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Student Satisfaction as a Mediating Variable between Reputation, Image and Student Loyalty

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Abstract

This study aims to empirically examine the effect of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image to students' loyalty using Student Student satisfaction as the mediation at private universities. The object of research was conducted on 5 private universities in Bandar Lampung. The questionnaires were distributed to 500 respondents in the sample using purposive sampling technique. To analyze the data Structural Equation Model was used as a method of data analysis and was processed using Lisrel 8.80 Windows statistical software. The results found that the Perception of the general reputation of the university, Perception of study programs reputation, Perception of university image have a positive and significant effect on Student satisfaction. Furthermore, Student satisfaction has a positive and significant effect on Student's loyalty. Later it was found that Student satisfaction is a full mediating relationship between the Perception of the general reputation of the university, Perception of study program reputation, Perception of university image with Student loyalty. The results of the study also found that Perception of study programs reputation, Perception of university image have a positive and significant effect on Students' loyalty. In order to increase the loyalty of students then the agency should communicate well to students, ask professors to help students who have difficulty in subjects, complete campus infrastructures, maintain the reputation of study program in accordance with the advertisement / brochure / promotion that has been formed as well as keeping the image in keeping with the actual conditions. Future studies are recommended to add another variables or another dimensions to Students' loyalty model or use different respondent characteristics to the shape of Private Universities/Public Universities that is full with a wider study area. In addition it is also advisable to do some research within the scope of broader education, ranging from Elementary Education, Secondary Education, and Vocational Educatione, so hopefully it will get Students' loyalty model for all types of educational level.

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Keywords**:** Perception Of The General Reputation Of The University, Perception Of Study Program Reputation, Perception Of University Image, Student Satisfaction, Students Loyalty, Private Universities.

Introduction

Currently the competition among Higher Education Institution (HEI) in Indonesia is very competitive (Santoso, 2011). It has started since the enactment of the Decree of the Director General of Higher Education No. 08/DIKTI/Kep/2002, on the Technical Guidelines of National Education Decree No.184/U/2001 on Guidelines for Controling, Monitoring and Development of Diploma Program, Bachelor and Master's degree in Higher Education Institution (HEI). One of the important things in that decree is that any program of study in

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HEI has the authority to implement the learning process independently. This government policy has implication on the similarity of the operational status of the implementation of public and private universities. Since then, as de facto there is no difference in the operational status of the implementation for public and private universities. All rules and regulations refer to and are based on the Higher Education (Directorate General of Higher Education) under the Minister of National Education of Indonesia (Ministry of Education), including the operating license issuance for study program/operational. National Education Act no. 12 in 2012 also established the autonomy in the administration of higher education in every university, so that HEI can open a wide variety of study programs with a variety of program study (Suharyadi, 2011).

At the moment there are 83 public universities and 2,928 private universities in Indonesia, which is the number of private universities is as much as 97.24%, compared to the public universities which is only as much as 2.76% (Table 1).

Tabel 1
The Number of Higher Education Institutions in Indonesia in 2012

Form of Higher Education	**Public**		**Private**		**Total**
	Total	**%**	**Total**	**%**	**Total**
University	48	10,43	412	89,57	460
Institutes	6	11,32	46	88,68	53
Higher Education Institutes	2	0,15	1.314	99,85	1.316
Academy	-	-	1.015	100	1.015
Polytechnics	27	16,17	140	83,83	167
Total Number	**83**	**2,76**	**2.928**	**97,24**	**3.011**

Source: Kopertis Region II Palembang

Compared with the existing universities in Lampung province, currently there are only 2 public universities and 68 private universities located in Lampung Province, which is the number of private universities is as much as 97.14% as compared to the public universities which is only as much as 2.86% (Table 2).

Table 2
The Number of Higher Education Institutions in Lampung Province in 2012

Form of Higher Education	**Public**		**Private**		**Total**
	Total	**%**	**Total**	**%**	**Total**
University	48	10.43	412	89.57	460
Institutes	6	11.32	46	88.68	53
Higher Education Institutes	2	0.15	1,314	99.85	1,316
Academy	-	-	1,015	100	1,015
Polytechnics	27	16.17	140	83.83	167

Total Number	**83**	**2.76**	**2,928**	**97.24**	**3,011**

Source: Directorate General of Higher Education (Dirjen Dikti)

The large number of private universities indicates that, both in Indonesia and in Lampung province, private universities are dominant compared to public universities. Of the 68 private universities in Lampung province, as many as 62 private universities are located in the city of Bandar Lampung; it consists of 30 Higher Education Institutes, 25 Academy's, 5 Universities, 1 institute, and 1 Polytechnic. A large number of private universities spread across Bandar Lampung will provide many options for the community. This is an advantage not only for the society but also for education, due to the large number of private universities in Bandar Lampung; the community has more diverse choice in choosing qualified private universities. A large number of private universities will make stiff competition among private universities, so they will improve their performance in order to win the competition (Natalisa, 2012). Despite the development of HEI is very promising and potential every year, the HEI has always had difficulty in recruiting new students. This is compounded by the number of students who are not active every year (Natalisa, 2012). These conditions are caused by: (1) Industrialization in the field of higher education which have an impact on the establishment of universities, both public universities and public universities. It is so massive and evenly in nearly all districts/cities in Indonesia, so the level of competition among HEI to compete for prospective students is becoming very tight, especially for private ones. (2) The expansion of an industry that has a huge impact on the breadth and depth of social conditions in academic circles, so that every university is required to do "link and match" to all teaching and learning processes in HEI, including the provision of facilities and infrastructures to fit the needs of industries. The un- "link and match" phenomenon is widely experienced by HEI resulting in less demand by prospective students or even existing students move to another place, even drop out from the HEI. On the basis of the above mentioned conditions, the study was conducted.

