Vol.15(2), pp. 97-109, July-December 2023
DOI: 10.5897/IJEAPS2023.0752
Article Number: DAEBFDD70985
ISSN 2141-6656

http://www.academicjournals.org/IJEAPS

ACADEMIC JOURNALS
expand your knowledge

International Journal of Educational Administration and Policy Studies

Full Length Research Paper

Factors affecting on students' university choice in the tertiary education in Sri Lanka

Lakshmi Ranwala[1]*, Sampath Siriwardena[1], Veronica Kurukulaarachchi[2] and Lalith Edirisinghe[1]

[1]Faculty of Management and Social Sciences, CINEC Campus, Malabe, Sri Lanka.
[2]Faculty of Humanities and Education, CINEC Campus, Malabe, Sri Lanka.

Received 8 March, 2023; Accepted 19 June, 2023

Education boosts any nation's economy. Sri Lankan higher education is competitive. Because only 15% of students who take the General Certificate Examination in Advanced Level (G.C.E A/L) are qualified to enter public universities, every student struggles to get into university. Some ineligible public college students attend private universities, vocational schools, or are migrant students. 15% of students qualify for public colleges, but their abilities and skills may limit their possibilities. These characteristics show that Sri Lanka doesn't assess students' talents, qualifications, and program interests when picking a university. Thus, this study seeks to understand how Sri Lankan students choose universities. The study uses student selection dimensional variables. Hossler (1999), Kotler and Fox (1995), Marketing Mix model for higher education, and Combined Complex Decision model (Holdswoth and Nind, 2005) to quantify student university choice. Convenient sampling selected 139 students from 150. Methods were quantitative and qualitative. Descriptive and inferential statistics examined data to attain study aims. HEM majors lost students due to employability. HEM programs' flexible financing options are the biggest factor in students' undergraduate choices. Female HEM majors are unemployed. According to the findings, Sri Lanka's tertiary education system needs a paradigm shift to properly select university students.

Key words: University choice, Students' demand, Tertiary education in Sri Lanka, Academic disciplines, Paradigm shift.

INTRODUCTION

The education system plays a major role in contributing to the future of every country. For any nation, the that represents nations' economic growth. By developing human capital through education, there may be a positive education sector is critical for its development (El-Hilali et al., 2015). Human capital is the most important element impact on the growth and wealth of any nation. Education can benefit a person financially, emotionally, socially and

*Corresponding author. E-mail: lakshmi@cinec.edu.

intellectually. In terms of Sri Lanka, the country is currently ranked 91st out of 118 countries based on Gross Enrollment Ratio (GER) in tertiary education and the higher education participation rate in the world. Comparatively, the East Asian countries show a significant improvement from the late nineties onwards, while Sri Lanka has shown a slow progress in higher education, despite making attempts to emulate other South Asian states such as Indonesia, Malaysia, Vietnam, and India. The GER (gross enrolment ratio) is a metric used to determine the number of students enrolled in schools at several different grade levels. In Indonesia, it was recorded as 31%, Malaysia and Vietnam as 30%; Thailand at 51%, and Sri Lanka was recorded as just a little bit above 20% (World Bank Annual Report, 2019).

In comparison to many other poor countries, Sri Lanka has made an outstanding improvement in terms of basic education metrics (Liyanage, 2014). This is due in part to the government's universal free education policy, which was implemented in 1945; all students from kindergarten through university education being eligible for free education. This includes free textbooks, uniforms and tuition fees. Every child in Sri Lanka between the ages of 5 and 14 is required to attend school. In general, the Sri Lankan education system is divided into three cycles of 13 years. Children from 5–10 attend primary school (Grade 1–5), from age 11–14 junior secondary school (Grade 6–9), from age 15–16 senior secondary school (Grade 10–11), and from age 17–18 collegiate (Grade 12–13) (Liyanage, 2014).There are 15 universities in Sri Lanka, 7 postgraduate institutes, 10 additional higher education institutes, and 1138 technical, vocational, and training institutes. These are government institutions (Liyanage, 2014). University education can be regarded as the next level in the learning process (Premarathne et al., 2016). It is a critical component that is necessary for the labor market. To develop the economy in the country, knowledge accumulation and application are essential. Therefore, students' choice for the academic disciplines in the tertiary education has become important because tertiary education is competitive and market oriented. Throughout tertiary education, individuals can expand their knowledge and skills. However, tertiary education always leads to the economic development of the country as it enhances productivity of the country.

Admission to public universities is entirely based on A/L results, which implies that the Z-score of each stream of the A/L examination is used. As a result, admissions are exceedingly competitive, and the public university system's capacity is limited. The crucial thing to remember is that only about 20% of students who qualify for university study are admitted stating universities. Aside from that, it further demonstrates that, even after this competitive university selection process, the unemployment rate of graduates in the country still exists at a perceptible proportion such as the average overall employability ratio of Universities in Sri Lanka is 54% (Nawaratne, 2012). According to the study conducted by University Grants Commission (UGC) in 2012,under the theme of Re-creating and Re-positioning of Sri Lankan Universities further highlights that the Faculties of Arts and Management have higher rates of unemployment in the country and account for 76 and 36% of unemployed graduates respectively. In the current situation, tertiary education has become even more complex as a result of changing nature and the doors are repeatedly opened for a lot of practical issues in the tertiary education system on the island. Out of many issues, one of the critical issues is the entry system and the university selection process in the country. University choice decision has become more complex perhaps the most crucial decision in a student life is related to their higher education, whilst selecting a degree program. Decision making phase of university choice is very crucial in a student life since the whole career of the student depends on it. Students do not make university or undergraduate choice randomly as it determines the whole career and future of the students. Poor choice can negatively impact on motivation and career path. In considering the above facts, it implies that Sri Lanka do not have a proper mechanism to select a suitable higher education program for its students aiming for carrier buildup or to find a suitable job opportunity for their stated qualification. This is one of the burning issues as the unemployment in the degree holders are climbing up to 15% and youth unemployment was increased from 18% to 28% during the last decade of Sri Lanka. Therefore, the main objective of this paper is to identify the factors affecting for students' university choice in Sri Lanka.

