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Creating higher education quality through leadership, organizational culture and organizational commitment

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Abstract. The quality of higher education in Indonesia requires in-depth studies to determine the factors that play an important role in improving the quality and competitiveness at the regional and international levels. This study used a quantitative method with a path analysis model to test whether there is a direct and indirect influence on exogenous variables, namely leadership and organizational culture on endogenous variables, namely the application of the internal quality assurance system in state universities with organizational commitment as an intervening variable. The results of the analysis test show that organizational commitment plays an important role in mediating and contributing to leadership and organizational commitment to the implementation of the internal quality assurance system in higher education. Organizational commitment becomes a framework for universities to build a new paradigm in harmonizing the demands and needs of society regarding the quality of higher education in order to be able to compete professionally. Leadership and organizational culture require organizational commitment to building communication and motivation through expectations and academic values that develop in a healthy, creative, innovative and dynamic manner because they can encourage collaboration and synergy of all elements of higher education to achieve the quality standards set.

Keywords: Leadership, Organizational Culture, Organizational Commitment, Internal Quality Assurance System

1. Introduction

The urge to improve the quality of higher education in Indonesia is of course reasonable. Indonesia must pay serious attention to the development of education at the tertiary level, because it has been proven that the progress of a country cannot be separated from the success of a country in managing the world of higher education [19]. The literature of primary relevance to tertiary institutions covers a wide range of disciplines or transdisciplinary disciplines, including management science and development evaluation, organizational change and behavior, and higher education studies [6]. Organizational aspects such as structure, culture, human resource management and leadership are the determinants of the success of integrated quality management [24]. To improve the quality of higher education, several variables that are thought to play an important role are leadership, organizational culture and organizational commitment.

Leadership, in essence, is not only an individual's quality that is enhanced, but a way of being and acting in a positive way to connect with others, allowing for cooperation, assistance and other growth within him [18]. In order to achieve all this, the most important thing is leadership. The success of an organization to achieve quality control depends on the ability and attitude of top management [21]. The importance of the contribution of leadership in educational organizations has received attention, because in recent years, there has been an increasing interest in leadership development in organizations and education [16]. The external and internal changes affecting higher education require the institution, and the system as a whole, to redefine its mission, goals and practices. However, to achieve such a significant change requires leadership at many levels [15]. Therefore, academic credibility and university life experience are very important for effective leadership in higher education



[22]. Apart from the leadership aspect, there are also factors that are dominant in the process of improving the quality of higher education, namely organizational culture. Organizational culture is what employees feel and how these perceptions create patterns of trust, values, and expectations [11]. The characteristics that appear from the organizational culture, namely; (1) communication, (2) motivation, and (3) leadership [17]. In addition, culture emerges from a multidimensional set of influences that includes the external environment, workforce, managers and leaders, structure, technology, organizational history, and perceptions of the future [5]. Culture in turn always focuses on the values, beliefs and norms of individuals in organizations and how these individual perceptions coalesce into shared meanings [7]. Leadership and organizational culture are also determined by the organizational commitment of all elements of higher education, so that they simultaneously move together to improve the quality of higher education.

Commitment refers to attachment and loyalty. This is the relative strength of identifying individuals with their involvement in a particular organization. Organizational commitment consists of three factors, namely; (1) a strong desire to remain a member of the organization, (2) a strong belief and acceptance of the organization's values and goals; and (3) readiness to mobilize considerable effort on behalf of the organization [3]. The level of organizational commitment as well as the level of loyalty and attachment to the organization is positively influenced by factors that emphasize flexibility and adaptation, but also the level of emphasis on hierarchy and specialization of roles in both the public and private sectors [27]. Because, as the size of the organization increases, commitment decreases; as structures become more employee-focused, commitment increases; and the more positive the perception of organizational climate, the greater the commitment [23]. Based on the background description of higher education quality previously described, this study was designed with the intention of testing whether there is a direct and indirect effect of leadership and organizational culture as exogenous variables on the implementation of the internal quality assurance system in tertiary institutions as endogenous variables with organizational commitment as an intervening variable.

