"Factor affecting Student Enrollment in Higher Education Institutions Butwal Sub-Metropolitan City, Nepal"

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Abstract

The study aims to explore the relationship between academic factors, economic factors, infrastructure, location of college, placement opportunity and student enrollment. It seeks to identify how different dimensions of academic factor, economic factor, infrastructure, location of college and placement opportunity influence student enrollment. The study adopted a quantitative approach, gathering responses from 312 students of higher education institutions in Rupandehi District using a structured questionnaire and employing a convenience sampling method. Data were analyzed using PLS-SEM software with various tools, including the assessment of measurement items, model fit, Importance-Performance Map Analysis (IPMA), and bootstrapping techniques for hypothesis testing. The results revealed that academic factors and placement opportunity are the key predictors of student enrollment. It is evident that these factors are major contributors to student enrollment. Therefore, the management of higher education institutions should consider these aspects to enhance student enrollment. By understanding and reformulating policies based on these factors, there is a higher possibility of improving student enrollment.

Keywords: *Academic factor, Economic factor, Infrastructure, Location of college, Placement opportunity, Student Enrollment.*

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I. Introduction

At a time when higher education is increasingly seen as a gateway to personal and national development, the fluctuating enrollment rates in Nepal's higher education institutions (HEIs) especially in management programs raise critical questions about the future of this sector. In Butwal Sub-Metropolitan City, a vibrant hub for education in Nepal, student enrollment patterns have become a focal point for researchers, policymakers, and institutional leaders alike. The decision to enroll in higher education is not merely a personal milestone; it is shaped by a complex interplay of academic, economic, infrastructural, and social factors that reflect broader societal changes and challenges. To systematically analyze the factors influencing student enrollment, this study defines its key variables as follows: Academic Factors: These refer to the perceived quality of faculty, curriculum, teaching methods, and the overall reputation of the institution (Tinto, 1993).

In the context of Worldwide, higher education is viewed as one of the main instruments that make the way for social progress, innovation, and economic growth. Student registration rates at university level in the developed world have generally been on the rise for the last couple of

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decades. This is largely since countries have solid institutional frameworks, enjoy policy support, and have well-equipped learning environments. As per the data provided by UNESCO in 2022, the United States, the United Kingdom, Japan, and Finland have been successful in attaining a gross enrollment ratio (GER) of over 70%. This is evidence that these countries are very committed to providing access to education to all and ensuring the quality of education. Furthermore, these countries are reported by the OECD (2021) to implement various strategies that promote lifelong learning, student employability, and technological advancement. Some of these strategies include the adoption of flexible academic structures, facilitating extensive research activities, and promoting career development through the establishment of the efficient career support system. Besides, the adoption of online and hybrid modes of learning has made education more accessible and has facilitated higher education to reach the less privileged groups of society.

On the other side, country like Nepal is struggling with continuous problems which prevent from expanding access to higher education. Although growing literacy rate, gross enrollment ratio in higher education in Nepal is on only 17%, which is far less than the average of the rest of world (University Grants Commission UGC, 2022). The lack of proper academic quality and infrastructure facilities, limited capital and problem of fair distribution of educational tools within rural and urban areas have all been identified as factors that have contributed to low educational participation. The unstable economic factor and expensive education are two factor which discourage parents from investing for their children's higher education mostly in management and technical fields (Hossler et al., 1999); (Adhikari &Sharma, 2021). In addition to this lack of academic quality and lack of academic quality and placement opportunity program further worse the condition and cause of underutilization of higher education opportunities.

Here, the academic factor in the research is the quality of faculty, the relevance of the curriculum, the effectiveness of the teaching methods, and the overall academic reputation, which together influence students' recognition of the value of the institution (Tinto, 1993). The economic factor includes tuition fees, family income, and the scholarship availability which affect students' capacity to make a payment for higher education (Hossler et al., 1999). The infrastructure is defined as the physical and technological facilities like classroom, libraries, laboratories, and other resources that are necessary for the effective delivery of learning process (Khanal &Maharjan, 2021). Location of college refers to factors like geographic accessibility, way to institution, convenience of the mode of transport, safety, which are determinants of student's decision to choose institution (Hotelling, 1929). The placement opportunity is term

as umbrella which includes internships, career opportunity services, and guidance toward future which increases students' employability and so enrollment motivation (Rothwell & Arnold, 2007).

Location of the college refers to factors such as geographic accessibility, closeness, the convenience of the mode of transport, and safety, which are the determinants of students' decision to a specific institution (Hotelling, 1929). The phrase 'Placement Opportunity' is an umbrella term that includes internships, job placement services, and career guidance that, in turn, increase students' employability and thus, enrollment motivation (Rothwell & Arnold, 2007). Student enrollment, thus, can be considered as the number of students who sign up and attend higher education programs; this is seen as a consequence of their decisions influenced by academic, economic, infrastructural, and career-related factors (Tinto, 1993).

Student enrollment research became a significant subject of discussion in the second half of the 20th century when countries started to expand their higher education systems, mainly in Europe and North America. In these regions, one of the pioneers in this respect, similarly Becker (1964) presented the Human Capital Theory, which views education as an investment leading to future economic benefits. Besides, sociological approaches like Tinto's Student Integration Model pointed out that students' participation is influenced by personal academic and social experiences. Eventually, worldwide research took into consideration the effect of institutional quality, economic resources, and capacity on the enrollment trends. Locally, Nepal witnessed the development of planned studies on enrollment only after the significant growth of private colleges in the 1990s; nevertheless, research has been geographically concentrated in the capital and remains sparse elsewhere (K.C., 2019).

The conceptual framework for this research draws support from key theories. Human Capital Theory (Becker, 1964) is the leading idea to suggest the influence of economic and market factors on students' willingness to make decisions contingent upon the expected career advantages. Maslow's Hierarchy of Needs (Maslow, 1943) is an instrument that explains how education quality and school facilities satisfy students' need for development and self-realization. Expectancy Theory (Vroom, 1964) illustrates that students make the choice of the institution they believe will give them a better chance to succeed in their studies and find a job. Furthermore, Location Theory (Hotelling, 1929) can be seen as the support of the geographical dimension in the figuring out of the college that is suitable. By combining these theories, it becomes easier to understand the model that includes academic, economic, infrastructural, locational, and placement factors as determinants of student enrollment in higher education.

