Analysis of factors influencing the selection of educational institutions

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Abstract

This research aims to study the mechanism is the key to improving quality of life and improve the quality. Countries with the development of a good education . It is a country with a very high quality . Developing countries, it would be a step further than other countries . For this reason, the development of quality education is the cornerstone in developing countries . In today's competitive in the press release . And student recruitment in higher education institutions in both the public and private sectors are highly competitive in terms of courses and disciplines . Both between themselves and with the local university campus in the country . Some subjects had no students enrolled . To be closed or merged with other disciplines to collapse similar . With student admissions . When they are more competitive . Higher education institutions , both public and private . I have to compete in terms of quality in management education. Need for quality assurance . This will ensure the quality of management and management of each institution of higher education study . Be able to compete with other institutions for which there are several factors that can influence the selection of study in institutions of higher education students, for example, the famous travel programs and courses offered at cost . facilities etc. The data samples are factors that influence the selection of educational institutions . Diploma students . Institutions affiliated Tangtrongchit Commercial, total 400 items and 30 indicators.

indicators in to 6 factors, these factors were used to find out their relationship with Structural equation Model. It was found that the value obtained from the model are consistent with the data (Goodness of Fit),Chi_square (x^2) = 0.308 (p), GFI (Goodness of Fit Index) = 0.992, RMSEA (Root Mean Square Error of Approximation) = 0.020 and   Hoelter's N = 627

Keyword : Structural Equation Modeling, Factor analysis,Predicting satisfaction.

I. Introduction

Background and significance of the problem. College cassia. An institution of higher education institutions, nine of the institutions affiliated Tangtrongchit. Caused by aspiration of the founder Dr. Lily Chu property in Tangtrongchit and Dr. Vibha species held their chief executive institutions in upright designs. Ratchaphruek is the first college building is a five storey building with the name. "Honor the 60th anniversary celebrations consisted of a classroom. A Laboratory Library Learning Center. Research and development (Learning and Research Center) has produced media. Computer center. Meeting and conference rooms in the year 2552 the college opened, Dr. Lily Chu as their eighth grade school building to accommodate the growing student. Current college faculty Ratchaphruek a teaching opened 6 of 11 subjects are Administration Department is comprised of five major computer business. Management. Department of Marketing. Hotel and Tourism Management. Logistics Management's Board include Accounting Accounting. Faculty of Law The Faculty of Law. Communication Arts. The Department of Advertising and Public Relations. Science and Public Health. The Computer Animation. Department of Public Health. Faculty of Arts and the Faculty of Business English. Master of Public Administration Program. Master of Education course. Growth increased rapidly. The researchers. The idea is to do an analysis of factors influencing the selection of study in higher education institutions. By the results of the survey of students from affiliated institutions Tangtrongchit. To analyze the reasons for choosing to study higher education institutions. The analysis has led to the development Ratchaphruek College to meet the potential needs of the students further.

- Objectives of Research
- Firstly, it is to synthesize the factors influencing the selection of educational institutions.
- Secondly , it is to develop a structural equation model. Factors influencing the selection of educational institutions Scope of the research.
- Scope of Research

A Sample. Diploma student in the Institute of Commercial Tangtrongchit 400.

II. Literature Review

A. Factor analysis [1] is a technique used to extract factors of a group of indicators that are related to each other. Factors that have to be used in place of a group of indicators that are the same group. Is a technique used to reduce the number of variables, dimensions, or manifest to determine the suitability of the extraction of factors will determine the statistics. Kaiser-Meyer-Olkin: KMO value of KMO should be greater than 0.6 factor extracted is accurate, it is determined by the ability to explain the variability of Factors Total with the inverse of All variables revealed no factor extraction. If the value is set to a high percentage refers to a factor. The indicators can be good as well.

B. Structural equation modeling [2] is a technique used to analyze the relationship between the various factors from the survey. by extraction factor. The research aims at modeling the relationship of the various factors that should be according to theory. Or the hypothesis of the research. Then make sure that the relationship model (Default Model) that can describe the covariance. How well does. The model has to make sure that it is appropriate or not for statistics used for monitoring include the Chi-square ($\chi 2$) (should be Non significance), Goodness of fit index: GFI (should be> 0.9.), Root Mean Square error of approximation: RMSEA (should be <= 0.06) and the Hoelter's N (should not be less than 75), the Hoelter's N is used to specify the size of the sample (Case) sufficient to analyze the model equations. the structure or not.

C. Estimating the error.
Model must be built to precise compatibility (Model best fit) to the data used in the modeling of the maximum This model will be tested with another data set to know the actual cost resulting from the forecast data set will be used to calculate the errors relative to equation (1).

$$MRE_i = \frac{|Actualcost_i - predictedcost_i|}{Actualcost_i} \quad (1)$$

If there are multiple projects to tolerances of each project combined and relative to average equation (2).

$$MMRE = \frac{1}{n}\sum_{i=1}^{n}\left[\frac{|Actualcost_i - Predictedcost_i|}{Actualcost_i}\right] \times 100 \quad (2)$$

To know the accurate value will delete the MMRE values obtained by one hundred.

