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Necessity for a paradigm shift in tertiary education in Sri Lanka: An Approach for Introducing the Conceptual Framework of a Paradigm Shift

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Paradigm shift is a significant modification of the core assumptions and methods of experimentation in a scientific discipline. The field of education, at all levels, has undergone tremendous change recently, precipitated by extraordinary demand for high quality and meaningful sustainable education at all levels across the globe. The national education system is segregated into five main categories: primary, junior secondary, senior secondary, collegiate (higher education) and tertiary. In Sri Lanka, basic and higher education levels are compulsory for students; however tertiary education is an optional level. Recent data show that just 20% of students who pass the GCE Advanced Level Test can be admitted into the government university system, leaving the remaining students with few options for higher education. The framework or for determining students' university choice based on their qualifications, talents, demand and supply characteristics, or their willingness to select an appropriate degree program is somewhat non-existent in Sri Lanka's existing educational system. To determine the steps that can be taken for a paradigm shift in higher education, this study aims to highlight the need for one in Sri Lankan post-secondary education while also proposing a relevant conceptual framework. The Marketing Mix Model for Higher Education, Hossler, Kotler and Fox, and the Integrated Complex Decision Model was the framework used to identify the demand pull and supply push factors affecting the university choice in Sri Lanka. Both qualitative and quantitative techniques were used. The study sample was drawn using stratified sampling technique and clustered into several sub- clusters such as state university, private university, technological campus and vocational Institute. Both descriptive and essential inferential statistics tools were used for the data analysis. This study identified the measures that can be used for a paradigm shift in the tertiary education.

Key words: Paradigm shift, conceptual framework, tertiary education.

INTRODUCTION

Tertiary education portrays a determining role in the education system of a country as it directly contributes to the sustainable development of the country. It is broadly acknowledged that tertiary education is the major driver

Table 1. GCE (A/L) Examinations: Performance of all Candidates 2014-2019.

Year		2014	2015	2016	2017	2018	2019 (NEW)	2019 (OLD)
Number Sat		247376	255191	258193	253330	267111	187167	94619
Passed in 3 Subjects (Eligible for University Entrance)	Number	149489	155447	160520	163104	167907	113637	67489
	%	60.43	60.91	62.17	64.38	62.86	60.71	71.33
Obtained 3 A's	Number	5832	6547	7126	8267	5310	5534	1506
	%	2.36	2.57	2.76	3.26	1.99	2.96	1.59
Failed in All Subjects	Number	20377	23347	22392	22021	24057	17919	5479
	%	8.24	9.15	8.67	8.69	9.01	9.57	5.79

Source: Author Performance of Candidates, GCE(A/L) Examination – 2019 Annual Report

of the economic growth of a country. An increasingly knowledge-driven economy has made high quality tertiary education more important than ever before. For any nation, the education sector is critical for its development (El-Hilali et al., 2014). Human capital development is the core element of employees' performance which indirectly causes the growth of the economy and helps to intensify the wealth of a nation. Some people do consider education to be important, except those who excel in pre-tertiary evaluations and exams. As a result, once they land a job, their formal education is over because the majority of them believe that formal education leads to employment (Edirisinghe et al., 2022a). Education is the main pillar of the development of the human capital. Sofi (2016) stated that education enhances the quality of life of individuals and the community as a whole. Education is one of the areas where students must choose their future. The educational system plays a major role as it contributes to make the future of every country in the world. The national education system can be segregated into five main categories: primary, junior secondary, senior secondary, collegiate (higher education) and tertiary. Sri Lanka enjoys a remarkable progress, in terms of basic education indicators compared to many other developing countries in the world (Liyanage, 2014). By 1964, Sri Lanka has achieved the goal of universal primary education. After the government introduced universal free education policy in 1945, all the students from kindergarten to university education started enjoying free education facilities such as school textbooks, uniforms; also students of tertiary institutions are eligible to receive financial rebate. In Sri Lanka, tertiary education is considered as the top layer of education, which acts as knowledge link between primary and secondary education. 16 universities, 7 postgraduate institutions, 10 additional higher education institutions, and 1138 technical and vocational training institutions make up Sri Lanka's tertiary education system. There are state institutions (Liyanage, 2014). University education can be regarded as the succeeding level in the learning process of a student. It is a vital component that is necessary for the labor market.

To develop the economy of a country, knowledge accumulation and industry-oriented application are much essential for a knowledge-based economy. Due to the competitive and evolving nature of the tertiary education sector, students' selections of academic subjects have become important. With tertiary education, individuals can expand their knowledge and life skills component. However, tertiary education always leads to the economic development of a country as it enhances productivity and efficiency of the labor force of the country. Currently, Sri Lanka is ranked as 91st out of 118 countries based on Gross Enrolment Ratio in tertiary education and higher education participation rate in the world.

From the late nineties onwards, there has been a significant improvement in higher education in East Asian countries; while Sri Lanka made a slow progress in higher education.

To gain entry into public universities, the admission system is absolutely based on GCE Advanced Level (GCE A/L) results, and it relies on the Z-score of each stream of the A/L examination. Therefore, the university admissions are extremely competitive, and the capacity, available resources in the state university system are absolutely limited. The remarkable point is that, only 20-25% from the total student population (Those who have passed GCE A/L Examination) is qualified for the university free education. Table 1 and Figure 1 show the performance of all G.C.E. A/L candidates from 2014 to 2019.

Figure 1 and Table 1 show that there is a huge competition in the university selection process in Sri Lankan education system. Even though the eligibility is high (Avg 60%) university selection is less than 25%. The modern researchers stated that a considerable portion of unemployment still exists in Sri Lanka. This is common, especially among female graduates which is approximately 30% from the labor force in Sri Lanka. Further, the faculties of Arts and Management also have higher rates of unemployment in the country (76 and 36% respectively). According to Department of Census and Statistics (2019), in 2019, 411,318 people were listed as being unemployed. According to a poll, men and women have unemployment rates of 3.3 and 7.4%, respectively.

Based on the level of education, G.C.E. (A/L) and above

Figure 1. Percentage of all Candidates Passed in 3 subjects (Eligible for University Entrance) by Year: 2014 – 2019 - GCE (A/L) Examinations.
Source: GCE (A/L) Examination – 2019 – Candidates Performance, Annual Report.

category have the highest unemployment rate of 8.5%. For males and females, it is 5.0 and 11.9%, respectively. There were 42,024 unemployed graduates in 2019 in Sri Lanka. Among them, 54.8 percent have a degree in the Arts stream while 45.2% have other degrees.