This study is justified by the problem of student enrollment in the higher education institutions of Nepal that has been fluctuating for some time. The issue is most prominent in urban centers that are rapidly expanding, such as Butwal Sub-Metropolitan City. While developed countries have managed to achieve strong enrollment stability that is supported by their advanced academic systems, technological infrastructure, and effective placement services, Nepal still struggles with economic constraints, uneven academic quality, lack of facilities, and issues of accessibility. These differences contribute to the need to find out the factors that influence students' decisions to enroll in the local context as soon as possible. As higher education is one of the major drivers of human capital development, it becomes very important to figure out how academic quality, economic conditions, institutional infrastructure, college location, and placement opportunities can influence enrollment patterns for the purpose of educational planning to be improved. The present study is warranted as it offers real-world data that can assist institutions, policymakers, and educational planners in Strategy revision, upgrading academic and infrastructural standards, enhancing career services, reducing access barriers, and creating student-centered learning environments that are in line with both national needs and global educational trends.

Objectives of the Study

- To analyze the perception of the respondents with regard to the academic factors, economic factors, infrastructure, placement opportunity, location of the college on student enrollment by examining their average response level.
- To analyze the effect of academic factors, economic factors, infrastructure, placement opportunity, location of the college, and student enrollment.

II. Literature Review

This section presents a literature review, focusing on the theoretical and empirical aspects relevant to the current research being pursued. The theoretical review examines related theories that support the link between the variables mentioned in the framework. Moreover, the empirical review incorporates the findings of previous research conducted on the same topic. The following theoretical and empirical reviews support the contractual framework of the study and form the basis for the development of hypothesis.

Academic factor and Student Enrollment

The link between academic factor and student enrollment is strongly supported by motivational theories. Notably, Maslow's Hierarchy of Needs, which suggests that learners are motivated by a hierarchy of needs, starting from basic physiological needs to self-actualization (Maslow,

1943). According to this theory, academic factors such as quality of instruction and availability of academic support must be satisfied for students to feel secure and motivated to enroll. Additionally, the Social Learning Theory, proposed by Bandura (1977), asserts that individuals learn from observing others within a social context. This theory underscores the significance of academic reputation, peer recommendations, and role models in education.

A study by Pokhrel et al. (2016) in Kathmandu demonstrated that the academic quality of programs, including curriculum relevance and faculty qualifications, was a crucial determinant for students choosing between higher education institutions. This suggests a direct correlation between strong academic offerings and the likelihood of enrollment. Accordingly, to Ruslan et al. (2014) among Malaysian students highlighted the role of academic quality and campus characteristics as key factors influencing students' selection of higher education institutions. Their findings indicated that students prioritize academic rigor and the availability of academic resources when deciding where to enroll. Based on these studies, the following hypothesis can be formulated:

H1: There is significant relation of academic factor on student enrollment.

Economic factor and student enrollment

The link between economic factor and student enrollment is strongly supported by Human Capital Theory by Becker (1964), this theory posits that individuals invest in education with the expectation of future economic benefits. According to socioeconomic status (SES) significantly influences access to higher education (Sewell & Shah, 1968). Students from lower SES backgrounds may face financial barriers that affect their higher education choices. In Rupandehi, the financial capabilities of families will likely dictate which students can afford tuition and related expenses, thereby influencing overall enrollment patterns in HEIs. Additionally, Price Sensitivity Theory emphasizes that demand for higher education is sensitive to changes in costs (Heller, 1997). In the case of Rupandehi District, increases in tuition fees or living costs could lead to a decrease in student enrollment, especially among economically disadvantaged populations. The findings indicated that higher fees were associated with lower rates of enrollment, particularly among students from low-income families. Based on these studies, the following hypothesis can be formulated:

H2: There is significant relation of economic factor on student enrollment.

Infrastructure and Student Enrollment

The link between infrastructure and student enrollment is strongly supported by Maslow's Hierarchy of Needs theory: Proposed by Abraham Maslow (1943), this theory asserts that individuals are motivated by a hierarchy of needs, ranging from basic physiological needs to higher-level psychological needs. In an educational context, access to essential infrastructure—such as classrooms, libraries, laboratories, and recreational facilities—addresses students' basic needs for safety and comfort in a learning environment. When HEIs in Rupandehi provide adequate infrastructure, they enhance students' satisfaction and support their learning journey, thus motivating enrollment. Additionally Social Capital Theory: articulated by Pierre Bourdieu (1986), emphasizes the importance of social networks and institutional resources in influencing educational outcomes. In the context of infrastructure, well-equipped HEIs create an environment conducive to learning, collaboration, and interaction among students. Enhanced infrastructural resources such as technology, transportation, and campus facilities promote student engagement, which can positively affect enrollment rates.

Cheung et al. (2018) evaluated the role of physical and digital infrastructure in student enrollment across various universities in Hong Kong. Researchers concluded that modern and well-maintained facilities positively impacted student choices, with students gravitating towards institutions offering superior infrastructural resources. This suggests that HEIs in Rupandehi can enhance enrollment through investments in physical amenities and modern educational technologies. Additionally, a survey by Mavuso (2021) in South Africa examined factors that influence the choice of HEIs among students. The study found that quality infrastructure ranked among the top considerations for students, as it directly impacted their academic success and engagement. This implies that in Rupandehi, HEIs must prioritize infrastructural improvements to remain competitive and attractive. Based on these studies, the following hypothesis can be formulated:

H3: There is significant relation of infrastructure on student enrollment.

Placement opportunity and student enrollment

The link between placement opportunity and student enrollment is strongly supported by Gary Becker (1964), this theory posits that individuals invest in their education to enhance their skills and knowledge, leading to better job prospects and higher earnings. In the context of HEIs in Rupandehi, the promise of favorable placement opportunities can serve as a significant motivation for students to enroll. Institutions that demonstrate strong employability outcomes, such as placement rates, attract students who aim to maximize their human capital through quality education that leads to job security and career advancement. Additionally, **E**xpectancy Theory developed by Victor Vroom (1964), this theory posits that individuals are motivated to

act based on the expected outcomes of their actions. In the realm of higher education, students are likely to enroll in institutions where they believe their efforts will lead to successful employment outcomes. If HEIs in Rupandehi can demonstrate a strong track record of alumni employment, students will have a higher expectancy of achieving similar results, driving their enrollment decisions.