At this time, the condition of private universities in Bandar Lampung faced with many common problems, namely:

1) The decline in number of new students coming into private higher education, in particular form of private university. At the past, private universities is the only option for students who are not accepted at the Public University but still want to continue their study in college (Natalisa, 2012). The decrease in number of students who sign up to a private university in Bandar Lampung over the last 5 years is shown in Table 3 below:

Table 3
Admissions in Private Universities in Bandar Lampung years 2009-2012

Difference(%)	**Total of Students Numbers**	**Year**
	3,211	2009
-2.57		
	3,128	2010
-1.75		
	3,074	2011
-2.18		
	3,007	2012

Source: Kopertis Region II Palembang

2) The large number of students who are not active in each semester. The number of students who are not active at the Private Universities in Bandar Lampung on average in the last 4 academic years is at 5.61% (Table 4).

Table 4
The Number and Percentage of not active students in Private Universities in Bandar Lampung Academic Year 2009-2012

Academic	**Total Students**		**Percentage**
Year	**Total**	**Not active**	**Not active (%)**
2009	13,880	457	3.29
2010	12,430	184	1.48
2011	12,380	1,207	9.75
2012	10,897	863	7.92
		Average	**5.61**

Source: Kopertis Region II Palembang

Every university management wants all their students listed as active students in every semester. It indicated that the student has the intention to continue and finishing their study in the same university (loyal student's). Active student is a student who must be actively registered at the Academic Administration at the beginning of each semester of the current academic year. To be listed as an active student, then at the beginning of each semester of the course, students are required to re-register by completing the KRS (Card Study Plan) and complete the financial administration. Students are the most important part in the management of HEI. Revenue of HEI, private ones in particular, mostly still comes from students, so their presence on campus will determine the survival of these private institutes.

Although the university and the company are two different kind of businesses, some researches are trying to develop a commercial business model to be applied in the context of HEI (Sultan & Wong, 2010). Competition in higher education market which is very competitive today forced higher education institutions to adopt a strategy of competitive advantage in winning the competition (Thomas, 2011).

Loyalty of customers is a key of competitive advantage, survive, and grow (Reichheld, 1996). Students who are loyal are the source of competitive advantage for HEI (Thomas, 2011). Student loyalty, both in the short and long term, will have a direct impact on the HEI. Student loyalty will be a source of WOM (Word of Mouth) that is effective because students voluntarily would recommend the HEI where they got the study to others. In addition, after becoming the alumni, if they want to continue and deepen their education, then the students are likely to be loyal to continue in the same HEI (Marzo - Navarro et al., 2005).

Students as consumers will be loyal to the institution if they are satisfied (Andreassen & Lindestad, 1998). In addition, customer satisfaction is the impact of corporate reputation (Andreassen & Lindestad, 1998). Satisfaction is an overall feeling of someone after buying services/products (Solomon, 1994). The level of satisfaction is determined by the difference between the performance of the services received with what consumers expect (Parasuraman et al., 1986). By adopting customer satisfaction for goods and services, Elliot & Healy (2001)

introduced the concept of student satisfaction that is short-term behavior resulting from the evaluation of the educational services they receive from the experience.

A research conducted by Thomas (2011) on University Reputation concluded that there are two dimensions of Perception of student reputation, namely; the overall perception of university reputation/Perception of general reputation of the university and perception of study program reputation. In this study the author will put both these dimensions into latent variables and coupled with other latent variables, namely Perception of university image.

Based on the descriptions above, the researcher will discuss the effect of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image on Student loyalty with Student satisfaction as the mediation.

This study will also analyze the effect of Student satisfaction on Student loyalty by using dimensions of Facilities, Academic Support, Welfare support, feedback, Placement support and Organisation communication as suggested by O'Driscoll (2012).

Based on the background research that has been described above, the research problem is formulated as follows: Is there an effect of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image on Student satisfaction to Student loyalty? Is there an influence on Student satisfaction on Student loyalty?

The purpose of this study was to analyze the effect of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image to Student satisfaction and to Student loyalty as well as the influence of the Student Satisfaction on Student loyalty.

The benefits to be derived from the results of this study are: (1) For the Leader/Private university President may provide information to decision makers in the private universities, especially in private universities (Rector) in Bandar Lampung on how to increase Student loyalty through Student satisfaction as well as through the Perception of the general reputation of the university, Perception of study programs reputation and Perception of university image; (2) For further researchers, they will contribute to the theoretical literature on the Perception of the general reputation of the university, Perception of study programs reputation and Perception of university image, Student satisfaction and Student loyalty.

Review of Literature

Student Perception of Reputation

Reputation is a summary of the impression or Perception of external stakeholders of the company (Bromley, 1993; Davies & Miles, 1998). Another opinion states for consumers that the company's reputation is company centric which focuses on credibility, respect and legitimacy that the company is as good as their name (Ettenson & Knowles, 2008). Strong

brand reputation makes the company more attractive and desirable to consumers. Company with a strong brand reputation is accountable, has integrity, responsible and concerned with quality. These things will result in greater market share, reflect the actual value of the company, increase loyalty and be a key determinant in the selection of similar brands (Ahearne et al., 2010; de Chernatony, 1999; Ettenson & Knowles, 2008; Gounaris & Stathakopoulos, 2004; Nandan, 2004). Research in the fields of marketing, management and corporate strategy clearly indicates that the company's reputation is an important factor to gain success (Barney, 2002; Chun, 2005; Kay, 1993; Selnes, 1993). In management strategy studies, corporate reputation is considered as intangible assets that contribute to the company's level of competitive advantage (Barney, 2002; Dowling, 1994). Reputation based on estimation in general is something that benefits society, where the reputation gives a positive influence of public on the behavior and actions of organizations. This is a useful starting point for discussing and comparing the application of the concept of school reputation with corporate reputation (Skallerud, 2011). The concept of company's reputation has also been anticipated and adjusted in the field of management education, which is if a school/college has a good reputation then it will have a positive effect (Safo'n, 2009; Vidaver - Cohen, 2007).

