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Using Factor Analysis and Binary Logistic Regression Methods to Find Out Student Decisions in Selecting Management Study Programs, UNISNU Jepara

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Abstract:- Based on the Higher Education Statistics report, management science is the study program (prodi) with the largest number of students in 2020. There were 956,563 students who took this study program at undergraduate (S1) level last year. There are also 55,663 students who are interested in management study programs at master's (S2) level. Meanwhile, only 2,865 students took this study program at doctoral (S3) level. (Ministry of Education and Culture, 2020). The problem in this research is that data from the Ministry of Education and Culture states that the study program with the largest number of students is the management study program with 956,563 students, then according to the capacity data, the selection of study programs at Nahdlatul Ulama University has the largest number among 17 other study programs, namely the management study program with capacity. amounting to 300 students per class each year. According to management students, Nahdlatul Ulama University received many responses that the management study program was a reserve study program if they were not accepted into the desired study program. The aim of this research is to group variables into several factors that influence Unisnu students in choosing the Management study program, Unisnu and to find out the variables that most influence the decision to choose the management study program, Unisnu Jepara. In research, there are appropriate methods to use, namely the factor analysis method and binary logistic regression. The results obtained from the factor analysis method are from 13 variables which are grouped into 4 factors, namely: the first factor is the promotion factor with an eigenvalue of 4.292%, the second factor is the reputation factor with an eigenvalue of 2.117%, the third factor is the family factor with The eigenvalue was 1.568% and the fourth factor was social factors with an eigenvalue of 1.286%, while the binary logistic regression method obtained 1 significant predictor factor that had a big influence on students' decision variables in choosing a Management study program, Unisnu Jepara, namely the family factor (X3) and 3 significant predictor factors that have little influence on the decision variable for selecting a Management study program, Unisnu are promotion factors (X1), reputation factors (X2) and social factors (X4). The conclusion of the factor analysis method is that there are four factors, namely factor 1 "promotional factors", factor 2 "reputation factors", factor 3 "family factors" and factor 4 "social factors". Meanwhile, in the binary logistic regression method, there is 1 significant predictor factor that has a large influence and 3 significant predictor factors that have a small influence on the decision variable for selecting a Management study program, Unisnu.

Keywords:- *Factor Analysis, Binary Logistic Regression, Management.*

I. INTRODUCTION

The Higher Education Data Base (PDDIKTI) notes that the number of new students in Indonesia has continued to increase from the 2016/2017 to 2018/2019 academic year. In the 2016/2017 academic year, the number of new students rose 3.7% to 1.44 million people. The figure then rose 2.4% to 1.47 million in the 2017/2018 academic year. A year later, the number of new students increased significantly by 20.1% to 1.77 million people. In detail, most new students come from private universities (PTS), namely 1.1 million people. Meanwhile, 683.9 thousand new students came from state universities (PTN), 285.9 thousand from religious universities (PTA), and 76.1 thousand from ministry universities (PTK) (Ministry of Research and Technology, 2019).

Based on the Higher Education Statistics report, management science is the study program (prodi) with the largest number of students in 2020. There were 956,563 students who took this study program at undergraduate (S1) level last year. There are also 55,663 students who are interested in management study programs at master's (S2) level. Meanwhile, only 2,865 students took this study program at doctoral (S3) level. (Ministry of Education and Culture, 2020).

Nahdlatul Ulama Jepara Islamic University (UNISNU JEPARA) is a merger of INISNU, STIENU and STTDNU based on Minister of Education and Culture Decree Number 149/E/O/2013, under the auspices of the Nahdlatul Ulama Jepara Higher Education Foundation (YAPTINU JEPARA)

