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Unlocking Performance: Analysis of Quality Management Practices and Administrative Innovation in Private Universities

Velanska Dixie Namira [1], Timotius Febry Christian[2*]
[1, 2] Universitas Ciputra Surabaya, CitraLand CBD Boulevard, Made, Sambikerep District, Surabaya, East Java 60219*

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Correspondence Email:
timotius.febry@ciputra.ac.id

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ABSTRACT

The successful implementation of TQM in the manufacturing industry has led many other industries to start trying to implement TQM. In this study, researchers want to know whether the application of TQM can have a significant effect if applied in the education industry. This study used a quantitative approach to test a predetermined model. This study uses quantitative analysis approach Partial Least Square structural equation model (PLS-SEM). Researchers use Smart-PLS 4.0 software in data processing. The results of data processing and analysis show that there are 2 accepted hypotheses, namely soft TQM has a positive influence on administrative innovation, and administrative innovation has a positive influence on organizational performance. In this study, hard TQM has no effect on administrative innovation and organizational performance.

ABSTRAK

Keberhasilan penerapan TQM pada industri manufaktur telah menyebabkan banyak industri lain mulai mencoba menerapkan TQM. Dalam penelitian ini, peneliti ingin mengetahui apakah penerapan TQM dapat memberikan pengaruh yang signifikan jika diterapkan pada industri pendidikan. Penelitian ini menggunakan pendekatan kuantitatif untuk menguji suatu model yang telah ditentukan. Penelitian ini menggunakan pendekatan analisis kuantitatif Partial Least Square Structural Equation Model (PLS-SEM). Peneliti menggunakan software Smart-PLS 4.0 dalam pengolahan data. Hasil pengolahan dan analisis data menunjukkan bahwa terdapat 2 hipotesis yang diterima, yaitu soft TQM memiliki pengaruh positif terhadap inovasi administrasi, dan inovasi administrasi memiliki pengaruh positif terhadap kinerja organisasi. Dalam penelitian ini, hard TQM tidak memiliki pengaruh terhadap inovasi administrasi dan kinerja organisasi.

INTRODUCTION

Higher education is experiencing increasingly rapid development considering that universities are one of the providers of intellectual assets in order to compete and meet the quality demanded by the community (Sonia, 2021). This phenomenon occurs due to the assumption that higher education is the formal education that has the greatest influence on educating someone to become a professional in a particular field (Sonia, 2021). The expansion of colleges or universities is accelerating in most countries where a trend is driven by the view that higher education is essential for economic and social progress (Valero &; Van Reenen, 2019). There are several pathways that universities can use to influence economic growth such as greater supply of human resources; more innovation; support for democratic values; and demand effects. Therefore, universities, especially in Indonesia, have undergone significant transformation and continue to grow (Valero &; Van Reenen, 2019).

In the last two decades, the higher education system has grown tremendously with an increasing number of students and programs. However, tertiary institutions face many challenges and pressures resulting from funding shortages, lack of qualified staff and faculty, and high student enrollment numbers (Maha Mohamed Abd-Elaal Nasr et al., 2021). Another

problem faced by higher education institutions is to become more efficient in their operations. Current conditions show that educational organizations are looking for new ways to improve the quality of education by considering new approaches in quality management, integrating risk, stakeholder, and process analysis (Andrea Sütőová et al., 2022).

Today, quality is considered an important point for any industry especially services and educational institutions as it plays an important role in improving their products and services. Total Quality Management (TQM) in higher education is defined as the educational standards needed to improve the quality of education with relatively low effort and costs in order to achieve institutional goals that meet the needs of the labor market (Maha Mohamed Abd-Elaal Nasr et al., 2021). The principles of TQM are widely applied in manufacturing and service industries especially in an industrial perspective while less is known with respect to TQM in higher education (Casprini et al., 2023; Nasim et al., 2020). TQM is very important for academic educational institutions in terms of: its positive impact on the objectives of the institution, improving the educational curriculum and educational process, encouraging teamwork with each other, making the educational environment more motivating, creating a culture of trust, strengthening the speed of training services, reducing costs, increasing opportunities in competition, increasing customer satisfaction, and strengthening the institution's position in the market (Maha Mohamed Abd-Elaal Nasr et al., 2021).

Some previous research looked at TQM within the scope of organizations by distinguishing between "hard" dimensions such as methods used to improve operational efficiency, and "soft" dimensions such as human resource management (Filippi et al., 2024). Researchers have highlighted the importance of studying QM as a multidimensional practice suggesting that its successful implementation depends on a balanced blend of "soft" factors and "hard" QM factors as both dimensions are necessary for successful QM implementation Zeng et al., 2017). In line with previous research showing that many universities have adopted and implemented TQM on an ongoing basis (Casprini et al., 2023; Maha Mohamed Abd- Elaal Nasr et al., 2021; Oluwafemi & Laseinde, 2019; Sonia, 2021; Taroreh et al., 2022). This research was conducted to further understand the influence of Soft TQM, Hard TQM, and Administrative Innovation on Organizational Performance in private universities in Surabaya and Malang.

In an increasingly competitive global economy, TQM is no longer limited to the manufacturing sector. The concept of TQM has extended to service companies and non-profit organizations such as health care, government, services, education, and financial institutions (Dian Awalia Ramadhanty et al., 2023). Total Quality Management is a management system used to make changes to improve the quality of organizational performance and provide satisfaction to customers (Dian Awalia Ramadhanty et al., 2023). Quality management is a combined effort to maintain and achieve high-quality services based on maintenance-related improvements to routine, error prevention and processes at all levels of the organization as well as functions (Dhaif et al., 2022). Total quality management is the result of regular efforts to meet customer expectations and needs, achieving quality to meet these needs at a very low cost and through the participation of all (Dhaif et al., 2022).

