

Quality Management Practices and Organizational Performance at Higher Educational Institutions: the role of Human Oriented Elements and Work Environment

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The standard of Indonesian higher education is not well recognised globally. There are several loopholes which decrease the performance of these higher educational institutions. To expediate the organisational performance, it is needed to increase the quality of education. Therefore, the primary aim of this research is to review the role of quality management practices (QMPs) in organisational performance. Additionally, the role of human oriented element and work environment were also examined. Data were gathered from Indonesian universities. The respondents of the research were based on the educational staff of these universities such as lecturers, assistant professor, associate professors and professors. By applying the area cluster sampling, 400 survey questionnaires were utilized for data collection. Partial least square was used to analyse the collected data. It is found that QMPs have a significant positive role in organisational performance. Additionally, human oriented element and work environment as a moderating variable enhance the positive relationship between QMPs and organisational performance among Indonesian higher educational institutions.

Key words: *Quality management, organisational performance, higher education, satisfaction, work environment.*



Introduction

High level of education is one of the major sectors of every nation (Meléndez Carballido, Paronyan, Alfaro Matos, & Santillán Molina, 2019). The internationalisation of education remains the main challenge faced by tertiary institution systems around the world, derived from the growth of international education and conclusion of Government budgetary allocation, public higher education institutions as well as private institutions are focused on commercial competition enforced by economic effects (Kagaari, Munene, & Mpeera Ntayi, 2010). These situations are forcing higher education institutions to search other sources of financing. Such competitive environments demand that higher education institutions over the world specifically in Indonesia, have had an impact on the delivery of educational services, how institutions operate, and at the same time increased their organisational performance. Focusing on the quality of services and keep excellence in organizational performance among higher education is most crucial.

The Indonesian government has started the quality rebellion and applied different QMPs initiatives comparable with TQM, ISO 9000 series, 5S, and Customer Charter as a source to enhance quality. In brief, QMPs was formalised by the Indonesian government through the guidelines on schemes for quality advancement in the state. However, after many years the organisational performance of the Indonesian higher education institutions still obtained many complaints that show the inability of this sector in delivering their quality of services. As it is evident that Indonesian higher education is facing various issues and challenges (Choy, 2019). Thus, significant efforts are required to enhance the quality of higher education in Indonesia.

Literature indicates that the incompetency of organisational performance in the Indonesian high level of education bodies depending upon the increasing number of complaints by the public. As widely covered by previous scholars, all quality management initiatives would gain various advantages such as quality of services, client satisfaction, and institutional performance (Sadiq Sohail & Boon Hoong, 2003). Recently, studies that have focused on QMPs on services have increased. Significantly, higher education institutions can be considered as a service industry (Gruber, Fuß, Voss, & Gläser-Zikuda, 2010), and they started to pay more attention to achieve their customers' needs (Spivey, Chisholm-Burns, Murphy, Rice, & Morelli, 2009) by improving the quality. As the service industry is a major contributor to the economy than other industries. Gotzamani, Tsiotras, Nicolaou, Nicolaides, and Hadjiadamou (2007) proposed that the upcoming studies should emphasise on the issue of soft factors (human oriented elements) along the connections between QMPs and organizational performance.

Surprisingly, Gadenne and Sharma (2009) provide evidence that QMPs does not fully cover certain human-oriented issues (e.g. employee welfare, and satisfaction). Understanding the human-oriented elements such as satisfaction, therefore, it is essential as it is linked with absolute positive and negative organisational performance, and other related issues such as