2. Methods

This research used quantitative methods with correlation analysis design and path analysis. The objective of correlation analysis is to provide a comparison with the results of the path analysis, because correlation analysis is not influenced by the correlation of other variables [26]. Path analysis wants to test regression equations involving several exogenous and endogenous variables at the same time to allow testing of the mediating / intervening variables or intermediate variables [10]. Based on literature review, this research model has two endogenous variables, namely; organizational commitment and implementation of an internal quality assurance system; and two exogenous variables namely; leadership and organizational commitment. The study population included 340 lecturers at 3 state universities in Ambon city, Maluku province. The sampling technique used purposive sampling because it is a sampling technique with special considerations so that it is worthy of being sampled. Referring to the Slovin sample determination guidelines, with a population of 340 a sample of 221 respondents was assigned with an error rate of 5%. The number of population and research sample is described in the following table.

Tabel 1. Population and Sample Research

No	College	Departement	Population	Sample	%
1	Universitas Pattimura Ambon	70	280	182	82,35
2	Institut Agama Kristen Negeri Ambon	15	45	29	13,12
3	Politeknik Negeri Ambon	5	15	10	4,52
Amount		90	340	221	100

Based on the literature review and the variables to be studied, this study developed a questionnaire and tested it on 33 respondents outside the specified sample. The questionnaire used a Likert scale with a score range of 5-1 answer choices and each respondent is asked to indicate a response or attitude. Corrected-item-total correlation and Cronbach's alpha analysis were used to test validity and reliability (de Vaus, 2002). After testing the validation and reliability using SPSS version 20, the variable leadership; 45 statements are valid, 1 item is rejected with a Cronbach alpha coefficient of $0.751 > 0.60$. Organizational culture variables; 42 valid with Cronbach's alpha coefficient $0.756 > 0.60$. Organizational

commitment variable; 45 valid statements with a Cronbach alpha coefficient of $0.792 > 0.60$. Furthermore, the SPMI variable; 41 statements are valid, 4 items are rejected with a Cronbach alpha coefficient of $0.745 > 0.60$. Meanwhile, for the path model testing process and research hypothesis testing, path diagrams were used in the AMOS 21 program. Multivariate normality analysis showed point c.r-0.454, meaning that the coefficient value obtained was normal because it was smaller than the maximum threshold of 2.58. The results of the data normality test for each variable can be seen in the following table.

Table 2. Assessment of Normality

Variable	Min	Max	skew	c.r.	kurtosis	c.r.
Org_Commitment	150,000	198,000	-,087	-,529	-,824	-2,502
Leadership	150,000	199,000	-,208	-1,260	,104	,314
Org_Culture	152,000	195,000	-,183	-1,110	-,898	-2,725
IQAS	151,000	198,000	-,044	-,268	-,234	-,709
Multivariate					-,424	-,454

3. Results and Discussion

3.1 Correlation Analysis

The results of the correlation analysis showed that the variables of the implementation of the internal quality assurance system were related to organizational commitment (0.653 , $p < 0.01$), leadership (0.642 , $p < 0.01$). Organizational culture is not directly correlated but through organizational commitment with a correlation coefficient (0.475 , $p < 0.01$). As an intervening variable, organizational commitment is correlated with leadership (0.724 , $p > 0.05$), organizational commitment (0.686 , $p > 0.05$), leadership and organizational commitment with a coefficient (0.574 , $p > 0.05$). In other words, the implementation of the internal quality assurance system in tertiary institutions is positively correlated with the support of leadership, a dynamic and creative organizational culture and high organizational commitment from all elements of the organizers of each higher education institution. The following table presents the correlation value matrix between the variables studied.