Rothwell and Arnold (2007) examined the influence of career services and job placement on student satisfaction and enrollment decisions at UK universities. Their research highlighted that students showed a marked preference for institutions with strong placement programs, as it correlated with perceived value in their education and future job prospects. Blasco et al. (2018) examined the role of internships and job placement in student decision-making in higher education in Latin America. Results indicated that institutions with robust placement networks were more successful in attracting students, as they directly aligned education with employment opportunities, increasing the attractiveness of enrollment. Based on these studies, the following hypothesis can be formulated:

H4: There is significant relation of placement opportunity on student enrollment.

Location of college and student enrollment

The link between location of college and student enrollment is strongly supported by Theory of Planned Behavior (TPB) state that individual's beliefs about the outcomes of a behavior (in this case, choosing an educational institution) and their perceptions of how easy or difficult it is to perform the behavior (the accessibility of the college) directly affect their intentions and choices (Ajzen, 1991).Relevant theory which shows the relationship between location of the college and HEIs enrollment is Location Theory, which executed that geographical factors significantly influence human choices, including educational decisions (Hotelling, 1929).

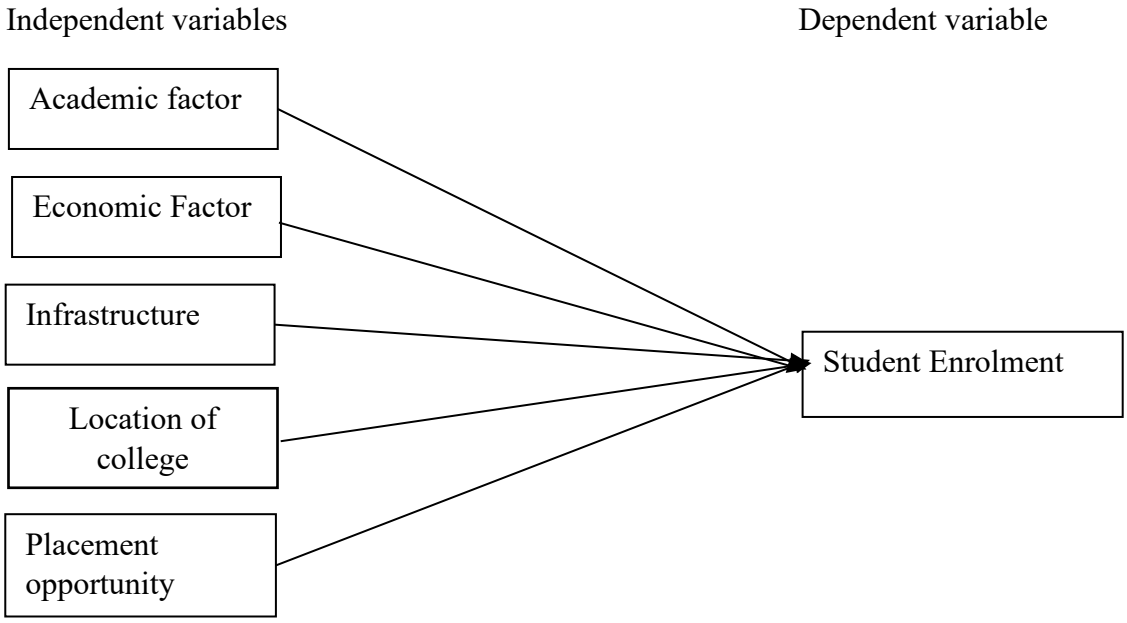
The research conducted by Silwal and Baral (2021) in Kathmandu highlighted that proximity to quality institutions significantly influences students' choices, supporting the notion that enrollment rates are positively correlated with the college's location. Their findings stipulate that students often prefer institutions with better access, thus validating Location Theory's assertions regarding educational choices. Le et al. (2022) explored the factors affecting students' decisions to choose higher education institutions in Vietnam. Their findings underscored the importance of proximity, institutional reputation, and the availability of resources, which are associated with the location of colleges. Based on these studies, the following hypothesis can be formulated:

H4: There is significant relation of Location of college and student enrollment.

Research Framework

The research framework is the structure that illustrates the relationship among various variables. In this context, three variables are employed. Service quality is measured by five indicators**:** Academic factor, Economic factor, Infrastructure, Location of college and Placement opportunity as independent variables. Student enrollment is used as the dependent variable. The research framework of the study is outlined below:

Figure 1 - *Research Framework*



Note. Adapted from **(**Dhaliwal et al., 2019)

Operationalization variables

Academic Factor

This refers to the perceived quality and relevance of the educational offerings of the institution. Operationally, it will be measured through a composite index incorporating the following elements: (a) Range and reputation of academic programs: Number of programs offered across different disciplines and the perceived academic standing of these programs based on publicly available rankings or accreditations (if applicable) (Alkakimi & Qasem, 2018; Igberahara & Onyesom, 2021); (b) Quality of faculty: Proportion of faculty holding terminal degrees in their fields and student-to-faculty ratio as reported by the institution (Dhaliwal et al., 2019); (c) Availability of research opportunities: Presence of undergraduate and graduate research programs, research centers, and opportunities for student involvement in faculty research projects (if data available from institutional websites or publications); (d) Academic support

services: Existence and perceived accessibility of tutoring services, writing centers, academic advising, and library resources (Teachmint, n.d.).

Economic Factor

This encompasses the financial aspects associated with attending the institution. Operationally, it will be measured through a composite index including: (a) Tuition and fees: The total cost of attendance, including tuition, mandatory fees, and other institutional charges for a full-time student per academic year (Ortagus et al., 2021); (b) Availability of financial aid and scholarships: The total amount of institutional scholarships, grants, and other forms of financial assistance available to students, as well as the proportion of students receiving such aid (if publicly reported by the institution); (c) Cost of living: Estimated average cost of housing, food, transportation, and other living expenses in the vicinity of the college (if data available from publicly accessible cost-of-living indices or surveys for the college's location); (d) Perceived return on investment: Students' or prospective students' perceptions regarding the future earning potential and career prospects associated with graduating from the institution (Becker, 1964).

Infrastructure

This refers to the physical and technological resources available at the institution that support the learning and living environment. Operationally, it will be assessed through: (a) Quality and adequacy of learning facilities: Availability of modern classrooms, well-equipped laboratories, libraries with sufficient resources (physical and digital), and specialized learning spaces (e.g., studios, workshops) (Teachmint, 2023); (b) Availability of on-campus housing: Capacity and quality of student residential facilities (if applicable and data available); (c) Technological infrastructure: Availability and reliability of internet access, Wi-Fi connectivity across campus, and access to computer labs and other technology resources (Varthana, 2023); (d) Recreational and co-curricular facilities: Presence of sports facilities, student centers, and spaces for extracurricular activities (Teachmint, 2023).