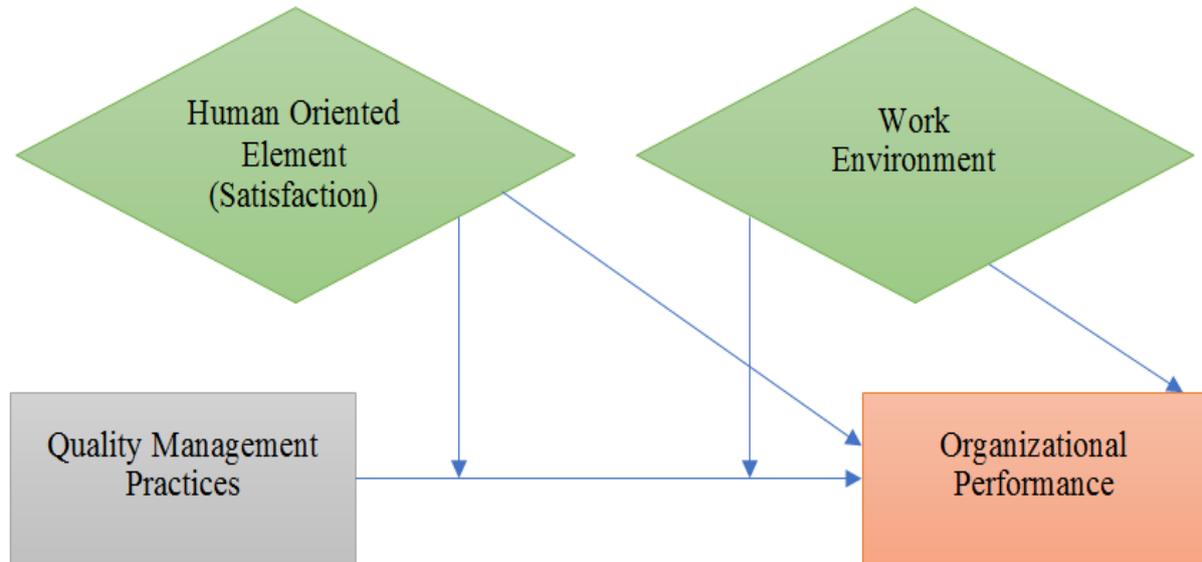


turnover, lateness, absenteeism, and intention to leave (Wreder, Gustavsson, & Klefsjö, 2008). Several pieces of research have been conducted to estimate the effects of QMPs on human-oriented elements, including job satisfaction. Job satisfaction and employee satisfaction are of key importance for education institutions (Hussain, Rizwan, Nawaz, & ul Hameed, 2013). Although the numbers of studies on the effect of human-oriented elements in QMPs are varied and still growing, the issue of the interrelationship between QMPs, the human-oriented factors and organisational performance has not been fully searched.

Along with the QMPs and human-oriented factors, work environment also has an important role in organisational performance. Better work environment motivates the workers to work hard to achieve the aims of the organization. However, unsuitable work environment demotivates the employees which lead to a decrease in overall organisational performance. As it is proved by the previous studies that work environment has an important role in organisational performance (Feather, McGillis Hall, Trbovich, & Baker, 2018; Pawirosumarto, Sarjana, & Gunawan, 2017). Therefore, four key elements are considered in this study, namely; QMPs, organisational performance, human-oriented elements like satisfaction and work environment. Figure 1 shows the relationship between QMPs, human orientated element, work environment and organisational performance. Therefore, the primary goal of this research is to determine the role of QMPs in organisational performance. Further, the sub-objectives are as under;

1. To examine the moderating role of human-oriented elements.
2. To examine the moderating role of the work environment.

Figure 1. The theoretical framework of the research demonstrating the connection between quality management practices, human orientated element, work environment and organisational performance.



Literature Review

Quality Management Practices (QMPs) and Organizational Performance in Higher Education Institutions

Before the issues of globalisation, liberalisation, and sustainability, studies on quality management practices (QMPs) in the higher education institutions have got attention due to demand for excellence. In fact, the QMPs currently applied in higher education institutions originally came from manufacturing. Due to this reason, the consensus among the previous scholars on the usefulness of QMPs in education is still not achieved (Mehralizadeh & Safaeemoghaddam, 2010). Currently, the compatibility of QMPs in higher education is questionable and remaining as unresolved issues.

