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KNOWLEDGE MANAGEMENT MATURITY MODEL OF HIGHER EDUCATION BASED-ON QUALITY CULTURE AND HUMAN RESOURCE MANAGEMENT PRACTICES

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ABSTRACT

There are 2 main important things to improve knowledge management maturity (KMM), namely organizational culture and proper HR management. There are no studies on human resource culture and management that are specific to increasing KMM in tertiary institutions. Empirical research on the influence of higher education quality culture as a goal of implementing the Internal Quality Assurance System (SPMI) on all tertiary institutions in Indonesia and the influence of HR management on KMM is still very limited. This study aims to develop a model for improving KMM in Indonesian universities through the implementation of a quality culture and human resource management. The analysis was carried out with a structural equation model (SEM). The results showed that quality culture had a positive and significant effect on human resource management practices, but had no direct effect on knowledge management maturity. Human resource management practices have a positive and significant effect on knowledge management maturity. The results of this study prove the importance of the quality culture of higher education in developing mature knowledge management, through human resource management practices.

KEYWORDS *Knowledge Management Maturity, Human Resources, Quality Culture*

INTRODUCTION

Indonesia's global competitiveness index ranking in the World Economic Forum (WEF) report is ranked 50 out of 141 countries in 2020. Indonesia ranks 4th in ASEAN after Singapore (1), Malaysia (27) and Thailand (40). Indonesia is still lagging behind in almost all components of competitiveness, except for the components of macroeconomic stability and economic size. The higher education system is one of the key factors in economic development and competitiveness. This is

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evidenced by Krsti'c et al. (2020) which states that there is a strong correlation between the quality of higher education and economic competitiveness and sustainable development. The quality of higher education is measured based on the output of activities in the form of scientific publications, patent acquisition, and other academic works. Competitiveness based on the competitiveness index compiled by the WEF.

Studies on factors that increase KMM are still very limited, especially in universities. Cultural factors and HR management practices have received the attention of several researchers. Research by Prystupa-Rządca (2017) states that values play a positive role in KM. Meanwhile Ahmadya et al. (2016) who used Denison's cultural model approach stated that cultural strengthening supports the success of KM. This is in line with Coleman (2018) who uses the cultural approach of Cameron and Quinn (2011) in analyzing the influence of organizational culture on Knowledge Management.

Several researchers have found that human resource management practices that support KM are human resource management that treats employees as knowledge workers. Knowledge workers are generally individuals who do not like too strict rules and want self-development and do not respond to financial rewards (Ishak et al., 2010). This is supported by research by Sundiman (2017) and Edvardsson (2008).

Based on the description above, it can be concluded that there is still a research gap on the knowledge management maturity model in universities. This is due to different approaches in assessing and analyzing the maturity level of Knowledge Management in universities. Researches on how to increase knowledge management maturity are also still very limited, most research on knowledge management focuses on the influence of knowledge management on individual performance and organizational performance. Considering the increasingly active implementation of SPMI which aims to build a quality culture of higher education and the importance of proper HRM practices to develop the competitiveness of universities in Indonesia, this study will examine the role of quality culture and HRM practices in universities to achieve knowledge management maturity so that university competitiveness is achieved. high.

This study aims to create a knowledge management maturity model by analyzing the influence of quality cultural constructs on knowledge management maturity, and the influence of HRM practices on knowledge management maturity.

Theoretical Background

Quality Culture

Quality culture refers to higher education quality. Quality culture according to Malhi (2013), is a system of shared values, beliefs and norms that focuses on customer satisfaction and continuously improving the quality of products and services. According to Malhi (2013) quality values are: 1) Customer focus, 2) Employee engagement and empowerment, 3) Open and honest communication, and 4) Problem solving and fact-based decision making, 5) Continuous improvement, 6) Work teams across the organization, 7) Process management, 8) Rewards and recognition based on achievement of quality objectives and demonstration of

appropriate behavior. According to Powel in Njiro (2015) seven important elements of quality culture are: 1) Consistency, 2) Benefit principles, 3) Learning environment, 4) Honesty, 5) Utilitarian, 6) Respect or appreciation, 7) Empowerment that explores employee creativity.