Placement Opportunity

This refers to the support and resources provided by the institution to facilitate students' transition into the workforce or further studies after graduation. Operationally, it will be measured by: (a) Career services and resources: Availability of career counseling, resume workshops, interview preparation, and job fairs organized by the institution (Western Sydney University, 2023); (b) Internship and co-op opportunities: Number and variety of internship or cooperative education programs facilitated or offered by the college (Sheffield Hallam University, n.d.); (c) Graduate employment rate: Percentage of graduates employed or enrolled in further education within a specified period after graduation (if publicly reported by the

institution); (d) Relationships with potential employers: Number of partnerships or collaborations the institution has with companies and organizations for recruitment purposes (if information is available through career service websites or institutional reports).

Location of College

This refers to the geographical setting and accessibility of the institution. Operationally, it will be defined by: (a) Urbanicity: Categorization of the college's location as urban, suburban, or rural based on official geographical classifications or population density data (if available); (b) Accessibility via transportation: Availability and convenience of public transportation options (e.g., buses, trains) and proximity to major roadways (using online mapping services or institutional information); (c) Proximity to students' origin: Geographical distance between the college's location and the typical catchment areas or the home addresses of enrolled students (if such data can be ethically and legally obtained or inferred from enrollment patterns); (d) Local economic and social environment: Presence of industries or job markets relevant to the college's programs in the surrounding area, and the perceived safety and attractiveness of the local community (if data available from local government sources or surveys).

III. Research Methodology

This section deals with the research methods adopted by the researcher in conducting the research. It looks at the various methods and procedures of the research study adopted in conducting the study in order to address and answer the research problems and questions stipulated by the researcher. In this regard, it deals with different component of research design which guides researcher to decide the population and sample from the desired research area, techniques of approaching the sampled respondent, sources of data collection, research instrument used for data collection and different types of tools used to analyze the collected data. Thus, this section is organized in the following structure: research design, population, sample size, sampling technique, sources of data collection, data collection methods, tools used for data analysis.

Research design

A research design is a structured plan that guides data collection and analysis, shaping the study (Cooper & Schindler, 2003). This study adopts Descriptive Research Design and Explanatory Research Design to achieve its objectives.

Descriptive Research Design systematically presents characteristics, behaviors, or phenomena without altering variables. It identifies trends, patterns, and relationships within a population (Creswell, 2014). Explanatory Research Design examines cause-and-effect relationships by comparing groups with existing differences, analyzing the impact of independent variables on

dependent variables without direct manipulation (Fraenkel & Wallen, 2009). Likewise, Kerlinger (1986) highlights ex post facto research, where past independent variables are analyzed to assess their effects on dependent variables (Kerlinger, 1986; Pant, 2012, p. 117). Common statistical methods include the Spearman Rank Order Coefficient, Phi Correlation Coefficient, Regression, t-test, Chi-square, and Analysis of Variance (Isaac, 1978; Pant, 2012, p. 118).

By combining descriptive and explanatory designs, this study effectively examines variable relationships and their impact (Kerlinger, 1986), ensuring a structured and systematic approach.

Population and sample

The population of this research study comprises all respondents within the research area. In this study, the chosen research area is Butwal Sub-Metropolitan City, and the population consists of BBA the student of higher educational institutional affiliated to T.U located in Butwal. The total number of students in these colleges is 1500 . Therefore, the population of the study is identified as 312. The details of the banks and their respective number of students are presented in Table 1.

Total students of Educational Institutions in Butwal

S. N	Name of College	Educational Program	No. of Student
1	Siddartha Gautam Buddha Campus	MBS	290
		MED	100
2	Lumbini Banijya Campus	MBS	120
		MBS-F	100
		MBA-BF	70
3	Butwal Kalika Campus	MA	50
4	Butwal Multiple Campus	MBS	250
		MA	420
		MED	100

Sample is a part of a population or subset of population and denoted by n. The total sample size for this study has been obtained using the formula developed by yamane (1967). In case of population size is known, the Yamane formula for determining the sample size is given by: n= N/1+Ne2 Where, n= sample size, N= Population size, and e= Margin of error (MOE), e=0.05 based on research condition. Thus, the sample size of the study is n =365

Sampling method

The sampling method is chosen to select sample respondents from the overall population for data collection. In this context, the simple random sampling method is specifically student approaching the sample respondents. Given that the study focuses on

the factor affecting student enrollment in higher educational institutions of Butwal, Sub-metropolitan city, Nepal. The convenience sampling technique is deemed appropriate. This choice is made because the number of male students is relatively low, allowing for the identification and random selection of individuals from the list of male students to mitigate bias among respondents.

Nature and Sources of Data Collection

This study primarily relies on quantitative data, which were collected from primary sources. A structured questionnaire was designed to gather first-hand information directly from respondents.

Survey Instrument

A self-structured questionnaire was used as the survey instrument for data collection. It was developed based on operational definitions from previous literature. The questionnaire employs a seven-point Likert scale (7 =Strongly Agree, 6 = Agree, 5 = Somewhat Agree, 4 = Neutral, 3 = Somewhat Disagree, 2 = Disagree, and 1 = Strongly Disagree) to gather responses from participants.

A set of questions was designed to measure each independent, dependent variable totaling 24 items. To ensure clarity and accuracy, a pilot test was conducted by distributing the questionnaire to a sample of 30 respondents. Out of 365 distributed questionnaires, 312 were fully completed, yielding a response rate of 86.67%.

Statistical Tools

The study utilized various statistical tools based on the nature of the data. Descriptive statistics, including mean and standard deviation (SD), were computed to analyze and interpret students' responses. Additionally, a reliability test was conducted to assess the consistency of the research instrument. Furthermore, correlation analysis was used to measure the relationship between variables, while regression examined the effect of independent variables on the dependent variable.