Paradigm shift means modifying significantly the core assumptions and methods of experimentation in a scientific discipline. The phrase "paradigm shift" also refers to a significant change in the ideas and methods used to accomplish anything. A paradigm shift could function within a wide variety of context. It also can be regarded as a systematic way of thought patterns. A paradigm shift is a new way of viewing something. As we change our paradigm, we can perceive, think, feel, and act in new ways. A paradigm shift is a strategy used to deal with problems; it makes it easier to separate important information from irrelevant data. It is designed to address important issues and it is the way used to address problems. Basically, paradigms act as a way of looking into a situation and thinking and acting according to the situation. The replacement of one theory with another can result in a paradigm shift. In the current situation, the 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 in 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's life is related to his/her higher education; his/her choice of a degree program. The decision making phase of a university is very crucial for students since their whole career depends on it. Students do not choose universities randomly as it

determines their whole career and future. Poor choice can negatively impact their motivation and career path. While choosing the university they want, students consider some factors such as personal preferences, courses, job opportunities, workload, quality of teachers, university's reputation, tuition fee, academic facilities, location, parents' influence, parents' knowledge, parents' educational status, family socialization, university ranking, learning environments, graduate success, financial aids etc.

In Sri Lanka, there are a number of factors that affect students' choice of academic subjects in tertiary education: availability in public university, private university, vocational education, migrate for higher education, enter to the job market, self- employment, unemployed and not engage in education, employment or training (NEET). With free market operations, the impact of foreign and global educational flows, and institutional operations, the higher education system in Sri Lanka has undergone a significant transformation. Nearly 10,000 students are migrating for higher education in Sri Lanka (Nawaratne, 2012). Among them minority are returning with foreign educational qualifications and experience. Many Sri Lankan youths think that migration and international schooling is a way of enhancing employment prospects. D'Souza and Moore (2017) claim that because Sri Lanka's higher education system is unable to meet students' demand, particularly at the undergraduate level, the country's tertiary student population is quite mobile. A significant factor that influences students' decisions in choosing courses from the Humanities, Education, and Management (HEM) as their major is the availability of flexible payment options for degree programs. In addition, female students are more likely to choose undergraduate

HEM programs, but women still struggle to get work (Edirisinghe et al., 2021). These facts revealed that Sri Lanka is lacking a proper system for students to select suitable higher education program. Further, those programs do not aim to build their career or find a suitable job opportunity for them. This causes unemployment for degree holders. During the last decade of Sri Lanka, the unemployment rate of degree holders has increased up to 15%, while the unemployment rate of youths has increased from 18 to 28%. In this case, it can be concluded that the selection of degree programs might be not suitable for their employability and the current universities cannot meet the demand of the job market. However, there is a considerable gap between selection of degree program (STEM and HEM) and suitable job opportunities for students. Therefore, the purpose of this study is to highlight the necessity for a paradigm shift in tertiary education in Sri Lanka while making an approach of introducing a suitable conceptual framework to identify the measures that can be taken for a paradigm shift in the tertiary education.

LITERATURE REVIEW

Paradigm shift

A psychological paradigm shifts in students' appetite for and enrollment in diverse academic areas in tertiary education should result from the answer to the current issue. Universities must offer degree programs that meet companies' needs and are consistent with contemporary viewpoints in order for this exercise to be meaningful (Edirisinghe et al., 2022b).

With refence to the literary sources in the paradigm shift, Nawaratne (2012) studied on shifting paradigms of higher education in Sri Lanka with the objective of re-engineering the total higher education sector of Sri Lanka to support the long-term aspirations of Sri Lanka to take the country into next level. Study suggested changing the current education system into a modern and world class system. Researcher found that shifting from old paradigm of ―Not accepting responsibility" to new paradigm of ―Accepting responsibility", instead of being ―Self-oriented" to being ―Job market oriented", old paradigm of making ―Locally employable graduates" to ―Globally employable graduates", instead of being ―Teacher centered" to being ―Student centered", to be ―Knowledge focus" to be replaced by ―Knowledge, skills, attitude and mindset (K-SAM) focused". The old paradigm of ―Producing only job seekers" shift into ―Producing both entrepreneurs and job creators". Finally moving from old paradigm shift of ―Not 100% employable graduates" to new paradigm ―100% employable graduates". The majority of students choose traditional academic programs, thus everyone else, with the exception of the top private higher education institutions, would try to meet this demand for financial gain. This circumstance may increase the "mismatch" between education and the labor market; hence, knowledge and visibility would be essential in selecting the appropriate academic discipline. A new paradigm of knowledge production in higher education may best be described as a result of the convergence of globalization, the advent of the knowledge society, and accelerated change, according to Moravec (2008). A literature survey was done to acquire information. According to the findings, higher education must adopt a systems approach to thinking and leading.

Taatila (2017) investigated the current paradigm shift in higher education around the world. According to the findings, there have been a number of significant changes in higher education during a relatively short period of time. The field of higher education has seen significant change as a result of financial constraints that have resulted in shorter accountability periods, mass education and research, as well as increasing rivalry brought on by e-enhanced globalization.

University choice

Empirical evidence

For students, post-secondary education is vital since it frequently determines their future as business owners or industry professionals (Edirisinghe et al., 2022a). One of a student's most crucial considerations is which university to attend. Using a multinomial regression model, Prakasam et al. (2019) investigated the various factors that affect students' decision to enroll in a certain course in higher education in India. 93,513 people in the age range of 5 to 29 who were enrolled in any type of educational institution were surveyed using a stratified multi-stage methodology. A number of variables, including ability, gender, the price of higher education, socioeconomic position, and geography, were taken into account to fit the multinomial regression model. The findings showed that there is clear gender polarization between the humanities and engineering. The predicated probabilities highlight the contrast between the types of courses people choose and the levels of living that are reflected in their consumption costs for professional and non-professional courses. The predicted probability of course preferences clearly show that the north, east, and NES regions prefer the humanities, while the south and west choose engineering and other professional courses.

The perks, facilities, and location of the institution may all have an impact on the students' decision to attend that institution for their education.

Using information from the Indonesia Family Life Survey (IFLS4), which was carried out by the RAND Corporation and others between 2007 and 2008, Ogawaa and Iimuraa (2010) examined the demand-side factors that affect access to tertiary education in Indonesia and

the effects of regional and family background factors on access inequity.

A multi-nominal logit model was fitted to explore what factors influence a person's decision to pursue a bachelor's program, a diploma program, or employment after graduating from high school in order to analyze the demand side factors for higher education.

