

STUDENT LOYALTY MODELING

MODELIRANJE STUDENTSKE LOJALNOSTI

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Preliminary communication

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SAŽETAK

Iz marketinške perspektive lojalnost studenta ključni je cilj mnogih institucija visokog obrazovanja. Naime, lojalnost studentske populacije izvor je konkurentске prednosti. Svrha ovoga istraživanja jest razviti empirijski model koji povezuje lojalnost studenta s njegovim zadovoljstvom, povjerenjem i društvenim poistovjećivanjem s institucijom. Podaci su prikupljeni na uzorku od 226 studenata preddiplomskog studija menadžmenta i računovodstva s Ekonomskog fakulteta Tarumanahgara Sveučilišta u Jakarti, Indonezija. Provedeno je empirijsko istraživanje kako bi se predloženi model potvrdio na temelju mjerenja pouzdanosti i valjanosti kao i putem testiranja značajnosti strukture odnosa korištenjem regresijske analize. Rezultati upućuju da su zadovoljstvo, povjerenje i društveno poistovjećivanje pozitivni i značajni prediktori lojalnosti, a

ABSTRACT

From a marketing perspective, student loyalty is a key objective for numerous higher education institutions since a loyal student population is a source of competitive advantage. The specific purpose of this research is to develop an empirical model linking student loyalty to student satisfaction, student trust and student social identification to the institution. Data was collected from 226 undergraduate management and accounting students of the Faculty of Economics, Tarumanahgara University Jakarta, Indonesia. Empirical investigation was carried out to validate the frame work through measurement reliability and validity, and testing the significance of the relationship structure using regression analysis. The results suggest that satisfaction, trust and social identification are both positive and significant predictors of loyalty, and trust

povjerenje posreduje u odnosu između zadovoljstva i lojalnosti. Na temelju rezultata predlažu se menadžerske implikacije i pravci budućih istraživanja.

mediates the relationship between satisfaction and loyalty. Based on the results, managerial implications and topics of future research are suggested.

1. INTRODUCTION

Customer loyalty is an important concept in high competition and low growth markets, and maintaining loyal customers is very important for survival (Peter & Olson, 2008). Accordingly, Rosenberg and Czepiel (1994) estimate that the cost of attracting new customers is six times higher than that of maintaining old customers. Acquiring new customers may cost as much as five times more than retaining existing ones, given the costs of searching for new customers, setting up new accounts and initiating new customers to information services (Parthasarathy & Bhattacharjee, 1998). A 5% increase in customer retention, in the insurance industry for example, typically translates to 18% savings in operating costs (Crego & Schiffrin, 1995).

According to Reichheld and Sasser (1990, p. 1), "... companies can boost profits by almost 100% by retaining just 5% more of their customers." Sheth and Mittal (2004, p. 89) also said that the results of purchasing based on relationship include loyalty to provider, increasing purchasing, wanting to pay more, proactive word-of-mouth and goodwill (customer equity).

Regularity and predictability of loyal customers' buying behavior allows service providers to utilize their resources more efficiently (Hennig-Thurau, Langer & Hansen, 2001). Thus, "*Creating and maintaining customer loyalty has become a strategic mandate in today's service markets.*" (Ganesh, Arnold & Reynolds, 2000, p. 65).

In higher education institutions, the statistics indicate that 74% of all college entrants in Chile in 1993 left higher education without having earned a degree by 1998. The dropout rate in the first year of college for professional careers was 30% during the same period. Yet, in two-year college programs, the dropout rate was 54% for 1997-1998 (Bernasconi & Rojas, 2002).

Other statistics show more than 40% of all college entrants in the United States leaving high-

er education without earning a degree; 75% of these students drop out in the first two years of college, and 56% of a typical entering class cohort do not graduate from college (Tinto, 1975). More recent statistics indicate that 26.4% of freshmen in the United States do not return the following fall semester and that 46.2% of students fail to graduate (Reisberg, 1999).