IV. Result and Analysis

Measurement Items Assessment

Table 1: *Assessment of Measurement Scale Item*

Variables	Items	Outer loadings	VIF	Mean	Standard deviation
Academic factor	AF1	0.734	1.596	5.103	1.753
	AF2	0.907	3.778	5.058	1.616
	AF3	0.806	2.345	4.654	1.842
	AF4	0.884	3.173	5.042	1.569

	AF5	0.878	2.866	5.048	1.756
	EF1	0.739	1.561	2.897	1.753
	EF2	0.898	3.55	2.942	1.616
Economic Factor	EF3	0.81	2.348	3.346	1.842
	EF4	0.876	2.861	2.958	1.569
	EF5	0.731	1.601	3.237	1.826
	INF1	0.903	3.295	3.324	1.913
	INF2	0.885	3.203	3.692	1.979
Infrastructure factor	INF3	0.847	2.487	3.628	2.07
	INF4	0.828	2.42	4.112	1.96
	INF5	0.923	4.43	3.798	1.981
	LOC1	0.864	2.476	5.888	1.46
	LOC2	0.83	2.322	5.776	1.536
Location of college	LOC3	0.859	2.518	5.667	1.685
	LOC4	0.8	2.048	4.971	1.8
	LOC5	0.8	1.88	5.429	1.784
	PO1	0.88	3.11	5.048	1.756
	PO2	0.904	3.874	5.125	1.849
Placement opportunity	PO3	0.919	4.363	5.407	1.562
	PO4	0.758	1.91	5.689	1.636
	PO5	0.785	1.794	5.106	1.656
	SE1	0.807	1.974	5.494	1.595
	SE2	0.828	2.52	5.644	1.575
Student Enrollment	SE3	0.89	3.31	5.519	1.597
	SE4	0.873	3.71	4.894	1.765
	SE5	0.782	2.659	4.542	1.746

Note. Derived from SmartPLS 4 Software

The Variance Inflation Factor (VIF) and standardized outer loading of the scale items used to measure the variables relevant to this study are shown in Table 1. According to Sarstedt et al. (2017), an item's outer loading needs to be higher than 0.708 in order for it to be deemed to significantly affect the evaluation of the associated variable. All forty-three scale objects are therefore kept for further examination. Additionally, each item's VIF value is less than 5, suggesting that multicollinearity is not present in the scale's items (Sarstedt et al., 2014).

Quality Criteria Assessment

Table 2 - *Construct Reliability and Validity*

Variables	Alpha	CR (rho_a)	CR (rho_c)	AVE
Academic factor	0.897	0.902	0.925	0.713
Economic Factor	0.87	0.876	0.907	0.662
Infrastructure factor	0.925	0.935	0.944	0.771
Location of college	0.888	0.892	0.918	0.691
Placement opportunity	0.904	0.908	0.929	0.725
Student Enrollment	0.893	0.897	0.921	0.7

Note. Derived from SmartPLS 4 Software

The results of Cronbach's Alpha, Composite Reliability (CR), and Average Variance Extracted (AVE) are shown in Table 2 to evaluate the convergent validity of the variables used in this

investigation. As demonstrated by Cronbach's Alpha coefficients that exceed the 0.705 threshold, each scale item makes a sufficient contribution to the assessment of related variables (Bland & Altman, 1997). A strong internal consistency metric is also indicated by the fact that the CR values of rho_A and rho_C are greater than the minimal requirement of 0.70 (Saari et al., 2021; Hair et al., 2022). Furthermore, each variable accounts for more than 50% of the variance explained, as indicated by the AVE values exceeding the critical cutoff point of 0.50. This outcome Validates that convergent.

Discriminant Validity

Table 3 - *Heterotrait- Monotrait (HTMT) ratio matrix*

Variables	Academic factor	Economic Factor	Infrastructure factor	Location of college	Placement opportunity	Student Enrollment
Academic factor						
Economic Factor	0.501					
Infrastructure factor	0.511	0.478				
Location of college	0.855	0.733	0.618			
Placement opportunity	0.735	0.747	0.556	0.811		
Student Enrollment	0.874	0.876	0.489	0.883	0.607	

Note. Derived from SmartPLS 4 Software

The HTMT ratio of the correlation matrix is displayed in Table 3 to evaluate the discriminant validity of the latent variables. The range of the HTMT ratio is 0.171 to 0.898. Although Henseler et al. (2015) suggest that a range of up to 0.90 is acceptable, the HTMT ratio values must be below the critical value of 0.85. As a result, the reflective constructs' discriminant validity is verified (Hair & Alamer, 2022).

Table 4 - *Fornell-Larcker Criterion*

Variables	Academic factor	Economic Factor	Infrastructure factor	Location of college	Placement opportunity	Student Enrollment
Academic factor	0.844					
Economic Factor	-0.776	0.814				
Infrastructure factor	-0.47	0.435	0.878			
Location of college	0.821	-0.823	-0.568	0.831		
Placement opportunity	0.661	-0.661	-0.517	0.731	0.852	

Student Enrollment	0.783	-0.773	-0.453	0.796	0.821	0.837

Note. Derived from SmartPLS 4 Software

The Fornell-Larcker Criterion, displayed in Table 4, is a crucial discriminant validity assessment in a structural equation model (SEM) (Fornell & Larcker, 1981). This criterion is satisfied if the average variance extracted (AVE) for each construct is higher than the squared correlation between that construct and any other construct in the model. Each construct's diagonal entries must have a square root of AVE larger than the off-diagonal values for the matching rows and columns. Table 4 shows that the diagonal values (in bold) for Academic factor (0.844)

Economic factor (0.814), Infrastructure factor (0.878), placement opportunity (0.831), Location of college (0.852), and student Enrollment (0.837) are all higher than their inter-construct correlations. This ensures the discriminant validity of the measurement model by suggesting that each concept is distinct and taps into a different portion of variance (Hair et al., 2010). This ensures that the constructs do not overlap and that the measures are measuring the right things.