Prystupa (2017) states the importance of culture in implementing KM in companies. The same thing was conveyed by Chang & Lin (2015). Organizational structure and information technology, organizational culture, and human resources and training according to Gharehbiglo (2012). Ahmadya et al. (2016) stated that culture will improve KM. In line with Chang & Lin (2015) that results-oriented culture and work support KM, while Prystupa (2017) states that the values of team collaboration, open communication, trust, experimentation, and autonomy. positive effect on KM.

Human Resource Management Practice

Armstrong (2006) states that the purpose of human resource management is to ensure that organizations are able to achieve success through people. Ulrich and Lake in Armstrong (2011) state that: 'HRM systems can be a source of organizational capabilities that enable companies to learn and take advantage of new opportunities.

But HRM has an ethical dimension which means that it must also pay attention to the rights and needs of the people in the organization through the implementation of social responsibilities. Edvardsson (2008) states that both exploratory and exploitative strategies support KM. Isaac et al. (2010) stated that HRM that encourages employee participation supports KM, but the analysis of the literature needs empirical evidence.

Knowledge Management in Higher Education

Knowledge management is a systematic process by which knowledge needed for an organization to be successful is created, captured, shared, and utilized. There are two kinds of knowledge. One of them is explicit knowledge, which can be expressed in words and numbers and shared in the form of data, scientific formulas, product specifications, manuals, universal principles, and so on. Meanwhile, tacit knowledge is deeply rooted in the actions and experiences of individuals, as well as in the ideals, values, or emotions they hold (Ramadhani & Tjakraatmadja, 2012).

Davenport et al. (1998) divides the implementation of knowledge management into 4 main processes, namely providing a place to store knowledge, improving access to knowledge, advancing the knowledge environment, and managing knowledge as an asset. In the process of creating a knowledge repository, universities need to provide a place for printed or electronic documents such as theses, theses, dissertations, research and publication results, the results of other academic service operational activities. To facilitate storage and retrieval, the use of Information and Communication Technology (ICT) is essential.

Knowledge Management Maturity

Knowledge management should run in line with the company's business strategy, therefore it must always be adjusted. Management needs to monitor the extent

to which knowledge management is implemented, so a tool is needed in the form of a KM Maturity model. Bagheri et al. (2013) stated that the knowledge management maturity model is a measurement model for whatever is proposed by knowledge management theory. Each maturity level requires a knowledge audit (evaluation) process. Several knowledge management maturity models have been proposed more than a decade ago but not all models are specifically stated as knowledge management maturity models (KMMM) for higher education development (Nur, 2017). There are two models that are widely used by researchers, namely the APO model and the KMMM model developed by Kulkarni & Louis (2008). Both models provide 5 levels of maturity, but with different terms. KMMM gives ratings: 1) Initial, 2) Repeated, 3) Defined, 4) Managed, and 5) Optimizing. Meanwhile, APO gives ratings: 1) Default, 2) Reactive, 3) Aware, 4) Convicted, and 5) Sharing. The most widely used model in KM maturity studies in universities is KMMM, even said by Demchig (2015) as the Asian KMM model.

Research on KMM has been carried out by researchers with different approaches. Pamulapati & Bodhicherla (2019) There are many KM Maturity models but nothing specific. Widiatuti et al. (2019) using the Siemens model states that the KMM at STIMIK ESQ is at the repeated level or level 2. The results of this study are lower than research by Nur (2017) researching KM Maturity at 4 leading universities in Indonesia (ITB, UGM, UI and IPB) is at level 3 (Defined). (Demchig (2015) found KMM in Mongolian universities was at level 1, Dehkord et al. (2017) stated that KMM in government institutions in India was at level 2, Naser et al. (2016) stated that KMM in Al-Azhar and Al-Quds in Palestine are at level 3. Using the APO KM approach, Ramadhani et al. (2012) found that the KMM of a multinational company is at the maturity level. Wijetunge (2012) using the Kruger model states that the KMM in the PT Sri Lanka library is at level 2. Based on the description, it is hypothesized that universities that have a high KMsM will have a better accreditation score. Considering that this study was only carried out in two universities, the third hypothesis will be tested by conducting a different test. This is also a weakness of this study.

