Factors Affecting Indonesia Student Choosing University and Industrial Engineering Study Program

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Abstract

This research conducted to find factors affecting Indonesia student in choosing University and study program in Industrial Engineering a case study in a University, Bandung, Indonesia. Questionnaires were developed using 7 Likert's scale with 58 factors considered and distributed to first-year students in a university. Factor analysis and Reliability analysis were used to test the validity and reliability of the questionnaires. Multiple Regression Analysis used to find which factors have significant influences. The result showed that the model has R² of 75.3% with eight factors considered as significant factors.

Keywords: Market Research; Indonesia Student; University Selection; Study Program Selection

1. Introduction

There were many studies about how students choose a specific study program in University. The model used were buying behavior model (Cheng, 2004; Padlee, 2010; Baharun, 2011; Kusumawati, 2010, 2013; Alonderiene, 2013, Muniady, 2014) or Marketing Mix (Muskinja, 2013). The only model which comprehensive in explaining how students choose their university and study program was proposed in the research paper which written by Alonderiene (Alonderiene, 2013). The model separated selection factors into two group of selection factors which are University selection factors and study program selection factors. This model was chosen to be the factors affecting the student in choosing a specific university and study program in this research. However, Alonderiene used descriptive statistics to explain which factors were considered significant. In this research, we tried to find factors affecting Indonesia student in choosing University and study program in Industrial Engineering for a first-year student in a University, Bandung, Indonesia through Multiple Regression Analysis. This research tried to answer which factors had a significant effect on university selection and study program selection in a university at Bandung, Indonesia.

2. Methodology

This research was quantitative research. Data gathered through questionnaires. The questionnaires were developed based on the University and Study Program Selection Factors model (see Table 1.) proposed by Alonderiene (Alonderiene, 2013). There were 25 factors developed for Program Study Selection and 34 factors developed for University Selection for independent variables. The dependent variable was students' intention in choosing the study program. Both independent and dependent variables were developed in the questionnaires using 7 points Likert Scale.

The respondents were all students in the first year in the university in Bandung. There were 97 respondents in total.

The data then were analyzed using Factor Analysis and Reliability Analysis. Factor Analysis was used to test the construct validity of data. The validated data then analyzed using Multiple Regression Analysis.
3. Findings and Arguments

The data gathered were the measurement of performance of each factor for the specific study program on the university they have chosen, which analyzed using Factor Analysis and Reliability. The results showed that all factors were valid and reliable with KMO score of 0.806 and Cronbach Alpha of 0.945.

Multiple Regression Analysis then used with the measurement of performance as independent variables and customer intention of choosing the specific study program on the university they have chosen as the dependent variables. Multiple Regression Analysis showed that the model has an $R^2$ value of 0.753, which means the model can explain 75.3% of the phenomena. The analysis also showed that from all factors considered only eight factors has significant values (see Table 2.).

Table 2. Multiple Regression Analysis

| Model  | Unstandardized Coefficients | Standardized Coefficients | t     | Sig. |
|--------|----------------------------|----------------------------|-------|------|
|        | B  | Std. Error | Beta |       |     |
| 1      | (Constant) | 6.247 | .075 | 83.169 | .000 |
| X1     | .210 | .076 | .227 | 2.782 | .008 |
| X2     | -.050 | .076 | -.054 | -.659 | .514 |
| X3     | .040 | .076 | .044 | .534 | .597 |
| X4     | .080 | .076 | .086 | 1.055 | .298 |
| X5     | .150 | .076 | .162 | 1.990 | .054 |
| X6     | -.118 | .076 | -.128 | -1.568 | .125 |
| X7     | -.008 | .076 | -.009 | -1.109 | .298 |
| X8     | -.107 | .076 | -.116 | -1.415 | .165 |
| X9     | -.086 | .076 | -.093 | -1.141 | .261 |
| X10    | .037 | .076 | .040 | .492 | .626 |
| X11    | .125 | .076 | .135 | 1.658 | .106 |
| X12    | -.041 | .076 | -.044 | -.537 | .594 |
| X13    | .087 | .076 | .094 | 1.154 | .256 |
| X14    | .117 | .076 | .127 | 1.552 | .129 |
| X15    | -.028 | .076 | -.030 | -.371 | .713 |
| X16    | .026 | .076 | .028 | .343 | .733 |
| X17    | .067 | .076 | .073 | .889 | .380 |
| X18    | .122 | .076 | .132 | 1.619 | .114 |
| X19    | -.059 | .076 | -.064 | -.780 | .441 |
| X20    | -.058 | .076 | -.063 | -.766 | .449 |
| X21    | -.089 | .076 | -.096 | -1.178 | .246 |
We grouped the factors which have significant results into two groups. They are the university selection factors and study program selection factors. The university selection factors were (as seen in Table 3.): lecturers competencies, students extracurricular activities, information on campus intakes and information for exceptional students (PMDK).

