

Factor Analysis Of Factors Driving Interest In Studying In Taiwan

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Abstract

This research investigates the factors influencing students' interest in pursuing higher education in Taiwan. Utilizing factor analysis, the study identifies key components that significantly impact the decision-making process of prospective international students. The analysis reveals that out of eight identified factors, only two—Factor 1 and Factor 7—adequately represent the overall decision-making influences. Factor 1 encompasses variables such as Learning Facilities, Involvement in the International Arena, Industry Involvement, Satisfaction of International Students, Alumni Connections, Presence in Exhibitions, and Digital Campaigns. Meanwhile, Factor 7 includes Scholarship Programs and the Number of Research and Publications. Among these, the Quality of Campus Life emerges as the most dominant factor, with a very strong extraction value of 0.859. The study concludes that these factors collectively shape the attractiveness of Taiwan as a study destination, with the remaining 28 variables also exerting a significant influence, evidenced by their extraction values exceeding 0.5 on average.

Keywords : Service Quality, Product, Promotion, Trust, Brand Image, Factor Analysis, and Decision-Making

INTRODUCTION

International student mobility has become a significant trend in higher education, with an increasing number of prospective students seeking educational experiences abroad. In this context, Taiwan has become an increasingly popular destination, including for prospective students from Indonesia. To further understand the factors influencing the



decision of Indonesian prospective students to continue their studies in Taiwan, a comprehensive analysis is necessary.

The increasing number of Indonesian students studying in Taiwan is driven by the Taiwanese government's soft power initiatives, which provide scholarships for international students. According to the Taipei Economic and Trade Office (TETO), the number of Indonesian students studying in Taiwan between 2018 and 2022 has experienced a significant increase. The Director of TETO Indonesia, Grace Ou, stated that thanks to Taiwan's soft power policies, the number of international students from Indonesia has increased by 28% during this period. In 2022, the number of Indonesian students in Taiwan reached 16,639 people, up from 11,840 in 2018, placing it in the second-highest position.

In terms of service quality, the factors to be investigated include industry connectivity, cultural and linguistic integration, academic counseling programs, facilities, scholarships, and other support facilities. Service quality is crucial as it can affect the learning experience and adaptation of international students in the new educational environment. Meanwhile, in terms of the marketing mix, the factors to be evaluated include product quality, information and promotion conveyed to prospective students, trust or belief, and the university's brand image in Taiwan. An in-depth analysis of these factors is expected to provide a deeper understanding of the preferences and considerations of Indonesian prospective students in choosing Taiwan as a higher education destination.

By understanding the factors that influence the decisions of prospective students, it is expected that higher education institutions in Taiwan can identify areas that need improvement to increase their attractiveness to international students, especially from Indonesia. The results of this research are expected to provide valuable insights for the Taiwanese government and educational institutions in developing more effective policies and marketing strategies to attract prospective Indonesian students.

This research will make a significant contribution to understanding the dynamics of international higher education mobility between Indonesia and Taiwan. Therefore, this study will focus on analyzing the factors that influence the decisions of Indonesian prospective students, based on indicators of service quality and marketing mix.

The service quality aspects to be studied include industry connectivity, cultural and linguistic integration, academic counseling programs, facilities, scholarships, and other support facilities. Meanwhile, the marketing mix components to be evaluated include product quality (study programs and facilities), information and promotion conveyed to



prospective students, student trust (belief) in institutions, and the university's brand image in Taiwan.

Through an in-depth analysis of these factors, it is expected to obtain a more comprehensive understanding of the preferences and considerations of Indonesian prospective students in choosing Taiwan as a higher education destination. The findings of this research can provide valuable input to relevant parties in developing more effective strategies to increase international student mobility from Indonesia to Taiwan.

Based on the background description above, the research problems in this study are:

1. What factors influence Indonesian citizens in choosing to study in Taiwan?
2. What is the most dominant factor influencing Indonesian citizens in choosing to study in Taiwan?

Research Objectives

Based on the research problems above, the objectives of this study are:

1. To determine and analyze the factors that influence Indonesian citizens in choosing to study in Taiwan.
2. To determine and analyze the most dominant factor influencing Indonesian citizens in choosing to study in Taiwan.

Research Benefits

The benefits to be achieved in this research are:

1. This research will provide a deeper understanding of the factors that influence the decision of Indonesian prospective students to continue their studies in Taiwan, both in terms of service quality and marketing mix. This will help relevant parties to understand the preferences and considerations of Indonesian students in choosing higher education destinations.
2. The results of this research can help higher education institutions in Taiwan to identify areas that need to be improved in order to increase their attractiveness to international students, especially from Indonesia. Thus, higher education institutions in Taiwan can develop strategies to attract more Indonesian students.
3. The results of this research can provide valuable insights for the Taiwanese government and educational institutions to develop more effective policies and marketing strategies in attracting prospective Indonesian students. This can have a positive impact on improving educational cooperation between the two countries.

145



4. This research is expected to make a significant contribution to understanding the dynamics of international higher education mobility between Indonesia and Taiwan, and provide a basis for the development of better educational policies in both countries.

Thus, this research is expected not only to provide a better understanding of the preferences of Indonesian students, but also to provide practical benefits in the development of higher education in both countries.

THEORETICAL BASIS

Service Quality

Service quality, according to Fand and Gregorius (2019) in (Nisa, 2023), is providing special encouragement for customers to establish mutually beneficial relationship bonds by understanding in detail the specific expectations and needs, thereby increasing customer satisfaction by maximizing pleasant customer experiences and minimizing unpleasant ones. Tjiptono (2015) in (Nurhikmah et al., 2022) states that service quality is the expected service and the perceived service.

