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The Influence of Total Quality Management and Innovation on Operational Performance: An Empirical Study of Fish Processing Industry SMEs in Cilacap

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A B S T R A C T

This study examines the influence of Total Quality Management (TQM) and innovation on operational performance in SMEs in the fish processing industry in Cilacap. The population in this study consists of business actors from SMEs in the fish processing industry in Cilacap, involving 40 respondents selected using purposive sampling. This study employs multiple linear regression analysis using SPSS version 30. The results indicated that management leadership, employee empowerment, continuous improvement, and strategic planning and development have a positive and significant relationship with operational performance. Meanwhile, customer focus and innovation were not found to have a significant influence on operational performance in the fish processing industry SMEs in Cilacap.

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INTRODUCTION

Indonesia, as the largest archipelago in the world, has enormous potential for marine and fisheries resources. One of the strategic subsectors in this sector is the fishery product processing industry, which not only provides added value to products, but also plays an important role in expanding markets, extending shelf life, and improving the distribution of seafood. Among the various industry players, Small and Medium Enterprises (SMEs) play a significant role, especially in the local context and empowerment of coastal communities. While large industries excel in terms of technology and capacity, SMEs have large numbers and socio-economic proximity to local communities. Fish processing SMEs are scattered in various coastal areas, including in Cilacap Regency. Processed products such as fish crackers, smoked fish, fish nuggets, and fish sauce and shredded fish are an important part of the community's economic activity. However, SMEs in this sector still face various challenges such as technological limitations, low managerial quality, and lack of innovation, hindering their competitiveness and business sustainability.

In the face of increasingly competitive market dynamics, the implementation of the right managerial approach has become an urgent necessity. One relevant approach is Total Quality Management (TQM), which emphasizes comprehensive and continuous quality improvement by involving all elements of the organization. TQM is seen as an approach to optimizing quality using multiple dimensions and has been widely applied by many companies with the aim of improving performance in terms of quality, productivity, and profitability (Zaki et al., 2024). TQM has a philosophy that seeks behavioral change at all levels of the organization, with a focus on customer satisfaction, emphasizing the importance of involving all elements of the organization in continuous process improvement to focus on customer satisfaction (Saril, 2019). The rationale for the need for TQM in a company is how a company can compete and excel to produce the best quality. To achieve the best quality, continuous efforts are required from human capabilities, processes, and the environment. Implementing TQM is the best way to improve these components into an integrated system that builds on each other (Tjiptono & Diana, 2003). The implementation of TQM in the fish processing industry SMEs in Cilacap is expected to help improve operational efficiency, reduce waste, enhance product quality, and create relevant innovations to meet market needs with a focus on achieving customer satisfaction.

Operational performance is a company's ability to carry out its operations. Performance measurement is a benchmark for company management to determine company policy. Whether a company's performance is good or not can be seen by measuring existing aspects, both from a financial and non-financial perspective (Ridwan & Apriliani, 2021). Operational performance, according to (Handoko, 2010) refers to the implementation of managerial activities involved in the selection, design, updating, operation, and supervision of production systems. As TQM increases, it will have a positive impact on operational performance, as the elements of TQM have been proven to enhance operational performance. If all elements of TQM are implemented

harmoniously, the company's profit objectives will be achieved, indicating that the company's operational performance is functioning effectively (Tjiptono & Diana, 2003).

Innovation is the result of various activities such as research and development, process development, design, marketing, organizational restructuring, resource management, and employee development (Hoang et al., 2006). Innovation can have a significant impact on organizational performance by enabling a better position in the market, which in turn will enhance competitive advantage and superior performance. In today's increasingly competitive environment, businesses, especially SMEs, must be able to adapt to rapidly changing market demands. However, with changes in the market, it is expected that competitive conditions will also change, and quality is one of the qualifying criteria, along with flexibility and innovation, which are considered the cornerstones of a company's success (Antunes et al., 2017).

This study was conducted to identify the relationship between TQM practices and innovation on operational performance. This study applied TQM variables such as management leadership, employee empowerment, customer focus, continuous improvement, and strategic planning and development. Several studies have found that TQM impacts operational performance. For example, research by (Arisgi Wiyono et al., 2023) found a significant relationship between TQM and operational performance. Research conducted by (Anifowose & Ghasemi, 2022) found that TQM has a significant and positive influence on operational performance. Based on the description above, this study will be conducted to determine the effect of TQM and innovation on operational performance in the fish processing industry SMEs in Cilacap.