Table 3. Correlation Matrix

Variable	Org. Culture	Leadership	Org. Commitment	IQAS
Org_Culture	1,000			
Leadership	,574	1,000		
Org_Commitment	,686	,724	1,000	
IQAS	,475	,642	,653	1,000

3.2 Path Analysis

The results of the analysis using AMOS 21 show that leadership and organizational culture affect organizational commitment and the implementation of an internal quality assurance system. Organizational culture influences the implementation of an internal quality assurance system through organizational commitment. Furthermore, organizational commitment affects the implementation of the internal quality assurance system with a significance level of 0.001 ($p = ***$). In other words, all the proposed hypotheses are proven and accepted. The influence between exogenous variables, endogenous variables and intervening variables is shown in the following table.

Table 4. Regression Weights

			Estimate	S.E.	C.R.	P	Label
Org_Commitment	<---	Leadership	,521	,053	9,859	***	par_1
Org_Commitment	<---	Org_Culture	,386	,048	8,071	***	par_2
IQAS	<---	Org_Commitment	,369	,066	5,630	***	par_3
IQAS	<---	Leadership	,354	,069	5,106	***	par_5

The value of the coefficient of determination is shown by the squared multiple correlations 0.632 (R²). This means that the organizational commitment variable can be explained by the leadership and organizational culture variables of 63.2% while the remaining 36.8% is another variable that is not studied. Furthermore, the value of squared multiple correlations of 0.487 (R²) indicates that the internal quality assurance system (IQAS) variable can be explained by the variable leadership, organizational culture and organizational commitment of 48.7%, while the remaining 51.3% is another variable not examined. The results of hypothesis testing regarding the magnitude of the value of the direct influence between exogenous and endogenous variables with organizational commitment as an intervening variable indicate that the direct effect of leadership on the implementation of the internal quality assurance system (IQAS) is 0.357 or 35.7%. The direct effect of leadership on organizational commitment 0.492 or 49.2%. The direct influence of organizational culture on organizational commitment is 0.403 or 40.3%. Furthermore, the direct effect of organizational commitment on the implementation of the internal quality assurance system (IQAS) is 0.394 or 39.4%. The results of the direct effect test for each variable are presented in the following table.

Table 5. Standardized Direct Effects

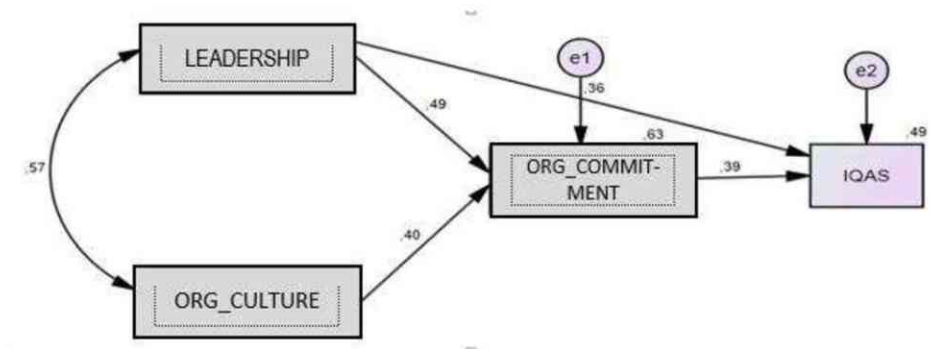
	Org_Culture	Leadership	Org_Commitment
Org_Commitment	,403	,492	,000
IQAS	,000	,357	,394

The results of hypothesis testing regarding the magnitude of the value of the indirect effect between exogenous and endogenous variables with organizational commitment as an intervening variable indicate that the indirect effect of leadership on organizational commitment is then to the implementation of the internal quality assurance system (IQAS) = (0.492) (0.394) = 0.194. So, the total effect: direct + indirect = 0.357+ 0.194 = 0.551. That is, the influence of leadership on the implementation of the internal quality assurance system (IQAS) through organizational commitment is 55.1%. The indirect effect of organizational culture on organizational commitment further to the implementation of the internal quality assurance system (IQAS) = (0.403) (0.394) = 0.159. So, the total effect: direct + indirect = 0.403 + 0.159 = 0.562. That is, the influence of organizational culture on the implementation of the internal quality assurance system (IQAS) through organizational commitment is 56.2%, the results are shown in the following table.