| Model | Unstandardized Coefficients | Standardized Coefficients | t | Sig. |
|-------|-----------------------------|---------------------------|---|-----|
|       | B   | Std. Error | Beta |     |     |
| X22   | .009 | .076   | .010 | .125 | .901 |
| X23   | .068 | .076   | .074 | .905 | .371 |
| X24   | -.033 | .076 | -.036 | -.444 | .660 |
| X25   | -.013 | .076 | -.014 | -.170 | .866 |
| X26   | .166 | .076 | .180 | 2.199 | .034 |
| X27   | .168 | .076 | .181 | 2.219 | .033 |
| X28   | .190 | .076 | .205 | 2.512 | .017 |
| X29   | -.028 | .076 | -.031 | -.377 | .709 |
| X30   | -.029 | .076 | -.032 | -.388 | .700 |
| X31   | .054 | .076 | .058 | .710 | .482 |
| X32   | .144 | .076 | .155 | 1.903 | .065 |
| X33   | .041 | .076 | .044 | .541 | .592 |
| X34   | .073 | .076 | .079 | .966 | .340 |
| X35   | -.024 | .076 | -.026 | -.321 | .750 |
| X36   | .129 | .076 | .140 | 1.709 | .096 |
| X37   | -.026 | .076 | -.028 | -.346 | .731 |
| X38   | .074 | .076 | .080 | .980 | .333 |
| X39   | .057 | .076 | .062 | .761 | .451 |
| X40   | -.129 | .076 | -.139 | -.1702 | .097 |
| X41   | .175 | .076 | .189 | 2.312 | .026 |
| X42   | -.065 | .076 | -.071 | -.866 | .392 |
| X43   | -.079 | .076 | -.085 | -.1040 | .305 |
| X44   | -.026 | .076 | -.029 | -.349 | .729 |
| X45   | .151 | .076 | .163 | 1.993 | .054 |
| X46   | .144 | .076 | .156 | 1.912 | .064 |
| X47   | .119 | .076 | .128 | 1.570 | .125 |
| X48   | .191 | .076 | .206 | 2.527 | .016 |
| X49   | .067 | .076 | .072 | .887 | .381 |
| X50   | .163 | .076 | .176 | 2.155 | .038 |
| X51   | -.089 | .076 | -.097 | -.1184 | .244 |
| X52   | -.105 | .076 | -.113 | -.1384 | .175 |
| X53   | .066 | .076 | .072 | .878 | .386 |
| X54   | -.071 | .076 | -.077 | -.939 | .354 |
| X55   | -.09 | .076 | .010 | .118 | .907 |
| X56   | .205 | .076 | .222 | 2.716 | .010 |
| X57   | .001 | .076 | .001 | .014 | .989 |
Table 3. University Selection Factors

| University Selection Factors                       | Beta coefficients | t value | sig  | Performance measurement |
|-----------------------------------------------------|-------------------|---------|------|-------------------------|
| Lecturers’ Competence                              | 0.21              | 2.782   | .008 | 5.1649                  |
| Infrastructures: Students extracurricular activities| 0.166             | 2.199   | .034 | 5.3093                  |
| Information Sources on campus intakes              | 0.168             | 2.219   | .033 | 5.5361                  |
| Information Sources for special students (PMDK)    | 0.19              | 2.512   | .017 | 5.5155                  |

The study program selection factors were (as seen in Table 4.): tuition costs, open house, events sponsored, and laboratory facilities.