D. Related Research.
- Ratchada [3] present an analysis of causal factors that affect customer satisfaction. In the use of computer network services for the students. Using structural equation modeling.Case Institute of Technology.Researchers studied 25 indicators, the indicators to be used to create a sample query which 229 samples were analyzed. With statistical methods. Factor analysis can be extracted 2 factors F2 and F3 F2 is a significant new means satisfied with security. Encoding pass. Including the continuation of the use and satisfaction F3 means the speed of access / display page of the Institute of Technology and the search engine using a wired network. A new variant of the wireless and 2 above can be concluded that if you want to increase customer satisfaction in the service network should be the determining factor of the two main variables.

- Properties [4] present an analysis of risk factors in the pathogenesis of blood pressure. Using structural equation modeling. A case study of patients admitted to hospital with Nan. Researchers have studied the measure 16 indicators to collect data, 3,462 items were extracted by four factors, factors that influence the occurrence of high blood pressure by an equation that has the moving average of estimate. the model is ± 23.43% ± 10.00% in males and in females, then the structural equation acquired programming in an application.

III.Conduct research.

Analysis to analyze factors that influence Choosing a university education. There are steps and procedures below.
A. Education and Indicators (Manifest variable) that is being referenced. In the analysis for the analysis of factors influencing the selection of university education. Can be summarized as follows.
Table I. Indicators and definition of indicators divided. The three areas.

I. Background Factor

Indicator	Definition	Level
A1	The location of institutions that affect the selection of the institution	1- 5
A2	Distance from home to institutions that affects the choice of the institution	1- 5
A3	Income of the parents affect the selec-	1- 5

	tion of the institution	

II. Characteristic Factor

Indicator	Definition	Level
A4	Your GPA. Affect to the choice of institution .	1- 5
A5	Your knowledge affect to the Selection of institution	1- 5
A6	Personal skills such as accounting, marketing, computer information. That affect to the selection of your institution	1- 5

III. Expectation Factor

Indica-tor	Definition	Level
A7	The labor market needs an institutions affect your choice	1- 5
A8	Proud of parents with a university that affect to your selection.	1- 5

IV. External influences on the decision Factors

Indicator	Definition	Level
A9	The fact that you have seniors / friends studying in the institutions that affect to the institution of your selection	1- 5
A10	Suggestion of friend affect to your selection	1- 5
A11	Impressive Person (Idol) is an alumnus of this institution affect to the selection.	1- 5
A12	The parents intention such as be a teacher or be an executive officer etc. affect to the selection.	1- 5
A13	To find information about the institutions or courses offered by the Internet affect select institutions.	1- 5
A14	To find out about courses offered or institute by the student handbook. , Newspaper, magazine affect to your selection.	1- 5
A15	Information about the institutions or courses offered that you get from flyers, leaflets, posters, board.Affect to the selection.	1- 5
A16	Information of the education institute that you have attended from educa-	1- 5

	tion guidance. Affect to your selection.	

V. Examination

Indicator	Definition	Level
A17	Model of student admission such as students from the quota or examination, can affect to the selection.	1- 5
A18	The test subjects such as Mathematic, English Language or Thailand aptitude affect to the selection.	1- 5
A19	Competitive rates in the entrance examination that affect to the selection.	1- 5

VI. Qualification of Institute

Indicator	Definition	Level
A20	Reputation of the institute affect to the selection.	1- 5
A21	Reputation of lecturer affect to the selection.	1- 5
A22	Reputation of the current students or alumni affect to the selection.	1- 5

VII. Environment Factors

Indicator	Definition	Level
A23	The large size of the school building and modernization affect to the selection.	1- 5
A24	Beauty and pleasantness in institution areas affect to the selection.	1- 5
A25	Readiness and modernization of equipment for teaching affect to the selection.	1- 5
A26	There are various facilities such as apartment, sport fields or medical center affect to the selection.	1- 5

VIII. Tuition and finances Factors

Indicator	Definition	Level
A27	Tuition for further study affect to the selection.	1- 5
A28	Scholarships affect to the selection.	1- 5
A29	Promotion of the first semester affect to the selection.	1- 5

B. Factor analysis (Factor Analysis) data indicators, and 29 to analyze the factors using the extracted form factor PCA (Principal Components Analysis) and the rotation axis orthogonal (Varimax) The result of the extraction of factors was found. KMO = 0.911, indicating that the extracted factors to be successful. Variables clustered together. With the ability to explain the total variation 59.67 Table 2 following.

Table II. Factors and indicators of factors.