Table 6. Standardized Indirect Effects

	Org_Commitment	Leadership	Org_Culture
Org_Culture	,000	,000	,000
Iqas	,159	,194	,000

This study used a path diagram with the help of the AMOS 21 program to test the direct and indirect effect of the hypothesis proposed by referring to the previous literature review. After testing, the results show that all hypotheses are accepted because they meet the criteria and benchmark standards set. The following figure presents the antecedents of increasing the implementation of higher education internal quality assurance systems using organizational commitment as an intervening variable.

Figure 1. Path Analysis Diagram

3.3 Goodness of Fit Test

After the goodness of fit test was carried out, the path diagram model developed gave a Chi Square of 7,247 ($p > 0.05$). It was concluded that the developed model was supported by empirical data. An RMSEA value of 0.169 is considered suitable, as it is close to the predetermined threshold, i.e. below the 0.08 threshold. Meanwhile, the values in the CMIN / df, GFI, AGFI, NFI and CFI categories showed results that were very in line with the specified threshold. Thus, it is concluded that the model has met most of the requirements in the Goodness of Fit Test.

Tabel 7. Goodness of Fit Test

Index	Cut-off Value	Empirical Test	Remark
Chi Squared	$\alpha \geq 5\%$	7.247 ($p=0.007$)	Fit
RMSEA	≤ 0.08	0.169	Fit
CMIN / d.f.	≤ 3.0	1.0	Fit
GFI	≥ 0.9	0.984	Fit
AGFI	≥ 0.9	0.841	Fit
NFI	≤ 0.9	0.984	Fit
CFI	≥ 0.9	0.986	Fit

3.4 The Effect of Leadership on Organizational Commitment

Referring to the findings presented, it can be explained that universities are the main pillars of improving the quality of a nation's human resources. Therefore there is a demand to improve the quality and competitiveness of higher education should be seen as a necessity. The low quality of higher education in Indonesia is determined by various factors. In addition to the leadership contribution factors, organizational culture and organizational commitment are factors that can have a positive impact on efforts to drive the improvement of the quality of higher education. This research offers a strategy to improve the implementation of the internal quality assurance system in higher education through organizational commitment. With the increase in organizational commitment, the role of leadership will be realized and the organizational culture will be built synergistically and simultaneously to improve the achievement of the quality standards set by each university. The significance of the value obtained compared to the value in the correlation matrix between variables proves that leadership is the dominant factor in improving the quality of higher education. This finding is confirmed according to previous studies that highlight the role of a leader [25]; [9], the required competence and demonstrated style [2]; [1]; [4] are leadership factors that directly determine higher education quality assurance systems. Leaders contribute to mobilizing all organizational resources to ensure the achievement of all quality standards established through a series of academic activities. In every university, apart from the chancellor and dean, the heads of departments or study programs are the implementing elements at the forefront of improving the quality of higher education. Involvement and coordination between leaders at each level of the higher education organization to implement an internal quality assurance system will be seen through the role, performance, competence, style and always focus on efforts to achieve quality standards at each level. The framework of thought regarding

the implementation of the internal quality assurance system, refers to the quality policy that is determined both nationally and which is established by each university. This finding is in line with the results of previous research which concluded that there was a significant effect of leadership on improving the quality of education in tertiary institutions [14]; [8].

According to the findings, there is a direct influence of leadership on organizational commitment by 49.2%. No matter how good the role, performance, competence and style a leader has, they need support from the organizational environment and various elements that interact, create and collaborate together to form a truly dynamic and innovative organizational commitment. Higher education organizational commitment to form a professionally managed academic culture. If seen from the magnitude of the value of the influence of leadership on the implementation of the internal quality assurance system, the value of the influence of leadership on organizational commitment is more dominant and stronger. This means that organizational commitment can mediate for each leader to contribute to higher education quality assurance.