At first, the concept of TQM was applied to the business and manufacturing industries, but began to develop and be applied in educational institutions (Nur Rahmi Sonia, 2021). The implementation of TQM in education is still not widely done because there are still many parties who still doubt the effectiveness of the concept in the world of education (Nur Rahmi Sonia, 2021). Some experts also still debate the suitability of the TQM concept which is difficult to evaluate with the characteristics of universities (Sonia, 2021). However, some earlier researchers

argued that TQM may be suitable as a support function, but less suitable for teaching and learning functions (Hasbullah, 2021). There is 220 tertiary institutions such as the University of Chicago, Harvard University, Oregon State University, University of Pennsylvania, and other institutions that implemented TQM (Prakash, 2018).

Experts divide TQM into 2 categories, namely Soft TQM and Hard TQM (Casprini et al., 2023; Christina Whidya Utami et al., 2021; Sciarelli et al., 2020). Soft TQM is more closely related to social, cultural and behavioral relationships while Hard TQM refers to technical aspects that use scientific methods or statistical tools (Sciarelli et al., 2020). Soft TQM is a quality management practice that leads to involvement and commitment from management and employees, training, learning, and cooperation (Aufa Yarzqi Zihni dan Helman Arif, 2023). Previous studies have shown that only some soft aspects of TQM, namely human factors such as commitment, teamwork, and so on, contribute to organizational performance (Ahmed & Idris, 2021). Human is one of the indispensable aspects to realize quality management improvement (Hamadamin & Atan, 2019). One is to create an environment where seamless deployment and application of TQM can occur, and the other is to directly influence organizational performance in the same way that traditional human resource management (HRM) practices can impact an organization (Easa & Orra, 2021). However, companies also need Hard TQM to support their the implementation of Soft TQM (Ahmed & Idris, 2021). As explained, Hard TQM is more directed towards the technical aspects needed to produce high-quality products (Tanjoyo et al., 2021). The following is a grouping of indicators of Soft and Hard TQM:

Variable	Indicator	Supporting literacy
Soft TQM	Top Management Support	Da Rosa et al., 2003; Badri et al., 2006; Sahney et al., 2006; Burli et al., 2012; Mehta et al., 2014; Griffin et al., 2014; Carlos et al., 2015; Bari M.W et al., 2016
	Student Focus	Badri et al., 2006; Abdulla Badri., 2006; S. Hasham., 2018; Al Mohaemin., 2022
	Supplier Management	Calvo et al., 2006; Soria Garcia et al., 2014; Psomas et al., 2017; Budayan C. et al., 2022
	People Management	Psychogios et al., 2007; Venkatraman et al., 2007; Calvo et al., 2014; Soria Garcia et al., 2014; Psomas et al., 2017
	Strategic Planning	Badri et al., 2006; Venkatraman et al., 2007; Burli et al., 2012; O'Mahony et al., 2012; Calvo et al., 2014; Psomas et al., 2017
Hard TQM	Process Management	Sadeh et al., 2014; Psomas & Anthony., 2017
	Information and Analysis	Sayeda et al., 2010; Psomas & Anthony., 2017
	Continous Improvement	Psomas et al., 2017; Mehta et al., 2014; O'Mahony & Garavan, 2012
	Program Design	Aminbeidokhti et al., 2016; Psomas et al., 2017; Mehta et al., 2014; O'Mahony & Garavan, 2012

Many other researchers acknowledge Downs and Mohr's assertions about instability in innovation research results. To reduce perceived instability, the researchers relied on a sub

theory of organizational innovation. Researchers distinguish between administrative innovation and technical innovation (Easa & Orra, 2021). Administration is the driving force of educational institutions in achieving their vision, mission, goals, and objectives. This process deals with the general affairs of the institution as well as the performance of the organization. Thus, the administration initiates institutional processes and ensures that they are carried out satisfactorily. Administrative innovations are indirectly related to the basic work activity of an organization and mainly affect its management system (Giotis & Papadionysiou, 2022). Another widely known but poorly researched typology is the distinction between technological innovation (also called 'technical') and administrative innovation (also called 'organization' and 'management') (Julian Birkinshaw et al., 2008). Administrative process innovation is a new approach and practice to motivate and reward members of the organization, strategize and structure tasks and units, and modify organizational management processes. Innovation in Higher Education is very important to increase the value of education for students and the wider community. The college must be managed in such a way that innovation is transformed into a standard part of the institution's culture, and becomes embedded in daily activities, since innovation is created by the interaction between the knowledge accumulated by staff and faculty members (Sadeghi Boroujerdi et al., 2020).

Organizational performance refers to the ability of the company to achieve goals and objectives by utilizing adequate and sufficient means (Karakiliç, 2019). Implementing good quality management practices can lead to improved organizational performance (Sciarelli et al., 2020). Company performance is often used as evaluation material for service quality management (Dian Awalia Ramadhanty et al., 2023). Effective implementation of Quality Management practices can lead to improved organizational performance (Anil & K.P, 2019). Organizational performance can be measured through several perspectives such as financial and non-financial performance (Dian Awalia Ramadhanty et al., 2023; Mushtaq & Peng, 2020), corporate innovation performance (Akbari et al., 2022), and quality performance (Sciarelli et al., 2020). As the research has explained, there is no definite standard measure for organizational performance (Sciarelli et al., 2020). In this study, the indicators used for this variable are student result, people result, institute result, and society result (Psomas & Antony, 2017; Sciarelli et al., 2020). With the increasing demand for quality products, companies are realizing the need to implement TQM practices, especially in the production process as a means to minimize costs and errors while improving product quality.