According to the findings, the choice to pursue postsecondary education is significantly positively influenced by the family income per household member and the education level of the head of home. Living in an urban area does not affect one's ability to enroll in postsecondary education, access to bachelor's programs for urban residents is probably influenced by factors related to one's family background, and, if all other factors are held constant, female enrollment in diploma programs is more common than bachelor's programs for those who live in urban areas. Socioeconomic factors that influence education include parental education, household income, financial, non-financial, and material aid, language, parental involvement in a child's education, and peer group in the classroom.

Agrey and Lampadan (2014) identified various elements that go into decision-making of university choice in Central Thailand, such as support systems, both physical (e.g., bookstore, guidance/counselling office) and non-physical (scholarships, credit transferability, spiritual programming); secondly, learning environment (modern learning environment and facilities, reputation, a beautiful campus, a library, and a computer lab); job prospects (that is, a high rate of graduates being employed); thirdly, having good sporting facilities; fourthly, a strong student life program (healthcare services, residential accommodation); and activities (wide range of extracurricular activities) and finally, a safe campus as well as supportive faculty) and fifthly; a strong student; sixthly; fifthly; fourthly; a strong sports; fourthly; a strong; fifthly; fourthly; In order to investigate the institutional elements influencing students' college choice decisions in Malaysia, Ming (2010) constructed a conceptual framework (Figure7). Location, academic program, college reputation, educational facilities, cost, financial aid availability, employment opportunities, advertising, higher education institutions (HEIs), representatives, and campus visit are the independent variables that have been identified as having influenced students' college choice decisions.

Using 1,427 participants, Mustafa et al. (2018) looked at a number of factors that influence high school students' judgments about which colleges and universities to attend in Qatar. In order to determine which independent variables—student gender, nationality, parental education, and parental occupation—significantly influence the three extracted dimensions (dependent variables), exploratory factor analysis and ordinal logistic regression were used to examine various predictors of high school students' decisions to attend college and university in Qatar.

The results show that educational expenses, cultural values, and educational quality all have an impact on people's judgments about which colleges and universities to attend. According to varied degrees, the findings of the ordinal logistic regression showed that a student's preference for a higher education institution is significantly predicted by their demographic factors. The students' choice is also influenced by institutional characteristics including advantages, facilities provided by the institution, and the location where the services are provided.

The choice of university was examined by Jafari and Aliesmaili (2013) among 381 pre-university students in the northern Iranian provinces of Gilan and Mazandaran. The cluster sampling method was used to choose the participants. This study's primary survey tool was a questionnaire. The results of the chi-square test showed that students' decisions about which universities to attend are influenced by various economic, personal, social, and university-related aspects.

Sojkin et al. (2012) examined the underlying factors behind the choices that Polish students make while pursuing their tertiary education. Focus groups' discussions and questionnaire were the survey instruments of this study. Quota sampling was used to choose 1,420 students.

The fundamental causes of the decisions are found via exploratory factor analysis. The findings indicated that family opinions and expectations, as well as a life more akin to that of a student, are the driving forces behind choices regarding pursuing higher education. Moreover, Sojkin et al. (2012) developed an integrative framework for Polish university processes. The Polish university system's integrative framework is shown in Figure 2.

Using school-level data, Çokgezen (2012) investigated the factors influencing university choice in Turkey. According to regression analysis, factors that influence university choice include tuition costs, the size of the city where the school is located, the school's academic standing, and the language of teaching. The findings also showed that public university students are more affected by tuition fees, whereas private university students are more concerned with their academic standing than their peers at public universities. Manoku (2015) also looked into the main aspects that affect an Albanian student's decision on a university. Primary data were collected from questionnaires, including those of freshmen students at 17 public and private universities in Albania. The sample was chosen through a random stratified sample method. The results of the factorial analysis have identified nine key factors (cost of study and living, quality of teaching and supporting staff, reputation of the institution, faculty facilities, accreditation, individual preferences and talents, location, perspective after graduation, and high school scores) that influence the university choice of Albanian students.

Expectations of postgraduate students from the enrichment, professional development, and skill
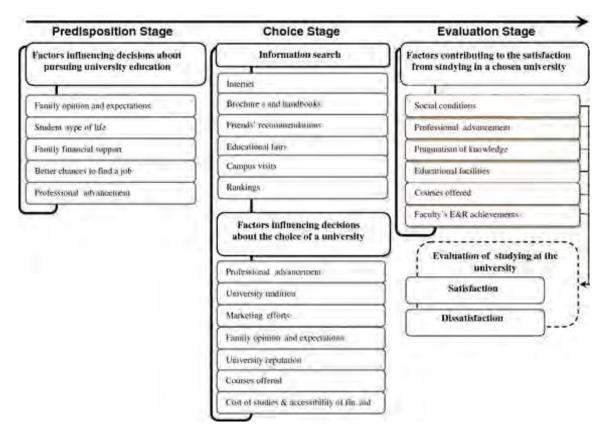
Figure 2. The integrative framework of university process in Poland.
Source: Sojkin B., Bartkowiak P. and Skuza A., 2012

acquisition, are influenced by a number of factors. The institution and department hosting the postgraduate program, which had a very good reputation in terms of quality and status (quality reasons), the cost of the postgraduate program or the possibility of a scholarship (academic reasons), the unique characteristics of the postgraduate program, such as the course schedule, duration, admission requirements, etc. (characteristics of the program), and the prospect of a scholarship were also identified as five factors influencing students' choice of postgraduate program (Siati et al., 2017). According to Binney and Martin (1997), undergraduate students at regional university campuses, such as the University of South Australia's Whyalla campus and the University of Melbourne's Glenormiston campus, heavily considered job preparation when deciding which university to attend. Students at the Whyalla campus also gave consideration to things like the school' size and distance from their homes. Nonetheless, Glenormiston students gave more weight to having access to accommodations and having the chance to do research.

The guidelines provided by the individual state tertiary entrance centers, academic sources, and the students' peers served as their primary sources of knowledge.

Khairani and Razak (2013) identified the factors that influenced students' choices of public universities by using 1,584 prospective students from pre-university institutions. A questionnaire was the survey instrument for this study. The Rasch model analysis was used to interpret the collected data. Results showed that the participants endorsed the university's image as the most influential factor, followed by the university's environment, facilities provided, and courses offered. Kusumawati (2010) studied student choice criteria for selecting an Indonesian public university. Data were gathered through semi-structured questionnaires and focus group interviews and 48 respondents participated in this study. The result indicated that total expenses (cost), reputation, proximity, job prospect, and parents are the five most important choice criteria for Indonesian students. Further, Sarkodie et al. (2020) investigated the factors influencing students' choice of tertiary education at Sunyani Technical University. Primary data were obtained from questionnaires distributed among 200 students. In this study, convenience sampling was used to select 200 students. Descriptive and inferential statistics were used to analyze the data collected. Results revealed that reputation of the institution was a major factor in influencing the respondent's choice of a tertiary institution, followed by parental factors.