3.5 The Influence of Organizational Culture on Organizational Commitment

Analysis of the direct influence of organizational culture on organizational commitment proves a significance value of 40.3%. These results indicate that an increase in organizational culture is also determined by an increase in organizational commitment. In the aspect of building commitment, affective commitment is needed, as evidenced by emotional attachment and involvement in the organization; normative commitment is evidenced by the desire to survive and fight for the organization; and sustainable commitment is evidenced by the responsibility and belief of all elements (lecturers, staff, students, and other stakeholders) regarding the future of higher education [20]. That is, increasing organizational culture requires organizational commitment as a supporting variable that moves all elements of higher education to create climate, atmosphere, norms, behavior, communication and academic interactions that shape the organizational culture of a university to develop dynamically, creatively and innovatively.

3.6 The Effect of Organizational Commitment on IQAS Implementation

Seeing the significant value of the direct effect of organizational commitment on the implementation of the internal quality assurance system (IQAS) which contributed 39.4%, it is imperative that every university strive to create organizational commitment periodically and continuously. Nationally, SPMI implementation begins with planning, implementation, evaluation and control, and development. From an implementation perspective, organizational commitment is seen as a driving variable that can be a common framework by involving various parties to achieve the established quality standards [12].

3.7 The Effect of Leadership on the Implementation of IQAS

If you look at the results of the analysis between variables, the influence of leadership on the implementation of the internal quality assurance system (IQAS) in higher education through organizational commitment has a high enough significance value because it contributes to a value of 55.1%. This shows that leadership plays an important role in improving the quality of higher education, but needs to be mediated through organizational commitment. Competition between tertiary institutions to create quality and competitiveness, in turn, requires attention to efforts to build organizational commitment. A healthy organization has a leadership pattern that is able to move organizational commitment professionally so as to encourage the improvement of the quality of higher education. Through organizational commitment, leadership can contribute to implementing an internal quality assurance system in a planned and sustainable manner [13].

3.8 *The Influence of Organizational Culture on the Implementation of IQAS*

The result of the significance test of the value of the influence of organizational culture on the implementation of the internal quality assurance system (IQAS) through organizational commitment is 15.9%. Indeed, this value is not comparable with the value of the direct influence of organizational culture on organizational commitment. This does not mean that organizational culture does not require organizational commitment from all elements of higher education. This is because the implementation of the quality assurance system is a strategy to achieve quality standards through a series of actions that involve every university administrator. Organizational culture is also proven to be able to contribute to developing organizational commitment in a professional manner so that it can increase the achievement of predetermined quality standard targets.

4. Conclusion

The results of this study found that 35.7% of the successful implementation of the internal quality assurance system in tertiary institutions was influenced by leadership who understood roles, had competence, performance, style, and always focused on quality. Leadership also contributes 49.2% to the creation and development of organizational commitment in universities. Thus, leadership in higher education plays a very strategic role in improving the quality and competitiveness of education. In addition to the leadership factor, it turns out that 40.3% of the development of higher education organizational commitment is determined by the presence of organizational culture in each individual at each university. It means that the organizational commitment of each university is determined by the increase in normative, affective and sustainable commitment as a basic framework for strengthening organizational commitment. Organizational commitment also contributes 39.4% to the achievement of the implementation of the internal quality assurance system in higher education. So, the higher the organizational commitment of a university, the implementation of its internal quality assurance system will run well, even increase sustainably.

The findings also show that organizational commitment as an intervening variable determines the indirect influence of leadership on the implementation of the internal quality assurance system in higher education by 55.1%. So, the success of a leader in the implementation of the internal quality assurance system (IQAS) is determined by the organizational commitment of each university. The higher education organizational commitment determines the specified quality achievements. Likewise, the influence of organizational culture on the implementation of the internal quality assurance system in higher education through organizational culture is 15.9%. In other words, a high organizational culture for implementing an internal quality assurance system (IQAS) requires an organizational commitment that is formed in a professional, dynamic and innovative manner. Such organizational commitment will mediate the organizational culture of all elements of higher education to pursue quality targets that are expected to be shared.

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