RESEARCH METHOD

Research Design

This research uses the survey method and is explanatory research which aims to explain the influence between variables through hypothesis testing. Determination of variables based on theoretical justification. The number of respondents was taken randomly as many as 149 academic staffs.

Data Analysis

All variables are arranged in a questionnaire, which consists of dimensions that are then described in indicators. Primary research data is collected using a questionnaire, which is filled in self-report by the respondent. The questionnaire is filled in a self-rating manner, where respondents fill out a questionnaire based on their perceptions of themselves. The measurement scale is using a Likert scale of 1 to 5. The questionnaire submission is delivered directly to the respondents because it can minimize the difference in interpretation between the respondent and the researcher.

The research data was processed using a structural equation model (SEM) using AMOS software. The selection of the structural model was chosen considering that apart from testing the influence between variables, it also analyzed the measurement model simultaneously (simultaneously). Considering that the measuring instrument is still in the process of empirical evidence from previous research studies, a confirmatory analysis is needed to validate the measuring instrument.

Research Hypothesis

1. Quality culture has a significant effect on knowledge management maturity.
2. Quality culture has a significant effect on human resource management practices.
3. Knowledge worker-based human resource management practices have a significant effect on knowledge management maturity.

RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistics of research variables based on respondents' answers are presented in Table 1. The dimensions of human resource management (HRM) that are considered good by the respondents are the dimensions of performance management and the dimensions of employee relations.

The dimension of quality culture that gets the highest assessment is stakeholder-in, it means that all university policies take into account the interests of internal and external stakeholders. All dimensions of knowledge management maturity have a score of less than 4.00, meaning they still need to be improved in order to reach maturity, especially the policy dimension has the lowest score.

Table 1. Descriptive Statistics of Variables

Variable	Dimension	Mean Score
Human Resource Management Practices	Fair Recruitment	3,8344
	Training and Development	3,7597
	Performance Management	4,1883
	Employee Relation	4,0877
Quality Culture	Quality first,	3,8961
	Skateholder in,	4,2890
	The next proses,	3,0779
	Speak with data	3,2857
	Upstream management.	3,0130
Knowledge Management Maturity	Culture	3,6591
	Policy	3,3669
	Process	3,8344
	Startegy	3,8117
	Technology	3,8019

Source : Research Data Processed (2023)

Measurement Evaluation

The results of the confirmatory analysis yielded the loading factor value from the dimensions of the research variables, indicating that the HRM dimension that has the highest loading factor value is in performance management, while the quality culture dimension which has the highest loading factor is the speak with data dimension. Knowledge management maturity (KMM) dimension with the highest loading factor value is for the strategic aspect dimension.

The validity test was carried out by using the variant extract criteria more than 0.70. All measurements of research variables are reliable because they have variant extract scores greater than 0.70.

Assumption Test Results

The normality assumption test is carried out as a condition for using the structural analysis model with AMOS software. The results of testing assumptions are presented in Table 6.4. The test results show that the value of skewness and kurtosis is quite low, which is less than 2.90, so it can be concluded that the assumption of normality has been met. Based on the distance of mahalanobis also shows that only approximately 5 percent have a lower value so that it is considered to meet the normality requirements.

Model Accuracy Test

Evaluation of model fit is needed to evaluate whether the research model is good enough so that it is feasible to be used in research analysis. The evaluation of the suitability of the research model was carried out using 6 criteria. Based on the evaluation shows that of the 6 criteria, as many as 5 criteria indicate that the model is good, while from 1 criterion it is marginal. Based on the evaluation results, the model is eligible for further analysis.