In this regard, Widrick, Mergen, and Grant (2002) conducted a study that looked at QMPs in the United States of America's higher education institutions. In their model, the basic parameters of QMPs can be grouped into three areas, namely quality of design (QOD), quality of conformance (QOC) and quality of performance (QOP). These three parameters are interconnected and were chosen because frequently used in quality practices (Grant et al., 2002). Their model was rooted in two well-known QMPs models; the Juran Trilogy (quality schedule, quality check, quality advancement), and the Plando-check-act (PDCA) by Deming. The quality planning refers to QOD, quality control is correspondents to QOC, and quality improvement is QOP. Grant et al. (2002) reviewed nine articles from QMPs literature and they found that quality of design (QOD) and quality of conformance are largely covered, whilst the

quality of performance (QOP) was overlooked. In other words, little work reports on QOP in the higher education institutions arena. They insisted that two main possible reasons for the lack of QOP may also be explained by the lack of quality models and performance measurement in higher education institutions (Widrick et al., 2002). In the absence of a quality model and organisational performance measure, higher education institutions may not be ensuring continuous efforts to distinguish their targeted performance when designing any QMPs program. For that fact, this allows an area of study to focus the QMPs and organisational performance in the high level of education organisations.

The debate of trait involves a diversity of opinions, the guidance of the diverse people, things as well as the way it determined through various angles. The link of QMPs and organisational achievement is an imperative matter to assess. Setting out the precise role of QMPs in organisational achievement is problematic based on the reason that it covers numerous areas and wide subjects. As Thiagaragan, Zairi, and Dale (2001) stated that overlooking QMPs matter is equal to lack of achievement, as well as the good strategy in a highly competitive environment which is important for organisational performance. Consequently, efforts have to be assumed to advance the QMPs as organisational performance is heavily depending upon it. An agreement in the study that QMPs influence performance (Martínez-Costa, Choi, Martínez, & Martínez-Lorente, 2009). The majority of the QMPs studies with organisational performance emphasised the favourable results (Heras Saizarbitoria, Arana Landín, & Casadesús Fa, 2006; Yasin, Alavi, Kunt, & Zimmerer, 2004). Precisely, literature described the development in term of financial matters, product quality, the involvement of various level employees, the image of the company, quality awareness, and communication within the organisation (Heras, Dick, & Casadesus, 2002; Romle, 2014). Therefore, the positive effect of QMPs on financial matters, product quality, the involvement of various level employee, the image of the company, quality awareness, and communication within the organization ultimately increases the organizational performance among higher educational institutions.

Therefore, among educational institutions, quality management has a significant role. The decrease in education quality shows a negative effect on organisational performance. Significant quality level among the institutions generally based on the quality of education, infrastructure, the capability of staff, good working environment and other significant facilities related to the education. These quality features attract the customers and increase the service quality which affects positively on organisational performance. As the quality of services in higher educational institutions increases the organisation performance (Ali, Zhou, Hussain, Nair, & Ragavan, 2016; Guzmán, Fóster, Ramírez-Correa, Grandón, & Alfaro-Perez, 2018). A certain level of education quality is required to draw the clients with the help of QMPs. In this context, various studies in different organisations proved that QMPs has a significant role in organisation performance (Arda, Bayraktar, & Tatoglu, 2019; Obeidat, Yousef, Tawalbeh, & Masa'deh, 2018).

H1. QMPs has a positive effect on organisational performance.

Human-Oriented Elements

A comprehensive review on the research, has found that human-oriented elements are the most critical variable (Douglas, McClelland, & Davies, 2008; Sayeda, Rajendran, & Sai Lokachari, 2010). That is, human-oriented elements as assessed by satisfaction, commitment, and loyalty, presents the most beneficial judgement of elements intensity (Nilsson, Johnson, & Gustafsson, 2001), and achieving organisational performance is the aim of the QMPs initiative. Within the field of human-oriented elements literature, focus in this study has changed for organisational constructs because human-oriented elements are not solely related to intrapersonal (individual) constructs. Moreover, direct relationships examined in the previous scholars have raised inconsistent outcomes (Heras Saizarbitoria et al., 2006; Wilkinson & Dale, 2002; Yasin et al., 2004). The usual exercise on direct relationship to predict organisational performance neglects the significance of moderating impact on the connection of QMPs and organisational performance (Sila & Ebrahimpour, 2005). Thus, this study also allows both direct and moderation effects by testing the variables and mediating links between QMPs, human-oriented factors (satisfaction), and organisational achievement simultaneously. As mentioned by Kunnanatt (2007), little work is available about the effect of QMPs on the human part of a service organisation and studies linking these human-oriented elements are needing attention because human-oriented elements have become the focus of QMPs (Gadenne & Sharma, 2009). This literature intentions to satisfy such difference in the QMPs research by analysing the relationships amongst QMPs, human-oriented elements (satisfaction), and organisational performance.