Development dimensions of Reputation

According to Davies et al., (2004) the difference between brand reputation with the image is that the image is an independent opinion based on actual experience, while reputation is highly dependent on the experience of the use of goods and services. Gray and Balmer (1998) explains the difference between image and reputation. Image can establish an organization image without the need to have experience with the organization, while reputation is more detail of the image which is the result of experience with the organization. The definition of reputation by Argenti & Druckenmiller (2004) is a representation of the entire collection of images from the company built in the long period of time based on the identity of the company, the performance of the company and how consumers receive the perception of activities of the company. The terms of reputation and image are often used interchangeably with no clear difference between the two (Chun, 2005). Therefore, it can be concluded that the image is part of reputation. Thus, in this study the image is a new variable in addition to perception of the general reputation of the university and the perception of study program reputation.

Conceptual Framework

Based on several studies that have been done, there are a lot of factors that affect the level of loyalty; one of the most dominant is the satisfaction (Anderson & Srinivasan, 2003; Bloemer & Lemmink, 1992). Satisfaction is a feeling of pleasure or disappointment from someone after comparing the perception of the product's performance with its expectations. If consumers are satisfied with the performance of the products/services used, then the consumer will be loyal/faithful to the products services (Yoon & Uysal, 2005). Students as consumers in the higher education institute will be loyal to their institution if they were satisfied (Andreassen & Lindestad, 1998).

Strong corporate reputation affects satisfaction (Lim et al., 2000; Andreassen & Lindestad, 1998). Reputation is an overall consumer perception of the company, either directly or indirectly related to, and what consumers should get when buying a product or service from a company (Fombrun & Shanley, 1990; MacMillan et al., 2005). While the

image is a form factor of the company's reputation that is built in the long term based on identity and corporate performance as well as how consumers receive the perception of activities of the company (Argenti & Druckenmiller, 2004). Image is an integral part of the reputation and is often used interchangeably with no clear difference between the two (Chun, 2005). Research conducted by Thomas (2011) reveals that the reputation of the university is able to improve the Student Satisfaction and Student loyalty by using two dimensions, namely; Perception of the general reputation of the university and Perception of study program reputation. Another study concluded that the image is an important role to customer satisfaction and customer loyalty (Wang & Wu, 2011; ¨ Ozer & Aydin, 2004).

Based on the description above, the conceptual framework can be described as follows:

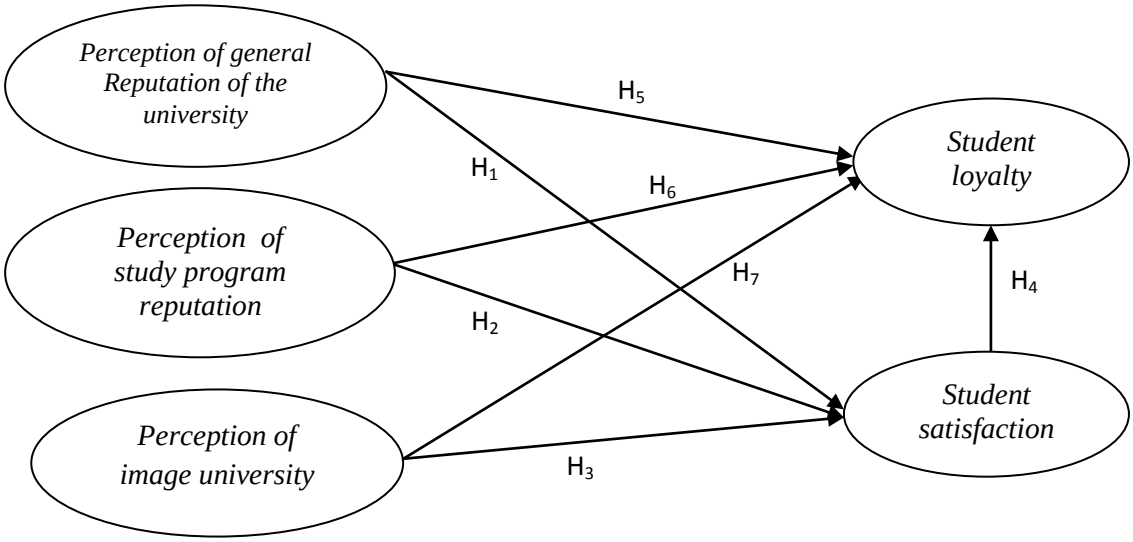


Figure. 1.Conceptual Framework

Research Hypothesis

H_1: There is a positive and significant impact of Perception of the general reputation of the university to Student satisfaction.
H_2: There is a positive and significant effect of Perception of study program reputation to Student loyalty.
H_3: There is a positive and significant impact of Perception of university image on Student loyalty.
H_4: There is a positive and significant impact of Student satisfaction on Student loyalty.
H_5: There is a positive and significant impact of Perception of the general reputation of the university to Student loyalty.
H_6: There is a positive and significant effect of Perception of study program reputation on Student loyalty.
H_7: There is a positive and significant impact of Perception of university image on Student loyalty.

Methodology

Research carried out referring to the limitations of studies that have been done previously by Thomas (2011) and Helgesen and Nesset (2007). Research conducted a survey (field study) that aims to test the hypotheses on the effect of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image on Student loyalty using Student satisfaction as a mediating variable.

The involvement of the researcher in this study was minimal/low. The researcher was not involved in the research results (low-level engagement) because author only form conceptual framework, formulate hypotheses, operationalize variables, collecting relevant data and analyzing the results or research findings. Research setting is non-contrived settings / inartificial setting because it is done in a scientific environment (natural setting), which is directly on the respondents who attended the private University in Bandar Lampung. The unit of analysis in this study is the individual, such as students who are studying above 3rd semester in private universities in Bandar Lampung. As for the dimension/time horizon, then this study is a cross-sectional study because the data were collected at a certain time period of December 2013.