From a marketing perspective, student loyalty is a key objective for numerous higher education institutions for three reasons (Hennig-Thurau *et al.*, 2001). First, tuition fees are the main source of income for most privately-owned universities. Universities retaining students will have a solid and predictable financial basis for their future activities. Second, a loyal student to his or her educational institution may positively influence the quality of teaching through active participation and committed behavior. The last reason, a loyal student may continue to support his or her academic institution financially after graduating, through word-of-mouth promotion or some form of cooperation. It is clear that the advantages of student loyalty to universities are not limited to the time that the student spends at the university; rather, the advantages are at their greatest after graduation. Based on these reasons, student loyalty is of great importance to an educational institution if it is to retain students and survive in a competitive market.

It goes without saying that student loyalty and the drivers of student loyalty should be of great importance when determining the most appropriate management strategy. By allocating resources to the activities that have a lot to say for students, managers may increase the value offered so as to retain students and, as a result, generate funds in the future (Helgesen & Nettet, 2007b). Managers may also establish appropriate programs that promote, establish, develop and maintain successful long-term relationships with both current and former students. However, such programs have to be based on a clear understanding of how long-term relationships with students can be developed and sustained (Rojas-Méndez, Vasquez-Parraga, Kara & Cerda-Urrutia, 2009).

Even though the concept of relationship marketing has begun to influence marketing practices and academic research in various areas and industries, it is for the most part ignored by higher educational institutions (Hennig-Thurau *et al.*, 2001). Therefore, there are few studies on the relations between higher education institutions and their students, such as presented in Table 1. Independent variables of research studies consist of trust, quality, commitment, image, satisfaction and value.

This study attempts at explaining student loyalty in a higher education institution by examining the variables explaining it during academic years. These variables (satisfaction, trust, and social identification) are articulated in a model. Based on research studies listed in Table 1, this

study adds a new independent variable, i.e. social identification.

2. THEORETICAL BACKGROUND AND HYPOTHESES DEVELOPMENT

2.1. Loyalty

The concept of consumer loyalty as buying the same product more than once (Sheth & Mittal, 2004; Neal, Qvester & Hawkins, 1999; Dick & Basu,

Table 1: Summary results of student loyalty research, with student loyalty as the dependent variable

Author(s)	Independent Variables	Result*	Context
Hennig-Thurau <i>et al.</i> (2001)	Trust Quality Goal commitment Emotional commitment Cognitive commitment	-n.s. +sign. +sign. -sign. -sign.	Germany: university graduates and dropouts
Chieh-Peng & Yuan (2008): Perceived Quality (PQ)	PQ teaching services Perceived signals of retention PQ administrative services	+sign. +sign. -n.s.	Taiwan: business administration undergraduates
Helgesen & Nettet (2007b)	University image, Satisfaction Image study	+sign. +sign. +n.s.	Norway
Brown & Mazzarol (2009)	Evaluative satisfaction Emotional satisfaction Value	+sign. +sign. +sign.	Australian universities
Rojas-Mendez <i>et al.</i> (2009)	Commitment Trust Satisfaction	+sign. +sign. +sign.	Chile: college of business
Mohamad & Awang (2009)	Corporate image Service quality Students' satisfaction	+sign. +n.s. +sign.	Malaysia
Gulid (2011)	Satisfaction	+sign.	Thailand
Thomas (2011)	Satisfaction Reputation	+sign. +sign.	India
Kheiry, Rad & Asgari (2012)	Satisfaction University image	+sign. +sign.	Iran

*n.s. (not significant); sign. (significant)

1994) is frequently debated because of no differentiation between true and quasi loyalty (Day, 1969); also, there is no indication of whether a consumer actually prefers a product to similar products (Sheth & Mittal, 2004). Thus, consumer loyalty should represent a relative attitude to and repeat buying of the product (Dick & Basu, 1994; Grisaffe, 2001).