as the organizer. UNISNU JEPARA has 18 undergraduate study programs and one undergraduate study program. All study programs have been accredited by BAN-PT. In fact, BANPT has also given Rank B in Higher Education Accreditation to UNISNU JEPARA with number 3598/SK/BAN-PT/Akred/PT/X/2017. This accreditation further confirms that UNISNU JEPARA has met higher education management standards in accordance with statutory regulations. The problem in this research is that data from the Ministry of Education and Culture states that the study program with the largest number of students is the management study program with 956,563 students, then according to the capacity data, the selection of study programs at Nahdlatul Ulama University has the largest number among 17 other study programs, namely the management study program with capacity. amounting to 300 students per class each year. According to management students, Nahdlatul Ulama University received many responses that the management study program was a reserve study program if they were not accepted into the desired study program. So the aim of this research is to group several variables into several factors that influence students to choose a Management study program, because these factors can influence students to make decisions about choosing a management study program, Nahdlatul Ulama University. Then it can be a reference for new students to consider the management study program as an option, not as a reserve, because there are many factors that students must pay attention to. Therefore, researchers want to research using the factor analysis method to group the determining factors that influence students' decisions in choosing a Management study program, Nahdlatul Ulama Islamic University, Jepara. Then, after getting the determining factors, we move on to the second objective, which is to determine the factors that have a large and small influence on the selection of the Management study program, Nahdlatul Ulama Islamic University, Jepara, using the Binary Logistic Regression method.

The contribution in this research is designing independent variables to find out which groups of variables will be selected as factors by Management study program students, Nahdlatul Ulama Islamic University. In this study, several independent variables (X) and dependent variables (Y) were determined. According to Sugiyono (2015:96) "an independent variable is a variable that influences or is the cause of changes or the emergence of a dependent (bound) variable." whereas according to Sugiyono (2015:97) "the dependent variable is a variable that is influenced or becomes a consequence, because of the existence of the independent variable." In this study, there is a dependent or bound variable (Y), namely "Decision Factors in Selection of Management Study Programs" while the independent or independent variable (X) is influenced by several 15 variables which will group the variables into factors and determine factors that have a large and small influence on student decisions in choosing a Management study program, Nahdlatul Ulama Islamic University Jepara.

In a journal related to problems in the Management Study Program, Nahdlatul Ulama Islamic University Jepara according to Mahendra Fakhri, Alini Gilang and (Nining Ratnayu, 2017) regarding "Analysis of Factors Forming Decisions on Selection of Private Universities, Telkom University (Study of Business Administration Undergraduate Study Program Students, Faculty Telkom University Communication and Business Class of 2016)" in the Bachelor of Business Administration study program, Faculty of Communication and Business, Telkom University Class of 2016, with the problem of the large number of universities in Indonesia, both PTN and PTS, making competition between universities increasingly high. Students as recipients of higher education services have various factors when considering choosing a college and study program. That the aim of this research is to analyze the dominant factors that shape students' decisions in choosing a private university at Telkom University for the Bachelor of Business Administration Study Program. The research results showed that 5 new factors were formed, namely campus, campus promotion, family influence, friend influence and campus location. The university image factor has the largest variance value, namely 27.02% in forming the decision to choose a private university at Telkom University for the Bachelor of Business Administration Study Program.

In a journal related to problems in the Management Study Program, Nahdlatul Ulama Islamic University Jepara according to Saiful Ghozi, Ramli, Asri Setiarini, 2018 regarding "Analysis of Customer Decisions in Choosing a Type of Bank: Application of the Binary Logistic Regression Model (Case Study at Bank BRI Balikpapan Branch" In this research, samples of primary data taken through a questionnaire were 56 respondents, of which 25 respondents were taken at BRI Syariah Balikpapan Branch and 31 respondents were taken at BRI conventional Balikpapan Branch with the existence of problems where the development of sharia banking in Indonesia in the last five years can be seen that in the last five years Lastly, the network of bank offices and sharia banking business units has increased quite rapidly. Customers as recipients of services at banks have various factors in considering the choice of conventional banks and sharia banks. The aim of this research is to find out customer preferences between conventional banks, sharia banks and other factors. which one is the most dominant? The research results show that the initial model significance test shows that there is at least one coefficient that has a significant effect at the ÿ = 0.05 level. This means that of the 8 predictor variables analyzed, there is at least 1 predictor variable that has a significant influence on customers' decisions in choosing a bank and the variables that have a significant influence on customers' decisions in choosing a bank are promotion of BRI Syariah via electronic media (X5) and respondents' knowledge about sharia banks (X1).