LITERATURE REVIEW

Total Quality Management (TQM) and Operational Performance

Operational performance is a company's ability to carry out its operations. Performance measurement is a benchmark for company management to determine company policy. Whether a company's performance is good or not can be seen by measuring existing aspects, both from a financial and non-financial perspective (Ridwan & Apriliani, 2021). TQM is also widely recognized as a key factor in improving operational performance, namely effectiveness and efficiency in production and service activities. The dimensions of TQM contribute to improving product quality, reducing costs, increasing timeliness, and production flexibility. Research by (Zaidi & Ahmad, 2020) on manufacturing companies in Malaysia found that all dimensions of TQM positively and significantly influence operational performance. Similarly, (Wangui, 2018) demonstrated that top management commitment and customer focus have a significant impact on operational efficiency.

H1: Management leadership has a significant effect on operational performance.
H2: Employee empowerment has a significant effect on operational performance.
H3: Customer focus has a significant effect on operational performance.
H4: Continuous improvement has a significant effect on operational performance.

H5: Strategic planning and development has a significant effect on operational performance.

Innovation and Operational Performance

Innovation is believed to be the main driver of operational performance improvement. The application of innovation, both in terms of products and processes, enables companies to improve quality, efficiency, and responsiveness to market changes. According to (Hoang et al., 2006) state that innovation can strengthen market position and increase competitive advantage. Then, (Prajogo & Sohal, 2003) emphasize that innovation is the result of the effective implementation of TQM, which in turn contributes to operational performance. Research by (Anifowose & Ghasemi, 2022) shows that innovation speed has a significant effect on operational performance.

H6: Innovation has a significant effect on operational performance.

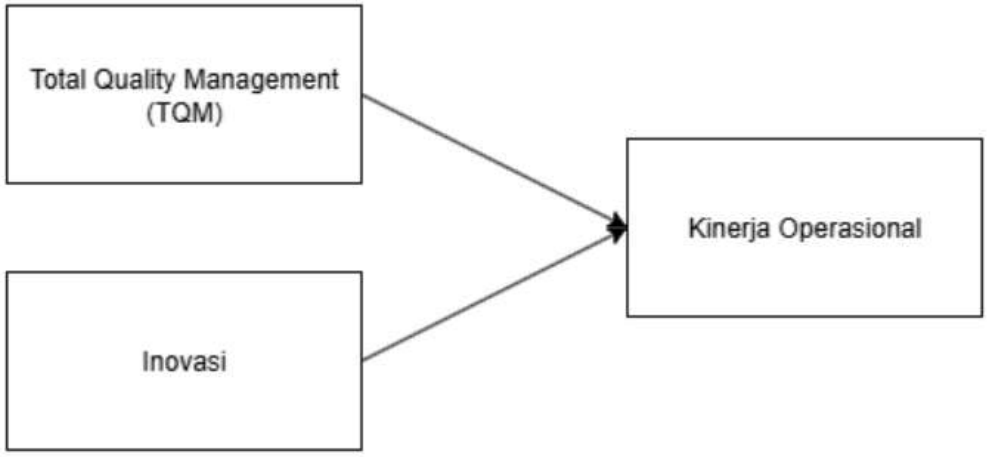


Figure 1. Conceptual Framework

METHODOLOGY

The population in this study was small and medium-sized enterprises (SMEs) in the fish processing industry registered with the Cilacap Regency Manpower and Industry Office (DISNAKERIN). Based on data obtained from DISNAKERIN, the total number of SMEs in the fish processing industry in Cilacap Regency is 60 business units, and in this study, the author used 40 SMEs samples. In this study, the author adopted five main dimensions of TQM based on research conducted by (Anifowose & Ghasemi, 2022; Antunes et al., 2021; Zaidi & Ahmad, 2020), which consist of: Management Leadership, Employee Empowerment, Customer Focus, Continuous Improvement, and Strategic Planning and Development. The author then used innovation as independent variable with other TQM dimensions and operational performance as dependent variable. The research questionnaire consisted of 30 items, including 21 items related to TQM variables, 4 items related to innovation variables, and 5 items related to operational performance variables. The measurement scale used in this study was the Likert scale, which employs five levels of indicators to measure respondents' answers. The analysis was

conducted using SPSS 30, including classical assumption tests, multiple linear regression tests, t-tests, F-tests, and mediation analysis.