Population, Sample and Data Collection Methods

The population in this study were all students of a private universities located in Bandar Lampung city. Because of the large population, this study used a sample, specially students who study in private universities in Bandar Lampung. The sample selection due to: (1) the total number of students in of private universities in Lampung Province is adequate to be used as the sample, i.e. private University students in Bandar Lampung so it is more effective and efficient, (2) the whole number of students who attend private universities in the city of Bandar Lampung is larger than in the district or other cities in Lampung province so that they could be as a reference to the other districts/cities, (3) the number of private universities in Bandar Lampung is the most widely among districts/cities in Lampung province so that a high level of competition shows absence of resistance (survival) for Private Universities at present. Therefore, the results of this study can be used as a picture of other private universities in Lampung province or other areas in Indonesia.

The size of the sample has an important role in predicting and interpreting the results of the research. Based on the opinion of Hair et al., (2010), the results of statistical tests are very sensitive to the magnitude of the sample size. The number of samples using SEM was said ideal if the respondent amounted to between 200 to 400 respondents (Hair et al., 2010). Meanwhile, according to Sekaran (2003) the appropriate magnitude of the sample size in the study is ranged from 30 to 500 respondents. This study used purposive sampling techniques. This technique was used because researchers believe that students who were respondents have the necessary information for researchers. The sample size is determined by taking into account the analytical techniques used in hypothesis testing structural equation model (SEM). Roscoe (1975) as cited in Sekaran (2003) provides guidance on the determination of the number of samples as follows:

1. It is preferably that the sample size is between 30 s / d 500 elements.
2. If the sample is broken down again into the subsample (male/female, elementary/junior high/high school, etc.), the minimum number of subsamples should be 30 for each category.

3. In multivariate research (including multivariate regression analysis) the sample size should be several times larger (10 times) of the number of variables to be analyzed.
4. To study a simple experiment, with strict controls, sample size can be between 10 s / d 20 elements.

Based on the above sampling method, then a sample of respondents in this study is 500 students. A sample of respondents is drawn using proportionate stratified random sampling technique. Sampling criteria used as respondents was students in 3rd semester or above and the selection of respondents in the random sample. To calculate the sample size for each private university, the determination of the number of samples using proportionate stratified random sampling technique is as follows:

$$\text{Sample / Private University} = \frac{\Sigma \text{ Population / Private University} \times \text{sample}}{\Sigma \text{ Population Private University}}$$

Information:

Sample / Private University = Sample for students in private University

Σ Population/Private University = The number of student population in private university

Sample = The number of samples

Σ Population of Private University= The number of population of private university students

Based on the method of calculation of the number of samples with data obtained from Kopertis region 2 in 2012, the number of samples of the population in 5 private universities that exist in Bandar Lampung is as follows:

Table 5
Population and Sample of Private Universities Students In Bandar Lampung in 2012

No	Names of Private Universities	Total Students	Samples
1	University of Bandar Lampung	2,542	127
2	University of Tulang Bawang	1,237	62
3	University of Muhammadiyah Lampung	1,078	54
4	University of Malahayati	3,381	168
5	University of Sang Bumi Ruwa Jurai	1.796	89
	Total Number	**10,034**	**500**

Source: Kopertis Region II Palembang

The method of data collection is done by distributing questionnaires directly to students in five private universities in Bandar Lampung. Respondents were asked to fill out a list of questions/questionnaire provided by the survey team/enumerators. Then the team will wait for the survey respondents answer all of the questions so that the questionnaire's return rate is 100 %. However, not all the questionnaires that have been returned were processed. This is because after validation, there is a questionnaire that is not eligible to be processed, for example, not all questions are filled or inconsistent answers with one another. Therefore the number of respondents to the questionnaire distributed in excess of the number of samples used, namely 500 questionnaires. Data validation is done in the form of test validity and reliability of research instruments in order to refine the query. So it can be known whether the respondent understands what is asked without any meddling from the enumerators.

Profile of respondents

Based on the results of the data collection, profiles of respondents surveyed can be seen from several characteristics, namely (1) Gender, (2) Semester, (3) Location of origin of High School/Vocational, (4) Type of study program, (5) Parents' jobs, and (6) Parents income.

Table 6:
Private University Students Profil in Bandar Lampung based on Sex, Semester, Origin of location of High School/Vocational, Type of Study Program, Parents' jobs and Parents' income

Percentage (%)	**Total Respondents**	**Information**
		Sex
42.4	212	Male
57.6	288	Female
		Semester
45.0	225	3-4
26.6	133	5-6
19.2	96	7-8
9.2	46	> 8
		location of Origin of High School/Vocational
49.4	247	Bandar Lampung
30.6	153	Outside Bandar Lampung (inside Lampung Province)
20.0	100	Outside Bandar Lampung (Outside Lampung Province)
		Types of Study Program
33.4	167	Science
66.6	333	Social
		Parents' employment
31.8	159	Civil Servant

19.6	98	Private Employee
22.2	111	Businessman
4.6	23	Army/Policeman
5.2	26	Teacher/Lecturer
4.2	21	Laborer/Farmer
12.4	62	Others
		Parent's income per month
20.0	100	> 10.000.000
29.8	149	5 – 10 millions
39.4	197	2 – 4.999.999
10.8	54	< 2 millions

Source: Data processing result

From Table 6 above, it can be seen that the profile of students in Private Universities in Bandar Lampung is as follows:

1) Based on gender, students of private university in Bandar Lampung consisted of 212 students were male or 42.4% and 288 students were female or 57.6%. The majority of private university students in Bandar Lampung were female and minorities were male.
2) Based on the semester, the students of private university in Bandar Lampung consisted of 225 (45.0%) students of 3-4th semester, 133 (26.6%) students of 5-6th semester , 96 (19.2%) students of 7-8th semester and 46 (9.2%) students above 8th semester.
3) Based on the location of the origin of high school/vocational, then the students of private university in Bandar Lampung consisted of 247 (49.4%) students from high school/vocational from Bandar Lampung, 153 (30.6%) students of school/vocational from outside Bandar Lampung (in Lampung province) and 100 (20.0%) students of school/vocational from outside Bandar Lampung (outside Lampung province).
4) Based on the type of study program, the private university students in Bandar Lampung consisted of 167 (33.4%) students who take the science of study program and 333 (66.6%) students take the social of study programs.
5) Based on parent employment, the private university students in Bandar Lampung have parents with jobs that consisted of 159 (31.8%) of parents of students with the work as civil servants, 98 (19.6%) of parents of students with private sector employee jobs, 111 (22.2%) of parents of students with self employment, 23 (4.6%) of parents of students with occupation as army/police, a total of 26 (5.2%) of parents of students with the work as teacher/lecturer, 21 (4.2%) of parents students with job as labors/peasants and 62 (12.4 %) of parents of students with other kinds of employment.
6) Based on the total income of the parent, the private university students in Bandar Lampung have parents with income consisted of 100 (20.0%) of parents of students with incomes of more than 10 million IDR per month, a total of 149 (29.8%) of parents students with an income with range of 5-10 million IDR per month, 197 (39.4%) of parents of students with an income of 2-4,999,999 IDR per month and 54 (10.8%) parents of students with income less than 2 million IDR per month.

Based on profiles of private university students in Bandar Lampung, it can be concluded that the private university students in Bandar Lampung are in the majority gender of (a) female; (b) 3rd-4th semesters; (c) the location of the origin of school/vocational of Bandar Lampung; (d) taken social studies programs ; (e) parents work as servants (f) the amount of parental income between 2-4,999,999 IDR per month.

Based on the profile of minority students of private universities in Bandar Lampung, it can be concluded that minority of private university students in Bandar Lampung is (a) male; (b) above 8th semester; (c) the location of the origin of school/vocational is outside Bandar Lampung (outside Lampung Province); (d) taken science study program; (e) parents work as laborers employee/farmer (f) total income of parents is more than 10 million IDR per month.

This study is limited to the private university students in Bandar Lampung. Then the development of variable Perception of general reputation of the university, Perception of study programs reputation, Perception of university image is adapted from a previous study conducted by Thomas (2011) and Argenti & Druckenmiller (2004). Furthermore Student satisfaction variables are limited to 6 dimensions by O'Driscoll (2012), namely facilities, academic support, welfare support, feedback, placement support, and organisation's communication. Student loyalty variables are limited to two dimensions, namely Attitude and Behavior (Hennig - Thurau et al., 2001).

Development of Research Instruments

There are 5 variables used in this study. All variables were measured using the dimensions and number of statements item. In addition, the variable was measured using a 5 point Likert scale ranging from 1 to 5 ; where 1 = Strongly Disagree/Very Dissatisfied , up to 5 = Strongly Agree/Very Satisfied.

Validity and Reliability Instruments Test

Validity test is done to find out if all the questions (instruments) of the proposed research to measure the variables of the study are valid. If valid, the instrument can be used to measure what it intends to measure (Zikmund, 1994).

To test the validity the content validity and construct validity are tested. Content validity relates to the extent to which a measurement scale / instrument represents the entire characteristics of contents of the research that is being measured. Content validity is essentially judgmental, so it is considered a valid indicator if it is consistent with the literature review (Sekaran, 2003). Indicators used to measure all the variables are based on the theories that have been discussed on a theoretical basis, so it can be concluded that all statement items are valid.

The construct validity test is used to understanding the theoretical arguments on which the measurements obtained. The test the construct validity is done by using CFA (Confirmatory Factor Analysis) with convergent validity criteria. Convergent validity is the test of the indicators of a latent construct that should converge/share with a high proportion of variance. Assessment of convergent validity is seen from loading factor value for each indicator. The model fit the constructs analyzed with Lisrel 8.80 software requires to meet the convergent validity value, but the value of the factor loading is very sensitive to sample size (Hair et al., 2010). Here is a significant factor loading value based on sample size:

Table 7:
Guidelines for Identifying loading Factor Significant Based on Sample Size

Loading Factor	**The Number of Sample Required**
≥ 0.30	350
≥ 0.35	250
≥ 0.40	200
≥ 0.45	150
≥ 0.50	120
≥ 0.55	100
≥ 0.60	85
≥ 0.65	70
≥ 0.70	60
≥ 0.75	50

Source: Hair et al.,(2010)

In relation to the size of the sample used, i.e. 500 samples, the indicators with loading factor ≥ 0.30 is valid. Loading Factor values obtained from the construct of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image, Student satisfaction and Student loyalty has a value of ≥ 0.30; thus it can be concluded that all of these indicators are able to explain and define the construct of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image, Student satisfaction and Student loyalty, in other words, the indicators used to measure all the variables in this study are valid and meet the convergent validity.

Reliability Test is used to assess how much the consistency of the variable is (construct reliable / unreliable), in which certain statements are summarized into a total score for a construct (Hair et al., 2010). Reliability testing performed on each construct uses the technique of "Internal Consistency Reliability Method". Reliability test results of each construct with Cronbach 's Alpha value; where the values of Cronbach 's α coefficients were acceptable worth ≥ 0.6 (Sekaran, 2003).

From the results of testing the reliability of the constructs research instrument of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image, Student satisfaction, and Student loyalty is measured by indicators such as question items. It is obtained coefficient values of Cronbach 's ≥ 0.6 with the value of cut-off Cronbach 's coefficient α. This means that the respondents' answers to the statements used in the study to measure the construct Perception of the general reputation of the university, Perception of study program reputation, Perception of university image, Student satisfaction and Student loyalty can be dependable/reliable/consistent.
Variable measurement

Prior to test the hypothesis, the overall model (Fit Model) must first be assessed to ensure that the model is able to describe all the causal relationship (goodness of fit indeces) to see some measurement criteria (Hair et al., 2010).