The appropriate method to overcome the above problems is the Factor Analysis method and the Binary Logistic Regression method. The factor analysis method is to group variables into several factors that influence Nahdlatul Ulama Islamic University students to choose the

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Management study program as the study program of choice for college. Therefore, the Factor Analysis method is appropriate to use because it can analyze the relationship between variables and to explain the variables in the approach. statistics that include several concepts that are believed to be the underlying source of a set of real variables. So if there is a set of variables that have been correlated with factor analysis, they can be reduced and arranged to simplify the variables. This is done by minimizing information lost due to analysis or to obtain as much information as possible. The Factor Analysis Method is "to find relationships *(Interrelationships)* between a number of variables that are independent of each other, so that one or several sets of variables can be created that are fewer than the initial number of variables" (Susanto & Singgih, 2005:11).

Binary Logistic Regression Method to find out the factors that are most related to the decision to choose a Management Study Program, Unisnu. Therefore, the Binary Logistic Regression method is appropriate to use because it can analyze the factors most related to students' decisions in choosing a Management study program, Nahdlatul Ulama Islamic University, Jepara. In binary logistic regression, it is used to model an event with a two- choice category response variable, namely success or failure denoted by = 1 (Influence) and = 2 (Not Influence).

Based on the explanation of the background to the problem above, in knowing the factors that influence Nahdlatul Ulama Islamic University students to choose the Management study program as the study program of choice for college. In this research, the appropriate method is used, namely the Factor Analysis method to group variables into several factors that influence Unisnu students in choosing a Management study program, Unisnu and the Binary Logistic Regression method to find out the variables that most influence the decision to choose a management study program, Unisnu Jepara.

II. LITERATURE REVIEW

A. Factor Analysis Method

Sarwono (2012:202) "Factor analysis is analysis used to reduce data or In other words, summarizing or grouping data or variables into smaller amounts." To test the accuracy of factor analysis, the author used *the Barlet test of sphericity* sample feasibility measurement and KMO MSA *(Keiser Meyer Olkin Measure of Sample Adequacy)* by comparing partial correlations. With the KMO index being between 0.5 to 1.0, provided that if the KMO value is below 0.5, it means that the correlation between a pair of variables or indicators cannot be explained by other variables or indicators and thus means that factor analysis is not appropriate, and vice versa, if the KMO value is greater from 0.5 then factor analysis can be used. In the factor analysis technique, the author also uses SPSS 20.00 for Windows *software* .

B. Binary Logistic Regression Method

"Regression analysis is an analysis that explains the relationship between response variables and predictor variables that contain cause and effect. If the regression model contains one predictor variable and one response variable, then This relationship is called a simple regression model. Meanwhile, if the regression model contains one or more variables predictor and one response variable, then this relationship is called a multiple regression model. Statistical methods for modeling response variables that are categorical on a nominal or ordinal scale with one or more categorical or continuous predictor variables (ratio or interval scale) is called logistic regression" (Varamita, 2017).

III. RESEARCH METHODOLOGY

This research uses a quantitative approach because the observed symptoms are converted into numbers which are analyzed using statistics. According to Creswell (2012: 13), quantitative research requires researchers to explain how variables influence other variables. This research is a type of experimental research. According to Sugiyono (2011: 7), "research with an experimental approach is research that attempts to find the influence of certain variables on other variables under strictly controlled conditions." The same thing was also expressed by (Creswell, 2012: 295), "that experimental design is used when you want to determine the possible causes and influence of the independent and dependent variables." Therefore, try to control all variables that influence the results except the independent variables. Then, when the independent variable influences the dependent variable, it can be said that the independent variable causes or influences the dependent variable.