Innovation plays an important role in providing unique products or services, more value for the organization, and barriers for competitors (Velanska Dixie Namira & Auditia Setiobudi, 2024). Soft Quality Management allows the creation of the right environment to innovate because it can support the development of creative ideas (Sciarelli et al., 2020) Ahmed (2021) similarly states that management's support of quality and management's quality communication philosophy enables innovation by setting a shared vision and ambitious goals that inspire employees to improve performance, encourage training, and encourage recognition of employee suggestions and creative performance. However, several studies have also found that Hard TQM practices also have a positive influence on innovation because they help develop and implement best practices in support of innovative activities (D. Y. Kim et al., 2012; Perdomo-Ortiz et al., 2006). When compared to other service and manufacturing industries, there are still not many studies that examine the relationship of quality management practices to innovation in the world of higher education. But in general, research examining quality management practices has a positive influence on innovation (Aminbeidokhti et al., 2016; Antunes et al., 2017;

García-Fernández et al., 2022). Antunes argues about the practice of implementing TQM as an effective instrument to increase innovation in higher education because it will encourage better service not only internally but to society as a whole (Godinho Antunes et al., 2018). Based on the study, the researcher proposed the following hypothesis:

H1: Soft TQM has a positive impact on Administration Innovation

H2: Hard TQM has a positive impact on Administration Innovation

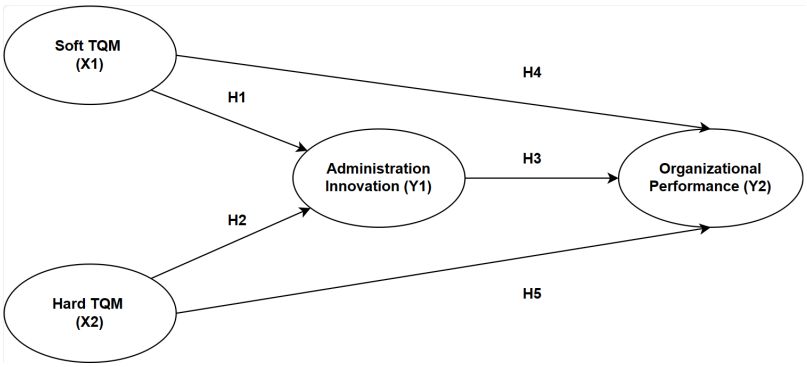
Total Quality Management is a management system used to make changes to improve the quality of organizational performance and provide satisfaction to customers (Dian Awalia Ramadhanty et al., 2023). Several previous studies have stated that TQM has a positive influence on the Company's organizational performance (Alweteed, 2018; Sunarsi et al., 2023; Tajouri & Lakhal, 2024). Samson and Terziovski in the study of Khalfallah et al. (2022) Using data collected from industrial companies in Australia and New Zealand, they found that TQM practices, namely leadership, human resource management, and customer orientation, had the most significant relationship with operational performance.

H3: Soft TQM has a positive impact on organizational performance

H4: Hard TQM has a positive impact on organizational performance

In higher education, innovation is one of the important aspects to gain a dominant position and achieve higher profits in the business environment (Tseng & Tseng, 2019). Several empirical studies have confirmed a positive relationship between innovation and organizational performance (e.g. Khan and Naeem, 2018). In more depth, previous researchers examined the influence of administration innovation on organizational performance (Aboramadan et al., 2020; Sciarelli et al., 2020). In HE, several studies have found that innovation is needed to continuously improve their performance (Sciarelli et al., 2020). Iqbal (2018) argue that universities should rely on product innovation and innovation processes to improve educational performance. Similarly, Sciareli (2020) argue that innovation can enable universities to achieve competitive advantage and increase opportunities for life in the future. Iqbal et al. (2018), found that innovation plays a significant role in improving performance at universities because it can increase productivity, student satisfaction, curriculum development, and responsiveness to environmental challenges.

H5: Administration innovation has a positive influence on organizational performance



Source: Author (2024)

Figure 1. Conceptual Model

RESEARCH METHODS

This study aims to examine the impact of quality management practices by considering administrative innovation on organizational performance in East Java universities. The majority of our respondents came from universities in Surabaya and Malang considering that these two cities have the highest number of private colleges and universities in East Java (Badan Pusat Statistik, 2019). The number of colleges and universities in Surabaya reaches 72 institutions while in the city of Malang reaches 56 institutions (Badan Pusat Statistik, 2019). We distribute question items to teaching staff with positions such as expert assistant, lector, head lector, extraordinary lecturer, professor, and other teaching positions. The sampling technique used is non-probability purposive sampling where sampling uses certain considerations in accordance with the desired criteria to be able to determine the number of samples to be studied (Sugiyono, 2018). This study used a quantitative approach to test a predetermined model. Researchers used primary and secondary data obtained through questionnaires distributed to target respondents and previous literacy on relevant variables and topics. Data collection in this study used questionnaires by utilizing Google Form tools. The form is disseminated to respondents according to predetermined criteria and carried out online. All indicators will be measured using a likert scale with 5 points where (1) strongly disagree, (2) disagree, (3) neutral, (4) agree, up to (5) strongly agree. This study uses quantitative analysis approach Partial Least Square structural equation model (PLS-SEM). Researchers use Smart-PLS 4.0 software in data processing.