Consumer loyalty in a service context may be indicated by repeat buying or intention to buy (Rust, Zahorik & Keiningham, 1995; Cronin & Taylor, 1992). Accordingly, Reichheld (2002, p. 126) gives the following definition: "A loyal customer is one who values the relationship with the company enough to make the company a preferred supplier. Loyal customers don't switch for small variations in price or service; [instead] they provide honest and constructive feedback, they consolidate the bulk of their category purchases with the company, they never abuse company personnel, and they provide enthusiastic referrals."

Behavioral loyalty is not an appropriate concept in a durable product context, including higher educational services. The reason is that no one buys the same service more than once. In higher education, a student's loyalty to his or her educational institution must not only use this institution's offering on a regular basis but it must also have a positive cognitive and emotional attitude toward the institution—one that provides the underlying motivation for his or her behavior (Hennig-Thurau *et al.*, 2001). Accordingly, Rojas-Mendez *et al.* (2009) focus on loyalty involving an identifiable intention to behave, such as by repurchasing a specific brand or providing a financial or non-financial support to one's *alma mater*. In this research, an intention is used to represent consumer loyalty.

2.2. Trust

The consensus definition of trust may be, as Rotter states (1967, p. 651), "... an expectancy held by an individual that the words, promise, verbal or written

statement of another individual or group can be relied on." Similarly to the definition, Morgan and Hunt (1994) hold that trust suggests that confidence on the part of the trusting party results from the other party's belief that the trustworthy party is reliable and has high integrity, which is associated with such qualities as consistent, competent, honest, fair, responsible, helpful and benevolent.

In the educational field, students' trust may be understood as students' confidence in the university's integrity and reliability. Students' trust develops through personal experiences with the educational institution. If an educational institution wishes to build long-term relationships with its students, it has to develop trust as part of such relationships. The lack of trust may severely undermine long-term relationships (Andaleeb, 1994).

According to Ganesan (1994), trust is an important aspect in a long-term orientation because it changes the focus on future conditions. A person who does not want to trust the vendor in a competitive market cannot be loyal to the vendor (Ball, Coelho & Machás, 2004). The important role of trust in explaining loyalty is supported by other research studies as well (Sirdeshmukh, Singh & Sabol, 2002; Chaudhuri & Holbrook, 2001; Singh & Sirdeshmukh, 2000; Garbarino & Johnson, 1999; Lim & Razzaque, 1997).

There is a negative relationship between trust and tendency to quit (Morgan & Hunt, 1994). Anderson and Weitz (1989) also find that trust is a dominant contributor to maintaining relationships in conventional distribution. Other researchers show that trust is a positive and significant predictor of loyalty (Auh, 2005; Chaudhuri & Holbrook, 2001; Shamdasani & Balakrishnan, 2000; Garbarino & Johnson, 1999; Doney & Cannon, 1997; Chu, Lee & Chao, 2012). In higher education, trust is a negative and not a significant predictor of student loyalty (Hennig-Thurau *et al.*, 2001), but another research finds that trust is a positive and significant predictor of student loyalty (Rojas-Mendez *et al.*, 2009).

Hypothesis 1: Students' trust has a positive effect on their loyalty.

2.3. Satisfaction

The dominant paradigm on consumer satisfaction is a confirmation-disconfirmation paradigm (Anderson & Sullivan, 1993; Everelles & Leavitt, 1992; Churchill & Suprenant, 1992). The most supported definition of satisfaction is "... *a post choice evaluative judgment concerning a specific purchase selection*" (Day, 1984 in Westbrook & Oliver, 1991, p. 84). According to Anderson, Fornell and Lehman (1994, p. 54), "*Customers require experience with a product to determine how satisfied they are with it.*"