Table. 1 Variable

Variable
1. Parental Advice (X_1)
2. Large Family Recommendation (X_2)
3. Following an older sibling or sibling (X_3)
4. Continuing Parents Business (X_4)
5. Likes Courses (X_5)
6. Accredited Study Program (X_6)
7. Prestigious Study Program (X_7)
8. Influence of Friends (X_8)
9. Following Girlfriend (X_9)
10. According to your original major in high school (X_{10})
11. Become an Entrepreneur (X_{11})
12. Wide Employment Area (X_{12})
13. Complete information on social media (X_{13})
14. Interesting Socialization (X_{14})
15. Clear Brochure (X_{15})

The research location is the Nahdlatul Ulama Jepara Islamic University campus, Faculty of Economics and Business (FEB), Management Study Program and the time used to carry out this research is October 2021 to December 11 2021.

IV. RESULTS

Below is data collection on dependent and independent variables in the decision to select a study program Management, Nahdlatul Ulama Islamic University, Jepara as follows:

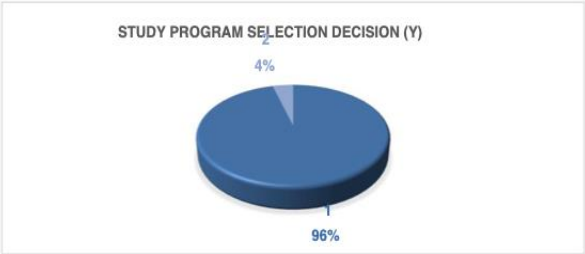

Fig 1 Decision on choosing a study program
1 = Influential
2 = No Influence

There is number 1 "influence" with the highest percentage of 96%, while number 2 "has no effect" with the lowest percentage of 4%. So it can be concluded that in the decision to choose a Management study program, Nahdlatul Ulama Islamic University, Jepara is very influential.

Fig 2 Total management students
1 = Management study program

There is number 1 "management study program" with a percentage of 100%, so it can be concluded that the questionnaire was filled in by students of the Management study program, Nahdlatul Ulama Islamic University, Jepara.

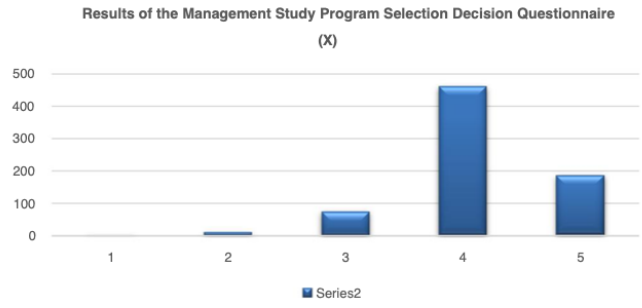

Fig 3 Results of the decision to select a management study program

In the graph there is a scale with a result of 0 respondents, which means that no one chose the question with a scale answer of 1, on the result of scale 2 there is a result of 9 respondents, on the result of scale 3 there is a result of 72 respondents, on the result of scale 4 there is a result of 457 respondents and on scale 5 results there were 182 respondents. So it can be concluded that in filling out the questionnaire with a Likert scale, there were more 457 respondents on a scale of 4, which were filled in by students of the Management study program, Nahdlatul Ulama Islamic University, Jepara.

A. Factor Analysis Method

The following is the *Confirmatory Factor Analysis* (CFA) Validity Test as follows:

Table. 2 *Confirmatory Factor Analysis* (CFA) 1

Factor	Variable	Calculated r value ≥ r table value (0,284)	Decision
Family Factor	X1	0,376	Valid
	X2	0,336	Valid
	X3	0,439	Valid
	X4	0,500	Valid
Reputaion Factor	X5	0,683	Valid
	X6	0,542	Valid
	X7	0,622	Valid
Social Factor	X8	0,678	Valid
	X9	0,405	Valid
	X10	0,638	Valid
Career path Factors	X11	0,374	Valid
	X12	0,242	Tidak Valid
Promotional Factor	X13	0,588	Valid
	X14	0,683	Valid
	X15	0,643	Valid