The factors that become an assessment of the service quality of a foreign university can be identified into 5 dimensions of service quality, namely:

1. Strong academic support
2. Modern learning and research facilities
3. Internship and job placement opportunities
4. Support for international students
5. Scholarship and financial assistance programs
6. Campus life quality

Product

Product is everything that can be offered to satisfy a need and desire of consumers (Kotler, 2014) in (Herdianto, 2023). Meanwhile, Kennedy, et al (2001) in (Eriyanti, 2021) stated that product quality is related to trust in salespeople and the company. From the perspective of service marketing, the product is the overall concept of an object or process that provides a number of values to consumers.

Indicators of product quality of a foreign university are:

1. Global ranking.
2. Teaching quality.
3. Involvement in the international arena.



4. Number of Research and Publications.
5. Involvement in the industry
6. Satisfaction of international students
7. Alumni connections

Promotion

Promotion is the company's activity in stimulating and disseminating information about the presence, availability, characteristics, conditions of the product, and the benefits or uses of the produced product (Woen & Santoso, 2021).

Indicators of promotion of foreign universities used in this study are:

1. Presence at exhibition events
2. Digital campaigns
3. Information programs and seminars
4. Cooperation with education agents
5. Student testimonials
6. Partnerships with educational institutions

Trust

Trust is the extent to which a consumer believes that a particular product can satisfy his or her desires. According to (Carroll & Ahuvia, 2006), this allows customers to rely on brands that are beneficial to them. In general, trust is the willingness of consumers to rely on a party based on its characteristics and behavior (Jevons & Gabbott, 2000). Trust not only differs among people but also in their relationships (Schoorman et al., 2007). According to (Lin & Lee, 2012; Mao, 2010), it is the psychological and emotional state of a customer's expectation of a particular brand (Situmorang, 2024). The function to run the product excellence in this case is the trust regarding the usefulness, benefits, attitudes of a product or service from a brand or company when used by consumers. (Sumadi et al., 2022)

Consumer trust in a product can be created by providing security guarantees on the product, as well as the benefits (efficacy) of the product in question.

Indicators of trust in foreign universities are:

1. University reputation
2. Direct testimonials from students
3. Scholarship program credibility
4. Administrative support



5. Perceptions of culture and environment

Brand Image

According to Kotler and Keller (2016) in (Aji & Putra, 2024; Yanto, 2024), a brand is a name, term, sign, symbol or design, or a combination of these, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors. (Suvia & Yuwono, 2022) also says that brand image is where this concerns how a consumer depicts what they feel about the brand when they think about it.

Indicators of the brand image of universities are as follows:

1. Brand awareness
2. Positive association
3. Differentiation
4. International reputation
5. Scholarship program credibility

Choosing Decisions

Decision is the selection of one of several choices from an action from two or more alternatives. A decision is something that a consumer decides to decide on the choice of purchasing goods or services (Swasta, 2015) in (Daulay, 2024)

Conceptual Framework

In the context of this research, the conceptual framework represents the process of selecting the relevant theoretical aspects that are related to the research problem (Firdaus, 2015). In this study, the researcher's framework of thinking starts with the prospective students or students.

The conceptual framework for this research is constructed based on the variables that have the potential to influence the decision-making process.

The conceptual framework for this research is as follows:



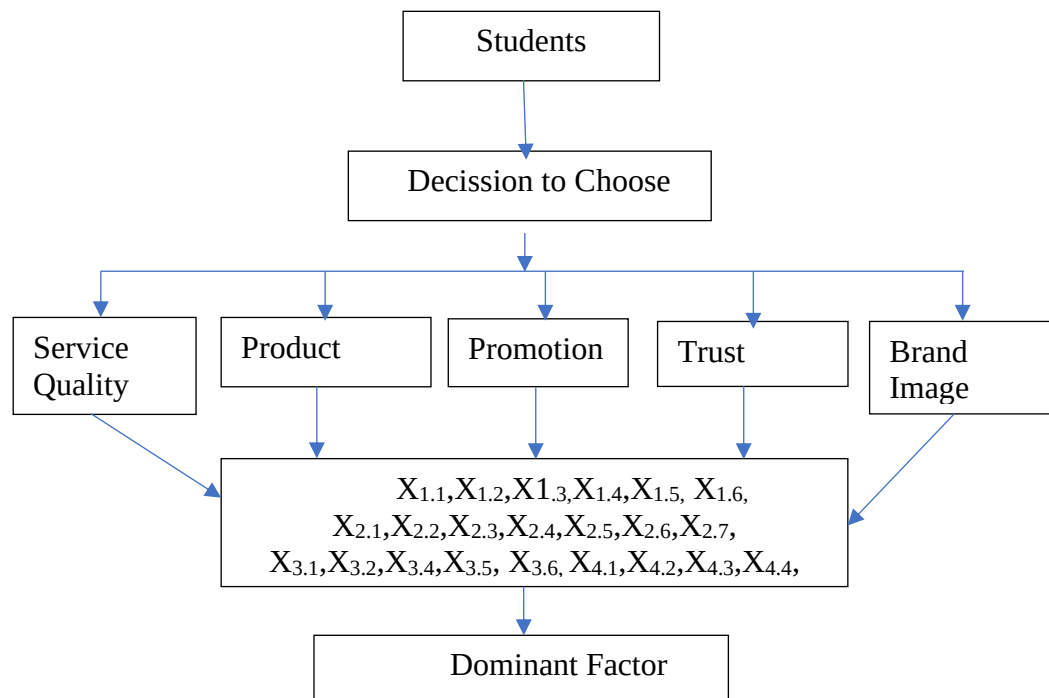


Figure 1: Conceptual Framework

Hypotheses

According to Sugiyono (2018), a hypothesis is a temporary answer to the formulation of the research problem in the form of a question. Hypotheses are temporary in nature because they are based on theory, not empirical facts. Hypotheses can be stated as theoretical answers to the research problem formulation, not empirical answers.