LITERATURE REVIEW

''Higher' education is simply the highest segment of the education system of a nation. Higher education is said to impart the deepest understanding in the minds of students, rather than the relatively superficial grasp that might be acceptable elsewhere in the system. In higher education, nothing can be taken on trust and the students have to think for themselves so as to be able to stand on their own feet, intellectually speaking (Barnett, 1997). Friedmann (2018) investigated women's participation in STEM fields. According to the findings, "salary and the ability to balance work and family responsibilities were the most important determinants of women's career choices." Raza (2016) investigated the significance of several employment characteristics for men and women. In this study, choice-based conjoint and choice model analyses were used. For the first time, this study focused the basic traits associated to women's profession choices, the initial principles of a social marketing intervention. Furthermore, the study found that current trends, personal preferences, parental pressure, and career counselors can all have an impact on kids' job

decisions.

Raza also investigated the educational and career-change behaviors of male and female students. Purposive sampling was used to select 145 female and 123 male students for the study, which was done at various public and private universities in Islamabad. According to the findings of the study, students' choices and adoption of educational careers are influenced by current and prevalent trends as well as their personal decisions. However, family pressure has no effect on educational or professional selections. Furthermore, male students are more satisfied than female students with a profession change in education. All of the other findings were nearly same for male and female students. According to Perera and Pratheesh (2018), decision-making in higher education while picking a program is critical because course selection determines students' prospects. According to the research, the "most important factors in major selection are the job factor and academic quality." Abeygunawardeana (2018) studied influential factors in selecting a bachelor's degree from international degree programmes which have appeared recently. The methodology employed in the study was review of literature to identify the influential factors found in previous studies. In this study, in order to reflect the industry demand, Bachelor of Science, Bachelor of Engineering, Bachelor of Arts, Bachelor of Business Administration degrees have been selected for the study to cover STEM and Management related disciplines. A simple random sampling is used in the study with a sample size of 420 first year undergraduates in STEM and management related bachelor's Degrees in randomly selected Private Higher Education institutes. Numerous studies have found a link between students' university choices and their family background. Families wield power in the following areas: finance, information, expectation, persuasion, educational prestige, and competition. Furthermore, Ogawaa and Iimuraa (2010) examined the demand-side determinants of access to tertiary education in Indonesia. According to the findings of the multi-nominal logit model, the education level of the head of household and family income per household member have significant positive effects on the choice of pursuing tertiary education in urban areas, whereas the education level of the household spouse is not. Cajucom (2019) researched who persuaded freshmen from the College of Management and Business Technology (CMBT) to enroll in their course. To collect data, 211 survey questionnaires were issued. Descriptive statistics such as frequency, percentage, and weighted mean were utilized to analyze and interpret the collected data. The findings revealed that the respondents' parents' advice played a significant effect in their choice of a college course.

The location of an institution is another major factor in the university selection process. This factor refers to where a university is located geographically, and close proximity to home or city center. Weerasinghe and Fernando (2018) found that the quality of the university location is influenced on the student satisfaction levels. Kunwar (2017) says that location also influences for university choice. Furthermore, Douglas et al. (2008) introduced a conceptual model of student satisfaction with their experience in higher education. Results revealed that access to university is the most important factor. Eidimtas and Juceviciene (2014) and Simões and Soares (2010) pointed out geographical proximity is most important choice factors for higher education institutions. Furthermore, Drewes and Michael (2006), identified location as one attribute in university choice. Students, in general, consider university expenditures. They calculate how much money they will need to spend on education before making their decision. It does not simply refer to university tuition; it can also cover housing and transportation expenses. Distance from home increases the expense, which might have a detrimental impact on actual preferences and force students to limit their options.

Many studies have been conducted to investigate the role of cost in the university choosing process. Eidimtas and Juceviciene (2013), Abeygunawardena (2018), and Kunwar (2017), for example, demonstrate the significance of expenses in the university selection process. Using school-level data, ÇOkgezen (2014) investigated the factors of university choice in Turkey. Tuition fees, the population of the city in which the institution is located, the academic success of the university, and the language of instruction are all key factors of university choice, according to the regression results. The findings also show that tuition prices have a greater impact on public university students, but private university students are more concerned with academic success than their public university counterparts. Furthermore, Dunnett et al. (2012) used conjoint analysis to investigate the influence of fee adjustments on how students weigh their university options. 400 responders are given online surveys. According to the data, students from households with no history of attending university will face more disutility because of the higher costs. Financial aid and scholarships help students fund their education. As a result, financial aid is another important element influencing students' institution choices. Some students base their decision on financial considerations including financial help or scholarships. Cajucom (2019) explored scholarships and grants are highly influenced for university choice. According to Cruz (2018) availability of scholarships is the most influential institutional characteristic for students in decision making process. Drewes and Michael (2006) used a unique set of microdata on university applications to investigate the effect of institutional qualities in the choices made by graduating high school students between the 17 universities in the Province of Ontario, Canada. According to one survey, applicants favor universities that spend

more money on scholarships.