Test model criteria with different types of measurements goodness-of-fit using Lisrel 8.80 is as follows:

Table 8:
Criteria of Goodness of Fit Index Full Structural Model

Goodness of Fit Index	**Cut-off Value**
Absolute Fit Measures	
RMSEA	≤ 0.08
Incremental Fit Measures	
NFI	≥ 0.90
CFI	≥ 0.90
RFI	≥ 0.90
GFI	≥ 0.90
AGFI	≥ 0.90

Source: Hair et al.,2010

Based on Table 8 above, the measurement criteria of goodness of fit index seen from the cut off value. Model established at a level acceptable marginal fit and if there are one or two goodness of fit criteria that have been met (Hair et al., 2010). Summary of Goodness-of-Fit-Index of all variables are presented in Table 10 below:

Table 9:
Summary of Goodness-of-Fit-Index Value Model

	Result Values					
Goodness of Fit Index	**Perception of general reputation of the university**	**Perception of study program reputation**	**Perception of image university**	**Student Satisfaction**	**Student Loyalty**	**Cut-off Value (Model Fit)**
RMSEA	0.00	0.06	0.07	0.02	0.03	RMSEA ≤ 0.08
NFI	1.00	1.00	1.00	0.99	1.00	NFI ≥ 0.90
CFI	1.00	1.00	1.00	1.00	1.00	CFI ≥ 0.90
RFI	0.99	0.98	0.98	0.99	0.99	RFI ≥ 0.90
GFI	0.99	0.98	0.98	0.99	0.99	GFI ≥ 0.90
AGFI	1.00	1.00	0.99	0.96	1.00	AGFI ≥ 0.90
Information	**Model fit**	**Model fit**	**Model fit**	**Model fit**	**Model fit**	

Source: Data Processing

Based on calculations of Goodness-of-Fit-Index of the variable Perception of general reputation of the university, Perception of study program reputation, Perception of university image, Student satisfaction and Student loyalty it can be concluded that all the variables have a fit model. So the next step can be performed of calculations for data analysis.

Data Analysis

In analyzing the data of this study the researcher used Univariate and Multivariate Analysis. Univariate analysis was used to analyze each variable by finding central tendency. Hypothesis testing is performed using multivariate analysis techniques, i.e. SEM (Structural Equation Modeling).

SEM is a collection of statistical techniques that allow the testing of a series of relationships that are relatively "complex" simultaneously. SEM determines the strength of individual relationships, the model 's goodness test of fit and various hypothesized paths. There are 2 types of scales used by SEM to analyze multivariate data i.e., the scale matrix (interval and ratio scale) and non-matrix scale (ordinal). To analyze the data in the study the researcher usese Lisrel 8.80 Windows.

Result and Discussion

Descriptive Statistics

Description of the study variables, namely Perception of the general reputation of the university, Perception of study program reputation, Perception of university image, Student satisfaction and Student loyalty is presented in the descriptive statistics table, which shows the average value and standard deviation that can be seen in Table 14 below:

Table 10
Research Descriptive Variable

Descriptive Statistics: X1; X2; X3;…

Variable	**N**	**Mean**	**Standard Deviation**
Perception of general reputation of the university	500	3.748	0.828
Perception of study program reputation	500	4.112	0.841
Perception of image University	500	4.098	0.821
Facilities	500	3.690	0.819
Academic support	500	3.785	0.816
Welfare support	500	3.670	0.853
Feedback	500	3.703	0.834
Placement support	500	3.803	0.858
Organisation communication	500	3.803	0.806
Attitude	500	3.917	0.801
Behavior	500	3.750	0.827

Source: Data processed

Based on the above table, all variables have an average value of between 3.670 to 4.112 and the standard deviation between 0.801 to 0858. This indicates that a student at a private university in general somewhat agree/somewhat satisfied (> 3) and agree/satisfied (> 4) in the statement of items used. While the standard deviation values of variables obtained tend to be low, indicating the spread of the data tends to be centralized and the data collected are well.

Results of Hypothesis Testing

Structural Equation Model and full model of SEM using LISREL 8.80 program are indicated by the equation and the image as in the following:

Structural Equations

SS = 0.378*SPU + 0.222*SPP + 0.398*US, Errorvar.= 0.256 , R^2 = 0.744
(0.0586) (0.0682) (0.0525) (0.0347)
6.455 3.248 7.582 7.375

SL = 0.624*SS + 0.0241*SPU + 0.143*SPP + 0.237*US, Errorvar.= 0.110, R^2 = 0.890
(0.0738) (0.0507) (0.0624) (0.0539) (0.0192)
8.459 0.476 2.299 4.392 5.729

Reduced Form Equations

SS = 0.378*SPU + 0.222*SPP + 0.398*US, Errorvar.= 0.256, R^2 = 0.744
(0.0586) (0.0682) (0.0525)
6.455 3.248 7.582

SL = 0.260*SPU + 0.282*SPP + 0.485*US, Errorvar.= 0.210, R^2 = 0.790
(0.0434) (0.0524) (0.0563)
5.998 5.371 8.619

Information:

SS = Student satisfaction
SL = Student loyalty
SPU = Perception of general reputation of the university
SPP = Perception of study program reputation
US = Perception of image University