The hypotheses in this study are:

1. There are factors that influence students in choosing to study in Taiwan.
2. There is a dominant factor that influences students in choosing to study in Taiwan.

Population and Sample

In this study, the population is prospective students and students who decide to study in Taiwan. The sampling method used in this study is "Snowball Sampling", which is the determination of a sample of prospective students or students who choose to study in Taiwan, which is sent in a chain through online. According to Sugiyono (2019:143), the minimum number of sample members is 10 times the number of variables studied. For

149

simple research, the number of sample members is between 10 and 20. Therefore, in this study, the researchers will take a sample size of 15 times the number of variables studied. The research variables in this study are set at 5 variables. So, the minimum sample size in this study is $5 \times 15 = 75$ respondents.

Operational Definition and Identification of Variables

In this study, there are two research variables, namely the dependent variable and the independent variable. In this study, there are variables of the decision to choose, including: Service Quality (X1), Product (X2), Promotion (X3), Trust (X4), Brand Image (X5).

1. Dependent Variable

The dependent variable in this study is the decision to choose (Y).

2. Independent Variables

The independent variables in this study are Service Quality (X1), Product (X2), Promotion (X3), Trust (X4), Brand Image (X5).

The instruments compiled based on the operational definitions can be seen in Table 1 as follows:

Table 1. Operational Definition of Variables and Indicators]

Variables	Indicators	Statement Items
Service Quality (X ₁)	1.Academic Support 2.Learning Facilities 3.Internship Opportunities for Students 4.Support for International Students 5.Scholarship Programs 6.Campus Life Quality	X ₁ ,X ₂ , X ₃ , X ₄ , X ₅ , X ₆
Product (X ₂)	1.Global Ranking . 2.Teaching Quality . 3.Involvement in The International Arena . 4.Number of Research and Publications . 5.Industry Involvement 6.Satisfaction of International Students 7.Alumni Connections	X ₇ ,X ₈ ,X ₉ ,X ₁₀ ,X ₁₁ ,X ₁₂ , X ₁₃
Promotion (X ₃)	1.Presence in Exhibitions 2.Digital Campaigns	X ₁₄ ,X ₁₅ ,X ₁₆ ,X ₁₇ , X ₁₈ , X ₁₉



Variables	Indicators	Statement Items
	3.Information Programs and Seminars 4.Education agent collaboration 5.Student testimonials 6.Partnerships with Educational Institutions	
Trust (X ₄)	1.University Reputation 2.Direct student testimony 3.Credibility of the scholarship program by the campus 4.Dukungan administrative 5.Perception of culture and environment	X ₂₀ ,X ₂₁ , X ₂₂ , X ₂₃ , X ₂₄
Brand Image (X ₅)	1.Campus Brand Awareness 2.Positive Association 3.Differentiation 4.International Reputation 5.Credibility of Student Scholarship Programs	X ₂₅ ,X ₂₆ , X ₂₇ , X ₂₈ , X ₂₉

Data Analysis

Validity and Reliability Test

Based on the results of the validity and reliability tests after distributing questionnaires to 75 respondents, the instrument reliability value was 0.915. The Cronbach's Alpha value of 0.915 (see table below) indicates that the 29 items of questions distributed are considered reliable.

Table 2: Reliability Test Results

Reliability Statistics	
Cronbach's Alpha	N of Items
.915	29

To examine the validity of the research instrument, it is necessary to test the extent to which the values generated by the instrument are valid. In this study, the validity test



was carried out by involving 75 respondents to assess whether the question items used have been appropriate and suitable to be used as instruments in the research

Tabel 3 : Validity Test Result

Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Academic Support	105.73	208.955	.564	.901
Learning Facilities	105.88	207.296	.581	.901
Internship Opportunities for Students	105.89	208.178	.557	.901
Support for International Students	105.68	212.653	.468	.903
Scholarship Programs	105.87	212.198	.419	.904
Campus Life Quality	106.19	216.694	.251	.908
Global Ranking	106.04	209.579	.573	.901
Teaching Quality	105.68	208.734	.597	.901
Involvement in The International Arena	105.84	205.704	.635	.900
Number of Research and Publications	105.88	210.377	.538	.902
Industry Involvement	105.95	206.592	.711	.899
Satisfaction of International Students	105.97	205.297	.721	.899
Alumni Connections	105.85	205.559	.703	.899
Presence in Exhibitions	105.83	204.605	.658	.899
Digital Campaigns	105.76	204.725	.653	.900
Information Programs and Seminars	105.72	212.042	.480	.903
Education agent collaboration	105.84	206.920	.578	.901
Student Testimonials	105.89	212.799	.462	.903
Partnerships with Educational Institutions	105.73	208.009	.696	.900
University Reputation	106.04	209.120	.563	.901
Direct student testimony	106.04	213.012	.438	.904
Credibility of Student Scholarship Programs	105.89	207.745	.666	.900
Administrative Support	105.92	208.210	.567	.901
Perception of culture and environment	105.80	209.514	.634	.901
Campus Brand Awareness	105.99	225.743	-.005	.910