Institutional factors are highly affected in every student's university selection process. Agrey and Lampadan (2014) have done a review on the various elements that goes into decision-making in university choice in Central Thailand by distributing 261 questionnaires to the respondents. The study found factors such as support systems (for example bookstore, guidance/counselling office), learning environment (modern learning environment and facilities, reputation, beautiful campus, library and computer lab), having good sporting facilities, a strong student life program (health care services, residential accommodation), activities (wide range of extracurricular activities) and finally a safe and friendly environment (safe campus as well as supporting faculty) are significantly influenced decision-making on which institution of higher learning to attend. Weerasinghe and Fernando (2018) studied the critical factors affecting students' satisfaction with higher education in Sri Lanka. The regression results indicated a statistically insignificant influence of the quality of the academic staff and the quality of the administrative staff on the student satisfaction levels. Quality of education and cultural values affected to college and university choice decisions. Furthermore, university infrastructure facilities, marketing strategy, university characteristics, programme evaluation have been identified as the most influential factors which affect in selecting a bachelor's degree from the international degree programmes (Abeygunawardena, 2018). Information sources are identified as influential factors in the choice process based on the relevant literature. Abeygunawardena (2018) studied on the influential factors in selecting a bachelor's degree from private higher educational institutes in Sri Lanka: a study based on undergraduates of international degree programmes. Results found that the most important influential information sources are messenger and peers. Ahmad et al. (2016) identified that recommendations from various groups are one of the push factors influencing for studying tourism and hospitality in abroad. Another research found that advisors and friends are the most important factors when selecting universities. Eidimtas and Juceviciene (2013) and Simões and Soares (2010) pointed out recommendations of teachers and career counsellors, mass media and university website cause for students' decision to enroll in higher education. Furthermore, Reddy (2014) investigated how social media influences international students' decision of course and university. There were 167 international students were used to response to the survey questionnaire. The study found that active social media participation amongst international students; the role of social media in influencing international students' decisions on course and university selection and the role of social media in meeting their information needs. The majority of studies use following four models for university choice process such as economic models, sociological models, combined complex decision model and the marketing mixed model.

Economic model

Economic models emphasize the decision between attending college or university and pursuing a non-collegiate option (Reddy, 2014). These models are typically based on the idea that a student wishes to maximize benefit while minimizing risks. The economic models' weakness is that they only include students' rationality as a factor in their decisions. Economic models of university selection are based on the assumption that students act rationally, analyzing all available information in light of their preferences at the moment of choosing (Aydin, 2015). The most important economic model for students' college choices is the model introduced by Jackson in 1982. It proposes that students' college choices involve three stages: the preference stage, the exclusion stage and the evaluation stage. In the preference stage, a student's educational aspirations and attitudes about college enrolment is shaped by his or her level of academic achievement, family background and social context (for example, the influence of peers, neighborhood, and school). In the exclusion stage, the student goes through a process of eliminating some institutions from the prospective list. Tuition fees, location and academic quality are among the factors that may be considered in eliminating higher education institutions. In the evaluation stage, students are faced with a choice set of institutions before they make their final choice (Reddy, 2014). Figure 1 shows the economic model introduced by Jackson.

Sociological model

Sociological models were established as a result of educational and status achievement studies, with an emphasis on the ambitions of persons seeking higher education. The most prominent model for student choice is Chapman's model of student choice, which was introduced in 1981. It focused on the prospective student's (and the student's family's) traits as well as the features of his or her college, which he labels as cost, location, and program availability. More importantly, it identifies decision-making influences such as the school counselor, instructors, friends, and parents (Reddy, 2014). Chapman's economic model is seen in Figure 2.

Combined complex decision model

This model is introduced by Holdswoth and Nind in 2005, identified some factors that influence the choice process of a university: quality and flexibility of the degree/ course

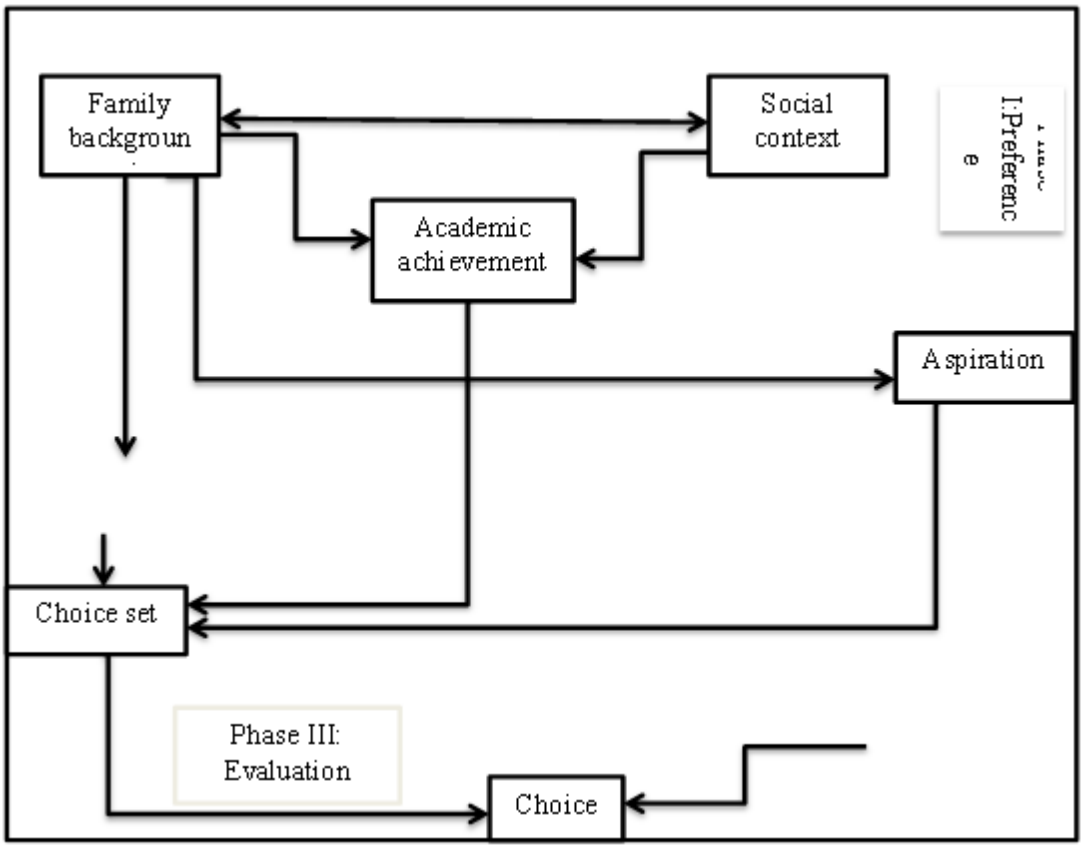

Figure 1. Economic model of college choice.
Source: Reddy (2014)

combinations, availability of accommodation, whether or not employers are likely to recruit from that university, cost and spatial proximity to home (Figure 3).