Table 5 - *Cross Loading*

Variables	Academic factor	Economic Factor	Infrastructure factor	Location of college	Placement opportunity	Student Enrollment
AF1	0.734	-0.739	-0.33	0.668	0.568	0.642
AF2	0.907	-0.898	-0.429	0.743	0.575	0.689
AF3	0.806	-0.81	-0.377	0.602	0.517	0.587
AF4	0.884	-0.876	-0.377	0.731	0.532	0.66
AF5	0.878	-0.791	-0.46	0.864	0.592	0.715
EF1	-0.734	0.739	0.33	-0.668	-0.568	-0.642
EF2	-0.907	0.898	0.429	-0.743	-0.575	-0.689
EF3	-0.806	0.81	0.377	-0.602	-0.517	-0.587
EF4	-0.884	0.876	0.377	-0.731	-0.532	-0.66
EF5	-0.607	0.731	0.237	-0.582	-0.49	-0.55
INF1	-0.461	0.428	0.903	-0.578	-0.526	-0.47
INF2	-0.416	0.386	0.885	-0.503	-0.476	-0.404
INF3	-0.352	0.331	0.847	-0.415	-0.383	-0.346
INF4	-0.398	0.354	0.828	-0.467	-0.417	-0.36
INF5	-0.422	0.396	0.923	-0.507	-0.445	-0.387
LOC1	0.678	-0.791	-0.46	0.864	0.592	0.715
LOC2	0.678	-0.649	-0.398	0.83	0.539	0.586
LOC3	0.687	-0.68	-0.463	0.859	0.621	0.648
LOC4	0.657	-0.646	-0.504	0.8	0.573	0.602
LOC5	0.66	-0.641	-0.526	0.8	0.695	0.73
PO1	0.554	-0.554	-0.447	0.618	0.88	0.71

PO2	0.542	-0.547	-0.472	0.61	0.904	0.699
PO3	0.543	-0.554	-0.412	0.584	0.919	0.743
PO4	0.534	-0.529	-0.284	0.556	0.758	0.601
PO5	0.638	-0.626	-0.562	0.738	0.785	0.728
SE1	0.598	-0.619	-0.443	0.614	0.718	0.807
SE2	0.687	-0.667	-0.432	0.719	0.726	0.828
SE3	0.686	-0.675	-0.406	0.739	0.743	0.89
SE4	0.654	-0.638	-0.359	0.655	0.651	0.873
SE5	0.651	-0.633	-0.235	0.585	0.545	0.782

Note. Derived from SmartPLS 4 Software

Table 5 displays the cross-loading values for every item and variable used in this study. An indicator variable must exhibit a loading of at least 0.70 towards its own construct and have no cross-loading on any other construct in the measurement model, according to the recommended standard for assessing cross-loading. This recommendation was based on the work of Hair et al. (2014). To illustrate the discriminant validity of the constructs in the measurement model, Table 5 displays the loading values for each construct. According to these loading values, every construct has a loading on the associated construct that is higher than 0.70. Furthermore, compared to the unrelated items, the loading values of the variables' associated items are higher. Consequently, this table supports the discriminant validity of the constructs of the measurement model.

Model fit Assessment

The SRMR fit indices evaluate the model's explanatory efficacy. The model's SRMR value is 0.77, below the acceptable threshold of 0.80 (Bollen & Stine, 1992). Consequently, this finding suggests that the model exhibits adequate explanatory capability.

Moreover, the effect sizes of Academic Factor, Economic Factor, Infrastructure factor, Placement Opportunity and location of college on Student enrollment are quantified as 0.12, 0.091, 0.083, 0.034, and 0.506, respectively. This reveals that Academic Factor moderately influences Student Enrollment, whereas Economic Factor, infrastructure factor, and Location of college have a minor effect on Student enrollment. In contrast, Placement opportunity wields a substantial impact on SE. (Cohen, 2013).

Finally, the r-square value corresponding to Student Enrollment is 0.785. This signifies that Student Enrollment possesses strong predictive power (Hair et al., 2013).