Item-Total Statistics				
	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Positive Association	106.04	224.525	.026	.911
Differentiation	106.03	224.378	.037	.910
International Reputation	105.83	224.145	.047	.910
Credibility of the Scholarships Offered	105.87	226.036	-.019	.911

Based on the validity test results, the Cronbach's alpha value for the 29 question items at a significance level of 5% is at least 0.300. The analysis shows that each item of the 29 question items has a value above 0.305, so it can be concluded that all question items are declared valid. Thus, the instruments used in this study can be stated as valid and reliable. Therefore, the 29 question items can be used for further analysis purposes.

Data Analysis

Testing the predetermined variables

The 29 variables tested were included in the factor analysis to test the KMO and Bartlett Test values and MSA (measures of sampling adequacy). The MSA value must be above 0.5. The following is a table of the KMO and Bartlett Test values:

Tabel 4 : KMO and Bartlett's Test

KMO and Bartlett's Test			
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.			.771
Bartlett's Test of Sphericity	Approx. Chi-Square		1420.376
	df		406
	Sig.		.000

Based on the information provided above, the results of the The KMO value is 0.771, which is greater than 0.5, and the significance value of Bartlett's Test of Sphericity is 0.000, which is less than 0.05.

Therefore, the variables and samples available can be further analyzed using factor analysis, as the data meets the requirements for this statistical technique.



Tabel 5 : Measures of Sampling Adequacy (MSA)

Measures of Sampling Adequacy (MSA)

Academic Support	.720 ^a
Learning Facilities	.694 ^a
Internship Opportunities for Students	.735 ^a
Support for International Students	.649 ^a
Scholarship Programs	.675 ^a
Campus Life Quality	.536 ^a
Global Ranking	.823 ^a
Teaching Quality	.738 ^a
Involvement in The International Arena	.712 ^a
Number of Research and Publications	.780 ^a
Industry Involvement	.856 ^a
Satisfaction of International Students	.828 ^a
Alumni Connections	.822 ^a
Presence in Exhibitions	.876 ^a
Digital Campaigns	.799 ^a
Information Programs and Seminars	.620 ^a
Education agent collaboration	.869 ^a
Student Testimonials	.824 ^a
Partnerships with Educational Institutions	.870 ^a
University Reputation	.781 ^a
Direct student testimony	.679 ^a
Credibility of Student Scholarship Programs	.904 ^a
Administrative Support	.822 ^a
Perception of culture and environment	.919 ^a
Campus Brand Awareness	.587 ^a
Positive Association	.609 ^a
Differentiation	.664 ^a
International Reputation	.771 ^a
Credibility of the Scholarships Offered	.543 ^a

Regarding the 29 variables, the Measure of Sampling Adequacy (MSA) values for all variables are greater than 0.50, which means that all variables are suitable for factor analysis.



Factoring and Rotation

After all variables meet the requirements, the next step is to perform factor analysis, which is the process of extracting a set of variables to form one or more factors. In this extraction process, the method used is Principal Component Analysis.

After eight factors were formed, to determine which variables will be included in each factor, a rotation process was performed using the varimax method, which is part of the orthogonal method.

Tabel 6 : Communalities

Communalities		
	Initial	Extraction
Academic Support	1.000	.684
Learning Facilities	1.000	.659
Internship Opportunities for Students	1.000	.688
Support for International Students	1.000	.856
Scholarship Programs	1.000	.817
Campus Life Quality	1.000	.859
Global Ranking	1.000	.778
Teaching Quality	1.000	.748
Involvement in The International Arena	1.000	.721
Number of Research and Publications	1.000	.785
Industry Involvement	1.000	.727
Satisfaction of International Students	1.000	.836
Alumni Connections	1.000	.797
Presence in Exhibitions	1.000	.730
Digital Campaigns	1.000	.803
Information Programs and Seminars	1.000	.760
Education agent collaboration	1.000	.562
Student Testimonials	1.000	.824
Partnerships with Educational Institutions	1.000	.824
University Reputation	1.000	.798
Direct student testimony	1.000	.727
Credibility of Student Scholarship Programs	1.000	.693



Communalities		
	Initial	Extraction
Administrative Support	1.000	.667
Perception of culture and environment	1.000	.513
Campus Brand Awareness	1.000	.740
Positive Association	1.000	.725
Differentiation	1.000	.589
International Reputation	1.000	.600
Credibility of the Scholarships Offered	1.000	.647
Extraction Method: Principal Component Analysis.		

Based on the Communalities analysis, which refers to the explanation by Singgih Santoso (2004:42), it can be concluded that all variables can be used to explain the factors formed.

Communalities indicate the amount of variance of a variable that can be explained by the existing factors. The higher the Communalities value, the stronger the relationship between the variable and the formed factors.

In this study, the variable with the largest Communalities value is "Campus Life Quality" with an extraction value of 0.859. This means that 85.9% of the variance of this variable can be explained by the factors that are formed.

Therefore, it can be concluded that all variables used in this study can well explain the factors formed through factor analysis.

The Communalities analysis provides important insights into the relevance and significance of the variables in the factor analysis. The high Communalities values indicate that the selected variables are closely related to the underlying factors that influence the decisions of Indonesian students in choosing to study in Taiwan.