Marketing mixed model

Kotler and Fox (1995) introduced a marketing mixed model for higher education which consists of seven elements such as the program, the place, the price, the promotion, the physical facilities, the people and the process. Similarly, the student choice is a part of consumer behavior that is how individuals or groups select, buy and use goods or services. To select a university, students have five steps of choice: there are needs and motives, information gathering, evaluating alternatives, decision making and post choice evaluation.

METHODOLOGY

Methodology is basically a detailed procedure, strategy or strategies utilized to distinguish, select process, and analyze information about the core content of the topic. The conceptual framework is presented, and it is based on the theoretical framework of the literature review and the conceptual framework of this study is mainly based on three theoretical models have been used to identify and measure the university choice of the students. In this chapter, Conceptual framework and Operationalization of the study are briefly explained.

1. Dimensional factors of student selection by Hossler (1999)
2. Marketing mix model for Higher Education Kotler and Fox (1995)
3. Combined Complex Decision model Holdswoth and Nind (2005)

Dimensional factor model is considered under three categories, namely: economic model, sociological model and combined model. In the economic category model, Cost of attending a specific higher education institute, parental income, student academic ability, college characteristics, location, available majors, academic reputation of the university, future career and job prospects factors are taken into consideration. In sociological models, influence of significant others such as peers, parents, teachers and influence of siblings or spouse considered. In addition to the influence of significant others, academic ability, student motivation and high school characteristics are also taken into consideration under sociological model. In the Marketing Mix model for Higher Education by Kotler and Fox, student choice is considered as a part of consumer behavior. Main elements in Marketing Mix model developed by Kotler and Fox are the program, location, price of the course, promotion, Facilities of the Higher Education Institute, the people and the process. In the Combined Complex Decision model by Holdwoth and Nind, factors affected to the university choice is identified as, quality and flexibility of the degree program, Accommodation availability, employers' likelihood to recruit from the

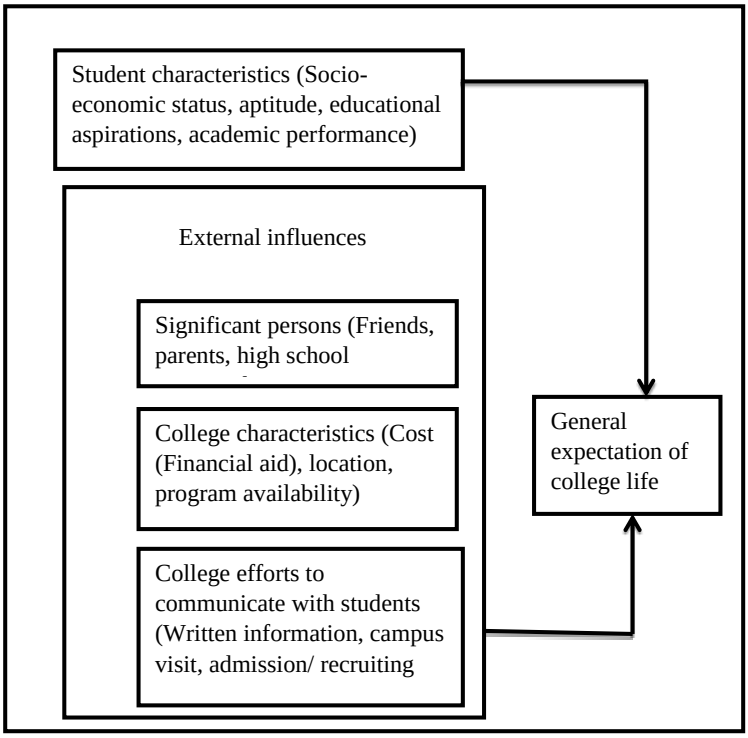

Figure 2. Sociological model of college choice.
Source: Reddy (2014).

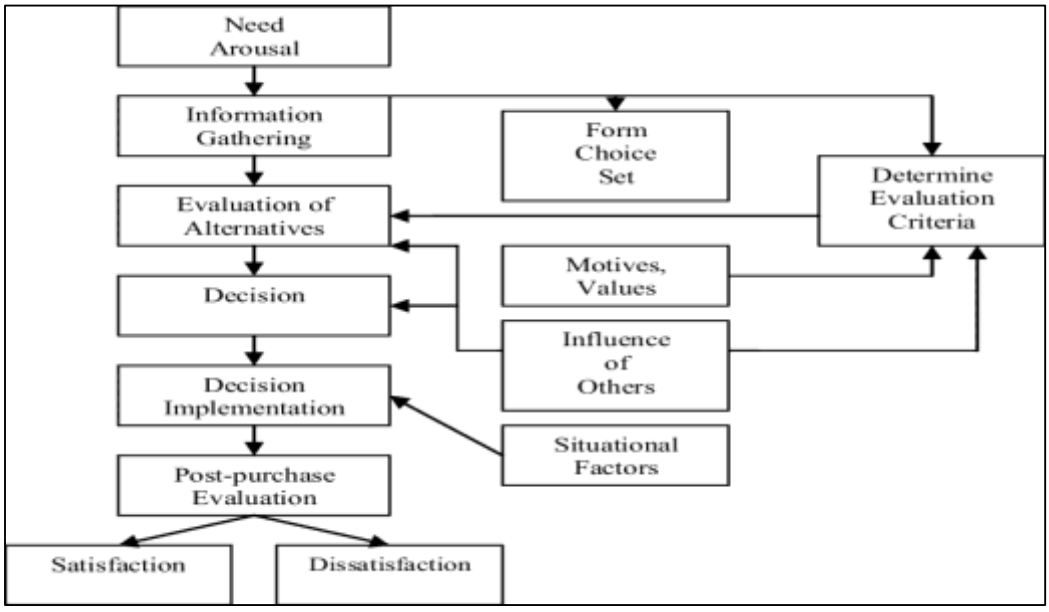

Figure 3. Combined complex decision model.
Source: Holdswoth and Nind 2005.

selected university, cost of the program, spatial proximity to home. By studying the theoretical frameworks listed above, conceptual framework of the study is shown in Figure 4.