In the literature, there are two basic conceptualizations of satisfaction: cumulative and transaction-specific satisfaction (Johnson, Herrmann & Gustafsson, 2002). Cumulative satisfaction describes the customer's overall consumption experience with a product or service over time (Fornell, 1992). Further, cumulative satisfaction is also a better predictor of future behavior (Gustafsson, Johnson & Roos, 2005). In market research, there is a tendency to use a cumulative concept of satisfaction, and measuring satisfaction as an overall satisfaction based on experiences with organization (Garbarino & Johnson, 1999; Sharma, Niedrich & Dobbins, 1999). Transaction specific approach defines satisfaction as a customer's evaluation of his or her experience with and reactions to a particular product transaction, episode, or service encounter (Olsen & Johnson, 2003).

There is a general assumption in the literature that satisfaction may increase loyalty (Jones & Suh, 2000; Patterson, Johnson & Spreng, 1997; Oliver, 1980). In general, the higher the satisfaction the higher the loyalty (Cassel & Eklof, 2001; Strauss & Neuhaus, 1997; Hallowell, 1996; Selnes, 1998; Bloemer & Poiesz, 1989; Chu *et al.*, 2012; Gulid, 2011). In higher educational institutions, satisfaction is a positive and significant

predictor of student loyalty (Helgesen & Nasset, 2007b; Brown & Mazzarol, 2009; Rojas-Mendez *et al.*, 2009; Mohamad & Awang, 2009; Gulid, 2011; Thomas, 2011; Kheiry *et al.*, 2012).

Hypothesis 2: Students' satisfaction has a positive effect on student loyalty.

Although satisfaction is important to develop a relationship, satisfaction alone does not automatically affect repeat purchasing (Reichheld & Aspinall, 1993). The reason is that retained consumers may not always be satisfied and satisfied consumers may not always be retained (Dick & Basu, 1994). Even though consumers are satisfied, some of them are high switchers (Pont & McQuilken, 2005). Heskett, Sasser and Schlesinger (1997) also indicate that satisfaction and loyalty do not always directly relate. Moreover, satisfaction is positively related to trust (Anderson & Narus, 1990; Dwyer, Schurr & Oh, 1987; Chu *et al.*, 2012). According to Michell, Reast and Lynch (1998), satisfaction is a foundation of trust.

Trust reduces the risk of opportunistic behavior by the service provider and, therefore, reduces transaction costs between different partners to the exchange (Williamson, 1985). A customer who has trust in his service provider is more likely to stay in and be committed to the relationship. The mediating role of trust for the link between satisfaction and loyalty has been shown in prior research studies (Garbarino & Johnson, 1999; Hennig-Thurau, Gwinner & Gremler, 2002; Palmatier, Dant & Evans, 2006).

Hypothesis 3: Students' trust is a mediating variable between students' satisfaction and student loyalty.

2.4. Social identification

According to Social Identity Theory, people tend to classify themselves and others into social categories (Tajfel & Turner, 1985 in Mael & Ashforth, 1992). "*Social identification is the perception of one-*

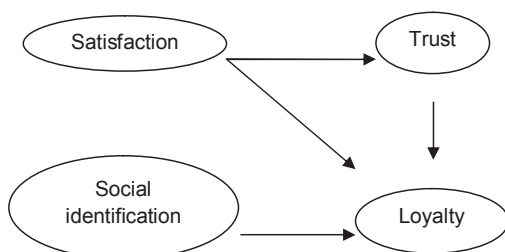
ness with or belongingness to a group classification. The individual perceives him or herself as an actual or symbolic member of the group." (Mael & Ashforth, 1992, p. 104). Identification with a group is similar to identification with a person or a reciprocal role relationship in as much as one party defines oneself in terms of a social referent. Individual's social identity may be derived not only from the organization, but also from his or her work group, department, union, lunch group, age cohort, and so on (Ashforth & Mael, 1989).