H2. Human-oriented elements have a positive effect on organisational performance.

H3. Human-oriented elements moderates the relationship between QMPs and organisational performance.

Work Environment

The working environment is one of the wide-ranging terms and it describes all surroundings during working in various organisations. The physical working environment in organisations includes various elements. For instance, employee work tools and air, noise as well as light. However, employee working environment also comprises the psychological features of how work is organised as well as employee wellbeing at work. In case of higher educational institutions, the work environment is based on place of teaching, department political environment, relationship with students and teachers, facilities for teaching, noise at teaching place and equipment's required for teaching. It is evident from previous studies that work



environment has a crucial role in organisations (Abildgaard et al., 2018; Ellenkamp, Brouwers, Embregts, Joosen, & van Weeghel, 2016; Feather et al., 2018; Sundstrup et al., 2018).

Stress at the workplace is a major issue as well as a complicated phenomenon (Fernández-Esquer, Gallardo, & Diamond, 2019). Generally, the work environment has a role in creating stress which shows negative consequences. It creates problems for the organisation because stress is directly contributing to the performance of an organisation in educational institutions. Stress also leads towards job dissatisfaction and increasing cost. Job stress can be a special and main issue for the client-oriented departments as worker often experience the contradictory requirements of the customers and organisation and all these conflicts of demands establish dissension for workers which lead to the low organisational performance due to decrease in employee performance. Therefore, work environment sometimes creates stress for employees (Azuma, Ikeda, Kagi, Yanagi, & Osawa, 2015).

Moreover, poor working environment such as long working hours, less time available for social activities and work-family conflict take us to the worker job stress (Collie et al., 2012; Jung and Shin, 2014) and decreases the organisation performance. This job stress leads to job disappointment and job disappointment leads to low performance, absenteeism, inefficient working and ultimately towards the turnover intention (Bokti & Talib, 2009). These factors like job satisfaction and job stress having an impact on redundancy and employee performance. Thus, a better quality working environment is required for teachers in higher educational institutions. It indicates that the working environment has a significant positive role in organisational performance. Better working environments lead to better performance; however, poor working environment leads to low performance. Thus, the work environment has a positive role in organisational performance. It also has a significant link with QMPs (Gutierrez-Gutierrez, Barrales-Molina, & Kaynak, 2018).

H4. The work environment has a positive effect on organisational performance.

H5. Work environment moderates the relationship between QMPs and organisational performance.

Research Methodology

This research preferred quantitative study method. By using a cross-sectional research design, a survey questionnaire was applied to gather the data. Krejcie and Morgan (1970) instructions were applied for sample size extraction. By applying the area cluster sampling, 400 survey questionnaires were used for data collection. Four hundred (400) questionnaires were distributed among which two hundred and twelve (212) valid responses were received. Partial least square (PLS) was utilised to analyse the collected data. Area cluster sampling is applied

because it has a significant role to cover the widespread population (Altaf, Hameed, Nadeem, & Arfan, 2019).

A scale is an instrument through that people are notable as to how they vary from each other on the parameters of interest to the research. One more significant feature that essential to be highlighted when establishing a survey questionnaire is building an assessment scale (Krosnick, 1999). Accordingly, the optimum length of an assessment scale is 5 to 7 points. Seven-point Likert scale gives more depth; however, many options confuse the respondent. However, five-point scale provide originality by decreasing the frustration (UL Hameed, Nisar, Abbas, Waqas, & Meo, 2019). Thus, the five-point scale was used in this study.

Data Analysis and Findings

Prior to the beginning of data analysis, the data screening was performed, which is shown in Table 1. It is noticed that data is excepted missing value and external value. Usually, it is not an issue while using PLS-SEM. Various studies mentioned that PLS-SEM is suitable in case of highly non-normal data (J. F. Hair, Ringle, & Sarstedt, 2013; W. U. Hameed, Basheer, Iqbal, Anwar, & Ahmad, 2018).