Peer and media influence were the least important factors. Further, the study showed that subject

combinations at senior high school, personal interest, career desire, employment opportunities, recognition of the program, and academic records were factors influencing students' choice of program in tertiary education. In Sri Lanka, the students' intake for state universities is extremely competitive as the capacity of the state university system is limited. The important thing is approximately only 20% of the students who qualify for university education and gain admission to the state universities. In that case, students tend to look for many other options for their higher education.

Student migration is one of them and is fairly common. Researchers discovered a number of determining factors for studying abroad. Chloe (2019) used 435 full-time foreign undergraduate and postgraduate students to research the important variables impacting international students' decision-making while choosing private HEIs in Malaysia. Cluster random sampling was employed to choose the sample. The study finds that international students' decisions to study abroad often result from their personal belief that an education abroad is superior to a degree from their own country.

Ahmad et al. (2015) investigated the push and pull factors influencing the decision to study tourism and hospitality abroad. The results found that country attraction had the strongest pull influence on the international students' study decision, followed by the pull factors of institutional attraction. Push factors included seeing and learning experiences and recommendations from various groups. Further, the image of institutions and recognition of educational qualifications are also important factors in determining the motivation and decision of international students to travel to the United Arab Emirates for tertiary education. According to Choi and Nieminen (2013), international students primarily base their decision on the university's standing and quality in the academic community, the range of academic programs it offers, and the applicability and worth of the foreign degree they receive. Lee (2014) mentioned that quality of education, the reputation and information about the institution are important factors for international higher education students. Rahman et al (2017) examined the critical factors that are influencing international students' perception in the selection of a destination for education tourism. Primary data were collected by distributing 220 questionnaires to the students. While analyzing the collected data, confirmatory factor analysis and structural equation modelling is used.

The findings showed a strong correlation between service quality and the decision to travel for educational purposes. When the destination loyalty variable plays a substantial mediating role, there is also a considerable relationship between destination brand image and the decision to choose a place for tourism or education. There was no statistically significant link between spirituality behavior and destination choice. When the visitors' goals serve as a mediating factor, there is a considerable correlation between spirituality behavior and destination choice. To draw more international students to Malaysia to study, Malaysian tertiary education providers must match market demands and promote these together with diverse selection criteria (Baharun et al., 2011). In their study, Kunwar (2017) investigated the factors influencing the selection of higher education institutions in Finland by foreign students. The study identified main factors such as students' personal, location-specific, university-specific, program-specific, financial, future career-related, and social life-related factors. Shah et al. (2013) examined the factors influencing student choice to study at private higher education institutions in Australia. It included 120 students for this study. The study found that mainly there are six factors influencing student choice: student perception, access and opportunity, learning environments, quality of teachers, course design and graduate success.

Several local Sri Lankan students pursue studies abroad while remaining in Sri Lanka. Abeygunawardena (2018) conducted a study using undergraduates in foreign degree programs to examine the deciding criteria for choosing a bachelor's degree from private higher education institutions in Sri Lanka. For this study, 420 first-year students enrolled in overseas degree programs were randomly chosen as the sample. The standard survey tool was a questionnaire. To determine the deciding variables for choosing a bachelor's degree from private higher education institutions in Sri Lanka, factor analysis was used. The findings showed that the most important variables that influence choosing a bachelor's degree from among the foreign degree programs are infrastructural facilities, marketing strategy, cost, institution characteristics, program evaluation, messengers (sources of information), and peers.

Understanding how socioeconomic issues affect students' university selection is important. Wiese et al. (2010) looked at the selection criteria students take into account while choosing a higher education institution, concentrating on the distinctions between gender and linguistic groups. 1241 respondents were chosen based on convenience. The major survey tool was a self-administered questionnaire. With an emphasis on the distinctions between gender and language groups, multivariate analysis of variance (MANOVA) was used to study the choice factors students take into account while choosing a higher education institution. The investigation showed that the effectiveness of higher education institutions' teaching was the most crucial selection factor for respondents, regardless of gender or language.

Subsequent research revealed differences between men and women in their selection of particular choice characteristics, which implies that higher education institutions should take into account recruitment techniques for each gender group. Sovansophal (2019) examined the patterns of STEM major choices across

demographic and regional variables as well as the strong relationship between family socioeconomic position and STEM (Science, Technology, Engineering, and Mathematics) majors. In this study, 1,000 pupils were involved. Descriptive analysis and cross-tabulation statistical tests were used to analyze the data. According to the findings, students receiving government scholarships from Cambodia tended to major in social science rather than subjects connected to science and engineering. Results also showed that gender, location, and family socioeconomic position were strongly correlated with students' decisions to major in STEM. Higher socioeconomic class households, male students, and students from the provinces all had greater STEM major selection rates than their counterparts.

Using data from the 2015 International STEM Graduate Student in the US Survey, Miner (2019) investigated the relationship between gender and the choice of discipline in STEM graduate education as well as the effect of citizenship status on gender differences in STEM disciplines in the USA. In order to analyze disparities in enrollment in STEM disciplines by gender and citizenship status, this study used multinomial logistic regression analyses and gives projected probabilities. When compared to domestic men, the findings showed that domestic women were less likely to enroll in computer sciences and engineering. There were no gender variations in the enrollment of overseas students in engineering, in contrast to domestic students.

Cho 2018) studied factors influencing Myanmar students' choice of university courses with regard to their demographic and influential factors. Primary data were collected by distributing 200 questionnaires to the respondents. According to the results of inferential analysis, there are positive and inverse relationships between social factor influences, product factor influences, and students' demographic backgrounds when choosing university courses. Rosti and Chelli (2009) investigated the gender impact of tertiary education on the probability of entering and remaining in self-employment by surveying 62,000 graduate and non-graduate individuals. The results found that education significantly increases the probability of entering self-employment for both male and female graduates. It also significantly increases the transition from self-employment to dependent employment for female graduates.

Chakrabarti (2010) examined the role played by economic, social, and demographic characteristics in determining the likelihood of participation in higher education for both rural and urban youth in India. For this study, secondary data were gathered from the National Sample Survey. The findings showed that, compared to other socioeconomic groupings in rural areas, youth from scheduled caste or scheduled tribe backgrounds had much lower probability of attending a higher educational institution. The highest income/expenditure quartiles in both urban and rural areas had a stronger gender influence on participation in higher education. Higher educational attendance was significantly influenced by elements like gender, economic and social identity, and the educational background of the family head.