RESEARCH RESULT

Respondent Profile

The data obtained in this study came from questionnaires distributed to respondents, namely SME actors in the fish processing industry in Cilacap. The following table shows the characteristics of the respondents, including their gender, age, position/job title, highest level of education, and length of service at the SME that was the subject of the study.

Table 1. Respondent Profile

Characteristic	Frequency	Percentage (%)
Gender of respondents		
Male	15	37,5%
Female	25	62,5%
Age range of respondents		
21-30 years	4	10%
31-40 years	13	32,5%
41-50 years	14	35%
>50 years	9	22,5%
Position of respondents		
Business Owner	34	85%
Staff	6	15%
Respondent's highest education		
TK	0	0%
SD	3	7,5%
SMP	2	5%
SMA	21	52,5%
Diploma (D1/D2/D3)	2	5%
Sarjana (S1/S2/S3)	12	30%
Period of employment		
<2 years	1	2,5%
2-5 years	8	20%
>5 years	31	77,5%
Total	40	100%

Instrument Test Results
Validity Test

Table 2. Validity Test Results

Variable	Item	rCount	rTable	Description
Management Leadership (ML)	ML1	0.575	0.312	Valid
	ML2	0.796	0.312	Valid
	ML3	0.657	0.312	Valid
	ML4	0.691	0.312	Valid
	ML5	0.629	0.312	Valid
Employee Empowerment (EE)	EE1	0.568	0.312	Valid
	EE2	0.579	0.312	Valid
	EE3	0.571	0.312	Valid
	EE4	0.715	0.312	Valid
	EE5	0.681	0.312	Valid
Customer Focus (CF)	CF1	0.689	0.312	Valid
	CF2	0.731	0.312	Valid
	CF3	0.625	0.312	Valid
	CF4	0.700	0.312	Valid
Continuous Improvement (CI)	CI1	0.707	0.312	Valid
	CI2	0.723	0.312	Valid
	CI3	0.778	0.312	Valid
	CI4	0.745	0.312	Valid
Strategic Planning and Development (SPD)	SPD1	0.767	0.312	Valid
	SPD2	0.842	0.312	Valid
	SPD3	0.767	0.312	Valid
Inovasi (I)	I1	0.642	0.312	Valid
	I2	0.761	0.312	Valid
	I3	0.769	0.312	Valid
	I4	0.662	0.312	Valid
Operating Performance (KO)	KO1	0.475	0.312	Valid
	KO2	0.602	0.312	Valid
	KO3	0.821	0.312	Valid
	KO4	0.838	0.312	Valid
	KO5	0.555	0.312	Valid

Based on the validity test results in the table above, it shows that all statement items obtained a rhitung value greater than rtabel. This indicates that all statement items in the research variable can be declared valid. Thus, all statements in the questionnaire can be used for research.

Realibility Test

Table 3. Reliability Test Results

Variable	***Cronbach's Alpha***	**Tingkat Sig.**	**Description**
Management Leadership	0,693	>0,60	Reliable
Employee Empowerment	0,607	>0,60	Reliable
Customer Focus	0,623	>0,60	Reliable
Continuous Improvement	0,714	>0,60	Reliable
Strategic Planning and Development	0,704	>0,60	Reliable
Innovation	0,781	>0,60	Reliable
Operational Performance	0,695	>0,60	Reliable

Based on the reliability test results in the table above, it can be seen that the Cronbach's alpha value for all variables is greater than the significance level (0.60). Thus, all variable statement items in this study are declared reliable and can be used in research.

Classical Assumption Test Results

Normality Test

Table 4. One-Sample Kolmogorov-Smirnov Test Results

		Unstandardized Residual
N		40
Normal Parameters	Mean	,0000000
	Std. Deviation	1,25118282
Most Extreme Differences	Absolute	,126
	Positive	,126
	Negative	-,072
Test Statistic		,126
Asymp. Sig. (2-tailed)		,108

The normality test showed a significance value of 0,108 in normality tests, meaning that the data was normally distributed and therefore suitable for use in the study.