RESULTS AND DISCUSSION

Respondent Profile

Profile	*Category*	*Frequency*	*%*
Academic Position	Professor	0	0
	Head Lector	10	18,2%
	Lector	23	41,8%
	Expert Assistant	13	23,6%
	Extraordinary Lecturer (DLB)	2	3,6%
	Teaching Staff	1	1,8%
	Other	6	11%
Length of Service	1 – 5 years	16	29,1%
	6 – 10 years	14	25,5%
	11 – 15 years	11	20%
	> 15 years	14	25,4%

Source: data processed from SmartPLS (2024)

All respondents who filled out this questionnaire were lecturers at universities and colleges in East Java. Academic positions consist of professors as much as 0%, Associate Professors as much as 18.2%, Lecturers as much as 41.8%, Expert Assistants as much as 23.6%, Extraordinary Lecturers as much as 3.6%, Teaching Staff as much as 1.8% and others as much as 11%. The majority of respondents worked for 1-5 years by 29.1%, 6-10 years by 25.5%, 11-15 years by 20%, and above 15 years by 25.4%.

Validity and Reliability Test Result

Constructs	Item	Factor loading	AVE	Cronbach's α	CR	R square
	X1.7	0.856				

Soft TQM (X1)	X1.8	0.835	0.709	0.863	0.907	-
	X1.9	0.774				
	X1.10	0.898				
Hard TQM (X2)	X2.3	0.820	0.566	0.813	0.867	-
	X2.4	0.717				
	X2.5	0.780				
	X2.6	0.731				
	X2.8	0.707				
Administration Innovation (Y1)	Y1.1	0.833	0.663	0.897	0.922	0.350
	Y1.3	0.799				
	Y1.4	0.880				
	Y1.5	0.764				
	Y1.6	0.857				
	Y1.7	0.746				
Organizational Performance (Y2)	Y2.1	0.724	0.695	0.937	0.948	0.594
	Y2.2	0.893				
	Y2.3	0.844				
	Y2.4	0.892				
	Y2.5	0.829				
	Y2.6	0.844				
	Y2.7	0.781				
	Y2.8	0.850				

Source: data processed from SmartPLS (2024)

Structural Equation Model is a multivariate analysis technique that combines factor analysis and regression analysis (correlation) with the aim of testing the relationship between model variables, either between indicators and their structure or relationships between structures (Hair et al., 2021). Research model testing in SEM-PLS is carried out through validity tests, convergent validity, reliability tests, and discriminant tests (Hair et al., 2021). PLS analysis consists of two models, namely the inner model and the outer model. The outer model will be tested using validity and reliability tests. Ghozali (2021) states that validity tests are used to measure the validity, or validity or validity of a questionnaire. The convergent validity of a model can be determined from the outer loading of each item (Maulana & Rakhman, 2022). An indicator is said to have good validity if the outer loading value is above 0.7 (Astuti, 2021). In this study, researchers eliminated some items because they did not meet the outer loading value of > 0.7. Based on the table, it can be seen that the outer loading of all constructs after elimination of data above 0.7 so that it can be declared valid. Outer loading alone is not enough to test convergent validity so it must look at AVE values (Velanska Dixie Namira & Auditia Setiobudi, 2024). Acceptable Average Variance Extracted (AVE) values are > 0.5 (Gordon W. Cheung et al., 2023). All variables have an AVE value above 0.50 so they can be declared valid. Based on outer loading and AVE tests, it can be declared that convergent validity is acceptable.

In addition to validity tests, in the outer model it is also necessary to carry out reliability tests aimed at ensuring measurement accuracy. This study used questionnaires as a data collection tool. Questionnaires can be declared reliable if respondents' answers are consistent. Reliability tests can be seen through Cronbach alpha and composite reliability values (Velanska Dixie Namira & Auditia Setiobudi, 2024). Indicators on a variable can be declared valid if they meet the minimum requirements of cronbach alpha >0.7 (Maulana &; Rakhman, 2022) and composite reliability >0.7 (Gordon W. Cheung et al., 2023). The highest Cronbach alpha value was in the organizational performance (Y2) variable of 0.937. The highest composite reliability was also in the organizational performance (Y2) variable of 0.948. Based on the results of data

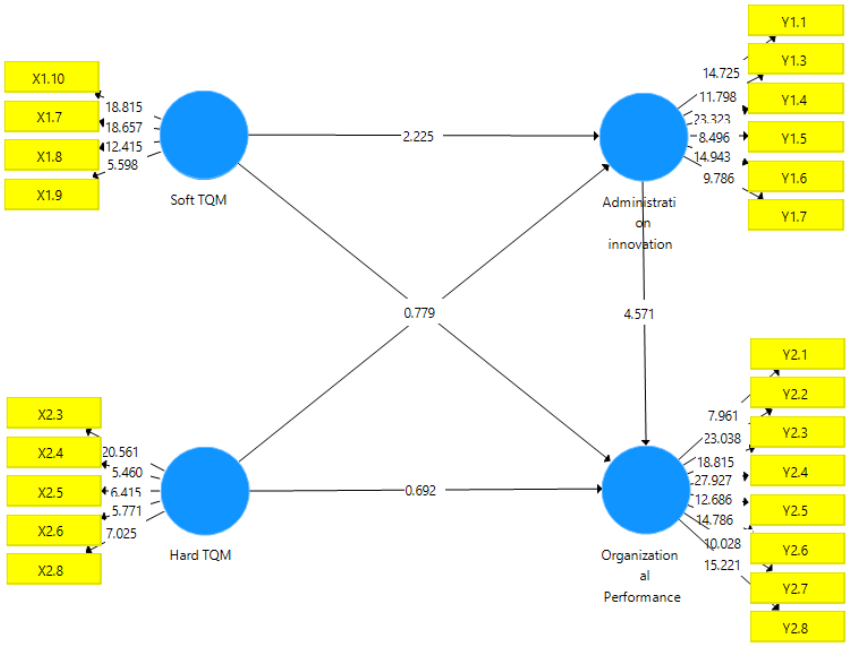
processing, all variables have Cronbach alpha and composite reliability values above 0.7 so that they can be declared valid.