Table 1: Data Screening

	Missing	Mean	Median	Min	Max	SD	Kurtosis	Skewness
QMPs1	0	3.892	4	1	5	1.303	0.157	-1.107
QMPs2	0	4.032	4	1	5	1.173	0.052	-1.031
QMPs3	0	3.903	4	1	5	1.196	0.79	-1.217
QMPs4	0	3.769	4	1	5	1.029	0.829	-0.984
QMPs5	0	4.011	4	1	5	1.209	0.705	-1.253
QMPs6	0	4.038	4	1	5	1.147	0.083	-1.022
HOE1	0	3.656	4	1	5	1.037	0.348	-0.729
HOE2	0	3.79	4	1	5	1.128	0.072	-0.801
HOE3	0	3.828	4	1	5	1.245	-0.398	-0.831
HOE4	0	2.828	3	1	5	1.089	-0.491	0.196
HOE5	0	4.048	4	1	5	0.798	0.146	-0.535
HOE6	0	3.726	4	1	5	1.075	0.525	-0.9
WE1	0	3.93	4	1	5	0.989	0.413	-0.9
WE2	0	3.737	4	1	5	1.016	0.615	-0.846
WE3	0	3.785	4	1	5	0.96	-0.071	-0.586
WE4	0	3.688	4	1	5	0.994	0.79	-0.961
WE5	0	3.86	4	1	5	0.946	0.209	-0.716
WE6	0	3.753	4	1	5	1.012	0.756	-0.929



OP1	0	3.817	4	1	5	0.989	0.072	-0.702
OP2	0	3.726	4	1	5	1.065	0.637	-0.94
OP3	0	3.769	4	1	5	0.895	0.146	-0.614
OP4	0	3.672	4	1	5	0.692	-0.229	0.542
OP5	0	3.753	4	1	5	0.985	0.932	-1.015
OP6	0	3.753	4	1	5	0.69	0.293	-0.024
OP7	0	3.726	4	1	5	1.034	0.402	-0.781
OP8	0	3.914	4	1	5	0.98	0.964	-1.105

Data analysis and findings of this study are based on statistical software namely, Partial Least Square (PLS). PLS generally work on Structural Equation Modeling (SEM). PLS-SEM is recommended for primary data by various studies (J. F. Hair et al., 2013; Henseler, Ringle, & Sinkovics, 2009). This study followed PLS-SEM from previous studies (W. Hameed & Naveed, 2019; W. U. Hameed et al., 2018; Henseler et al., 2009). Figure 2 shows the confirmatory factor analysis (CFA). Table 2 shows the results of CFA which indicates that all the value of composite reliability (CR), alpha and average variance extracted (AVE) is above 0.7, 0.7 and 0.5, respectively (J. Hair, Hollingsworth, Randolph, & Chong, 2017). Factor loadings is also above 0.7 for all items (J. Hair et al., 2017). Finally, discriminant validity was confirmed by using AVE square root which is highlighted in Table 3.

Figure 2. Confirmatory factor analysis (CFA)