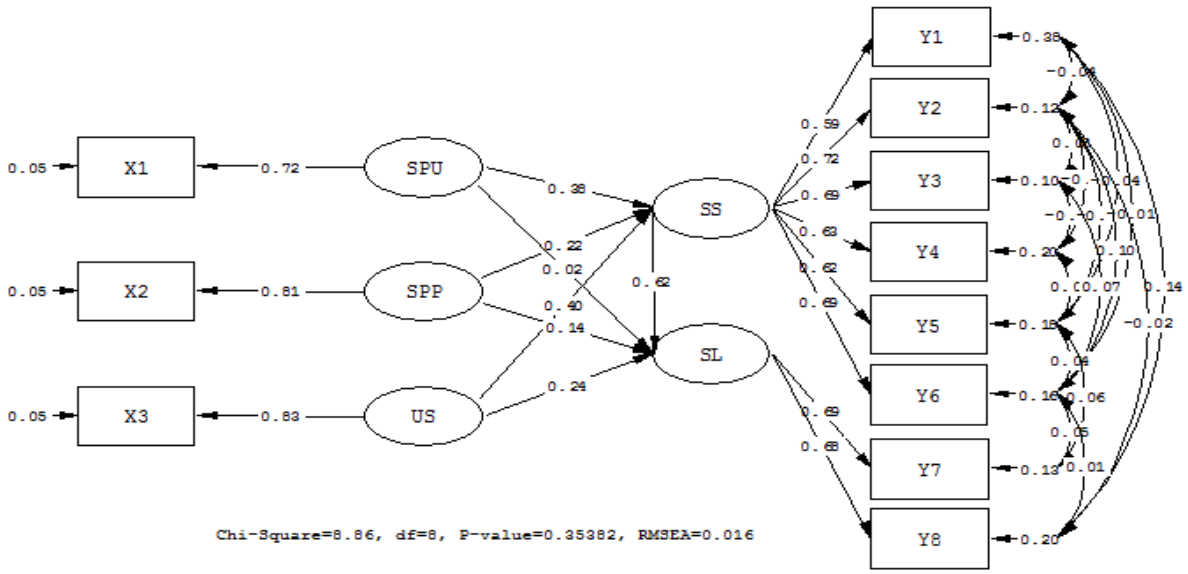


Figure. 2. Results of Calculation SEM (Standardized Model)

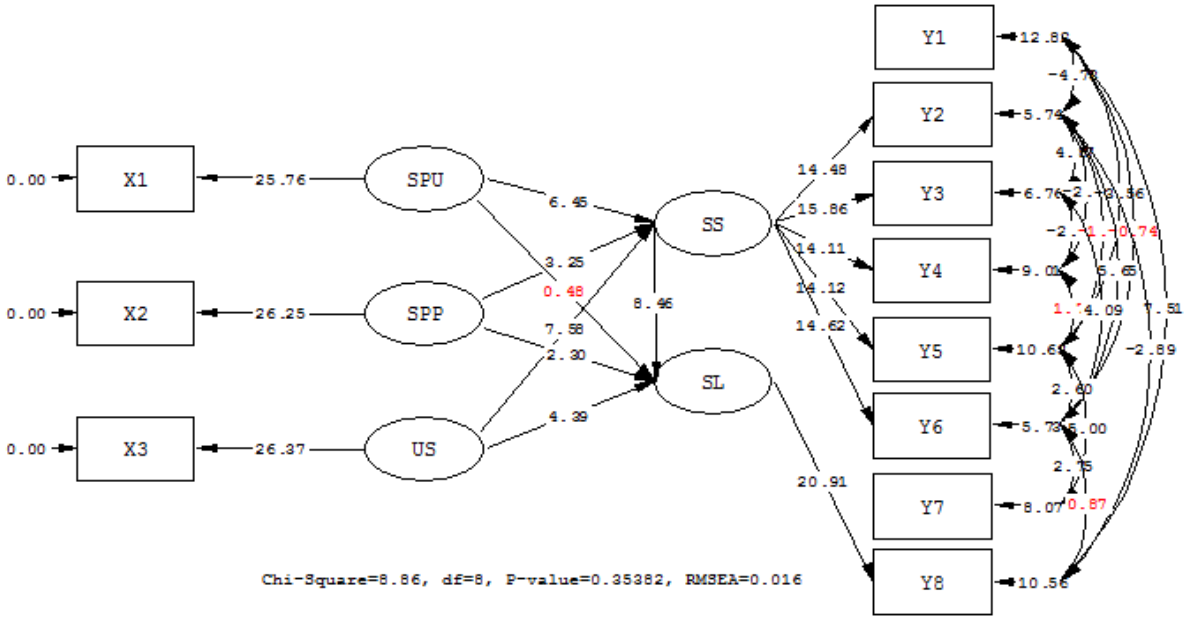


Figure. 3. Results of Calculation SEM (t-value Model)

Hypothesis Testing. All the results of testing research hypothesis proposed, ranging from H_1 to H_7, are summarized in Table 11 below:

Table 11:
Summary of Hypothesis Testing Result of the Proposed Research

Hypothesis	**Hypothesis of the Research**	**Standardized Solution**	**t-value**	**Hypothesis Testing Results**
H_1	There is a positive and significant impact of Perception of general reputation of the university on Student satisfaction	0.378	6.455	H_1 Supported
H_2	There is a positive and significant impact of Perception of study program reputation on Student satisfaction.	0.222	3.248	H_2 Supported
H_3	There is a positive and significant impact of Perception of image University on Student satisfaction	0.398	7.582	H_3 Supported
H_4	There is a positive and significant impact of Student satisfaction on Student loyalty	0.624	8.459	H_4 Supported
H_5	There is no positive and significant impact of Perception of general reputation of the university on Student loyalty	0.024	0.476	H_5 Unsupported
H_6	There is a positive and significant impact of Perception of study	0.143	2.299	H_6 Supported

	program reputation on Student loyalty			
H_7	There is a positive and significant impact of Perception of image University onStudent loyalty	0.237	4.392	H_7 Supported

Source: Data processed

Hypothesis 1

H_1 : There is a positive and significant impact of Perception of the general reputation of the university to Student satisfaction

These results support previous studies that have been conducted by Lim et al., (2000) and Andreassen & Lindestad (1998) and also supported by Skallerud (2011), which states that the company's reputation empirically similar to the one in college, then good reputation of a brand or company will have the same effect as that of the university's reputation.