Six independent variables are selected in the conceptual framework. In operationalizing the Conceptual framework, all independent variables are measured using the Interval Scale. 20

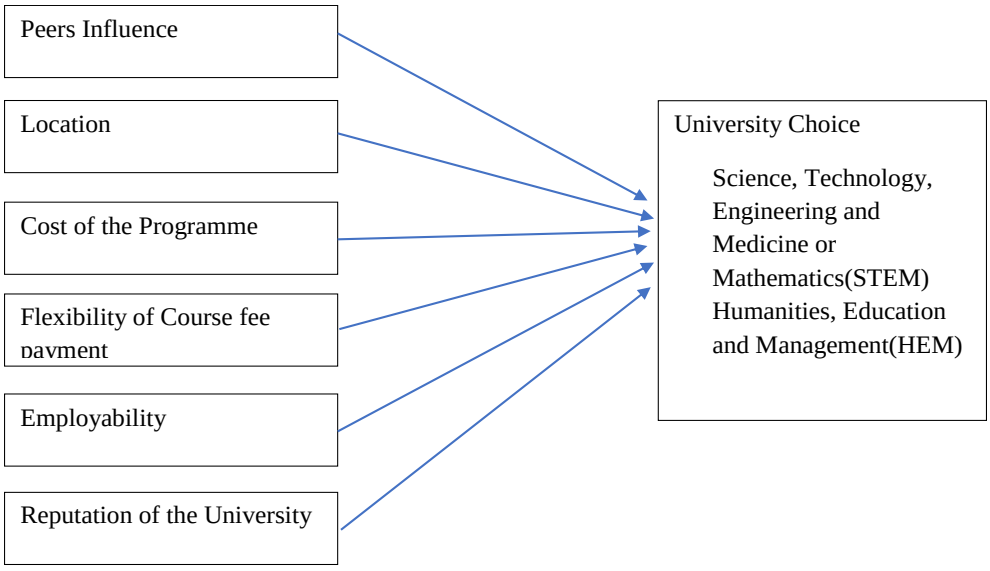

Figure 4. Conceptual framework of the study.
Source: Author

equi-distance Likert scale questions are used to measure the independent variables. Dependent variable of the study is a Binary variable, where the University choice of STEM (Science, Technology, Engineering and Medicine or Mathematics) and HEM (Humanities, Education and Management) programs taken. Target population of this study is Undergraduate first year students. In Sri Lanka, Undergraduate First year students can be mainly categorized into two clusters as State University and Non- State University students. In this study, only Non-state Higher Education Institutes (HEIs) taken into consideration as State University student choice is board area and final decision is made by the University Grants Commission (UGC) Sri Lanka. Sample of 150 students are selected for the study using convenient sampling method, for the final analysis 139 responses are selected. Upon carrying out descriptive analysis, correlations between independent variables and dependent variables were checked using Chi-square test. Confirmatory Factor analysis was carried out using Principal component analysis to fit the sub variables into main variables in the Conceptual Framework. Independent sample t-test used to compare the means of the independent variable in STEM and HEM choice. As the dependent variable of the study is a Binary variable. Binary Logistics regression model will be fitted to test the Conceptual Framework and to check the impact of the six independent variables in making STEM and HEM choice. Pseudo R square, Classification tables and Omnibus test are used as model diagnostic tools.

ANALYSIS OF RESULTS

Descriptive analysis

In the selected sample of 139 students, 61% are male students. 82% of the students in the sample are aged 21-23. 93% of students decided to enter into undergraduate studies having three passes or above in their Advanced Level examination. 52% of the sample received National University Entrance but was selected in the non-state sector. 27% of them enrolled into non-state sector institutes considering that it will take longer time to complete the degree if joined a state university. 19% of the students enrolled into Non-state HEI as they were not selected for their preferred program in state university. When considering the financial background of the students, 53% of the students are using Government Interest Free Loan Scheme as their financial support to continue their degree in Non-state HEIs. 43% of the students, course fees will be paid by their parents. When considering their awareness of the available degree programs, 52% of students visited the university websites, 30% of students visited social media fan pages of the selected university, 19% visited stall of the Non-State HEI in an educational fair, 41% participated Open Day programs conducted by the HEIs and another 28% visited the HEI before enrolling into the degree programs. It is worthwhile to note that only 14% of students enrolled by referring to the information in newspaper advertisements (Table 1). When considering the descriptive statistics, mean of the identified variables, influential level of friends, peers following the similar program, peers in the same university, award of scholarships and availability of university resources are at medium level. Influential level of other factors is at a low level when considering mean.

Correlation analysis

In testing the correlation between identified variables and university choice, Chi-square test has been used. Below hypotheses tested in correlation analysis:

H0: ith Variable has no correlation with university choice.
H1: ith variable has a correlation with university choice.

Table 1. Descriptive statistics of the variables.