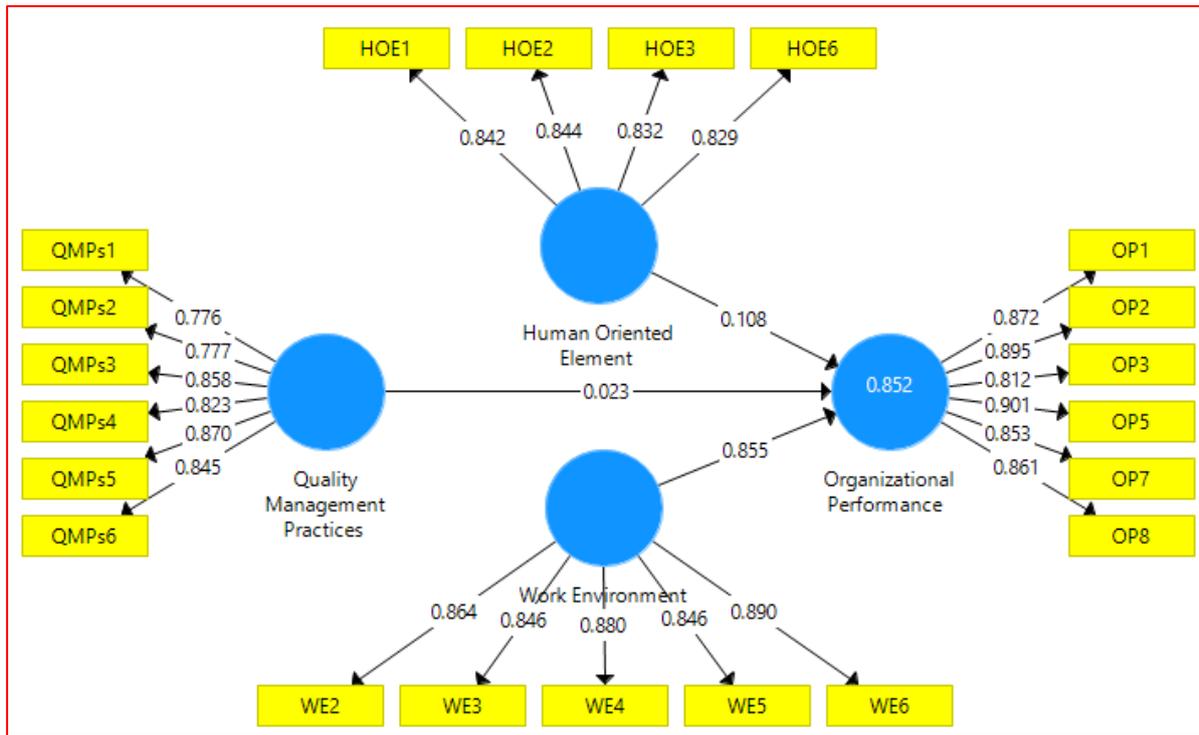


Table 2: Reliability and Validity

	Alpha	rho_A	CR	AVE
Human Oriented Element	0.86	0.879	0.903	0.7
Organizational Performance	0.933	0.935	0.947	0.75
Quality Management Practices	0.906	0.914	0.928	0.682
Work Environment	0.916	0.917	0.937	0.749

Table 3: Discriminant Validity

	Human Oriented Element	Organisational Performance	Quality Management Practices	Work Environment
Human Oriented Element	0.837			
Organizational Performance	0.55	0.866		
Quality Management Practices	0.689	0.416	0.826	
Work Environment	0.499	0.817	0.373	0.866

After confirmatory factor analysis (CFA), PLS-bootstrapping was performed to check the relationship between QMPs, human orientated element, work environment and organisational

performance. T-value 1.96 was considered a minimum significant level. It is noticed that all the relationships have t-value higher than 1.96. Therefore, all the hypotheses (H1, H2, H4) are supported by the results of this study. It indicates that QMPs, human orientated element and work environment has a positive effect on organisational performance.