Multicollinearity Test

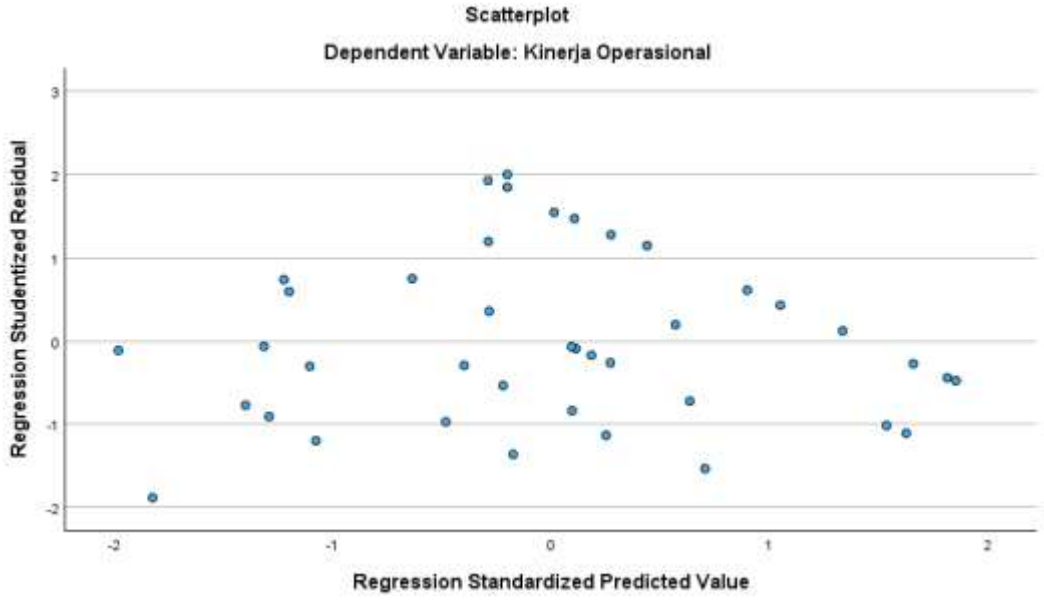
Table 5. Multicollinearity Test Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Management Leadership	,837	1,194
	Employee Empowerment	,954	1,048
	Customer Focus	,807	1,239
	Continuous Improvement	,586	1,705
	Strategic Planning and Development	,755	1,324
	Inovasi	,576	1,736
Dependent Variable: Kinerja Operasional			

The results of the multicollinearity test show that the VIF value is less than 10 and the tolerance value is more than 0.10, which can be concluded that there are no symptoms of multicollinearity.

Heteroscedasticity Test

Table 6. Heteroscedasticity Test Results



Based on the scatterplot results, the residual points are randomly distributed and do not form a specific pattern. The points are evenly distributed above and below the zero line and do not show a systematic pattern. This means that there are no signs of heteroscedasticity in the regression model.

Data Analysis Results

Multiple Linear Regression Analysis

Table 7. Multiple Linear Regression Analysis Results

Coefficients						
Model		Unstandarized Coefficients		Standarized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	34,323	8,305		4,133	<,001
	Management Leadership	,370	,149	,313	2,492	,018
	Employee Empowerment	,563	,152	,436	3,702	<,001
	Customer Focus	,265	,182	,186	1,453	,156
	Continuous Improvement	,525	,178	,443	2,948	,006
	Strategic Planning and Development	,563	,220	,338	2,554	,015
	Inovasi	,384	,215	,271	1,786	,083
	Dependent Variable: Kinerja Operasional					

The regression equation can be formulated as follows:

$$Y = 34{,}323 + 0{,}370X1 + 0{,}563X2 + 0{,}265X3 + 0{,}525X4 + 0{,}563X5 + 0{,}384 + \varepsilon\ldots..$$