In addition, a study of students' decisions to major in a particular field of study in higher education finds that female students in urban India are much more likely than their male counterparts to enroll in a university to study the arts or humanities. Even after accounting for the social and economic makeup of the household, there is a significant gender bias against women in every other stream, including science, business, medicine, engineering, and other professional fields.

In order to comprehend the impact of a number of psychological, personal, and institutional elements, Cho et al. (2008) looked at students' reports of the college decision-making process. A self-reporting, online survey was completed by 1,339 college freshman who were the first in their families to attend college. When compared to their counterparts who are not first-generation, the results showed that psychosocial characteristics and the college's academic standing had the most influence on first-generation students' college selection. However, these influences were complexly modified in various ways by gender, race, and socioeconomic position. Mahmoud et al. (2019) investigated the impact of cultural factors on international students' choice of country. Also, it looked at how much personal values might influence a student's decision regarding their home country. According to the findings of the structural equation modeling technique, the choice of country made by international students was significantly positively influenced by education, language, and social institutions.

Theoretical approaches

Theory of reasoned action (TRA)

The Theory of Reasoned Action (TRA) is used to inform our examination of the formation of, and changes to, students' attitudes and interests. It is a model that can be used to predict behavior and action toward an object. Behavior is largely determined by intention. The stronger the intention, the more likely it is that the behavior will occur. Intention is comprised primarily of three inputs, informal STEM programs (e.g., attitude toward the behavior), subjective norms, and perceived control and self-efficacy. TRA can be applied to the fields of social psychology (with applications in marketing), science education, the arts, and sociology (Tretola et al, 2019). Figure 3 shows the Theory of Reasoned Action (TRA). Tretola et al. (2019) applied the TRA to construct a conceptual framework for the study examining the impact of a university STEM program along with —hands-on" activities that include the arts. For each STEM topic, the
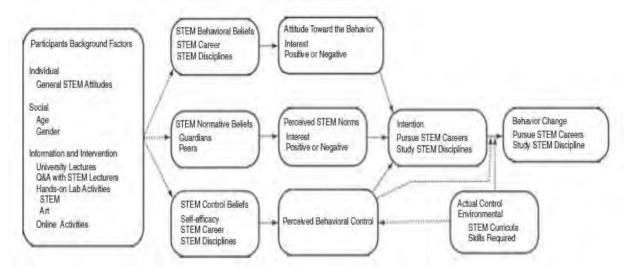
Figure 3. The Theory of Reasoned Action (TRA).
Source: Tretola et al., 2019.

results showed that interest grew noticeably for students who had expressed low interest in the initial pre-lecture survey using paired samples t-tests. Using a repeated measures general linear model, it was found that interest in engineering significantly improved linearly. Parents or guardians noted a greater interest in STEM fields, which led to more technical conversation among peers and within the family.

Trey L. Mitchell's model of career-decision making

Trey L. Mitchell's model of Career-Decision Making assumes that a decision-maker will create a set of preferences or priorities when considering possible alternatives. The framework shows that the interaction between a person and his behavior is influenced by his thoughts and actions, while the interaction between a person and the environment involves beliefs and cognitive competencies developed and modified by social influence. The interaction between the environment and the behavior involves a person's behavior determining his environment which, in turn, affects his behavior. These preferences will help the decision-maker distinguish between choices based on the values assigned to possible alternatives (Malubay et al., 2017). Following Figure 4 shows Trey L. Mitchell's model of Career-Decision Making.

In their study, Malubay et al. (2017) applied Trey L. Mitchell's model of career-decision making to investigate the factors affecting the decisions of freshmen students in pursuing hospitality and tourism programs at the University of the Philippines, Laguna. The results showed that the respondents were mostly between the ages of 17 to 19, female, Filipino, International Travel and Tourism Management students, and financially capable. Furthermore, economic factors such as stable wages and job demand are the most important considerations for students pursuing Hospitality and Tourism programs. Significant relationships were also found between age and social factors, and nationality and economic factors.

The majority of research use one of the four models below to explain how students choose their universities: economic models, sociological models, integrated models, and marketing strategies.

Economic models

Economic models emphasize choice between enrolment in a college or university and the pursuit of a non-collegiate alternative (Reddy, 2014). These models often start with the premise that a student seeks to increase benefit while minimizing risk. The economic models' drawback is that they only consider how students' rationality affects their decisions. Economic models of college selection are predicated on the idea that students make rational decisions by weighing all the information at their disposal in light of their preferences at the time of the decision (Aydin, 2015). The economic model that Jackson proposed in 1982 is crucial for determining which colleges students choose to attend.

These models typically start with the premise that a student wants to increase his or her utility and reduce risks. Because they only consider how students' rationality affects their decisions, economic models have this drawback. Students are assumed to act rationally by weighing all the information at their disposal in light of their desires while making decisions, according to economic models of university selection (Aydin, 2015).
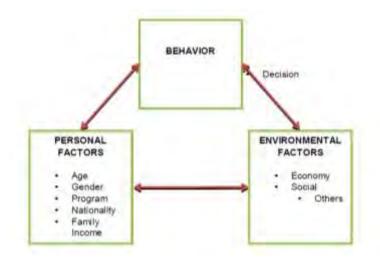
Figure 4. Trey L. Mitchell's model of Career-Decision Making.
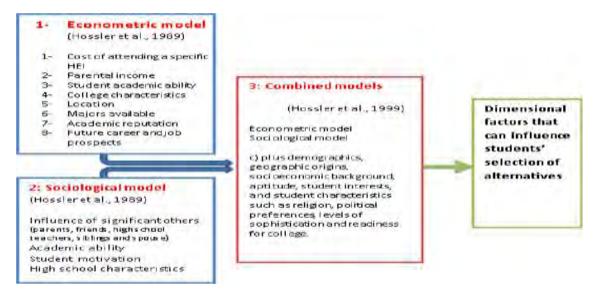Source: Malubay et al., 2017.

Figure 5. Hossler Dimensional Factors model.
Source: Hossler et al. (1999).

The economic model that Jackson proposed in 1982 is the most significant factor in students' college selections.

Hossler dimensional factors model

Dimensional factors model consists of economic model, sociological model and combined model. Hossler (1999) reveals the dimensional factors of student selection is further suggested that program cost, parental income, location, reputation of the academic institution and future job prospects belongs to economic model whereas peer influence, academic ability, student motivation, higher education characteristics belong to sociological model

and demographic and geographic origins, political preferences belongs to combined model to measure the dimensional factors that influence the students' choice of the university program selection. Figure 5 shows Hossler Dimensional Factors model.