Social identification is the perception of belonging to a group as a result of which a person identifies with that group. Identification enables the person to participate vicariously of accomplishments beyond his or her powers (Katz & Kahn, 1978). Identification is necessarily tied to the causes or the goals that an organization embodies. Thus, when an organization stands for specific causes, consumers may be loyal to its products because they identify with the mission of the organization (Bhattacharya, Rao & Glynn, 1995).

Organizational researchers consistently find that members', such as workers and alumni, identification to an organization tends to increase members' loyalty to the organization (Adler & Adler, 1994) and to decrease turnover (O'Reilly & Chatman, 1994; Gau & Kim, 2001). In the consumer context, Sheth and Mittal (2004) say that social identification with a brand is the dominant contributor to loyalty to that brand.

Hypothesis 4: Students' social identification has a positive effect on student loyalty.

Figure 1: Model of Relationships among Variables



A model of relationships among variables is displayed in Figure 1.

3. METHOD

3.1. Sample

The subjects of this research were students at the Economics Faculty, Tarumanagara University, Indonesia, majoring in accounting and management. The sample consisted of 226 students; 127 females and 99 males, with the effective response rate of 95.1%. Their age ranged between 19 and 23 years, with 21.3 as an average.

3.2. Measures

This research used a self-administrated questionnaire written in Indonesian. Satisfaction (3 items), trust (5 items) and loyalty (3 items) scales used in it were adapted from Sirdeshmukh, Singh and Sabol (2002). The social identification scale (9 items) was adapted from Bhattacharya *et al.* (1995). For satisfaction, respondents were asked to rate all of the ten-point Likert scale, with 1 indicating highly unsatisfactory (very unpleasant, terrible) and 10 indicating highly satisfactory (very pleasant, delightful). For trust, social identification and loyalty, respondents were asked to rate all of the ten-point Likert scale, with 1 indicating strong disagreement and 10 indicating strong agreement. The research questionnaire was pre-tested on other students to evaluate if there are items to be improved; pre-testing revealed minor mistakes to be corrected.

An exploratory principal component analysis with a varimax rotation was performed on all multiple scale items to determine item retention. Results of the analysis will be valid if several requirements are satisfied (see Table 2). Firstly, Bartlett's tests for all variables were significant. It means that no correlation matrixes were identity

matrixes, so it was appropriate to use the analysis (Norušis, 2012). Secondly, the KMO (Kaiser-Meyer-Olkin) index was used to compare the magnitudes of the observed correlation coefficients to the magnitudes of partial correlation coefficients. KMOs for all variables were higher than 0.70, meaning that the factor analysis was appropriate (Kaiser, 1974 in Norušis, 2012).

3.3. Analysis

Regression analysis was used to test the hypotheses (H1, H2 and H4). To analyze whether or not mediation existed (H3), the study used Baron and Kenny's (1986) three-step procedure. Firstly, the independent variable should be significantly

Table 2: KMO and Bartlett's test

	Satisfaction	Trust	Social Identification	Loyalty
Bartlett's Test	269.743***	993.357***	913.303***	305.277***
KMO	0.713	0.784	0.877	0.704

***p < 0.001

Extraction cumulative sums of squared loadings are 75.333% for satisfaction, 66.635% for trust, 69.371% for social identification and 76.833% for loyalty. All of these percentages are higher than 60.000%, so the factor for each variable was retained (Hair, Black, Babin, Anderson & Tatham, 2006).

Table 3 reports the results of exploratory factor analysis and reliability results. All items' loadings for each variable are higher than 0.50, except the three items of social identification (not shown), meaning that all 17 items may be retained (Hair, Jr. *et al.*, 2006). The reliability (Cronbach's alpha) values of all variables are higher than 0.70, hence, all scales are reliable (Rust & Golombok, 1989).

related to the mediating variable. Secondly, the independent variable should be related to the dependent variable. Finally, the mediating variable should be related to the dependent variable, with the independent variable included in the equation. If the first three conditions hold, at least partial mediation is present. If the independent variable has a non-significant beta weight in the third step, the mediator remains significant. This means that full mediation is present. In case of partial mediation, the study used Sobel's test (1982 in Howell, 2007).