DISCUSSION

H1: The Influence of Management Leadership on Operational Performance

The results of the t-test (partial) above indicate that the significance level of the management leadership variable on the operational performance variable is 0.003 (<0.05). Based on the above calculations, it can be concluded that there is a positive influence of management leadership (X1) on the operational performance variable (Y2). The results of this study are also supported by the same results from a study conducted by (Wangui, 2018), which shows that management leadership has a significant positive effect on operational performance. Furthermore, the results of the study conducted by (Zaidi & Ahmad, 2020) indicate that the management leadership approach has a positive effect on operational performance. This study shows that management leadership is an important element for SMEs in the fish processing industry in Cilacap in managing their operations. Top management in SMEs directly participates and has a vision for quality improvement, which positively influences operational performance. The resources provided by top management are also adequate for improving the quality of products produced by SMEs in the fish processing industry in Cilacap.

H2: The Influence of Employee Empowerment on Operational Performance

The results of the t-test (partial) above show that the significance level of the employee empowerment variable on the operational performance variable is 0.002 (<0.05). Based on the above calculations, it can be concluded that there is a positive influence of employee empowerment (X2) on the operational performance variable (Y2). These findings are consistent with the results of a study conducted by (Wangui, 2018), which found that employee empowerment has a significant positive effect on operational performance. These results indicate that the management of fish processing SMEs in Cilacap effectively empowers their employees. In problem-solving, the leadership/top management of SMEs implement a team-based problem-solving system. SMEs in the fish processing industry in Cilacap are also open to receiving suggestions from employees regarding product quality. Effective employee empowerment motivates employees to improve their performance.

H3: The Influence of Customer Focus on Operational Performance

The partial t-test result for the customer focus variable on operational performance is 0.156 (>0.05). Based on the calculation above, it can be concluded that there is no positive effect of customer focus on operational performance variables. This result is similar to the research conducted by (Hibau et al., 2019) which found that the customer focus variable in the TQM dimension does not have a significant and positive effect on operational performance. These results indicate that customer focus has not yet become a primary concern in the operational management of SMEs. Many small and medium-sized businesses still prioritize production aspects or cost efficiency over a deep understanding of customer needs and expectations. This may also occur due to the lack of a customer feedback recording system, limited human resources, or a narrow market orientation. Additionally, since most SMEs are still traditional and relationship-based (not digital), customer feedback is rarely managed systematically, so its impact on operational performance is not clearly evident in the collected data.

H4: The Influence of Continuous Improvement on Operational Performance

The results of the t-test (partial) above show that the significance level of the continuous improvement variable on the operational performance variable is 0.029 (<0.05). Based on the above calculations, it can be concluded that there is a positive influence of customer focus (X4) on the operational performance variable (Y2). These results are consistent with the research conducted by (Zehir & Zehir, 2023), which found that continuous improvement has a significant and positive effect on operational performance. The study by (Zehir & Zehir, 2023) states that the implementation of TQM focuses on improving employee quality not only to meet customer expectations but also to encourage continuous improvement. These results indicate that sustainability is an important element that is considered by SME actors in the fish processing industry in Cilacap. Employees in these SMEs also believe that continuous improvement is their responsibility, so they ensure that sustainability continues to run smoothly. The implementation of quality-related programs also reduces waste, promotes

better resource utilization, and ensures that all activities are carried out as effectively as possible to support these sustainable efforts.

H5: The Influence of Strategic Planning and Development on Operational Performance

The results of the t-test (partial) above show that the significance level of the strategic planning and development variable on the operational performance variable is 0.044 (<0.05). Based on the above calculations, it can be concluded that there is a positive influence of strategic planning and development (X5) on the operational performance variable (Y2). As in previous research by (Zaidi & Ahmad, 2020), the results show that strategic planning and development have a significant and positive effect on operational performance. These results indicate that small and medium-sized enterprises (SMEs) in the fish processing industry in Cilacap pay attention to their strategic planning and development, particularly in terms of its impact on operational performance. They focus on how to continuously improve their planning by conducting studies and planning for improvements to all products and processes. The leadership/top management of SMEs also frequently participate in training and supervision related to product quality.