Researchers also conduct multicollinearity tests that aim to see the presence or absence of correlation of each variable (Effiyaldi et al., 2022). A good model will have no correlation between its independent variables (Gordon W. Cheung et al., 2023). Correlations between independent variables can be identified by several methods, one of which is through the use of Variance Inflation Factor (VIF) (Shrestha, 2020). If the VIF value < 10, it is stated that multicollinearity does not occur (Shrestha, 2020). If the value of VIF > 10 then multicollinearity occurs Based on data processing, the following results were obtained: (H1) Soft TQM (X1) against Administration Innovation (Y1) has a VIF value of 2,369 < 10 so that it is stated that there is no multicollinearity; Hard TQM (X2) against Administration Innovation (Y1) has a VIF value of 2,369 < 10 so it is stated that there is no multicollinearity; Soft TQM (X1) against Organizational Performance (Y2)) has a VIF value of 2,635 < 10 so it is stated that there is no multicollinearity; Hard TQM (X2) against Organizational Performance (Y2) has a VIF value of 2,436 < 10 so it is stated that there is no multicollinearity; Administration Innovation (Y1) on Organizational Performance (Y2) has a VIF value of 1,538 < 10 so it is stated that there is no multicollinearity. In this model, all independent variables have a VIF value below 10 so that it can be concluded that multicollinearity does not occur.

Hypotheses Testing

Hypothesis	Path	T-Statistics	p-Values	Decision
H1	Soft TQM (X1) → Administration Innovation (Y1)	2.225	0.027	Supported
H2	Hard TQM (X2) → Administration Innovation (Y1)	0.992	0.322	Unsupported
H3	Soft TQM (X1) → Organizational Performance (Y2)	0.779	0.436	Unsupported
H4	Hard TQM (X2) → Organizational Performance (Y2)	0.692	0.489	Unsupported
H5	Administration Innovation (Y1) → Organizational Performance (Y2)	4.571	0.000	Supported

Source: data processed from SmartPLS (2024)



Source: Author (2024)

Figure 2. Inner Model Result

Based on data processing, it can be seen that there are 2 accepted hypotheses and 3 rejected hypotheses. Researchers focus on soft TQM practices such as top management support, student focus, supplier management, people management, and strategic planning. In this study, a positive relationship was found and between soft TQM and administration innovation. This is supported by previous research that states soft TQM has a positive influence on administration innovation (Escrig-Tena et al., 2018; Sciarelli et al., 2020; Zeng et al., 2017). This positive influence can occur because soft TQM and administration innovation are related to the social aspects of the organization so that it has a strong influence.

Furthermore, our research found that there was no relationship between hard TQM and administration innovation. Nevertheless, some researchers do not completely reject the argument that hard TQM can support innovation and recognize that TQM can facilitate innovation, but only on a very limited basis (Stana Vasic et al., 2022; Wen Zhang et al., 2023). As explained at the beginning, hard TQM is more about the technical aspects needed to produce high-quality products (Tanjoyo et al., 2021), while administration innovation focuses more on administrative approaches to improve organizational operational performance (Wen Zhang et al., 2023). This difference in the orientation of hard TQM and administration innovation makes the lack of relationship that exists between the two variables.

The finding of the third hypothesis is that soft TQM has no influence on organizational performance. In line with research by Casprini (2023), soft TQM does not directly affect organizational performance, but can have a positive influence if mediated by hard TQM. This can happen because Hard TQM and Soft TQM complement each other and work together to improve organizational performance (Filippi et al., 2024). Hard TQM provides a focus on technical and operational aspects, while Soft TQM emphasizes on human and cultural aspects so that the two aspects can complement each other. However, in this study that focused on universities in Surabaya and Malang, there was no positive relationship between soft TQM and organizational performance.

The finding of the fourth hypothesis is that hard TQM has no influence on organizational performance. This is in line with previous research on the negative relationship between TQM and organizational performance (Albuhisi & Abdallah, 2018; Al-Salim, 2018; Singh & Aljuboori, 2022). Q2 it. Hard TQM in the context of education does not affect organizational performance can be influenced by several factors, one of which is the implementation of hard TQM that is

rigid and does not consider the existing organizational culture can cause resistance from staff and lecturers so that it can hamper program effectiveness and even reduce organizational performance (Al-Salim, 2018). Higher education also aims to produce quality and competitive graduates so that the implementation of Hard TQM that only focuses on technical and operational aspects, without paying attention to human and cultural aspects, can lead to a loss of focus on the quality of education and stakeholder satisfaction (Al-Salim, 2018).

Fifth, our research found that there is a positive relationship between administration innovation and organizational performance (Alosani et al., 2020; Sciarelli et al., 2020). These results provide additional evidence to the previous literature that administration innovation has a positive influence on organizational performance. The application of administration innovation, especially in universities, is useful for improving administrative performance which is a driver in achieving the vision, mission, and goals of the organization. With administration innovation, universities can improve their educational performance so that they can be seen as superior by students and the wider community (Sciarelli et al., 2020).

CONCLUSIONS

This study investigated the impact of Total Quality Management (TQM) practices by both aspect (soft and hard TQM) on administration innovation and organizational performance in universities. The findings revealed that soft TQM practices have a positive influence on administration innovation, but no direct effect on organizational performance. This research also found that administration innovation also have a positive impact on organizational performance. Hard TQM practices were not found to influence either administration innovation or organizational performance. This study has several limitations and suggestions that can be considered for future research on the relationship between Soft TQM, Hard TQM, administration innovation, and higher education organizational performance in Indonesia. We only collect data from universities in Surabaya and Malang so that only a few respondents that can be obtained. In the future, researchers can expand the scope of research areas so that the number of samples will be more and represent private universities in Indonesia. We are also aware of limitations in terms of consideration of internal and external factors that may affect the relationship between variables. Future research can consider these internal and external factors so that they can better understand the implementation of TQM for administration innovation and organizational performance of universities in Indonesia.