So in table 2 there is a variable X12 with a calculated r value of 0.242 < 0.284 which is declared invalid. Then a validity test was carried out again with X12 not included in the test. After testing the validity again, the results are as follows:

Table. 3 *Confirmatory Factor Analysis* (CFA) 2

Factor	Variable	Calculated r value ≥ r table value (0,284)	Decision
Family Factors	X1	0,376	Valid
	X2	0,336	Valid
	X3	0,439	Valid
	X4	0,500	Valid
Reputaion Factor	X5	0,683	Valid
	X6	0,542	Valid
	X7	0,622	Valid
Social Factor	X8	0,678	Valid
	X9	0,405	Valid
	X10	0,638	Valid
Career path Factors	X11	0,374	Valid
Promotional Factor	X13	0,588	Valid
	X14	0,683	Valid
	X15	0,643	Valid

So in table 3 all variables are found with a calculated r value > 0.284, which states that all variables are valid, which is to determine the validity or suitability of the questionnaire used by researchers in measuring and obtaining research data from respondents.

Reliability Statistics

Cronbach's Alpha	N of Items
.815	14

Fig 4 Reliability

A questionnaire is said to be reliable if **Cronbach's Alpha is > 0.6.** If the Cronbach's Alpha results are 0.815 > 0.6, it is said to be reliable, which is to see whether the

questionnaire has consistency if the measurements carried out with the questionnaire are carried out repeatedly.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.743
Bartlett's Test of Sphericity	Approx. Chi-Square	273.626
	df	55
	Sig.	.000

Fig 5 KMO and Bartlett's Test

In the KMO and *Bartlett Test* output tables above, it is useful to know whether a variable can be processed further using factor analysis techniques or not. So it can be seen from the value of the *Kaiser Meyer Oikin Measure of Sampling Adequacy* (KMO MSA).

If **the KMO MSA value is greater than 0.50 then the factor analysis technique can be continued,** based on the input above it is known that the KMO MSA value is 0.743 > 0.50 and *the Bartlett's Test of Sphericity* (Sig.) value is 0.000 < 0.05 then the factor analysis in This research can be continued because it meets the requirements.

Table. 4 Factor Groups

Variable	Factor Groups			
	1	2	3	4
Parental Advice (X_1)			3	
Large Family Recommendation (X_2)			3	
Following an older sibling or sibling (X_3)			3	
Continuing Parents Business (X_4)			3	
Likes Courses (X_5)		2		
Accredited Study Program (X_6)		2		
Prestigious Study Program (X_7)		2		
Influence of Friends (X_8)				4
Following Girlfriend (X_9)				4
According to your original major in high school (X_{10})				4
Become an Entrepreneur (X_{11})	1			
Wide Employment Area (X_{12})	1			
Complete information on social media (X_{13})	1			

To ensure that a variable falls into which factor group, it is determined by looking at the largest correlation value between the variable and the factor *(Component)* that is formed. How to read the results of the rotation model factor analysis as follows:

- The variable "parental advice (X1)" in the correlation value of this variable with factor 1 = -0.125, factor 2 = 0.320, **factor 3 = 0.786** and factor 4 = 0.032, because the correlation value of factor 3 > factors 1,2 and 4 then the reliability variable belongs to factor group 3.
- The variable "Recommendations for Large Families **(X2)"** in the correlation value of this variable with factor 1 = 0.167, factor 2 = -0.136, **factor 3 = 0.844** and factor 4 = 0.013, because the correlation value of factor 3 > factors 1,2 and 4 then the reliability variable belongs to factor group 3.
- The variable "Following Brother or Sibling (X3)" in the correlation value of this variable with factor 1 = 0.159, factor 2 = -0.122, factor **3 = 0.701** and factor 4 = 0.556, because the correlation value of factor 3 > factor 1.2 and 4 then the reliability variable belongs to factor group 3.
- The variable "Continuing Parents' Business **(X4)"** in the correlation value of this variable with factor 1 = -0.006, factor 2 = 0.422, **factor 3 = 0.615** and factor 4 = 0.107, because the correlation value of factor 3 > factor 1.2 and 4 then the reliability variable belongs to factor group 3.
- The variable "Likes Courses (X5)" in the correlation value of this variable with factor 1 = 0.095, **factor 2 = 0.844,** factor 3 = 0.125 and factor 4 = 0.222, because the correlation value of factor 2 > factors 1,3 and 4 then Reliability variables include factor group 2.
- The variable "Accredited Study Program **(X6)"** in the correlation value of this variable with factor 1 = 0.220, **factor 2 = 0.761,** factor 3 = 0.062 and factor 4 = 0.006, because the correlation value of factor 2 > factors 1,3 and 4 then Reliability variables include factor group 2.
- The variable "Prestigious Study Program **(X7)"** in the correlation value of this variable with factor 1 = 0.211, **factor 2 = 0.769,** factor 3 = 0.111 and factor 4 = 0.082 because the correlation value of factor 2 > factors 1,3 and 4 is the variable reliability belongs to factor group 2.
- The variable "Friend Influence **(X8)"** in the correlation value of this variable with factor 1 = -0.009, factor 2 = 0473, factor 3 = 0.067 and **factor 4 = 0.702,** because the correlation value of factor 4 > factors 1,2 and 3 then Reliability variables include factor group 4.
- The variable "According to the original major in high school **(X10)"** in the correlation value of this variable with factor 1 = 0.093, factor 2 = 0.394, factor 3 = -0.060 and **factor 4 = 0.810,** because the correlation value of factor 4 > factor 1.2 and 3, then the reliability variable belongs to factor group 4.
- The variable "Becoming an Entrepreneur **(X11)"** in the correlation value of this variable with factor 1 = 0.400, factor 2 = 0.203, factor 3 = -0.009 and **factor 4 = 0.630,** because the correlation value of factor 4 > factors 1,2 and 3 then Reliability variables include factor group 4.
- The variable "Complete Information on social media **(X13)"** in the correlation value of this variable with **factor 1 = 0.871,** factor 2 = 0.192, factor 3 = 0.140 and factor 4 = -0.009, because the correlation value of factor 1 > factor 2.3 and 4, then the reliability variable belongs to factor group 1.
- The variable "Interesting socialization **(X14)"** in the correlation value of this variable with **factor 1 = 0.925,** factor 2 = 0.228, factor 3 = 0.026 and factor 4 = 0.124, because the correlation value of factor 1 > factors 2,3 and 4 then Reliability variables include factor group 1.

- The variable "Clear brochure **(X15)**" in the correlation value of this variable with **factor 1 = -0.892,** factor 2 = 0.165, factor 3 = -0.062 and factor 4 = 0.222, because the correlation value of factor 1 > factors 2,3 and 4 then the reliability variable belongs to factor group 1.

B. BINARY LOGISTIC REGRESSION METHOD

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	16.628	4	.002
	Block	16.628	4	.002
	Model	16.628	4	.002

Fig 6 Omnibus

In Figure 6, the hypothesis of the simultaneous influence of the independent variable on the dependent variable is accepting H1 and rejecting H0 , which means there is a significant simultaneous influence on . Therefore, the Chi-Square significance value is 0.002 where <alpha 0.05, where the results reject H0 and there is a significant effect simultaneously.

Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	.817	6	.992

Fig 7 Hosmer and Lemeshow Test

So from the SPSS Hosmer and Lemeshow test output table above, it can be seen that the Sig. of 0.992. This value is greater than the research alpha (0.992 > 0.05). So you can accept H0 , which means the model fits the observation data, so this logistic regression model is suitable for use in the next stage.

Table. 5 Steps 1 and 2

Step	-2 Log Likelihood
Step 1	16.628
Step 2	13.638

From the table above, it can be seen that the -2 Log likelihood value has decreased from step 0 of 16,628 to step 1 of 13,638. This means that the logistic regression model formed is better. It can also be seen that the Negekerke R Square value is 0.206, which means that the magnitude of the influence of the independent variables (X1, X2, X3 and X4) on the dependent variable (Y) is 20.6%.