H6: The Influence of Innovation on Operational Performance

The partial t-test result for the innovation variable on operational performance was 0.083 (>0.05). Based on the calculation above, it can be concluded that innovation has no positive effect on operational performance. This result aligns with research conducted by (Hilmiand & Mahfudz, 2022) which also examined fish processing SMEs in Semarang, which found that innovation had no significant effect on company performance.

This indicates that most fish processing SMEs in Cilacap tend not to prioritize innovation. Innovation by fish processing SMEs in Cilacap has not had a significant impact on operational performance. The significant impact on operational performance is largely determined by the implementation of TQM. Innovation by fish processing SMEs in Cilacap remains reactive, responding to market and consumer demand.

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of data analysis and hypothesis testing conducted in this study, several important conclusions can be drawn regarding the influence of Total Quality Management (TQM) and innovation on operational performance in fish processing SMEs in Cilacap. First, management leadership, employee empowerment, continuous improvement, and strategic planning and development were found to have a positive and significant effect on operational performance. Second, customer focus and innovation did not show a significant effect on operational performance. Finally, the study also revealed that innovation does not function as a mediating variable in the relationship between TQM and operational performance.

These findings highlight the crucial role of managerial leadership, employee involvement, continuous improvement, and well-structured strategic

planning in improving operational performance. On the other hand, customer focus and innovation alone are not sufficient to drive operational improvements in the context of SMEs in the fish processing industry in Cilacap. From a practical perspective, SME managers are advised to strengthen leadership practices, empower employees, continuously evaluate and refine operational processes, and design structured strategic development plans. These actions are expected to enhance efficiency, product quality, and overall operational performance.

ADVANCED RESEARCH

Based on the research conducted, several limitations were identified. This study has several limitations that need to be considered. First, the number of respondents was limited to only 40 SMEs in the fish processing industry in Cilacap, so the results cannot be broadly generalized to all SME sectors. Second, this study only used a quantitative approach through questionnaires, so it did not explore more in-depth information from a qualitative perspective such as interviews or case studies. Third, the variables studied only covered the dimensions of Total Quality Management, operational performance, and innovation, so other factors such as market conditions, government support, or external economic factors were not analyzed. Therefore, further research is recommended to expand the sample size, use mixed methods, and add other variables to provide a more comprehensive picture of the influence of TQM on SME performance.

REFERENCES

Abdurohim, D. (2023). Pengembangan Kreativitas Dan Inovasi (Jenis, Proses, Pendekatan, Teknik, dan Strategi) (1st ed.). Refika Aditama.

Agung Widhi, K., & Puspitaningtyas, Z. (2016). Metode Penelitian Kuantitatif (1st ed.). Pandiva Buku.

Anifowose, O. N., & Ghasemi, M. (2022). Total Quality Management and Small and Medium-Sized Enterprises' (SMEs) Performance: Mediating Role of Innovation Speed Oluwaseun. Sustainability. https://doi.org/https://doi.org/10.3390/su14148719

Antunes, M. G., Mucharreira, P. R., Justino, M. R. T., & Texeira-Quirós, J. (2021). Effects of Total Quality Management (TQM) Dimensions on Innovation—Evidence from SMEs. Sustainability (Switzerland), 13(18). https://doi.org/10.3390/su131810095

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 \& Reliability Management, 34(9), 1474–1492. https://doi.org/http://dx.doi.org/10.1108/IJQRM-02-2016-0025

Arisgi Wiyono, R., Zulfikarijah, F., & Ramadhani Fuadiputra, I. (2023). the Influence of Total Quality Management (Tqm) Application on Operational

Performance on Ud. "Matahari" Tempe Crackers. Restu Jaya. Journal of Economic Empowerment Strategy (JEES), 06(Vol 6 No 1), 15–26. https://doi.org/10.23969/jees.v6i1.6222

Dr. Juharni, M. S. (2017). Buku Manajemen Mutu Terpadu (Total Quality Management) (Vol. 1). SAH MEDIA.

Ellitan, L., & Anatan, L. (2007). Manajemen Operasi: Konsep dan Aplikasi. In Bandung: PT Refika Aditama. Refika Aditama.

Ghozali, I. (2016). Aplikasi Analisis Multivariete IBM SPSS 23, Badan Penerbit Universitas Diponegoro, Semarang. 2016 (8th ed.). Badan Penerbit Universitas Diponegoro.