Although this study has some limitations, it is expected to make new contributions in understanding the relationship between Soft TQM, Hard TQM, Administration Innovation, and Organizational Performance. The findings of this research can be a reference for organizations in developing the right TQM strategy and increasing the effectiveness of Administration Innovation to support optimal TQM implementation. However, to strengthen the findings and scope of research, it is necessary to conduct further research by overcoming existing limitations. Further research can be done by researching universities in a wider coverage area, using a larger sample of data, and considering other factors that might affect Organizational Performance. By overcoming limitations and expanding the scope of research, it is hoped that the resulting findings will be more comprehensive and accurate, so as to provide greater benefits for organizations in implementing TQM and improving their performance.

REFERENCE

Aboramadan, M., Albashiti, B., Alharazin, H., & Zaidoune, S. (2020). Organizational culture, innovation and performance: a study from a non-western context. *Journal of Management Development*, *39*(4), 437–451. https://doi.org/10.1108/JMD-06-2019-0253

Ahmed, A. O., & Idris, A. A. (2021). Examining the relationship between soft total quality management (TQM) aspects and employees' job satisfaction in "ISO 9001" Sudanese oil companies. *TQM Journal*, *33*(1), 95–124. https://doi.org/10.1108/TQM-05-2019-0147

Akbari, M., Omrane, A., Hoseinzadeh, A., & Nikookar, H. (2022). Effects of innovation on corporate performance of manufacturing companies: which roles associated to social responsibility? *Transnational Corporations Review*, *14*(4), 438–453. https://doi.org/10.1080/19186444.2021.1940055

Albuhisi, A. M., & Abdallah, A. B. (2018). The impact of soft TQM on financial performance: The mediating roles of non-financial balanced scorecard perspectives. *International Journal of Quality & Reliability Management*, *35*(7).

Alosani, M. S., Yusoff, R., & Al-Dhaafri, H. (2020). The effect of innovation and strategic planning on enhancing organizational performance of Dubai Police. *Innovation and Management Review*, *17*(1), 2–24. https://doi.org/10.1108/INMR-06-2018-0039

Al-Salim, A. A. A. (2018). Total Quality Management Its Impact on the Performance of Educational Institutions. *International Journal of Scientific and Research Publications (IJSRP)*, *8*(8). https://doi.org/10.29322/ijsrp.8.8.2018.p8029

Alweteed, N. (2018). The Impact of Total Quality Management on the Organization Performance. In *European Journal of Business and Management www.iiste.org ISSN* (Vol. 10, Issue 34). Online. www.iiste.org

Aminbeidokhti, A., Jamshidi, L., & Mohammadi Hoseini, A. (2016). The effect of the total quality management on organizational innovation in higher education mediated by organizational learning. *Studies in Higher Education*, *41*(7), 1153–1166. https://doi.org/10.1080/03075079.2014.966667

Andrea Sütőová, Katarína Teplická, & Martin Straka. (2022). Application of the EFQM Model in the Education Institution for Driving Improvement of Processes towards Sustainability. *Journal Sustainability*, *14*(3).

Anil, A. P., & K.P, S. (2019). TQM practices and its performance effects – an integrated model. *International Journal of Quality and Reliability Management*, *36*(8), 1318–1344. https://doi.org/10.1108/IJQRM-10-2018-0266

Antunes, M. G., Quirós, J. T., & Justino, M. do R. F. (2017). The relationship between innovation and total quality management and the innovation effects on organizational performance. *International Journal of Quality and Reliability Management*, *34*(9), 1474–1492. https://doi.org/10.1108/IJQRM-02-2016-0025

Astuti, C. C. (2021). PLS-SEM Analysis to Know Factors Affecting The Interest of Buying Halal Food in Muslim Students. *Jurnal Varian*, *4*(2), 141–152. https://doi.org/10.30812/varian.v4i2.1141

Aufa Yarzqi Zihni dan Helman Arif. (2023). Pengaruh Soft Total Quality Management terhadap Kinerja UKM di DKI Jakarta: Pendekatan Balanced Scorecard. *Jurnal Manajemen Dan Usahawan Indonesia* , *46*(2), 96–112.

Badan Pusat Statistik. (2019). *Jumlah Perguruan Tinggi Swasta di Jawa Timur Menurut Kabupaten/Kota dan Jenisnya di Provinsi Jawa Timur, 2017*.

Casprini, E., Pucci, T., Fiorini, N., & Zanni, L. (2023). Blending "hard" and "soft" TQM for academic excellence: the University of Siena experience in the field of Life Sciences. *The TQM Journal*, *35*(9), 231–255. https://doi.org/10.1108/TQM-07-2022-0213

Christina Whidya Utami, Timotius F.C.W. Sutrisno, Teofilus, & Elias Ardyan. (2021). Can Start-up Businesses Achieve Business Performance? An Overview of the "Soft" Total Quality Management Concept. *Quality Management* , *22*.

Daft, R. L. (1978). A Dual-Core Model of Organizational Innovation. In *Source: The Academy of Management Journal* (Vol. 21, Issue 2).

Dhaif, M., Saeed Eshaq, A., & Zainol, Z. (2022). The Effect of TQM and Leadership on Organizational Performance of Dubai Police: The Mediating Role of Organizational Culture. *International Business Education Journal*, *15*(1), 131–143. https://doi.org/10.37134/ibej.vol15.1.10.2022

Dian Awalia Ramadhanty, Melya Utami Putri, & Masduki Asbari. (2023). THE INFLUENCE OF TOTAL QUALITY MANAGEMENT ON ORGANIZATIONAL PERFORMANCE ON BANK SERVICES. *Journal of Infromation System and Management*, *2*(1), 15–20.