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	Faktor Promosi	-.400	1.197	8.556	1	.003	.674	.134	14.552
	Faktor Reputasi	-.395	1.827	11.758	1	.001	1.839	.029	37.863
	Faktor Keluarga	2.041	1.400	5.905	1	.015	7.695	.000	.
	Faktor Sosial	-1.895	1.514	4.989	1	.060	.150	.009	3.330
	Constant	-20.681	7.840	.002	1	.962	.010		

a. Variable(s) entered on step 1: Faktor Promosi, Faktor Reputasi, Faktor Keluarga, Faktor Sosial.

Fig 8 Variables in the Equation

Casewise List[a]

a. The casewise plot is not produced because no outliers were found.

Fig 9 Casewise List

In Figure 9, *the Casewise List* presents the output results that this research does not have abnormal data or extreme data so it does not need to be an outlier and is worth testing.

V. DISCUSSION (ANALYSIS)

The following are the results of the interpretation of the Factor Analysis method where the variables that have been grouped are given factor names, where the name of the factor depends on the variables that form it. So giving this name is subjective and there are no definite provisions regarding giving this name. The naming of factors is explained as follows:

Table. 6 Interpretation Results of the Factor Analysis Method

No	Variable	Factor	Eigen Value %	Loading Factor	% Variance	Cumulative%
1	Complete information on social media (X_{13})	Promotional Factor	4,292%	0,871	33,017 %	33,017 %
2	Interesting Socialization ($X_{14.1}$)			0,925		
3	Clear brochure ($X_{15.1}$)			0,892		
4	Like Courses ($X_{5.2}$)	Reputation Factor	2,117%	0,844	16,281 %	49,298 %
5	Accredited Study Program ($X_{6.2}$)			0,761		
6	Prestigious Study Program ($X_{7.2}$)			0,769		
7	Parental Advice ($X_{1.3}$)	Familiy Factor	1,568%	0,786	12,065 %	61,363 %
8	Large Family Recommendation ($X_{2.3}$)			0,844		
9	Following a Big Brother or Sibling ($X_{3.3}$)			0,701		
10	Continuing Parents Business ($X_{4.3}$)			0,615		
11	Friend Ifnluence ($X_{8.4}$)	Social Factor	1,286%	0,702	9,890 %	71,254 %
12	According to the original major in high school ($X_{10.4}$)			0,810		
13	Become an entrepreneur ($X_{11.4}$)			0,630		

The following is an explanation of the results of the interpretation of the Factor Analysis method:

A. Promotional factors

The first factor is named the promotion factor because the variable that represents it consists of X13.1 (Information complete on social media), X14.1 (Interesting socialization) and X15.1 (Clear brochure). The promotion factor is able to explain the variance of 33.017%. If seen from the *loading factor* value , the variable that has the most influence on the promotion factor is the variable X14.1 (Attractive socialization) because it has the highest *loading factor* value of 0.925. Therefore, promotional factors are one of the

factors that influence students in their decision to choose a Management study program, Nahdlatul Ulama Islamic University, Jepara.

B. Reputation factor

The second factor is named the reputation factor because the representative variable consists of X5.2 (liking the course), X6.2 (accredited study program) and X7.2 (prestigious study program). The reputation factor is able to explain the variance of 16.281%. If we look at the *loading factor* value , the variable that has the most influence on the promotion factor is variable X5.2 (likes the subject) because it has the highest *loading factor* value of 0.844. Therefore, the reputation factor is one of the factors that influences students in their decision to choose a Management study program, Nahdlatul Ulama Islamic University, Jepara.

C. Family factors

The third factor is named the family factor because the representative variable consists of X1.3 (parental advice), X2.3 (recommendations from extended family) and The family factor is able to explain 16.281% of the variance. If we look at the *loading factor* value , the variable that has the most influence on the promotion factor is variable X2.3 (large family recommendation) because it has the highest *loading factor* value of 0.844. Therefore, family factors are one of the factors that influence students in their decision to choose a Management study program, Nahdlatul Ulama Islamic University, Jepara.