This information is valuable in interpreting the results of the factor analysis and identifying the key determinants of the decision-making process. The variables with the highest Communalities values are likely to be the most important factors in shaping the students' choice of studying in Taiwan.

Overall, the Communalities analysis confirms that the selected variables are appropriate and well-suited for the factor analysis, and the results can be used to draw meaningful conclusions about the factors influencing the decisions of Indonesian students.



Referring to the explanation by Singgih Santoso (2004:43), the Total Variance Explained table depicts the number of factors formed in the factor analysis. To determine the factors formed, the Eigenvalue must be considered, where the factors worthy of being retained are those with an Eigenvalue greater than 1.

The Eigenvalue indicates the relative importance of each factor in calculating the variance of the total existing variables. The sequence of Eigenvalues is always arranged from the largest to the smallest value. The larger the Eigenvalue of a factor, the greater the ability of that factor in explaining the variance of all variables.

Therefore, the determination of the number of factors formed is based on Eigenvalues greater than 1, as factors with Eigenvalues less than 1 are considered inadequate to explain the variance of the existing variables.

In this study, the results of the Total Variance Explained analysis show that 8 factors were formed with Eigenvalues greater than 1. These 8 factors can be considered as the key factors that influence the decisions of Indonesian students in choosing to study in Taiwan.

The specific Eigenvalues and the percentage of variance explained by each factor are presented in the Total Variance Explained table. This information is crucial in understanding the relative importance and contribution of each factor in the decision-making process.

By examining the Eigenvalues and the cumulative percentage of variance explained, the researcher can determine the appropriate number of factors to retain and interpret, based on the established criteria and the research objectives.

The analysis of the Total Variance Explained table, along with the Rotated Component Matrix, provides a comprehensive understanding of the underlying factors and their respective influence on the decisions of Indonesian students in selecting Taiwan as their study destination.

Tabel 7 : Total Variance Explained

Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.823	33.873	33.873	9.823	33.873	33.873
2	2.996	10.332	44.205	2.996	10.332	44.205



Total Variance Explained						
Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
3	1.794	6.187	50.393	1.794	6.187	50.393
4	1.672	5.765	56.157	1.672	5.765	56.157
5	1.459	5.032	61.190	1.459	5.032	61.190
6	1.254	4.326	65.515	1.254	4.326	65.515
7	1.150	3.964	69.479	1.150	3.964	69.479
8	1.006	3.470	72.949	1.006	3.470	72.949
9	.950	3.276	76.226			
10	.914	3.152	79.378			
11	.796	2.743	82.121			
12	.631	2.177	84.298			
13	.584	2.013	86.311			
14	.539	1.859	88.170			
15	.495	1.708	89.878			
16	.448	1.544	91.422			
17	.375	1.293	92.716			
18	.361	1.246	93.961			
19	.327	1.129	95.090			
20	.266	.917	96.007			
21	.193	.666	96.673			
22	.184	.636	97.309			
23	.181	.626	97.934			
24	.171	.589	98.523			
25	.137	.471	98.995			
26	.123	.423	99.418			
27	.076	.264	99.681			
28	.056	.194	99.876			
29	.036	.124	100.000			
Extraction Method: Principal Component Analysis.						



Based on the analysis results in the Total Variance Explained table, it is known that there are 29 variables or components analyzed in this study. Furthermore, based on the initial eigenvalues, 8 factors were formed.

The requirement for a factor to be considered feasible is if it has an eigenvalue greater than 1. The details of the eigenvalues and the ability of each factor to explain the variance are as follows:

1. Factor 1 has an eigenvalue of 9.823 and can explain 33.9% of the variance.
2. Factor 2 has an eigenvalue of 2.996 and can explain 10.3% of the variance.
3. Factor 3 has an eigenvalue of 1.794 and can explain 6.2% of the variance.
4. Factor 4 has an eigenvalue of 1.672 and can explain 5.8% of the variance.
5. Factor 5 has an eigenvalue of 1.459 and can explain 5.0% of the variance.
6. Factor 6 has an eigenvalue of 1.254 and can explain 4.3% of the variance.
7. Factor 7 has an eigenvalue of 1.150 and can explain 4.0% of the variance.
8. Factor 8 has an eigenvalue of 1.006 and can explain 3.8% of the variance.

Therefore, all the factors formed have met the requirements with eigenvalues greater than 1.

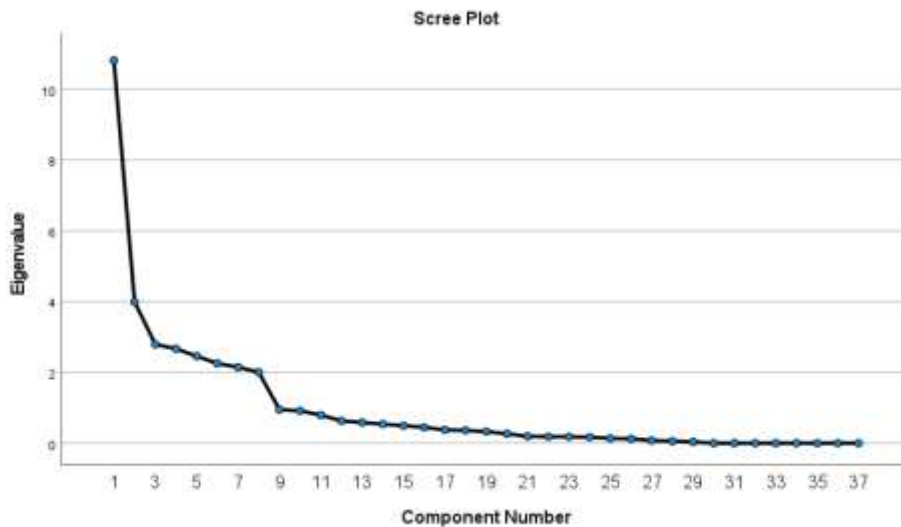
Based on the analysis results in the Total Variance Explained table, it can be seen that there are 29 variables (components) included in the factor analysis. From these 29 variables, 8 factors were formed, namely Factor 1, Factor 2, Factor 3, Factor 4, Factor 5, Factor 6, Factor 7, and Factor 8.