Descriptive statistics	N	Mean	Std. deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Std. error	Statistic	Std. error
Parents influence	139	1.84	0.887	0.760	0.206	-0.016	0.408
Peers similar course	139	2.49	1.099	0.526	0.206	-0.419	0.408
Peers' similar unity	139	2.76	1.179	0.407	0.206	-0.652	0.408
Friends influence	139	2.44	1.149	0.326	0.206	-0.744	0.408
Location	139	2.24	1.087	0.783	0.206	0.298	0.408
Transport availability	139	2.29	1.131	0.632	0.206	-0.270	0.408
Cost	139	2.19	0.924	0.386	0.206	-0.655	0.408
Flex payments	139	2.08	0.843	0.658	0.206	0.441	0.408
Scholarships	139	2.70	1.322	0.288	0.206	-0.982	0.408
Loan facility	139	2.15	1.388	0.880	0.206	-0.637	0.408
Uni Resources	139	2.37	1.180	0.753	0.206	-0.081	0.408
Academic reputation	139	1.86	0.913	1.043	0.206	0.956	0.408
Entry requirement	139	2.12	1.050	0.757	0.206	0.015	0.408
Discipline	139	1.74	0.879	1.312	0.206	1.875	0.408
Internships	139	1.70	0.857	1.118	0.206	0.542	0.408
Programme availability	139	1.71	0.756	0.959	0.206	1.269	0.408
Teaching methodology	139	2.01	0.830	0.604	0.206	0.346	0.408
Industry demand	139	1.61	0.856	1.548	0.206	2.248	0.408
Duration	139	1.80	0.972	1.233	0.206	1.209	0.408
Employment	139	1.90	0.973	1.211	0.206	1.439	0.408
Valid N (listwise)	139						

Source: Author

Employability, Industry demand, award of scholarships and offering internship factors show a significant correlation with the university choice, which is significant at 1% level. The cost of the program shows a significant relationship with university choice which is significant at 5% level. Friends influence, Teaching Methodology and entry requirement factors are correlated at 10% level with the university choice (Table 2).

Factor analysis

According to the results of KMO and Bartlett's Test, factor analysis can be performed. As KMO test statistics is above 0.6, sample is adequate to perform Factor analysis. Bartlett's test check whether the covariance matrix is identical or not. As the test is significant, covariance matrix is not identical which further supports the factor analysis (Table 3). Approximately 66% of the variance in the university choice is explained by the factor model (Table 4). According to the rotated component matrix of the factor model 06 factors extracted as listed:

1. Peers Influence
2. Location of the University
3. Cost effectiveness
4. Flexibility of course fee payment
5. Employability
6. Reputation of the University

Hypothesis testing

Ho: Mean of i^{th} factor in STEM group = Mean of i^{th} Factor in HEM Group
H1: Mean of i^{th} factor in STEM group ≠Mean of i^{th} Factor in HEM Group
i = 1, 2, 3, …., 6

Flexibility of Course fee payment factor is significant at 5% level and Employability factor is significant at 10% level. For all other factors mean for STEM and HEM groups are equal. It can be concluded that Mean influence of the flexible course fee payment availability is different for STEM and HEM groups. When considering the employability factor, Mean influence of employability factor is different for STEM and HEM groups (Table 5).

Regression modeling

Binary Logistics regression model fitted as the response variable is a binary variable. Model summary is shown in Table 6. According to the omnibus test the fitted model is

Table 2. Correlation analysis results.

Variable name	Test statistic	p- Value	Status
Employability	26.143	0.000	Accepted at 1%
Industry Demand	16.491	0.002	Accepted at 1%
Scholarships	12.77	0.012	Accepted 1%
Internships	11.569	0.009	Accepted at 1%
Cost	8.825	0.041	Accepted at 5%
Friends Influence	8.791	0.067	Accepted at 10%
Entry Requirement	8.233	0.083	Accepted 10%
Teaching Methodology	7.966	0.093	Accepted at 10%
Transport Availability	6.587	0.159	Rejected
Peers similar university	5.8	0.215	Rejected
University Resources	4.651	0.325	Rejected
Academic Reputation	4.276	0.37	Rejected
Discipline	3.673	0.452	Rejected
Location	3.556	0.467	Rejected
Duration	3.107	0.54	Rejected
Loan Facility	2.625	0.622	Rejected
Programme Availability	1.761	0.623	Rejected
Peers Similar course	1.658	0.798	Rejected
Parents' Influence	1.518	0.823	Rejected
Flex Payments	1.108	0.893	Rejected

Source: Author

Table 3. KMO and Bartlett's Test.

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin measure of sampling adequacy		0.794
Bartlett's Test of Sphericity	Approx. Chi-Square	987.516
	df	190
	Sig.	0.000

Source: Author

significant (Table 7). Fitted model is shown below:

$\text{Log}(\frac{P}{1-P})$ = 1.337 + (-0.367)* Cost + (-0.092)*Employability + 0.352* Flex Pay + 1.045*Gender_1

Model interpretation

Odds ratio will be used in interpreting the Binary Logistica Regression Model:

1. When Cost of the degree program is higher than alternative programs, students are less likely to select HEM program as their undergraduate choice.
2. When employability of the undergraduate program is more influential, students are less likely to select HEM programs as their undergraduate choice.
3. When flexible payment methods are more influential students are more likely to select HEM programs as their undergraduate choice.
4. Female students are more likely to select HEM programs as their undergraduate choice. Table 8 contains the Pseudo R square values of the model. Cox and Snell R square and Nagelkerke R square both used to calculate the explained variation. According to Pseudo R square values, variability explained by our model is varies from 27.2 to 31.2%. According to the classification table, percentage accuracy in classification is 79.9%. Sensitivity, which is the percentage of cases that selected HEM courses, which were correctly predicted by the model is 98.2%; where the percentage of cases that not selected HEM courses which were correctly predicted by the model is 10.3% (Table 9).

Table 4. Variability explained by the Factor Model.