Hypothesis 2

H_2 : There is a positive and significant effect of Perception of study program reputation on Student Satisfaction

This is consistent with studies that have been done previously by Safo'n (2009) and Vidaver-Cohen (2007) which stated that a good reputation is important for consumers as well as pride and is a good reason to produce satisfaction for the consumer.

Hypothesis 3

H_3: There is a positive and significant impact on the Perception of University image on Student Satisfaction

This supports previous studies that have been carried out by Li & Hung (2009) which examines the role of images in constructing the satisfaction of parents at an elementary school in Taiwan where the majority of students are female.

Hypothesis 4

H_4 : There is a positive and significant impact of Student satisfaction on Student loyalty

The results of this study support the results of research conducted by Thomas (2011) who did the research on the factors that influence the level of students loyalty to universities in India, where it was found that factors other than reputation, the degree of satisfaction determines a student loyalty on his/her university.

Hypothesis 5

H_5 : There is no positive and significant influence of Perception of the general reputation of the university to Student loyalty

Hypothesis H_5 research results cannot support the results of previous studies conducted by Thomas (2011) who did the research on the loyalty of students at 234 private

university students in the southern Indiana state, where the research results state that the reputation of the university as a whole affects the loyalty of students to their campus.

Hypothesis 6

H_6 : There is a positive and significant impact on Perception of study programs reputation on Student loyalty

Hypothesis H_6 study results are consistent with results of previous studies conducted by (Fombrun & Shanley, 1990) which states that the strong brand character will build a reputation that will yield long-term loyalty.

Hypothesis 7

H_7 : There is a positive and significant impact on the Perception of University image on Student loyalty

Hypothesis H_7 research results support the results of previous studies conducted by Wang and Wu (2011) which examines the level of consumer loyalty salon in Taiwan, where out of 279 respondents, the majority of the customers are women. The results of these studies concluded that that image has a positive and significant impact on customer loyalty.

Conclusion

Research conducted aims to identify and analyze the effect of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image to Student loyalty with Student satisfaction as the mediation at private universities. From the results of the study it can be concluded that: (1) Perception of the general reputation of the university, Perception of study program reputation, Perception of university image affect Student satisfaction; (2) Student satisfaction influences Student loyalty; (3) Perception of study program reputation and Perception of university image influence Student loyalty; (4) Perception of the general reputation of the university, Perception of study program reputation, Perception of University image give a greater influence on Student loyalty if through Student satisfaction or in other words Student satisfaction fully mediates the effect of Perception of the general reputation of the university, Perception of study program reputation, Perception of university image to Student loyalty.

Theoretical Implications

Based on the research results the researcher obtains some important things that can be used as a contribution to the theory that is hoped to be useful for the development of science. The implications are: (1) This research enriches Student loyalty models, where the Perception of the general reputation of the university, Perception of study programs reputation and Perception of university image influence Student satisfaction; (2) Student satisfaction influences Student loyalty; (3) Perception of the general reputation of the university, Perception of study program reputation, Perception of University image give a greater influence on Student loyalty if through Student satisfaction; (4) This study contributes to Student loyalty models in the context of higher education institutes, especially on Private Higher Education Institution in the form of University.

Managerial Implications

Based on the findings, the obtained practical steps that can be used by leaders/rector of private Universities are Student loyalty at private universities will increase if : (1) Students

are able to communicate and relate well with the faculty and study program. Private universities party should strive to provide the best service to students in the form of ease of communication with the faculty and the study program directly (face to face) or indirectly, such as providing telephone number, fax, email address/website or other means of communication that is easy to contact so as to facilitate the exchange of useful information both for students and for the faculty and study program; (2) Students have a high satisfaction, particularly satisfaction of faculty assistance in overcoming subjects difficulties. Private universities management's should strive to evaluate, monitor and provide direction to the lecturers in order to provide additional time outside of teaching hours for students to consult when students have difficulty in the courses they take. The faculty can create a schedule for professors to give time for regular student consultation or phone number, mobile phone, email address or other means of communication which can easily be reached so as to facilitate the students to meet with the teachers if students are having trouble in a subject; (3) Students feel the reputation of the university as a whole is high, particularly because of the complete infrastructure. Private universities Party shall endeavor to provide infrastructure and facilities that support the lectures, ranging from class (clean, neat, fitted with air conditioning, LCD projector and white board), office space (faculty, study program and student services), places of worship (mosque / prayer house), the parking lot (bicycles, motorcycles and cars), sports field and art (complete with crockery), student discussion spot and other facilities to complement the facilities and infrastructure needs; (4) Students feel that the high reputation of the study program, particularly the reputation of the study program, is in accordance with the advertisement/brochure/promotion previously ever received by the students; (5) Students feel the university image (Perception of University image) is high especially since the University has an image that is in accordance with the actual conditions. Private universities management's should strive to keep the image that has been formed among students remain well preserved, for example image is formed at the center of university research (research center), then the University should continue to produce works or the results of quality research that is known better in the community.

Recommendations for further research

In this study there are some suggestions and recommendations for future research. First, the study only analyzed the hypothesis according to the theories and previous research. Future studies are expected to add new variables or other dimensions into the model in addition to Student loyalty model other than Perception of the general reputation of the university, Perception of study program reputation, Perception of university image and Student satisfaction, so we will get a model with variables and dimensions that are more comprehensive. Second, further research is recommended to implement and test a model of Student loyalty with different characteristics of respondents, with a more complete private or public higher education institute form (Academy, Institute, Polytechnics and Universities) and not only in Bandar Lampung, but also in the entire Kopertis region 2 or over Indonesia so that the next results will get better generalization results. Third, further research is recommended to conduct similar studies with Student loyalty models in other educational scope, ranging from Elementary education, Secondary Education, and Vocational Education, so hopefully we will get a complete Student loyalty models for all types of educational level.

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