The process of determining which variables will enter each factor is done by comparing the correlation magnitudes in each row (variable) in the table. The variables will be grouped into the factors that have the greatest correlation with the factor.

Thus, this factor analysis has successfully identified 8 key factors formed from the initial 29 variables. The grouping of variables into each factor will be done based on the magnitude of the correlation between the variables and the formed factors.

If depicted in a graph, the 8 factors formed and their respective eigenvalues and percentage of variance explained would be presented as follows:

[Graph showing the 8 factors, their eigenvalues, and percentage of variance explained]



Once it is known that these eight factors are the most optimal numbers, the component matrix is determined. The diagram shows the distribution of 29 variables on the eight factors formed. At the same time, The numbers in the diagram are factor loadings which show the magnitude of the correlation of a variable with factor 1, factor 2, factor 3, factor 4, factor 5, factor 6, factor 7 and factor 8 determining which variables will enter into factor is done by comparing the magnitude of the correlation in each row

Tabel 8 : Component Matrix

	Component Matrix ^a							
	Component							
	1	2	3	4	5	6	7	8
Academic Support	.675	-.275	.281				-.137	.218
Learning Facilities	.690	-.213	-.267		.119			.203
Internship Opportunities for Students	.600		.106	.324	-.179	.405		
Support for International Students	.578	-.371	.391		-.128	.199		.411
Scholarship Programs	.408	.235	.183	.381	.402	.150		-.479
Campus Life Quality	.304	-.206	-.236	.350	.665	.219	-.166	.168
Global Ranking	.583	.220	.210	.272			-.499	-.116
Teaching Quality	.680	-.172	.465	-.150		-.108		
Involvement in The International Arena	.693			-.192	.281	-.253	.240	
Number of Research and Publications	.574		.325		.176		.517	-.224

Component Matrix ^a								
	Component							
	1	2	3	4	5	6	7	8
Industry Involvement	.756	.167	-.194	-.139		.158	-.178	-.103
Satisfaction of International Students	.769	.131	-.260	-.255		.285		
Alumni Connections	.785		-.159	-.355	-.132			
Presence in Exhibitions	.713	.105	-.117	-.374			-.146	-.176
Digital Campaigns	.717	.111	-.232	-.386		.210		-.135
Information Programs and Seminars	.554	-.202	.619			-.104		
Education agent collaboration	.629			.134		-.284	.242	
Student Testimonials	.561	-.366	-.275		.453	.151		.264
Partnerships with Educational Institutions	.763			.108	-.124	-.207	-.358	-.185
University Reputation	.570	.380	-.314	.343	-.222	-.118	.197	.100
Direct student testimony	.439	.364	-.101	.403	-.231	-.261	.285	.164
Credibility of Student Scholarship Programs	.707	.160	.127		-.170	-.143	-.319	
Administrative Support	.605	.193	-.274	.377	-.190			
Perception of culture and environment	.703							
Campus Brand Awareness	-.128	.696		-.160	.147	-.233		.360
Positive Association		.633	.135	-.119	.433	-.261	-.135	.105
Differentiation		.644	.234		.158	.274		
International Reputation		.611	.170	-.372		.122		.203
Credibility of the Scholarships Offered	-.115	.539	.218	.144	-.105	.506		
Extraction Method: Principal Component Analysis.								
a. 8 components extracted.								

After it was determined that delapan factors are the most optimal number, the Component Matrix table shows the distribution of the 29 variables into the eight formed factors. The numbers in the table are the factor loadings, which indicate the magnitude of the correlation between each variable and each factor (Factor 1, Factor 2, Factor 3, Factor 4, Factor 5, Factor 6, Factor 7, and Factor 8).

The process of determining which variables will enter each factor is done by comparing the correlation magnitudes (factor loadings) in each row (variable). The



variables will be grouped into the factors that have the greatest correlation (factor loading).

Thus, the analysis of this Component Matrix table will result in the grouping of variables into the eight formed factors, based on the largest correlation between the variables and each factor.

For example, for the variable "Academic Support (X1)":

1. The correlation between X1 and Factor 1 is 0.675 (very strong) as it is above 0.5.
2. The correlation between X1 and Factor 2 is -0.275 (very weak).
3. The correlation between X1 and Factor 3 is 0.281 (weak).
4. The correlation between X1 and Factor 4 is 0 (none).
5. The correlation between X1 and Factor 5 is 0 (none).
6. The correlation between X1 and Factor 6 is 0 (none).
7. The correlation between X1 and Factor 7 is -0.137 (very weak).
8. The correlation between X1 and Factor 8 is 0.218 (weak).

This process is repeated for the remaining 28 variables to determine their distribution across the 8 formed factors.