Table 3: Exploratory factor analysis and reliability results

	Cronbach's Alpha	Item	Loading
Satisfaction	0.835	How satisfying was your last experience with this university?	
		X1 (highly unsatisfactory / highly satisfactory)	0.876
		X2 (very unpleasant / very pleasant)	0.891
Trust	0.872	X3 (terrible / delightful)	0.836
		X4 (Has practices that indicate respect for the student)	0.927
		X5 (Favors the student's best interest)	0.937
		X6 (Acts as if the student was always right)	0.914
		X7 (Goes out of the way to solve student problems)	0.573
Social identification	0.909	X8 (Shows much concern for the student)	0.657
		X9 (When someone criticizes the university, it feels like a personal insult)	0.759
		X10 (I am very interested in what others think about the university)	0.792
		X11 (When I talk about the university, I usually say <i>we</i> rather than <i>they</i>)	0.843
		X12 (The university's successes are my successes)	0.866
Loyalty	0.849	X13 (When someone praises the university, it feels like a personal compliment)	0.868
		X14 (If a story in the media criticized the university, I would feel embarrassed)	0.861
		X15 (Plan to use services of the university most of your future)	0.829
		X16 (Recommend this university to friends, neighbors, and relatives)	0.908
		X17 (Use services of the university the very next time you need the services)	0.890

4. RESULTS

4.1. Descriptive statistics

Table 4 provides means, standard deviations and correlations among variables. All means are between 5 and 6, the two middle points. Satisfac-

tion has the maximum mean (5.768) and social identification has the minimum mean (5.035). The minimum standard deviation of trust is 1.455, while the maximum standard deviation of loyalty is 2.137.

The study also indicates that all correlations among variables are significant. The correlations range from 0.359 (between loyalty and satisfaction) to 0.579 (between trust and satisfaction).

Table 4: Means, standard deviations and correlations among variables

	Means	Standard deviations	Correlations			
			1	2	3	4
1. Satisfaction	5.768	1.651	1.00			
2. Trust	5.524	1.455	0.579***	1.00		
3. Social identification	5.035	1.646	0.563***	0.488***	1.00	
4. Loyalty	5.711	2.137	0.359***	0.546***	0.482***	1.00

4.2. Hypotheses testing

Table 5 reveals that the regression coefficient of satisfaction (0.062) is positive and significant ($t = 5.749$), and 12.5% of loyalty variance indicates satisfaction, meaning that H1 is supported. The regression coefficient of trust (0.546) is positive and significant ($t = 9.757$), and 29.5% of loyalty variance indicates trust. This means that H2 is also supported.

The regression coefficient of social identification (0.482) is positive and significant ($t = 8.236$), and 22.9% of loyalty variance indicates social identification. It means that H4 is supported too.

Secondly, satisfaction is significantly related to loyalty (number 1 in Table 6; Beta = 0.579, $t = 10.622$). Satisfaction explains 33.2% of trust variance. Finally, trust is related to loyalty, with satisfaction included in the equation. The regression coefficient of trust (0.509) is positive and significant ($t = 7.416$). However, compared to number 1 in Table 5, the coefficient regression of satisfaction (0.064) is not significant any more ($t = 0.931$). These results suggest that trust mediates the relationship between satisfaction and loyalty. To be sure of the mediating effect, this research performed Sobel's t-test (in Howell, 2007). Based on Sobel's procedures (in Howell, 2007), the t-test is 7.182. Using 5% of significance for Z-test (± 1.96), the t-value is significant. It means that there is a

Table 5: Regression results for H1, H2 and H4

No.	Independent variable	Beta ^a	t	Adjusted R ²	F
1.	Satisfaction	0.359	5.749***	0.125	33.055***
2.	Trust	0.546	9.757***	0.295	95.203***
4.	Social identification	0.482	8.236***	0.229	67.824***

Notes: dependent variable is loyalty; ^astandardized regression coefficients; *** $p < 0.001$

Testing H3 is based on regression number 1 in Table 5 and Table 6. Firstly, satisfaction is significantly related to trust (number 1 in Table 5).

significant mediating effect of trust on the relationship between satisfaction and loyalty. So, H3 is supported as well.