Figure 3. PLS-Bootstrapping

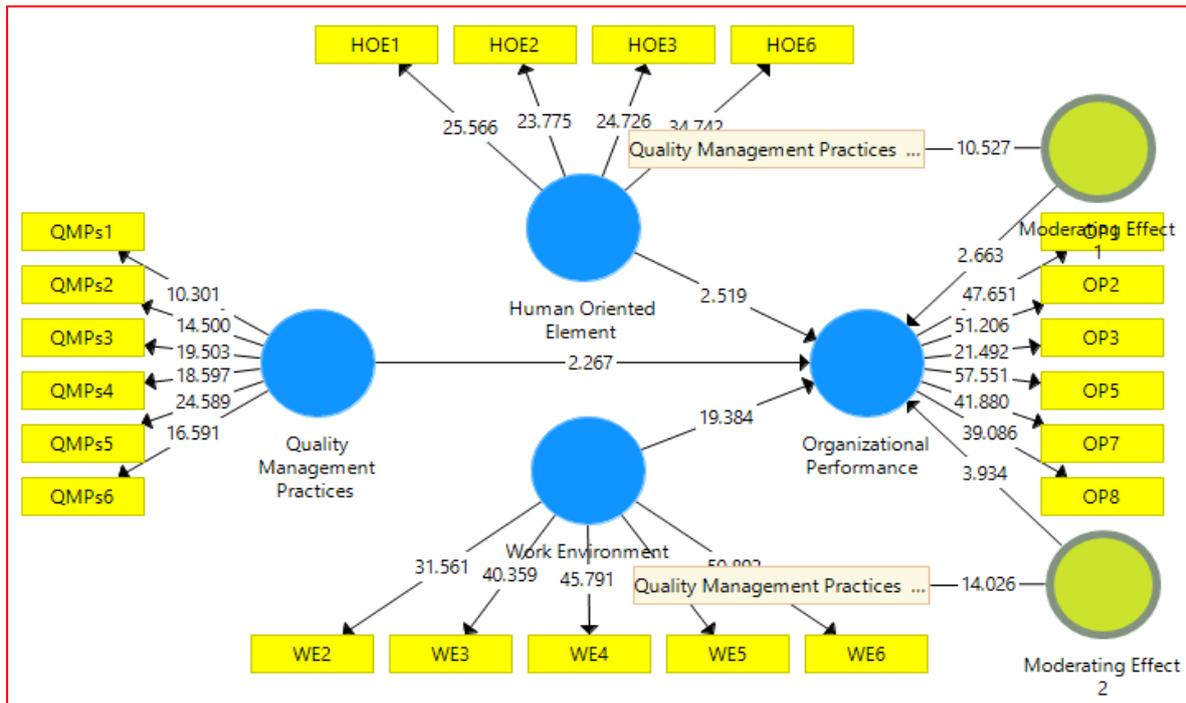


Table 4: Results

	(O)	(M)	SD	T Statistics	P Values
Human Oriented Element -> Organizational Performance	0.083	0.086	0.033	2.519	0.011
Moderating Effect 1 -> Organizational Performance	0.025	0.024	0.01	2.663	0.009
Moderating Effect 2 -> Organizational Performance	0.027	0.029	0.007	3.934	0
Quality Management Practices -> Organizational Performance	0.012	0.011	0.005	2.267	0.023
Work Environment -> Organizational Performance	0.836	0.832	0.043	19.384	0

Table 4 also shows the moderation effect of human orientated element and work environment between QMPs and organisational performance. It is noticed that both moderation impact is

significant as the t-value is above 1.96. These results supported H3 and H5. Moreover, R-Square value is given in Figure 2 which is 0.852. It means that QMPs, human orientated element and work environment are awaited to bring 85.2% change in organisational performance. This change is substantial as mentioned by Chin (1998). Also, Figure 4 shows that human orientated element as a moderating variable enhance the positive connection between QMPs and organisational performance. Furthermore, Figure 5 shows that the work environment as a moderating variable enhances the positive connection between QMPs and organisational performance.

Figure 4. The human orientated element was used as a moderating variable to strengthen the positive relationship between QMPs and organisational performance.



Figure 5. Work environment as a moderating variable strengthens the positive relationship between QMPs and organisational performance.



Conclusion

This research aimed to examine the role of quality management practices in organisational performance. In addition, the role of human-oriented element and work environment was also examined. Respondents of the study were based on the educational staff of universities in Indonesia. Data was analysed using Partial Least Square (PLS).

It is found that QMPs have a significant positive role in organisational performance. Better QMPs significantly improve organisational performance. Along with the QMPs, human-oriented element and work environment also has a positive role in enhancing organisational performance among Indonesian higher educational institutions. It is found that both human-oriented element and work environment enhance the positive relationship between QMPs and organisational performance. Therefore, along with QMPs, Indonesian universities should also promote human-oriented element and work environment. A positive work environment provides a significant contribution to improve performance. Human-oriented element (satisfaction) also shows a vital role. A satisfied employee always puts maximum efforts to enhance the performance to achieve organisation objectives. However, unsatisfied employees may lead to a decrease in the organisational performance. The unsuitable work environment has the ability to decrease performance. Additionally, human-oriented element and work environment as a moderating variable enhance the positive connection between QMPs and



organisational performance among Indonesian higher educational institutions. Hence, Indonesian higher educational institutions should improve QMPs, human-oriented element and supportive work environment to boost organisational performance.

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