According to Singgih Santoro (2004:45), the Component Matrix shows the distribution of the existing variables with the formed factors. The numbers in the Component Matrix table are the Factor Loadings, which indicate the magnitude of the correlation between a variable and the existing factors.

Rotated Component Matrix

Tabel 9 : Rotated Component Matrix^a

Rotated Component Matrix ^a								
	Component							
	1	2	3	4	5	6	7	8
Academic Support	.283	.682	.141	-.162	.250	.160		
Learning Facilities	.515	.284	.292			.392		-.254
Internship Opportunities for Students	.277	.353	.391	-.231	.166	.184		.462
Support for International Students	.174	.829		-.216		.212	-.141	.113
Scholarship Programs			.116		.402	.251	.705	.271
CAmpus Life Quality					.162	.904	.108	



Rotated Component Matrix ^a								
	Component							
	1	2	3	4	5	6	7	8
Global Ranking	.177	.242	.187		.780	.134	.104	
Teaching Quality	.315	.721			.172		.291	-.114
Involvement in The International Arena	.496	.301	.216	.125		.209	.401	-.343
Number of Research and Publications	.293	.395	.182				.706	
Industry Involvement	.729	.119	.214		.332	.126		
Satisfaction of International Students	.851	.113	.205			.132		.147
Alumni Connections	.813	.302	.189					
Presence in Exhibitions	.758	.156		.101	.275		.148	-.139
Digital Campaigns	.872	.112	.120					
Information Programs and Seminars	.124	.789			.143		.309	
Education agent collaboration	.262	.292	.455		.124		.373	-.202
Student Testimonials	.382	.250		-.127		.742		-.179
Partnerships with Educational Institutions	.437	.255	.302		.667		.104	-.133
University Reputation	.310		.817		.131			
Direct student testimony			.821	.116			.126	
Credibility of Student Scholarship Programs	.417	.361	.282		.549			
Administrative Support	.303		.680		.254	.169		
Perception of culture and environment	.496	.249	.325		.203	.115	.163	-.126
Campus Brand Awareness		-.161	.192	.805			-.157	
Positive Association		-.121		.800	.181		.154	
Differentiation				.552			.110	.517
International Reputation	.167			.645	-.104	-.206		.306
Credibility of the Scholarships Offered				.229		-.120		.751
Extraction Method: Principal Component Analysis.								
Rotation Method: Varimax with Kaiser Normalization.								
a. Rotation converged in 16 iterations.								

The results of the rotation in the Rotated Component Matrix table show a clearer and more distinct distribution of the variables. The rotation process minimizes the initially small factor loadings and maximizes the large factor loadings, making the grouping of variables into the formed factors more evident.

Here are the details of the grouping of variables into each factor based on the largest factor loadings:

1. Factor 1:

- Learning Facilities (X2) with a factor loading of 0.510
- Industry Involvement (X11) with a factor loading of 0.729
- Satisfaction of International Students (X12) with a factor loading of 0.851
- Alumni Connections (X13) with a factor loading of 0.813
- Presence in Exhibitions (X14) with a factor loading of 0.758
- Digital Campaigns (X15) with a factor loading of 0.872

2. Factor 2:

- Academic Support (X1) with a factor loading of 0.682
- Support for International Students (X4) with a factor loading of 0.829
- Teaching Quality (X8) with a factor loading of 0.721
- Information Programs and Seminars (X16) with a factor loading of 0.789

3. Factor 3:

- University Reputation (X20) with a factor loading of 0.817
- Direct student testimony (X21) with a factor loading of 0.827
- Administrative Support (X23) with a factor loading of 0.680

4. Factor 4:

- Campus Brand Awareness (X25) with a factor loading of 0.805
- Positive Association (X26) with a factor loading of 0.800
- Differentiation (X27) with a factor loading of 0.552
- International Reputation (X28) with a factor loading of 0.645

5. Factor 5:

- Global Ranking (X7) with a factor loading of 0.780
- Partnerships with Educational Institutions (X19) with a factor loading of 0.667
- Credibility of Student Scholarship Programs (X22) with a factor loading of 0.549

6. Factor 6:

- Campus Life Quality (X6) with a factor loading of 0.904
- Student Testimonials (X18) with a factor loading of 0.742

7. Factor 7:



- Scholarship Programs (X5) with a factor loading of 0.705
- Number of Research and Publications (X10) with a factor loading of 0.706

8. Factor 8:

- Credibility of the Scholarships Offered (X29) with a factor loading of 0.751

Thus, each variable has been grouped into the formed factors based on the largest factor loading.

According to Singgih Santoso (2004), the Rotated Component Matrix shows a clearer and more distinct distribution of the variables. The rotation process minimizes the initially small factor loadings and maximizes the large factor loadings.

Tabel 10 : **Component Transformation Matrix**

Component Transformation Matrix								
Component	1	2	3	4	5	6	7	8
1	.664	.458	.388	-.070	.309	.213	.227	-.045
2	.095	-.304	.309	.737	.175	-.237	.099	.404
3	-.367	.696	-.290	.143	.175	-.306	.306	.242
4	-.570	-.087	.555	-.316	.318	.300	.129	.227
5	-.098	-.089	-.329	.371	-.004	.719	.443	-.154
6	.234	-.027	-.273	-.246	-.166	.270	-.099	.836
7	-.011	.053	.337	-.061	-.778	-.119	.508	.040
8	-.162	.441	.255	.360	-.330	.334	-.603	.004
Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization.								