Figure : Path Relationship model

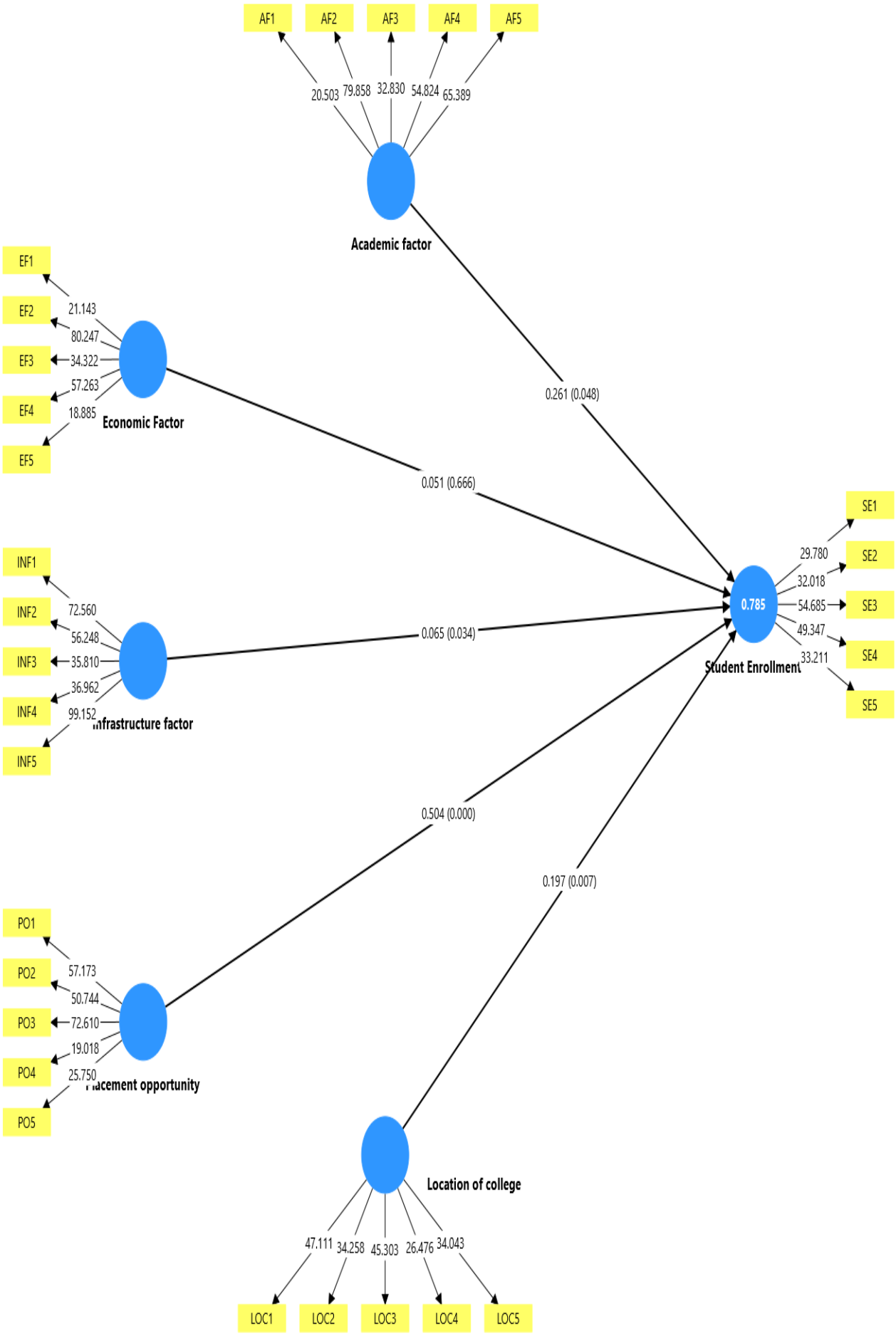


Table 6 - Hypothesis testing using Bootstrapping

	β	Sample means (M)	Standard deviation (STDEV)	Confidence Interval		T statistics (|O/STDEV|)	P value	Decision
				2.50%	97.50%			
H1:AF>SE	0.261	0.26	0.132	0	0.521	1.979	0.048	Accepted
H2:EF>SE	0.051	0.051	0.118	-0.184	0.281	0.432	0.666	Rejected
H3:IF>SE	0.065	0.066	0.031	0.007	0.217	2.118	0.034	Accepted
H4: LOC>SE	0.197	0.196	0.073	0.057	0.339	2.703	0.007	Accepted
H5:PO>SE	0.504	0.507	0.062	0.386	0.628	8.086	0	Accepted

Note. Derived from SmartPLS 4 Software

Figure 2 and Table 6 report the results of a bootstrapping analysis performed with 10,000 sub samples, which examine decisions regarding the proposed hypotheses s. Hypotheses H1, H3, H4, H5 have achieved acceptance at a significance threshold at 0.05. However, H2 is rejected as their p-value is above 0.05. Thus, there is a positive and significant impact of academic factors, infrastructure factor, placement opportunities, location of college on student enrollment. However, there is a positive and insignificant impact of economic factors on student enrollment.

Table 7 - *Importance performance*

	LV performance	Importance
Academic factor	66.571	0.261
Economic Factor	65.738	0.051
Infrastructure factor	44.815	0.065
Location of college	71.187	0.197
Placement opportunity	76.428	0.504
Mean	64.9478	0.2156

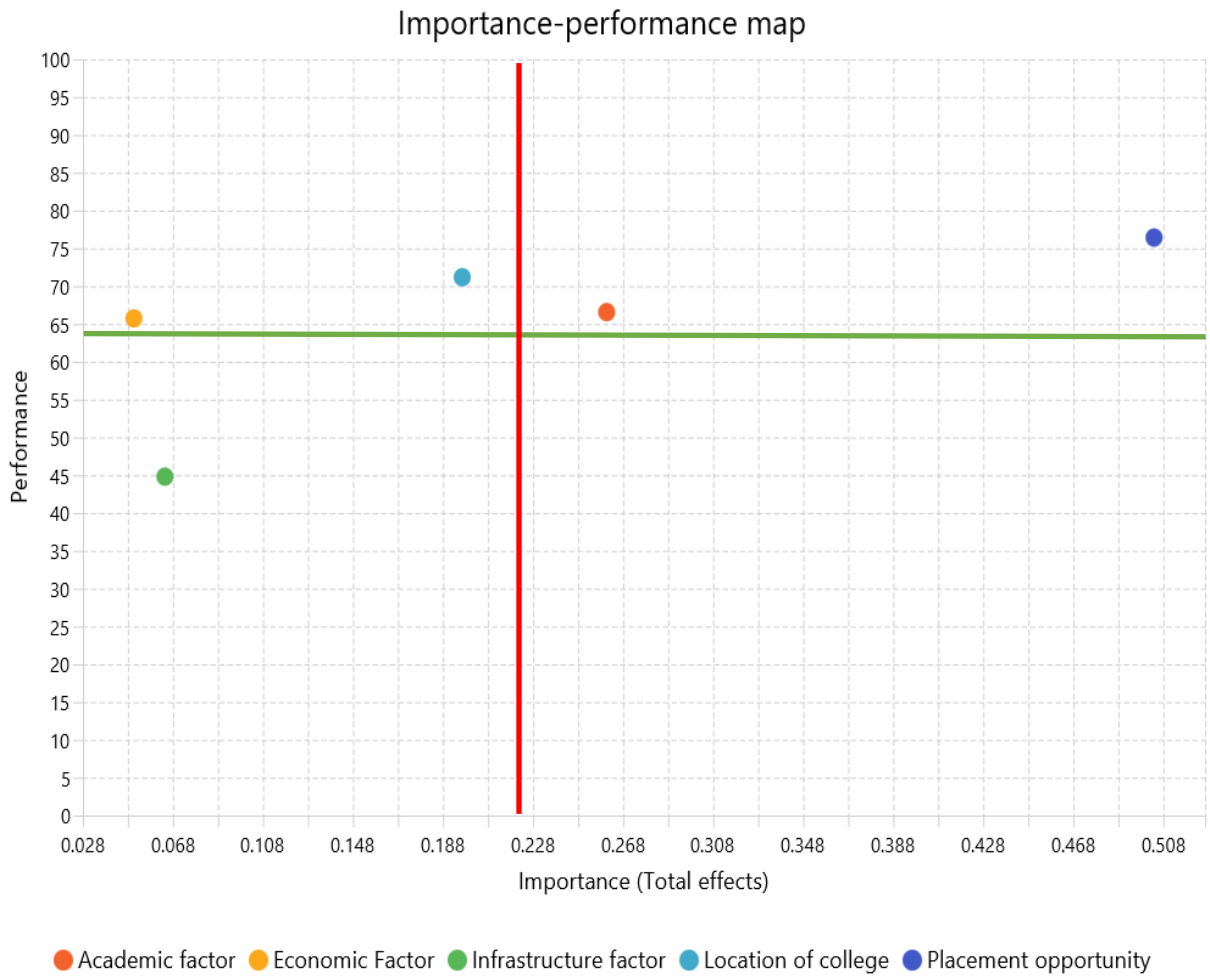
Note. Derived from SmartPLS 4 Software

Table 7 shows the total effects of Academic factor, Economic factor, Infrastructure factor, Location of college, and Placement Opportunity on Student Enrollment for the unstandardized effects. These effects are the same as the unstandardized weights of ordinary least square regression modelling (Hair et al. 2010). Furthermore, the student enrollment use attitude was calculated as 71.092 .