Marketing mixed model for higher education

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
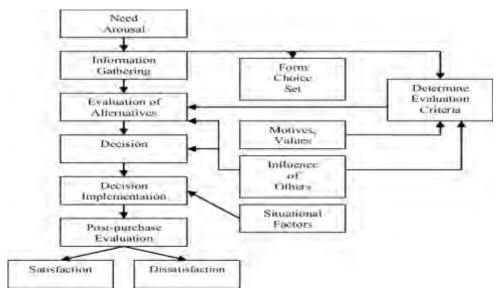
Figure 6. Combined Complex Decision model.
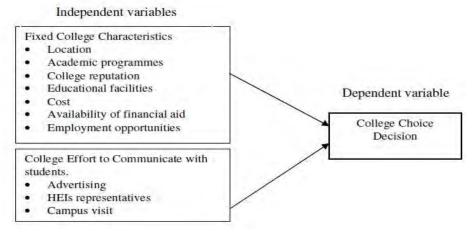Source: Holdswoth and Nind, 2006.

Figure 7. Proposed conceptual framework.
Source: Ming, 2010.

consumer behavior that is how individuals or group select 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.

Combined complex decision model

This model, developed by Holdswoth and Nind in 2006, identified a number of variables that affect a student's decision regarding a university, including cost, geographic proximity to home, the quality and flexibility of the degree and course options, the availability of housing, the

likelihood that an employer will hire from that university, and the availability of accommodation. Figure 6 shows the combined complex decision model.

METHODOLOGY

The conceptual framework is introduced to examine the necessity of a paradigm shift in tertiary education system in Sri Lanka. In order to establish a suitable conceptual framework to measure the paradigm shift, archived literature reviews, case studies, assumptions, different conceptual frameworks, models and theories are utilized. The proposed conceptual framework consists of both demand and supply side of the tertiary education; it narrates the university selection process (Choice) in a dynamic level.

Table 2. Unemployment of the Graduates – 2019 (Age 20 and above).

Type of the degree	Total	%
Total no. of unemployed graduates	42.024	100.0
Art degree	23.040	54.8
Other degrees	18.984	45.2

Source: Sri Lanka Labor Force Survey (2019), Department of Census and Statistics

The conceptual framework of this study is focusing the influencing factors affecting for the demand side, and the factors affecting to supply side in terms of making the decision of university selection.

The factors influencing the supply side of the job market include the entry of public universities, private universities, vocational education institutes, students' migration for higher education, new entrants to the job market, self-employment, and unemployed or NEET (Not in Education, Employment or Training). On the demand side, the factors influencing the job market are private sector organizations, public sector organizations, and those who migrate for work. These factors influencing the supply side can also be seen as psychological paradigm shifts. The conceptual framework is based on the theoretical frameworks of the archived literature reviews and the demand and supply side of the conceptual framework are based on the following two theoretical models.

1. Dimensional factors of student selection by Hossler (1999)
2. Marketing mix model for higher education by Kotler and Fox (1995)

Dimensional factors of student selection by Hossler (1999) belong to demand side of the conceptual framework. The Dimensional Factors model consists of the economic model, sociological model, and combined model, and it shows the factors affecting university selection from the demand side. Hossler (1999) reveals the dimensional factors of student selection is further suggested that program cost, parental income, location, reputation of the academic institution and future job prospects belongs to economic model whereas peer influence, academic ability, student motivation, higher education characteristics belong to sociological model and demographic and geographic origins, political preferences belongs to combined model to measure the dimensional factors that influence the students' choice of the university program selection.

The supply side of the conceptual framework is home to Kotler and Fox's (1995) marketing mix model for higher education. It demonstrates the supply-side factors influencing university choice. The program, the place, the pricing, the promotion, the physical facilities, the people, and the process are the seven components of Kotler and Fox's (1995) marketing mixed model for higher education. Similar to how people or groups choose, acquire, and use products and services, student choice is a component of consumer behavior. Students have five factors to take into account when choosing a university: needs and motivations, information gathering, assessing options, decision-making, and post-choice evaluation. Figure 8 shows the proposed conceptual framework for the study.

DISCUSSION

Analysis

The proposed conceptual framework covers both demand and supply side elements which focuses for a psychological paradigm shift in the tertiary education in Sri Lanka. Reference to the admissions to the public universities is completely based on A/L results and similarly it relies on the Z-score of each stream of the A/L examination. Therefore, the admissions are extremely competitive, and the capacity, available resources of the state university system is absolutely limited. The crucial factor is approximately only 20% of the students who qualify for university education and gain admission to the state universities. 20% of the students who obtain the opportunity to enter to the university education have multiple options that they can choose as their next step of the journey: enter to public universities, enter to private universities, vocational education and migrate for higher education. Some students study both in private and public-sector universities simultaneously. Around 250, 000 students get enrolled to vocational education system in Sri Lanka. Nearly 10,000 students are migrating for higher education in Sri Lanka. In addition to those students, there are some students who qualified for the public university or ability to enter to a private university for their higher education, they enter to the job market, or they started their own businesses (self- employment). Nowadays, students are finding the reasons to leave the university program and go to the job market easily. The reasons include four years' education system that Sri Lankan has, parents' influence, economic status of the family etc.

The students who do not meet the entry qualifications for university education in the country, estimated to be 83% of the total A/L passed out annually, have several opportunities in the market, such as entering private universities, pursuing vocational education, migrating for higher education, entering the job market, becoming self-employed, becoming unemployed, and becoming NEET (young people Not in Education, Employment or Training). These can be regarded as paradigm shifts in the tertiary education system in Sri Lanka. The unemployment rate is currently at 9.7%, which is a stark contrast to the 83% employment rate prior to the pandemic. This means that 17% of the population is now unemployed, even if they have completed tertiary education. Table 2 shows the estimated unemployment rate among persons aged 20 years and above who are graduates.

Table 3. Youth not in employment, education, or training (NEET) by gender, 2014-2019.

Gender	Year					
	2014	2015	2016	2017	2018	2019
Total	790.170	734.550	750.864	674.009	668.331	647.863
Male	242.421	224.501	234.616	212.226	216.246	202.043
Female	547.749	510.049	516.247	461.783	452.085	445.820

Source: Sri Lanka Labor Force Survey (2019), Department of Census and Statistics.

Table 4. NEET rate (NEET group as a percentage to total youth) by gender 2014 – 2019.

Gender	Year					
	2014	2015	2016	2017	2018	2019
Total	27.8	25.8	26.1	22.7	21.8	21.2
Male	17.6	16.3	17.0	14.8	14.4	13.3
Female	37.4	34.6	34.5	30.2	29.0	29.0

Source: Sri Lanka Labor Force Survey (2019), Department of Census and Statistics.