Factor	Component
F1	A11,A12,A13,A22,A15,A14,A17,A16,A21,A20,A19
F2	A24,A26,A23,A25
F3	A1,A27,A29,A7,A2
F4	A10,A9,A8,A6
F5	A4,A5,A3,A18
F6	Total

F1 –F5 = Indicator And   F6 คือตัวบ่งชี้

C. Structural equation modeling.

Factors derived from factor analysis will be used to build a structural equation model initializing the first picture of the underlying structural equation modeling was used to analyze significance. Relevance and ability to explain the mutual relations and distribution (Covariance) Maximum likelihood method as Figure 1 for the base model.
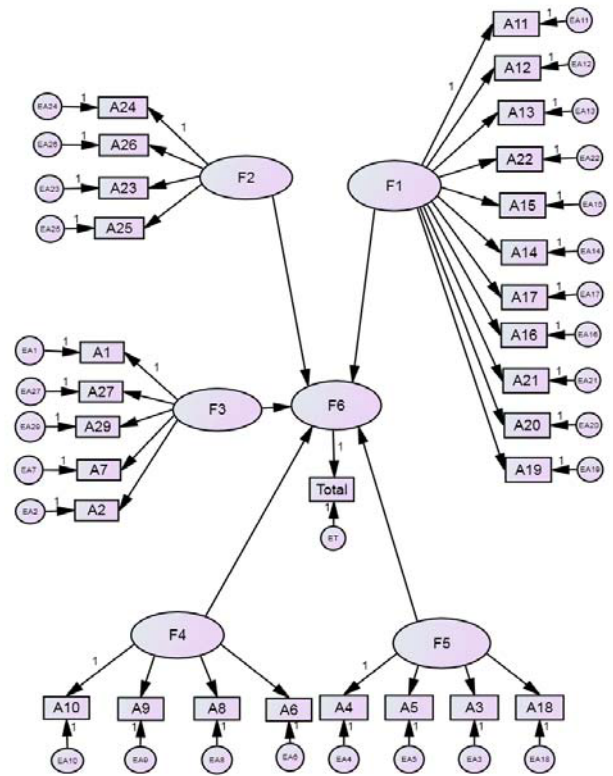
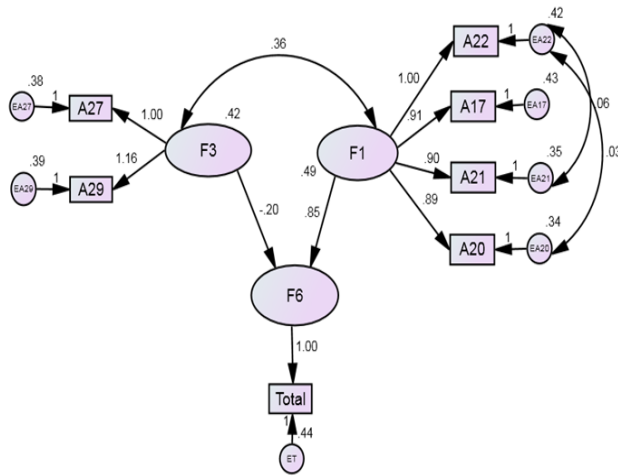

Figure I : Structural equation model substrate.

Five factors derived from factor analysis will be used to build a structural equation modeling optimal. Five factors derived from factor analysis will be used to build a structural equation modeling optimal. Monitoring statistics to show the compatibility of the model to the sample data (Goodness of fit) and the second the GFI and RMSEA and the adequacy of the sample (Sample case) from the Hoelter's N results in Table. 3 Analysis of the statistics to show the compatibility of the model to the sample data (Goodness of fit) and the second for the GFI and the RMSEA sufficiency.

Table III. Statistics of the model, through the analysis.

Statistics	Values
Chi_ square (χ^2)	0.308(P)
GFI	0.992
RMSEA	0.020
HOELTER 's N	627

Statistics is the minimum Chi_square (χ 2) the GFI and the RMSEA values Hoelter's N is acceptable in the com-

patibility of the model with samples taken for analysis. Analysis, structural equation modeling, as shown in Figure 2, structural equation modeling.

Figure II. Structural equation modeling Adjusted Interaction After Analyzing Appropriateness

Structural equation modeling. The analysis has shown that the size and direction of the influence of various factors. Affect the analysis of causal factors influencing the selection of educational institutions as a whole (Factor Total) is the standard. (Standardized Equation) as follows.

$$Total = F6 + 0.04 \qquad (1)$$

$$F1 = 1.00A22 + 0.91A17 + 0.90A21 + 0.89A20 \qquad (2)$$

$$F3 = 1.00A27 + 1.16A29 \qquad (3)$$

$$ET = 0.04$$

IV. Conclusion

A. Summary of the findings were as follows.
- Factors F1 manifest variables include A22 (reputation of current students. Or alumni. Affect select your institution at any level), the A17 (as a form of students get admission quota Test matches or get him out of the way. Affect select your institution at any level), the A21 (the reputation of the faculty. Affect select your institution at any level), the A20 (the reputation of higher education institutions. Affect select your institution at any level) has a direct influence on the analysis of factors influencing the selection of educational institutions using structural equation modeling, the influence of positive was 0.85.

- Seemed to consist of a variable factor F3 A27 (tuition in the study. Affect select your institution at any level), the A29 (the system of promotion in the first semester. Affect select your institution at any level) has a direct influence on the analysis of factors influencing the selection of educational institutions using structural equation modeling of factors influencing the positive was 0.20 F6.

- Factors F1 and F3 have a direct influence on the analysis of factors influencing the selection of educational institutions using structural equation modeling. That is, the F1 and F3 are related. The level of correlation was 0.36 by the model through data analysis, such as statistical.

V. References

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