Easa, N. F., & Orra, H. El. (2021). HRM practices and innovation: an empirical systematic review. *International Journal of Disruptive Innovation in Government*, *1*(1), 15–35. https://doi.org/10.1108/ijdig-11-2019-0005

Effiyaldi, Johni Paul Karolus Pasaribu, Eddy Suratno, Melani Kadar, Gunardi, Ronal Naibaho, Selfi Kumara Hati, & Vira Aryati. (2022). PENERAPAN UJI MULTIKOLINIERITAS DALAM PENELITIAN MANAJEMEN SUMBER DAYA MANUSIA . *Jurnal Ilmiah Manajemen Dan Kewirausahaan Universitas Dinamika Bangsa Jambi* , *1*(2).

Escrig-Tena, A. B., Segarra-Ciprés, M., García-Juan, B., & Beltrán-Martín, I. (2018). The impact of hard and soft quality management and proactive behaviour in determining innovation performance. *International Journal of Production Economics*, *200*, 1–14. https://doi.org/10.1016/j.ijpe.2018.03.011

Filippi, E., Gaio, L., & Zamarian, M. (2024). Leveraging the hard and soft elements of TQM: the interplay of benchmarking and improvement processes. *TQM Journal*, *36*(3), 702–719. https://doi.org/10.1108/TQM-01-2022-0045

Gadenne, D., & Sharma, B. (2009). An investigation of the hard and soft quality management factors of Australian SMEs and their association with firm performance. *International Journal of Quality and Reliability Management*, *26*(9), 865–880. https://doi.org/10.1108/02656710910995064

Ganguly, A. (2015). Exploring Total Quality Management (TQM) Approaches in Higher Education Institutions in a Globalized Environment-Case Analysis of UK and Sweden. *British Journal of Education*, *3*(7), 83–106. www.eajournals.org

García-Fernández, M., Claver-Cortés, E., & Tarí, J. J. (2022). Relationships between quality management, innovation and performance: A literature systematic review. *European Research on Management and Business Economics*, *28*(1). https://doi.org/10.1016/j.iedeen.2021.100172

Giotis, G., & Papadionysiou, E. (2022). The Role of Managerial and Technological Innovations in the Tourism Industry: A Review of the Empirical Literature. In *Sustainability (Switzerland)* (Vol. 14, Issue 9). MDPI. https://doi.org/10.3390/su14095182

Godinho Antunes, M., Ribeiro Mucharreira, P., Texeira Fernandes Justino, M. do R., & Texeira Quirós, J. (2018). THE ROLE OF TQM, INNOVATION AND INTERNATIONALIZATION STRATEGIES ON THE FINANCIAL SUSTAINABILITY OF HIGHER EDUCATION

INSTITUTIONS (HEIS). *ICERI2018 Proceedings*, *1*, 9778–9787. https://doi.org/10.21125/iceri.2018.0811

Gordon W. Cheung, Helena D. Cooper-Thomas, Rebecca S. Lau, & Linda C. Wang. (2023). Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations. *Asia Pacific Journal Management* .

Hair, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *An Introduction to Structural Equation Modeling* (pp. 1–29). https://doi.org/10.1007/978-3-030-80519-7_1

Hamadamin, H. H., & Atan, T. (2019). The impact of strategic human resource management practices on competitive advantage sustainability: The mediation of human capital development and employee commitment. *Sustainability (Switzerland)*, *11*(20). https://doi.org/10.3390/su11205782

Hasbullah. (2021). PENERAPAN MUTU TERPADU PERGURUAN TINGGI. *Tarbiyah Islamiyah: Jurnal Ilmiah Pendidikan Agama Islam*, *11*(1).

Hoang, D. T., Igel, B., & Laosirihongthong, T. (2006). The impact of total quality management on innovation: Findings from a developing country. *International Journal of Quality and Reliability Management*, *23*(9), 1092–1117. https://doi.org/10.1108/02656710610704230

Julian Birkinshaw, Gary Hamel, & Michael J. Mol. (2008). Management Innovation. *Academy of Management Review*, *33*, 825–845.

Karakiliç, N. Y. (2019). Impacts of leadership styles on organizational performance. In *New Trends in Management Studies* (pp. 99–114). Peter Lang AG. https://doi.org/10.5171/2018.687849

Kim, D. Y., Kumar, V., & Kumar, U. (2012). Relationship between quality management practices and innovation. *Journal of Operations Management*, *30*(4), 295–315. https://doi.org/10.1016/j.jom.2012.02.003

Kim, W. C., & Song, M. (2005). The Impact of Total Quality Management on Administrative Innovation: A Meta-Analysis. *Journal of Operations Management*, *23*(6).

Maha Mohamed Abd- Elaal Nasr, Neamat Mohamed El-Sayed, & Wafaa Hasan Mostafa. (2021). OBSTACLES OF IMPLEMENTING TOTAL QUALITY MANAGEMENT AT FACULTY OF NURSING, DAMANHOUR UNIVERSITY. *International Journal of Novel Research in Healthcare and Nursing* , *8*(2), 312–325.