D. Social factors

The fourth factor is named social factor because the variable that represents it consists of X8.4 (friend influence), X10.4 (according to your major from high school) and Social factors are able to explain the variance of 9.890%, if seen from the *loading factor* value , it is the most variable. The influence on the promotion factor is variable X8.4 (friend influence) because it has the highest *loading factor* value of 0.702. Therefore, social factors are one of the factors that influence students in their decision to choose a Management study program, Nahdlatul Ulama Islamic University, Jepara.
The following are the results and analysis of the interpretation of the Binary Logistic Regression method:

Table. 7 Interpretation Results of the Binary Logistic Regression Method

Factor	Variable	B	Sig. Value	Minimum Standard Value
Promotional Factor	Complete information on social media (X_{13})	-0.400	0.03	< 0,05
	Interesting Socialization ($X_{14,1}$)			
	Clear brochure ($X_{15.1}$)			
Reputation Factor	Like Courses ($X_{5.2}$)	-0.395	0.01	
	Accredited Study Program ($X_{6.2}$)			
	Prestigious Study Program ($X_{7.2}$)			
Family Factor	Parental Advice ($X_{1.3}$)	2.041	0.015	
	Large Family Recommendation ($X_{2.3}$)			
	Following a Big Brother or Sibling ($X_{3.3}$)			
	Continuing Parents Business ($X_{4.3}$)			
Social Factor	Friend Ifnluence ($X_{8.4}$)	-1.895	0.026	
	According to the original major in high school ($X_{10.4}$)			
	Become an entrepreneur ($X_{11.4}$)			

Based on the values in Table 7, the following information is obtained:

A. Promotion Factors

From the table above, it can be seen that the significant value for the promotion factor (X1) is 0.003. This figure is smaller than the research alpha (0.003 < 0.05) and has a B value of -0.400, meaning that partially the promotion factor has a small and significant effect on students' decisions in choosing a Management study program. Nahdlatul Ulama Islamic University, Jepara because it has a negative B grade.

B. Reputation Factor

From the table above, it can be seen that the significant value for the reputation factor (X2) is 0.001. This figure is smaller than the research alpha (0.001 < 0.05) and has a B value of – 0.395, meaning that partially the reputation factor has a small and significant effect on students' decisions in selecting the Management study program, Nahdlatul Ulama Islamic University, Jepara because it has a negative B value.

C. Family Factors

From the table above, it can be seen that the significant value for the family factor (X3) is 0.015. This figure is smaller than the research alpha (0.015 > 0.05) and has a B value of 2,041, meaning that partially family factors have a significant and large influence on students' decisions in selecting the Management study program, Nahdlatul Ulama Islamic University, Jepara because it has a positive B value.

D. Social Factors

From the table above, it can be seen that the significant value for social factors (X4) is 0.026. This figure is greater than the research alpha (0.026 < 0.05) and has a B value of -1,895, meaning that partially social factors have a small and significant influence on students' decisions in selecting the Management study program, Nahdlatul Ulama Islamic University, Jepara because it has a negative B value.

V. CONCLUSION

The results obtained from the factor analysis method are from 13 variables which are grouped into 4 factors, namely: the first factor is the promotion factor with an eigenvalue of 4.292%, the second factor is the reputation factor with an eigenvalue of 2.117%, the third factor is the family factor with the eigenvalue is 1.568% and the fourth factor is the social factor with an eigenvalue of 1.286%.

The binary logistic regression method is obtained by 1 significant predictor factor which has a big influence on the student's decision variable in choosing a Management study program, Unisnu Jepara, namely the family factor (X3) and 3 significant predictor factors which have a small influence on the decision variable in choosing a Management study program, Unisnu is the factor promotion (X1), reputation factors (X2) and social factors (X4).

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