Notably, we derived the five quadrants successfully based on the mean values of the constructs' importance and performance value. As per Fig. 2, if we increase 1 unit in placement opportunity from 76.428 to 77.428. Student enrollments increased from 71.092 to 71.596. Similarly, if we increased 1 unit in performance of economic factor from 65.738 to 66.738, then student enrollment attitude grew to increase from 71.092 to 71.143. Therefore, out of the five

determinants of student enrollment, the most critical factor was noted to be placement opportunity.

Figure 2



Note. Derived from SmartPLS 4 Software

Table 8 - *Necessary Condition Analysis (NCA): Bottleneck Value*

	LV scores - Student Enrollment	LV scores - Academic factor	LV scores - Economic Factor	LV scores - Infrastructure factor	LV scores - Location of college	LV scores - Placement opportunity
0.00%	17%	NN	NN	NN	23%	NN
10.00%	25%	NN	NN	NN	25%	NN
20.00%	34%	NN	NN	NN	25%	NN
30.00%	42%	NN	NN	NN	25%	31%
40.00%	50%	NN	NN	NN	25%	31%
50.00%	59%	29%	29%	NN	41%	31%
60.00%	67%	29%	29%	NN	41%	31%
70.00%	75%	29%	29%	NN	41%	31%
80.00%	83%	47%	42%	NN	55%	31%
90.00%	92%	60%	59%	NN	55%	31%

Note. Derived from SmartPLS 4 Software

Table 8 represents bottleneck values using necessary condition analysis. To achieve 17% student enrollment 23% of the infrastructure factors are necessary. Further, to achieve 42% student enrolment 25% location of college and 31% placement opportunity is necessary. factors are necessary. Further, to achieve 59% student enrollment 29% of academic factor, 29% of economic factor, 41% of location of college, 31% of placement opportunity is necessary. Further, to achieve 83% of student enrollment 47% of academic factors, 42% of economic factors, 55% of location of college and 31% of placement opportunity is necessary. Similarly, to achieve 92% of student enrollment 60% of academic factor, 59% of economic factor 55% of location of college and 31% of placement opportunity is necessary.

Findings of the Study

Findings of this study indicate that academic factors, infrastructure factors, placement opportunity and location of college positively effect and significantly impact student enrollment. However economic factors positively and insignificantly impact student enrollment.

V. Discussion, Implication and Conclusion

Discussion

The results of this study point to a number of important factors that influence student enrollment in Nepal's Butwal Sub-Metropolitan City's higher education institutions. Among these, the college's location, placement opportunities, infrastructure, and academic quality were found to be highly beneficial determinants. These findings are in good agreement with regional and international research on enrollment in higher education. As students favor universities with high academic performance, knowledgeable faculty, and up-to-date curricula, academic reputation and the caliber of teaching staff are widely acknowledged as crucial determinants in their decision-making processes (Nguyen et al., 2022). Comparably, the presence of contemporary facilities such as classrooms, libraries, labs, and online materials helps create a favorable learning atmosphere that draws in potential students (Khanal & Maharjan, 2021).As students look for a return on their educational investments, placement opportunities particularly those related to industry connections and job market readiness have grown in importance as a deciding factor in enrollment (Kantanen et al., 2023). Furthermore, the institution's location is important because universities in easily accessible urban areas typically draw more students because of the convenience of transportation, safety, and accessibility to other amenities (Thapa & Bhandari, 2020). Despite having a positive correlation, the economic factor was determined to be statistically insignificant in this particular context. This could imply that although the expense of education is a concern, Butwal families and students may value the perceived long-term advantages of a high-quality education over the immediate financial strain,

or assistance from the community (Adhikari & Sharma, 2021). Overall, the results highlight the need for educational institutions to implement comprehensive strategies to increase their appeal and support the multifaceted nature of enrollment decisions.

Implications

This research provides critical insights that can guide higher educational institutions in Butwal Sub-Metropolitan City and similar urban centers in Nepal to enhance their enrollment strategies. By identifying and empirically validating key factors such as academic quality, institutional infrastructure, college location, and placement opportunities the study offers a data-driven foundation for institutional planning and policy formulation. Institutions can use these findings to tailor their academic offerings, invest in infrastructure development, improve career support services, and strategically locate or promote their campuses to attract prospective students. Additionally, by understanding students' behavioral and motivational drivers through the lens of Maslow's, Human Capital Theory, Expectancy Theory, and TPB, institutions can design more student-centered programs and marketing strategies. Ultimately, this research supports in institutions in becoming more competitive, responsive, and aligned with the expectations of the modern learner, leading to sustained growth in enrollment and educational quality. By combining Maslow's Hierarchy of Needs, Human Capital Theory, and Expectancy Theory, this empirical study makes a significant theoretical contribution to our understanding of student enrollment behavior. Students seek to satisfy psychological and self-actualization needs (Maslow), invest in education as a way to increase future earnings and productivity (Human Capital Theory), and base their enrollment decisions on the perceived value and expected results of their efforts (Expectancy Theory). These factors significantly influence academic quality, infrastructure, placement opportunities, and college location. From a practical standpoint, the results provide insightful recommendations for policymakers and educational institutions in Butwal and comparable settings. Institutions can match their strategies with students' motivations by raising academic standards, bolstering job placement services, upgrading physical infrastructure, and guaranteeing accessibility. This will increase enrollment and promote equitable access to higher education.

Conclusions

This study concludes that student enrollment in higher education institutions in Butwal Sub-Metropolitan City is mainly dependent on factors like academic quality, institutional infrastructure, the location of the college, and placement opportunities. Individually and collectively, these factors reveal that students put a priority on accessible institutions, a supportive learning environment, and clear career prospects when deciding where to study. Economic factors, though, have a small positive influence as well, thus meaning that students

are willing to face some financial challenges in the short term for the sake of long-term educational benefits.

The research likewise discloses that the reasons for enrolling in a program are fluid and can change during the student's life. Thus, a subsequent study with a larger sample, and qualitative data is advised to reveal more profound and generalizable insights. In general, the study acts as a resource to be used by policymakers and educational institutions who are willing to devise effective enrollment strategies and consolidate higher education in Nepal.

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