Hypothesis Test Results

Table 2. Hypothesis Test Result

			C.R.	P	Result
Human Resource Management Practices	<---	Quality Culture	2.152	0.031	Accepted
Knowledge Management Maturity	<---	Human Resource Management Practices	3.548	***	Accepted
Knowledge Management Maturity	<---	Quality Culture	-0.308	0.758	Rejected

Source : Research Data Processed (2023)

Hypothesis testing was carried out using the P value criteria of 0.05, if the P value is less than 0.05 then the research hypothesis is accepted and if it is greater than 0.05 then the hypothesis is rejected. The results of hypothesis testing as shown in Table 2 proved that from the three hypotheses only two were accepted. Two research hypotheses were accepted; 1) quality culture has a positive and significant effect on HRM practices, and 2) HRM practices have a significant and positive

effect on Knowledge Management Maturity performance. This means that quality culture is an important factor in increasing knowledge management maturity through HR management practices.

Discussion

The Influence of Quality Culture on HRM Practices

There are two factors that have a positive effect on KM, namely cultural factors and human resource management factors. Wijetunge (2012) states that intrinsic motivation has an effect on Knowledge Sharing factors. Prystupa (2017) states the importance of culture in implementing KM in companies. The same thing was conveyed by Chang & Lin (2015). Organizational structure and information technology, organizational culture, and human resources and training according to Gharehbiglo (2012). Ahmadya et al. (2016) stated that culture will improve KM. In line with Chang & Lin (2015) that results-oriented culture and work support KM, while Prystupa (2017) states that the values of team collaboration, open communication, trust, experimentation, and autonomy. positive effect on KM.

The Effect of HRM Practices on Knowledge Management Maturity

Armstrong (2011) states that the purpose of human resource management is to ensure that organizations are able to achieve success through people. Ulrich and Lake in Armstrong (2011) state that: 'HRM systems can be a source of organizational capabilities that enable companies to learn and take advantage of new opportunities. However, as the results of this study support the practice of human resource management, it has an ethical dimension which means that HRM must also pay attention to the rights and needs of people in the organization through the implementation of social responsibility. Edvardsson (2008) states that both exploratory and exploitative strategies support KM. Isaac et al. (2010) stated that HRM that encourages employee participation supports KM, but the analysis of the literature needs empirical evidence (Zumali et al., 2018).

The Influence of Quality Culture on Knowledge Management Maturity

The results of this study support the idea that there are two factors that have a positive effect on KM, namely cultural factors and human resource management factors. However, it is proven that cultural influences do not directly affect knowledge management maturity. As stated by Ahmadya et al. (2016) culture will improve KM but not directly. In line with Chang & Lin (2015) that results-oriented culture and work support KM, while Prystupa (2017) states that the values of team collaboration, open communication, trust, experimentation, and autonomy. positive effect on KM. Also the thoughts of Wijetunge (2012) which states that intrinsic motivation has an effect on Knowledge Sharing factors. Prystupa (2017) states the importance of culture in implementing KM in companies. The same thing was conveyed by Chang & Lin (2015). Organizational structure and information technology, organizational culture, and human resources and training according to Gharehbiglo (2012) affected KM.

CONCLUSION

Based on the analysis of research data, it is concluded that the quality culture of higher education has an important role in supporting the maturity of knowledge management or knowledge worker maturity. However, this role is not direct, where the role is through human resource management practices. This is evidenced from the results of hypothesis testing stating that quality culture has a significant positive effect on human resource management practices, and human resource management practices have a significant positive effect on knowledge management maturity. The results of hypothesis testing indicate that quality culture has no significant effect on knowledge management maturity.

Every university in Indonesia, both public and private, is directed to implement SPMI in order to create a culture of quality in higher education. The results of this study prove that universities that implement a quality culture will improve human resource management practices, and for universities this will increase knowledge management maturity.

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