Handoko, T. H. (2010). Manajemen Personalia dan Sumber Daya Manusia. In Edisi Kedua. Cetakan Kesebelas. Yogyakarta (2nd ed.). BPFE.

Hibau, Y. H., Latif, I. N., & Nurqamarani, A. S. (2019). Analisis Pengaruh Penerapan Total Quality Management (TQM) Terhadap Kinerja Operasional Pada Media Online " Kaltim Kece " Tahun 2019. Ekonomia, 1, 265–272.

Hilmiand, M. Z., & Mahfudz, M. (2022). STRATEGY THE EFFECT OF INNOVATION, IMPLEMENTATION OF TOTAL QUALITY MANAGEMENT (TQM) AND ENTREPRENEURSHIP ORIENTATION ON COMPETITIVE ADVANTAGE STRATEGIES IN BUILDING COMPANY PERFORMANCE (Study on Small and Medium Enterprises (SMEs) in the Fish Processing I. Jurnal Akuntansi Dan Pajak, 23(2). https://jurnal.stie-aas.ac.id/index.php/jap/article/view/6905

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

Lakhal, L., Pasin, F., & Limam, M. (2006). Quality Management Practices and Their Impact on Performance. International Journal of Quality and Reliability Management, 23(6), 625–646. https://doi.org/10.1108/02656710610672461

Pahlevi, A., & Rahab, R. (2022). The Effect Of Innovation, Tqm Implementation And Entrepreneurship Orientation On Competitive Advantage Strategies In Building Msme Performance. Eduvest - Journal of Universal Studies, 2(8). https://doi.org/10.59188/eduvest.v2i8.545

Prajogo, D. I., & Sohal, A. S. (2003). The Relationship between TQM Practices, Quality Performance, and Innovation Performance: An Empirical Examination. International Journal of Quality and Reliability Management, 20(8), 901–918. https://doi.org/10.1108/02656710310493625

Ridwan, T., & Apriliani, I. (2021). Penerapan Total Quality Manajemen Terhadap Kinerja Operasional Pada CV. Suho Garmindo. Jurnal Inovasi Masyarakat, 01(02), 132–141.

Saril, S. (2019). Total Quality Management (Tqm) Sebagai Wujud Peningkatan Mutu Pendidikan. Adaara: Jurnal Manajemen Pendidikan Islam, 9(2), 963–972. https://doi.org/10.35673/ajmpi.v9i2.430

Sekaran, U. (2006). Research Methods for Business: Metodologi Penelitian Untuk Bisnis Buku 1 (4th ed.). Salemba Empat.

Sobandi, K. A., & Kosasih, S. (2014). Manajemen Operasi Bagian Kedua. In Jakarta: Mitra Wacana Media. Mitra Wacana Media.

Sugiyono. (2015). Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Alfabeta.

Sukmadi. (2016). Inovasi & Kewirausahaan Edisi Paradigma Baru Kewirausahaan. Humaniora Pustaka Utama.

Tjiptono, F., & Diana, A. (2003). Total Quality Management Edisi Revisi. In Yogyakarta: Andi (5th ed.). Andi.

Wangui, O. W. (2018). Effect of Total Quality Management Practices on Operational Performance of Food Manufacturing Firms in Nairobi County, Kenya. International Journal of Management and Commerce Innovations, 6(1), 1371–1385.

Zaidi, Z. M., & Ahmad, N. (2020). Total Quality Management (TQM) Practices and Operational Performance in Manufacturing Company. Research In Management Of Technology And Business, 1(1), 13–27. https://doi.org/http://dx.doi.org/10.30880/rmtb.2020.01.01.002

Zaki, C., Ummah, K., Ap, I. M., & Sodiq, A. (2024). Inflasi : Jurnal Ekonomi, Manajemen dan Perbankan Total Quality Management (TQM): Filosofi, Evolusi , dan Pendekatan Strategis Inflasi: Jurnal Ekonomi , Manajemen dan Perbankan. 1, 10–20.

Zehir, S., & Zehir, C. (2023). Effects of Total Quality Management Practices on Financial and Operational Performance of Hospitals. Sustainability (Switzerland), 15(21). https://doi.org/10.3390/su152115430