Total variance explained						
Component	Extraction sums of squared loadings			Rotation sums of squared loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.345	26.723	26.723	3.860	19.301	19.301
2	2.549	12.743	39.466	2.067	10.337	29.639
3	1.659	8.296	47.763	2.015	10.077	39.716
4	1.423	7.114	54.876	1.950	9.750	49.466
5	1.124	5.620	60.496	1.665	8.327	57.793
6	1.029	5.145	65.641	1.570	7.848	65.641
Extraction method: principal component analysis						

Source: Author

DISCUSSION

Empirical studies have proven that considering factors that affect students' university choice in tertiary education in Sri Lanka can influence students' decision-making process in Sri Lanka. Current study results are slight deviation with some of the empirical results of the various studies conducted by scholars. Some of the highlighted factors are Reputation and Ranking, Academic Programs and Majors, Faculty Quality and Expertise, Location and Accessibility, Financial Considerations, Facilities and Resources, Campus Culture and Student Life and Recommendations, Alumni Network and Career Opportunities and Word-of-Mouth.

This study is aimed to identify determinants of university choice for the academic disciplines in the tertiary education in Sri Lanka. The identified determinants of university choice of the students can be categorized in to six factors namely, peers influence, location of the university, cost of the program, flexibility of course fee payment, employability, reputation of the university. It is found that the entry requirements and teaching methodology has a significant association over the selection of the STEM and HEM programs. Similarly, while making a comparison with student choices, it is identified that that mean influence of availability of flexible course fee payment and the consideration of employability is somewhat dissimilar for the selection of STEM and HEM programs. It is found that, students prefer to select HEM programs more, when more flexible payment methods are available, such as different payment plans, Installment Plays, Financial Rebates on qualifications and skills of the students, penalty waved schemes, payment adjustments plans and banking aid and assistance facilities etc. The results of the regression model further illustrate that the availability of such flexible payments methods makes the student more likely to select the HEM programs. The reason behind this finding is perhaps, the selected sample represent 53% of the students from Government Interest Free Loan Scheme (IFLS). This finding was questionable as students are generally more likely to select STEM courses when the flexible payments methods are available for the program selection. Another fact is that the courses offered under Government Interest Free Loan Scheme are limited in the STEM stream. Correspondingly, the no of degree opportunities offered under STEM stream are also be limited. The reason behind this is STEM course fees are much higher than the HEM course fees since the STEM programs are essentially required to conduct laboratory practical sessions and need of special equipment and utensils for the various scientific investigations. Therefore, it is suggested that the competent authorities need to mull over in developing a flexible payment scheme policy for the undergrads and it is required to do a structural revision of STEM course fees by establishing more programs for the selection of the students. Aside from that, students are more likely to select STEM programs when they consider the prospect of getting employed just after graduation. Hence, the undergraduates have high tendency to select STEM programs by assuming that the students could secure a permanent job in the future. When cost of the opted program is higher than the alternative programs, students are more likely to select STEM programs. This may be the prospect of safeguarding an employee opportunity in the future. The results further depict that the female students are more preferred to select the HEM courses. This is somewhat a debatable finding; National Youth Unemployment Rate was shown an upward movement in the last decade in Sri Lanka. Youth unemployment rate increased from 18 to 28% (Department of Census Statistics, 2019). Female labor force participation rate was recorded as 32% in the year of 2019. It is a quite low rate comparing to the Asian countries.

Conclusion

The study found that female students are more likely to

Table 5. independent sample T- rest for comparing Means.

Independent samples test										
		Levene's test for equality of variances		t-test for equality of means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean difference	Std. error difference	95% confidence interval of the difference	
									Lower	Upper
Peers	Equal variances assumed	9.106	0.003	-0.374	137	0.709	-0.21003	0.56144	-1.32024	0.90017
	Equal variances not assumed			-0.476	67.037	0.635	-0.21003	0.44080	-1.08986	0.66980
Location	Equal variances assumed	0.926	0.338	0.301	137	0.764	0.12069	0.40051	-0.67128	0.91266
	Equal variances not assumed			0.263	37.732	0.794	0.12069	0.45895	-0.80863	1.05001
Cost	Equal variances assumed	0.001	0.981	1.332	137	0.185	0.43887	0.32942	-0.21254	1.09028
	Equal variances not assumed			1.384	46.254	0.173	0.43887	0.31716	-0.19944	1.07719
Employability	Equal variances assumed	14.227	0.000	2.121	137	0.036	1.74890	0.82460	0.11832	3.37949
	Equal variances not assumed			1.644	34.186	0.109	1.74890	1.06397	-0.41292	3.91072
flex_pay	Equal variances assumed	6.436	0.012	-1.887	137	0.061	-0.99843	0.52917	-2.04482	0.04796
	Equal variances not assumed			-2.427	68.564	0.018	-0.99843	0.41138	-1.81921	-0.17765
Uni_Reputation	Equal variances assumed	0.444	0.506	1.435	137	0.153	0.66865	0.46582	-0.25247	1.58978
	Equal variances not assumed			1.501	46.698	0.140	0.66865	0.44551	-0.22774	1.56505

Source: Author

Table 6. Omnibus test results.

Omnibus tests of model coefficients				
		Chi-square	df	Sig.
Step 1	Step	4.475	1	0.034
	Block	4.475	1	0.034
	Model	18.513	4	0.001

Source: Author

select HEM programs and that there is high tendency to be unemployed by considering the labor force participation rate in Sri Lanka. Hence, it is suggested to design a diverse entrepreneurial program including financial assistance aiming for the female grandaunts to actively participate in the labor force and intensify the country's' economic growth. It is also found that the employability opportunity of STEM is higher than the

Table 7. Fitted binary logistics regression model.

Variables in the equation		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Cost	-0.367	0.182	4.075	1	0.044	0.693
	Employability	-0.092	0.054	2.888	1	0.089	0.912
	flex_pay	0.352	0.128	7.572	1	0.006	1.422
	Gender_1	1.045	0.521	4.013	1	0.045	2.842
	Constant	1.337	0.870	2.361	1	0.124	3.808

[a]Variable(s) entered on step 1: Gender_1.
Source: Author

Table 8. Model diagnostics table.