As per Table 2, the unemployed graduates, about 54.8% are Art degree holders while the other 45.2% consist of other degree holders.

NEET segment can be defined as ―young people Not in Education, Employment or Training". It considers all young people who are not employed and inactive in the age group (15 – 24 years). This portion of youth does not get any opportunities to enter to the next level of education. Around 24% of youth are NEET which is employment, education, or training for different social and cultural reasons. NEET rates capture the non-utilized labor potential of the population and can also be used to identify individuals who may be at risk of future difficulties. Table 3 indicates NEET by gender from 2014 to 2019.

Table 3 depicts that the number of female youth not in employment, education or training is higher than that of male youth in all years from 2014 to 2019. The total NEET group is fluctuating over the period from 2014 to 2019, with the estimated value for NEET in 2015 being approximately 0.6 million. The NEET group is composed of those who are unemployed, not engaged in education and not attending any training. Unemployed youths who have successfully completed formal professional/ technical training and are not actively searching for jobs may indicate the presence of an idling or disappointed youth labor force in the country's labor market. Table 4 indicates the percentage of NEET by gender from 2014 to 2019.

Table 4 shows that approximately one out of every five youths belong to the NEET group. This increases up to one out of three for female youth. NEET rate is significantly higher for female compared to male.

Based on the supply side of this framework, students eventually make their way to the labor market and end up with employment in both the private and public sectors. Aside from that the migration to another country has become even more trending. Assuming a particular student enters to the job market, the graduate most probably works in a private sector organization or public-sector organization. However, those who do not enter private sector or public-sector organizations tend to migrate for overseas employment. This makes it easy to identify the current job skills required, as well as any skill gaps or emerging skill requirements in the island. This shows the demand and supply side of the conceptual framework. Reference to the first research question and the primary objective of the study, those who have gone through the tertiary education after A/L, it is necessary to understand what the driving factors for the selection of the course and the program are, or perhaps is solely student's choice or someone else's dream to achieve it. The second question is to identify the driving factors for different institutions. Even though some students have been selected to the public universities, they may not enter due to various issues. They may enter private universities while considering the many benefits they offer. Some students also choose to enroll in either private and public universities or institutions at the same time (e.g. CIMA, ACCA, CIM). When it comes to migration for higher education, there is a tradeoff between local verses international migration. People assume that people who have money going abroad for higher education. But it is completely wrong because families without having three meals also try to send their children to abroad for higher education. Therefore, it is necessary to understand
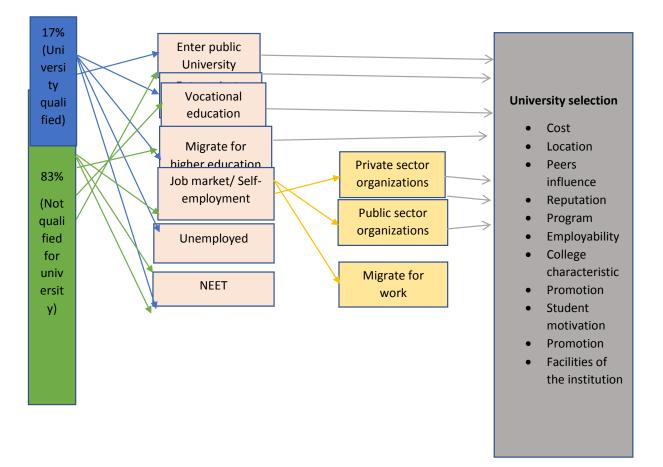
Figure 8. Conceptual framework.
Source: Author (2022)

what the tradeoff is they are expecting by choosing migration for higher education without staying local for higher studies.

Considering those who are moving to job market or self-employed has become a trend today. Researchers have clearly identified that youth groups in the market have a huge hesitation and unwillingness to enter to the universities. It is the main reason that influence youth to self- modem. However, they do not know anything about the gravity on self- employment. The unemployment and barriers to unemployment are also extremely crucial. Even though the employment opportunities exist some are voluntarily unemployed due to many reasons. Perhaps the reasons may be the family choices, parents' influence, the culture of the country and etc.
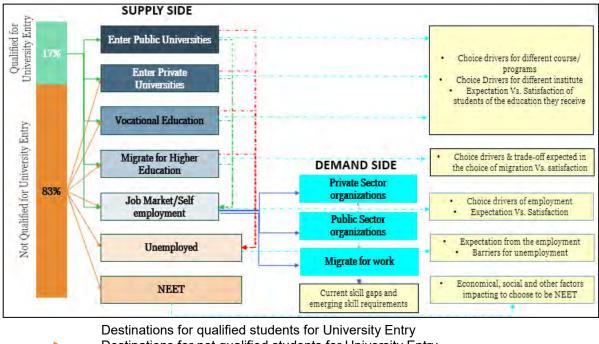
Conclusion

This study is aimed to highlight the necessity for a paradigm shift in tertiary education in Sri Lanka. Similarly, it also proposes a suitable conceptual framework to measure the identify of respective paradigm shift in the

tertiary education in the Sri Lanka. The proposed mechanism consists of demand pull and supply push factors of the tertiary education. Figure 9 (Proposed conceptual framework) identify the demand pull and supply push factors to measure the phycological paradigm shift in the tertiary education in Sri Lanka.

The factors influencing the supply side include enrolling in public universities, enrolling in private universities, pursuing vocational education, migrating for higher education, entering the job market, engaging in self-employment, and being unemployed or NEET (Not in Education, Employment or Training), while the factors influencing the demand side include private sector organizations, public sector organizations, and migrating for work. The factors influencing the supply side of tertiary education in Sri Lanka can also be regarded as a psychological paradigm shift, which focuses on a fundamental change in the basic concepts and experimental practices in the sector.

CONFLICT OF INTERESTS

The authors have not declared any conflicts of interests.

Figure 9. Conceptual framework.
Source: Author

REFERENCES

Abeygunawardena KAV (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. International Journal of Social Sciences 4(2):75-96.

Agrey L, Lampadan N (2014). Determinant Factors Contributing to Student Choice in Selecting a University.

Ahmad SZ, Buchanan FR, Ahmad N (2015). Examination of students' selection criteria for international education. International Journal of Educational Management.

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

Baharun R, Awang Z, Padlee SF (2011). International students' choice criteria for selection of higher learning in Malaysian private universities. African journal of Business management 5(12):4704.

Binney W, Martin C (1997). How Do Rural Students Choose Their Higher Education Institutions? Two Regional Australian Cases. Journal of Institutional Research in Australasia 6:74-80.