Mushtaq, N., & Peng, W. W. (2020). Can TQM Act as Stimulus to Elevate Firms' Innovation Performance?: An Empirical Evidence From the Manufacturing Sector of Pakistan. *SAGE Open*, *10*(4). https://doi.org/10.1177/2158244020963669

Nur Rahmi Sonia. (2021). Total Quality Management (TQM) Practices Applied in Education Institutions: A Systematic Review of Literature. *Southeast Asian Journal of Islamic Education Management*, *2*(1), 341–352. https://doi.org/10.20533/ijibs.2046.3626.2019.0045

Oluwafemi, I. J., & Laseinde, O. T. (2019). Adoption of Total Quality Management in the Educational Sector: Case Study of Engineering Institutions. *Journal of Physics: Conference Series*, *1378*(3). https://doi.org/10.1088/1742-6596/1378/3/032002

Perdomo-Ortiz, J., González-Benito, J., & Galende, J. (2006). Total quality management as a forerunner of business innovation capability. *Technovation*, *26*(10), 1170–1185. https://doi.org/10.1016/j.technovation.2005.09.008

Prakash, G. (2018). Quality in higher education institutions: insights from the literature. In *TQM Journal* (Vol. 30, Issue 6, pp. 732–748). Emerald Group Holdings Ltd. https://doi.org/10.1108/TQM-04-2017-0043

Psomas, E., & Antony, J. (2017). Total quality management elements and results in higher education institutions: The Greek case. *Quality Assurance in Education*, *25*(2), 206–223. https://doi.org/10.1108/QAE-08-2015-0033

Sadeghi Boroujerdi, S., Hasani, K., & Delshab, V. (2020). Investigating the influence of knowledge management on organizational innovation in higher educational institutions. *Kybernetes*, *49*(2), 442–459. https://doi.org/10.1108/K-09-2018-0492

Sciarelli, M., Gheith, M. H., & Tani, M. (2020). The relationship between soft and hard quality management practices, innovation and organizational performance in higher education. *TQM Journal*, *32*(6), 1349–1372. https://doi.org/10.1108/TQM-01-2020-0014

Shrestha, N. (2020). Detecting Multicollinearity in Regression Analysis. *American Journal of Applied Mathematics and Statistics*, *8*(2), 39–42. https://doi.org/10.12691/ajams-8-2-1

Singh, H., & Aljuboori, Z. M. (2022). Does Soft and Hard TQM Practices Impact Operational Performance? A Conceptual Model. *International Journal of Academic Research in Business and Social Sciences*, *12*(2), 251–265. https://doi.org/10.6007/IJARBSS/v12-i2/12870

Sonia, N. R. (2021). Total Quality Management dalam Lembaga Perguruan Tinggi. *Southeast Asian Journal of Islamic Education Management*, *2*(1), 125–139. https://doi.org/10.21154/sajiem.v2i1.47

Stana Vasic, Marina Zizakov, Milan Delic, Dusko Cuckovic, & Ilija Cosic. (2022). Quality Management and Innovation Performance: A Short Literature Review. In *Proceedings on 18th International Conference on Industrial Systems – IS'20*.

Sunarsi, D., Narimawati, U., Sayed Munna, A., & Pawar, A. (2023). *The Influence of Total Quality Management (TQM) and Organizational Culture on Employee Job Satisfaction that Impacts Employee Performance (Case Study on Cooperatives in South Tangerang City)*. *18*(2), 156–168. http://journal.umpo.ac.id/index.php/ekuilibrium

Tajouri, O., & Lakhal, L. (2024). The impact of TQM practices on organizational performance and on innovation: the mediating role of organizational learning. *International Journal of Quality & Reliability Management*. https://doi.org/10.1108/IJQRM-06-2022-0188

Tanjoyo, C., Harianto, E., & Sutrisno, T. F. C. W. (2021). THE ROLE OF TQM AND ORGANIZATIONAL CULTURE ON OPERATIONAL PERFORMANCE. *JURNAL APLIKASI MANAJEMEN*, *19*(4), 938–948. https://doi.org/10.21776/ub.jam.2021.019.04.20

Taroreh, S. R. A., Saerang, D. P., Maramis, J. B., Worang, F. G., & Wenas, S. S. (2022). IMPLEMENTASI TOTAL QUALITY MANAGEMENT PADA INSTITUSI PENDIDIKAN TINGGI: SEBUAH KAJIAN LITERATUR IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT IN HIGHER EDUCATION INSTITUTIONS: A LITERATURE REVIEW. In *1098 Jurnal EMBA* (Vol. 10, Issue 2).

Tseng, C., & Tseng, C.-C. (2019). Corporate entrepreneurship as a strategic approach for internal innovation performance. *Asia Pacific Journal of Innovation and Entrepreneurship*, *13*(1), 108–120. https://doi.org/10.1108/apjie-08-2018-0047

Valero, A., & Van Reenen, J. (2019). The economic impact of universities: Evidence from across the globe. *Economics of Education Review*, *68*, 53–67. https://doi.org/10.1016/j.econedurev.2018.09.001

Velanska Dixie Namira, & Auditia Setiobudi. (2024). THE IMPORTANT ROLE OF ENTREPRENEURSHIP EDUCATION IN ENCOURAGING INTENTION TO INNOVATE(CASE STUDY ON STUDENT BUSINESS PROJECT). *JURNAL ILMIAH*

MANAJEMEN BISNIS DAN INOVASIUNIVERSITAS SAM RATULANGI (JMBI UNSRAT), *11*(1), 60–76.

Walker, R. M. (2008). Characteristics: Towards a Configuration Framework. In *Public Administration Research and Theory: J-PART* (Vol. 18, Issue 4).

Wen Zhang, Xiao shuang Zeng, Huigang Liang, Yajiong Xue, & Xuanze Cao. (2023). Understanding How Organizational Culture Affects Innovation Performance: A Management Context Perspective. *Innovation Management and Organizational Performance for Sustainable Future*.

Zeng, J., Zhang, W., Matsui, Y., & Zhao, X. (2017). The impact of organizational context on hard and soft quality management and innovation performance. *International Journal of Production Economics*, *185*, 240–251. https://doi.org/10.1016/j.ijpe.2016.12.031