Table 6: Regression results for H3

No.	Independent variable	Beta ^c	t	Adjusted R ²	F
1.	Satisfaction	0.579	10.622***	0.332	112.834***
2.	Satisfaction	0.064	0.931	0.295	48.007***
	Trust	0.509	7.416***		

Notes: ^adependent variable is trust; ^bdependent variable is loyalty; ^cstandardized regression coefficients; *** $p < 0.001$

5. DISCUSSION AND MANAGERIAL IMPLICATIONS

This research aims at developing a loyalty model in the higher education context in Indonesia and, specifically, at investigating the effects of satisfaction, trust and social identification on loyalty. By investigating the relationship between social identification and loyalty in the higher education context, the result endorses social identification as a positive and significant predictor of loyalty and some previous studies (see Gau & Kim, 2001; Sheth & Mittal, 2004). It means that higher education institutions need to develop social identification of students with the institution to build their loyalty. Building social identification should start when students study on campus.

Based on Hall and Schneider's (1972) work, membership tenure will increase identification, but the rate at which this increase occurs will diminish over time. Mael and Ashforth (1992) also report that the length of time a person is actively involved with an organization is positively related to identification. Accordingly, there are many strategies to develop social identification (Bhat-tacharya *et al.*, 1995).

This research also supports the belief that trust, as a prerequisite variable of loyalty, is a positive and significant predictor of loyalty (Chu *et al.*, 2012). It suggests that, if someone is loyal to his or her institution, he or she trusts the institution. Thus, the officials of higher education institutions should comprehensively plan every promise to students before the promises are published.

Another finding of this research is that satisfaction is a positive predictor of loyalty. It endorses two previous researches by Chu *et al.* (2012) and Gulid (2011). Satisfied customers do not automatically become loyal to their service provider. They may want to try another provider to know if that provider is better than a previous provider. A traditional assumption asserts that customer sat-

isfaction leads to customer loyalty (Oliver, 1997). This assumption has been challenged in recent years by researchers who provide data indicating that large numbers of customers who express high customer satisfaction may defect or switch to competing brands (e.g. Jones & Sasser, 1995). Consequently, loyalty may become relatively independent of current customer satisfaction over time (Oliver, 1999).

The last finding of this research is that trust mediates the relationship between satisfaction and loyalty (Pont & McQuilken, 2005; Chu *et al.*, 2012). Accordingly, satisfaction is a positive and significant predictor of trust (Michell *et al.*, 1998) and trust is a positive and significant predictor of loyalty (Chu *et al.*, 2012). The implication of this mediating effect for the officials of higher education institutions is that they must satisfy their students, while also making them trust the institutions.

6. LIMITATIONS AND FUTURE RESEARCH

It is acknowledged that there are some limitations in the study. Firstly, the three items of social identification are not qualified. For the next research, these items should be revised, so that a conceptualization of social identification becomes representative.

Secondly, this research selected its subjects from only one university in Indonesia which, in turn, results in weakness of the external validity. A replication of the research is necessary to examine the reliability of the result because misleading conclusions could be drawn easily by the possibility of making generalizations to other countries with different characteristics (e.g. culture, academic quality). Finally, the variance of loyalty should be merged with other variables, such as image (Helgesen & Nasset, 2007a), quality (Henig-Thurau *et al.*, 2001) and value (Kheiry *et al.*, 2012) in order to yield a more comprehensive model.

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