From the table, it can be explained that on the diagonal of factors (components) 1, 2, 3, 4, 5, 6, 7, and 8, the values are (0.664; -0.304; -0.290; -0.316; -0.004; 0.270; 0.508; 0.004). The minus "-" sign indicates the direction of the correlation. Meanwhile, the other diagonals show values below 0.5, indicating the presence of other components in each factor that have high correlations.

Only two factors have values above 0.5 on the diagonals - factor 1 (component 1) with a value of 0.664 and factor 7 (component 7) with a value of 0.508.

Based on the formation of the factors, only two factors have values above 0.5 on the diagonals, which is already sufficient to represent the eight factors that were formed.



DISCUSSION

After performing factoring and rotation, the next step is to interpret the factors that have been formed. This is done to represent the variables that are members of each factor.

From the research results, it can be known that the factors of service quality, product, promotion, trust, and brand image significantly influence students in choosing to study in Taiwan.

Factors Influencing the Decision to Choose

Based on the factor analysis conducted, from the 29 variables studied, 8 factors (components) were formed with the following details:

Table 11: Formed Components

Faktor Terbentuk	Variabel – variable
Faktor 1	Learning Facilities (X ₂), Involvement in The International Arena (X ₉), Industry Involvement (X ₁₁), Satisfaction of International Students (X ₁₂), Alumni Connections (X ₁₃), Kehadiran Dalam Pameran (X ₁₄), Digital Campaigns (X ₁₅), Learning Facilities (X ₂), Involvement in the International Arena (X ₉), Industry Involvement (X ₁₁), Satisfaction of International Students (X ₁₂), Alumni Connections (X ₁₃), Presence in Exhibitions (X ₁₄), and Digital Campaigns (X ₁₅)
Faktor 2	Academic Support (X ₁), Support for International Students (X ₄), Teaching Quality (X ₈), Information Programs and Seminars (X ₁₆)
Faktor 3	University Reputation (X ₂₀), Direct student testimony (X ₂₁), Administrative Support (X ₂₃)



Faktor Terpentuk	Variabel – variable
Faktor 4	Campus Brand Awareness (X25), Positive Association (X26), Differentiation (X27), International Reputation (X28)
Faktor 5	Global Ranking (X7), Partnerships with Educational Institutions (X19), Kredibilitas Program Mahasiswa (X22)
Faktor 6	Campus Life Quality (X6), Student Testimonials (X18)
Faktor 7	Scholarship Programs (X5), Number of Research and Publications (X10) Scholarship Programs (X5) and Number of Research and Publications (X10)
Faktor 8	Credibility of the Scholarships Offered (X29)

Based on the factor analysis results, only 2 out of the 8 formed factors are considered to adequately represent the overall factors that influence Indonesian students' decision to study in Taiwan. These are Factor 1 (Component 1) with a value of 0.664 and Factor 7 (Component 7) with a value of 0.508.

Factor 1 consists of variables such as Learning Facilities (X2), Involvement in the International Arena (X9), Industry Involvement (X11), Satisfaction of International Students (X12), Alumni Connections (X13), Presence in Exhibitions (X14), and Digital Campaigns (X15).

Factor 7 consists of the variables Scholarship Programs (X5) and Number of Research and Publications (X10).

The most dominant factor influencing the decision to study

The most dominant factor influencing the decision to study in Taiwan is the Quality of Campus Life, with an extraction value of 0.859 (very strong). The remaining 28 variables also have a strong influence, as their extraction values are on average above 0.5.



CONCLUSIONS:

1. Factors Representing the Decision to Choose: Out of the 8 formed factors, only 2 factors are considered to adequately represent the overall factors that influence students' decision to study in Taiwan, namely Factor 1 (Component 1) and Factor 7 (Component 7).
2. Component of Factor 1: Factor 1 consists of various variables such as Learning Facilities, Involvement in the International Arena, Industry Involvement, Satisfaction of International Students, Alumni Connections, Presence in Exhibitions, and Digital Campaigns.
3. Component of Factor 7: Factor 7 consists of the variables Scholarship Programs and Number of Research and Publications.
4. The Most Dominant Factor Influencing the Decision to Choose: The dominant factor influencing students' decision to study in Taiwan is the Quality of Campus Life, with an extraction value of 0.859 (very strong). The remaining 28 variables also have a strong influence, with extraction values above 0.5 on average.

Recommendations:

1. Improve Campus Life Quality: Since campus life quality is the dominant factor, it is recommended to continuously improve the quality of facilities, extracurricular activities, mental health support, and health services on Taiwanese campuses.
2. Enhance Learning and Research Facilities: Focusing on the factors included in Factor 1, such as learning facilities, involvement in the international arena, industry involvement, and increasing research and publications, will help increase the attractiveness for Indonesian prospective students.
3. Develop Scholarship Programs: Considering that Factor 7 includes the Scholarship Programs variable, it is recommended to continue developing transparent, accessible, and sustainable scholarship programs to attract Indonesian students.
4. Implement Effective Promotion: The research findings show that the presence in educational exhibitions and digital campaigns have a significant impact. Therefore, it is recommended to continue promoting through effective educational exhibitions and digital campaigns to attract prospective students.
5. Utilize Student Testimonials: Given the significant influence of student testimonials, Taiwanese universities can consider utilizing the direct experiences of Indonesian students who have studied there as part of their promotion to build trust and a positive image.



By implementing these recommendations, Taiwanese universities can strengthen their appeal to Indonesian prospective students and increase their interest in studying in Taiwan.

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