Table 4. Study Program Selection Factors

| Study Program Selection Factors                      | Beta coefficients | t value | sig  | Performance measurement |
|------------------------------------------------------|-------------------|---------|------|-------------------------|
| Study program related: tuition costs                 | 0.175             | 2.312   | .026 | 4.6907                  |
| Study program related: open house                    | 0.191             | 2.527   | .016 | 4.9485                  |
| Study program related: events sponsored              | 0.163             | 2.155   | .038 | 4.6146                  |
| Study program related: laboratory facilities         | 0.205             | 2.716   | .010 | 5.2062                  |

4. Conclusions

This research has analyzed the effect of university selection factors and study program factors on customer intention in selecting a specific study program in a university. The model has R^2 of 75.3% which showed it fails to explain 24.7% cause of the phenomena.

The study showed that factors which have a significant effect on choosing a university were: the lectures’ competence, students extracurricular activities, and information on how to apply to university. For the study program sides, factors which have significant effect were: the tuition costs, the frequency of open house, events that sponsored by study program and laboratory facilities.

It is important to note that this study has an assumption that students are involved in choosing the study program they had attended. A further examination proposed in studying whether students are involved or choose a study program random.

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References

[1] Alonderiene Raimonda and Klimavičiene, Asta 2013, Insights into Lithuanian students' choice of university and study programme in management and economics, Journal of Contemporary Management; 2013, Vol. 18, 1
[2] Baharan, Rohaizat, et.all., 2011, International Students Choice Criteria for Selection of Higher Learning in Malaysian Private Universities, African Journal of Business Management, 5(12), p 4704-4714
[3] Cheng Chuan Shen 2004, Exploring the Consumer Behavior that Influences Student College Choice, p 53-72 Kotler Philip and Kevin Lane Keller 2009, Manajemen Pemasaran, Jilid 1, Edisi 13, Erlangga
[4] Kusumawati Andriani 2010, Student Choice Criteria for Selecting an Indonesian Public University: A Preliminary Finding, Research Online, 2, p1-11
[5] Kusumawati Andriani 2013, A Qualitative Study of the Factors Influencing Student Choice: The Case of Public University in Indonesia, Journal of Basic and Applied Scientific Research, 3(1) p 314-327
[6] Muniady Rajennd et.all. 2014, Factors Influencing Consumer Behavior: A Study among University Students in Malaysia, Asian Social Science, 10(9), p 18-25
[7] Muskinja Jovan et.all. 2013, The Need for Appropriate Marketing Mix Implementation at Serbian Universities. Journal of XIX Skup TRENDOVI RAZVOJA, T1.1-5, p 18-21
[8] Padlee, Siti F, et.all. 2010, International Students’ Choice Behavior for Higher Education at Malaysian Private Universities, International Journal of Marketing Studies, 2(2), p 202-207
[9] Sekaran Uma 2013, Research Methods for Business, A Skill Building Approach, Sixth Edition, John Wiley & Sons, Inc
Appendix 1
University and Study Program’s Selection Factors

University Selection Factors

- Competence of Lectures
- Research Conducted and Learning Methods
- International exchange Options
- University Reputation
- Career Job Possibilities
- Opinion or advice of other people

Infrastructure:
- Social Life:
  1. University
  2. City
- Cost:
  1. Study fee
  2. Accommodation expenses
- Information Sources:
  1. Events
  2. Other information sources (website, leaflet, magazines, articles in press)

Study Program Selection Factors

- Possibility to be admitted:
  1. Exam needed
  2. Study Allowances
- Study Program related factors:
  1. Study subjects
  2. Prestige
  3. Career opportunities

- Students
- Individual Characteristics