Model summary			
Step	**-2 Log likelihood**	**Cox & Snell R Square**	**Nagelkerke R Square**
1	132.029[a]	0.272	0.312
a. Estimation terminated at iteration number 5 because parameter estimates changed by less than .001.			

Source: Author

Table 9. Classification table.

Classification table[a]					
	Observed		**Predicted**		
			Final_Choice		**Percentage correct**
			STEM	**HEMS**	
Step 1	Final_Choice	STEM	3	26	10.3
		HEMS	2	108	98.2
	Overall Percentage				79.9

[a]The cut value is 0.500
Source Author

employability opportunity of HEM. Hence, it is suggested to make a structural revision of the HEM program curriculum to make undergraduates more skillful and to make a job-oriented approach. Similarly, it is much required to develop a “Vox Populi” among the public to draft an evaluation policy of undergraduates of Sri Lanka.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

ACKNOWLEDGEMENT

The authors appreciate the World Bank under the Accelerating Higher Education Expansion and Development (AHEAD) project for funding this research.

REFERENCES

Abeygunawardena KV (2018). Influential Factors in Selecting a Bachelor’s Degree from Private Higher Educational Institutes in Sri Lanka: A Study Based on Undergraduates of International Degree Programmes. PEOPLE. International Journal of Social Sciences 4(2):75-96.

Agrey L, Lampadan N (2014). Determinant Factors Contributing to Student Choice in Selecting a University, Necessity for a paradigm shift in tertiary education in Sri Lanka: An Approach for Introducing the Conceptual Framework of a Paradigm Shift.

Ahmad SZ, Buchanan FR, Ahmad N (2016). Examination of students’ selection criteria for international education. International Journal of Educational Management 30(6):1088-1103.

Aydin OT (2015). University Choice Process: A Literature Review on Models and Factors Affecting the Process. Journal of Higher Education/Yükseköğretim Dergisi 5(2).

Barnett R (1997), Higher education: A critical business. Buckingham: Open University Press.

Cajucom RL, Campos JrRB, Mina JC (2019). Appraisal of the Choice of College among Management and Business Technology Freshman Students. International Journal of Advanced Engineering,

Management and Science 5(1):94-97
ÇOkgezen M (2014). Determinants of University Choice: A Study on Economics Departments in Turkey. SSRN Electronic Journal. Yükseköğretim Dergisi 4(1):23-31.
Cruz JB (2018). Choosing an Ideal Graduate Education: The Nueva Ecija University of Science and Technology Experience. Open Journal of Social Sciences 263-270.
Douglas J, McClelland R, Davies J (2008). The development of a conceptual model of student satisfaction with their experience in higher education. Quality assurance in education 16(1):19-35.
Dunnett A, Moorhouse J, Walsh C, Barry C (2012). Choosing a university: A conjoint analysis of the impact of higher fees on students applying for university in 2012. Tertiary Education and Management 18:199-220.
Drewes T, Michael C (2006). How do students choose a university: an analysis of applications to universities in Ontario, Canada. Research in Higher Education 47(7):781-800.
Eidimtas A, Palmira J (2014). Factors influencing school-leavers decision to enrol in higher education. Procedia-Social and Behavioral Sciences 116:3983-3988.
El-Hilali N, Al-Jaber S, Hussein L (2015). Students' satisfaction and achievement and absorption capacity in higher education. Procedia-Social and Behavioral Sciences 177:420-427.
Friedmann E (2018). Increasing women's participation in the STEM industry: A first step for developing a social marketing strategy. Journal of social marketing 8(4):442-460.
Holdswoth KD, Nind D (2006). Choice modelling New Zealand high school seniors' preferences for university education. Journal of Marketing for Higher Education 15(2):81-102
Kunwar JB (2017). Factors Influencing Selection of Higher Education Institutions in Finland By Foreign Students. Lahti University of Applied Sciences Ltd.
Liyanage IM (2014). Education Syetems of Sri Lanka: Strengths and Weaknesses. Education in Sri Lanka pp. 116-140.
Nawaratne SJ (2012). 'Shifting paradigms of higher education in Sri Lanka. re-creating and repositioning of Sri Lankan Universities to meet emerging opportunities and challenges in a globalized environment', Re-creating and Re-positioning of Sri Lankan Universities to meet Emerging Opportunities and Challenges in a Globalized Environment Workshop Proceedings. University Grants Commission jointly with Ministry of Higher Education, Kalutara, Sri Lanka, 18th & 19th June.
Ogawa K, Iimura K (2010). Determinants of Access and Equity in Tertiary Education: The Case of Indonesia. Excellence in Higher Education 1(1 & 2):3-22.
Perera RHAT, Pratheesh P (2018). Factors influence o student course selection: a case of Trincomalee campus. International Journal of Innovative Science and Research Technology 3-5.
Premarathne W, De Silva MRD, Kithsiri VD (2016). Factors Influencing the Choice of Degree Offering Institutes Among the Logistics Management Students in Sri Lanka. International Journal of Scientific Research and Innovative Technology 3(2):103-114.
Raza I (2016). "Factors Affecting Adoption of Educational Discipline and Satisfaction Level Among Higher Education Students. Journal of Education and Educational Development 3(1):100-121.
Reddy VP (2014). The Influence of Social Media on International Students' Choice of University And Course. Queensland: Queensland University of Technology.
Simões C, Soares AM (2010). Applying to higher education: information sources and choice factors. Studies in Higher Education 35(4):371-389.
Weerasinghe I, Fernando R (2018). Critical factors affecting students' satisfaction with higher education in Sri Lanka. Quality Assurance in Education 26(1):115-130.
World Bank (2019). The World Bank Annual Report 2019: Ending Poverty, Investing in Opportunity. Washington, DC: World Bank.