Chakrabarti A (2010). Determinants of Participation in Higher Education and Choice of Disciplines: Evidence from Urban and Rural Indian Youth. South Asia Economic Journal 10(2):371-402.

Chloe TWS (2019). Investigating Key Factors Influencing International Students' Choice of Private Higher Education Institutions (HEIs) in Malaysia.

Cho SJ, Hudley C, Lee S, Barry L, Kelly M (2008). Roles of Gender, Race, and SES in the College Choice Process among First-Generation and Non-First-Generation Students. Journal of Diversity in Higher Education 1(2):95.

Cho YZA (2018). A study on the factors influencing Myanmar students' choice of university courses.

Choi S, Nieminen T (2013). Factors influencing the higher education of international students from Confucian East Asia. Higher Education Research & Development 32(2):161-173.

Çokgezen M (2012). Determinants of University Choice: A Study on Economics Departments in Turkey. Yükseköğretim Dergisi 4(1):23-31.

Department of Census and Statistics. (2019). Sri Lanka Labour Force Survey, Colombo: Department of Census and Statistics.

Edirisinghe L, Ranwala L, Siriwardena S (2021). Shaping the Education to Meet the Global Demands: Industrial Inclusiveness in University Curriculum. Sustainable Development Research pp. 28-38.

Edirisinghe L, Siddhisena K, Siriwardena S, Ranwala L (2022a). Creating a Psychological Paradigm Shift in Students' Choice for Tertiary Education in Sri Lanka: The Influence of Socioeconomic Factors. Journal of Educational Administration and Policy Studies pp.

1-16.

Edirisinghe L, Siriwardena S, Ranwala L (2022b). Creating a Psychological Paradigm Shift in Students' Choice in the Tertiary Education in Sri Lanka through Education Vertical Integration. International Journal of Educational Administration and Policy Studies pp. 72-78.

El-Hilali N, Al-Jaber S, Hussein L (2014). Students' Satisfaction and Achievement and Absorption Capacity in Higher Education. GKI. (2022). Sri Lanka. Retrieved from https://knowledge4all.com: https://knowledge4all.com/admin/CountryProfiles2021/LKA-en.pdf

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.

Hossler D, Schmit J, Vesper N (1999). Going to college: How social, economic and educational factors influence the decisions students make, Johns Hopkins Press, Baltimore.

Jafari P, Aliesmaili A (2013). Factors Influencing the Selection of a University by High School Students. Journal of Basic and Applied Scientific Research 3(1):696-703.

Khairani AZ, Razak NA (2013). Assessing Factors Influencing Students' Choice of Malaysian Public University: A Rasch Model Analysis. International Journal of Applied Psychology 3(1):19-24

Kotler P, Fox K (1995). Strategic marketing for educational institutions, Upper Saddle River, NJ: Prentice Hall.

Kumar C, Singh SP, Nauriyal DK (2014). Correlates and Issues of Academic Course-Selection in Post-Secondary Education in India: Evidence from National Sample Survey 2007-08. Open Access Library Journal 1(3):1-22.

Kusumawati A (2010). Student Choice Criteria for Selecting an Indonesian Public University: A Preliminary Finding.

Lee CF (2014). An investigation of factors determining the study abroad destination choice: A case study of Taiwan. Journal of Studies in International Education 18(4):362-381.

Liyanage IMK (2014). Education system of Sri Lanka: Strengths and weaknesses. Education system of Sri Lanka pp. 116-140.

Mahmoud MA, Oppong E, Twimasie D, Husseini MM, Kastner ANA, Oppong M (2019). Culture and country choice of international students: evidence from Ghana. Journal of Marketing for Higher Education 30(1):105-124.

Malubay GJJ, Mercado KAO, Macasaet E (2017). Factors affecting the decision of freshmen students in pursuing hospitality and tourism programs in lyceum of the Philippines university–Laguna: basis for enhancement. LPU–Laguna Journal of International Tourism and Hospitality Management 3(1):23-48.

Manoku E (2015). Factors that influence university choice of Albanian students. European Scientific Journal 11(16).

Miner MA (2019). Unpacking the monolith: Intersecting gender and citizenship status in STEM graduate education. International Journal of Sociology and Social Policy.

Ming JSK (2010). Institutional Factors Influencing Students' College Choice Decision in Malaysia: A Conceptual Framework. International Journal of Business and Social Science 1(3).

Moravec JW (2008). A new paradigm of knowledge production in higher education. On the horizon.

Nawaratne SJ (2012). Shifting paradigms of higher education in Sri Lanka. In Workshop Proceedings P 75.

Ogawaa K, Iimuraa K (2010). Determinants of Access and Equity in Tertiary Education: The Case of Indonesia. Excellence in Higher Education. P. 1.

Prakasam GR, Mukesh, Gopinathan R (2019). Enrolment by academic discipline in higher education: differential and determinants. Journal of Asian Business and Economic Studies 26(2):265-285.

Rahman MS, Osmangani AM, Raman M (2017). Destination selection for education tourism: Service quality, destination image and perceived spirituality embedded model. Journal of Islamic Marketing 8(3):373-392.

Ranwala L, Siriwardena S, Kurukulaarachchi V, Edirisinghe L (2020). Determinants of university choice for the academic disciplines in the tertiary education in Sri Lanka.

Reddy VP (2014). The influence of social media on international students' choice of university and course. (Doctoral dissertation, Queensland University of Technology).

Rosti L, Chelli F (2009). Self- employment among Italian female graduates. Education+ Training.

Sarkodie NA, Asare A, Asare D (2020). Factors Influencing Students' Choice of Tertiary Education. ADRRI Journal (Multidisciplinary) 28(11(5)):58-92.

Mustafa SAA, Sellami AL, Elmaghraby EAA, Al-Qassass H B (2018). Determinants of college and university choice for high-school students in Qatar.

Shah M, Nair CS, Bennett L (2013). Factors influencing students' choice to study at private higher education institutions. Quality Assurance in Education.

Sofi SY (2016). Factors determining choice of stream at secondary level education. Imperial Journal of Interdisciplinary Research 2(8)39-45.

Sojkin B, Bartkowiak P, Skuza A (2012). Determinants of higher education choices and student satisfaction: the case of Poland. Higher education 63:565-581

Sovansophal K (2019). Family socioeconomic status and students' choice of STEM majors' evidence from higher education of Cambodia. International Journal of Comparative Education and Development 22(1):49-65.

Tretola B, Coupey E, Meamber L (2019). Multidisciplinary impact – the arts join informal STEM programs. Arts and the Market 9(1):81-94.

Wiese M, Heerden CHV, Jordan Y (2010). The role of demographics in students' selection of higher education institutions. Acta Commercii 10(1):150-163.