

EFFECT OF TOTAL QUALITY MANAGEMENT ON PERFORMANCE OF SELECTED TABLE WATER COMPANIES IN KEFFI, NASARAWA STATE.

Jibrin, Abdulazeez Musa
abdoulazeez11@gmail.com
Nasarawa State University, Keffi

Ogaji, Salim Muhammad
ibnogaji@gmail.com
Federal University of Kashere-Gombe State
and
Haruna, Muhammad Awwal
muhammadharunaa@nsuk.edu.ng
Nasarawa State University, Keffi

ABSTRACT

Despite increasing advertisement and investing hugely in technology, it has been observed that table water companies continue to perform below average in their operations which necessitated this study that examined effect of total quality management on performance of table water companies in Keffi. A structured five-point Likert scale questionnaire was used in a survey design to gather primary data from a sample of 112 employees in selected table water companies in Keffi. Multiple regression analysis was used to analyse the data. The study found that customer focus has a negative and significant effect on performance while continuous process improvement and management commitment have a positive and insignificant effect on performance. The study recommends that they should carefully reassess their strategies for customer focus and operational efficiency. This could be done through streamlining processes, improving supply chain management to enhance overall performance without compromising customer satisfaction. Also, they should reevaluate their approaches to continuous process improvement. This could be done by having a closer examination of the specific improvement initiatives in place, the methods used for implementation, and the metrics used to measure operational performance. Similarly, they should explore the nuances of management commitment and its impact on operational performance. This could involve assessing the consistency and visibility of management support for operational improvement initiatives, ensuring that commitment is effectively communicated throughout the organization.

Keywords: *Total Quality Management, Customer Focus, Continuous Process Improvement, Management commitment.*

INTRODUCTION

The field of Total Quality Management (TQM) has gained great attention in the

recent past majorly due to its importance in enhancing the overall performance of an organization. The different practices of Total Quality Management play a significant role

in improving the competitive advantage of organization and consequently enhancing the performance levels of such organizations. TQM is associated with other important aspects in the growth of an organization and these include; quality assurance and quality control. Most organizations that have management to control quality of their products have continuously registered high sales volumes which corresponds to high levels of organizational growth (Zakiah & Nurazwa, 2020). Most studies indicate that TQM is largely used as a tool to improve the general quality of products and services produced is offered by different manufacturing companies.

TQM is an integrated management philosophy and set of practices that emphasize, among other things customer focus, continuous improvement, reducing work, long-range thinking, increased employee involvement, process design, competitive benchmarking, team-based problem solving, constant measurement of results, and closer relationship (Ross, 1993). While Mukhtar (2016) held that management leadership, continuous improvement and customer focus are key indicators of TQM. Sin and Jusoh (2022) classified TQM into leadership, strategic planning, supplier's quality management, process management, product and service design, employee management and customer relationship management. However, the most popular dimensions of TQM are seen in the areas of continuous process improvement, customer focus, top management commitment (Samer & Ahmad, 2020; Anan et al., 2018; Zakiah & Nurazwa, 2020) and hence the focus of this study.

Customer focus is defined as the continual and persistent effort in maintaining a closer relationship with customers by acquiring constant feedback from customers to ensure customers' needs and requirements are met

(Elshaer & Augustyn, 2016). An organization should determine current and future needs of customers and consider their needs as requirements for the whole organization (Yusr, et al., 2014). This could result in more loyal customers and higher organizational performance (Barouch & Kleinhans, 2016).

Continuous process improvement is concerned with a systematic and structured approach to control, manage and optimize the business processes design so that productivity, quality and innovativeness can be attained (Kafetzopoulos et al., 2015). Basically, the most influential factor in process improvement is technology (Fotopoulos et al., 2010) especially firms with strict quality systems that need to adopt up to date technologies in their processes (Ooi, 2014). Therefore, process management ought to focus on managing processes so that they operate as expected (Al-Ababneh et al., 2012).

Many studies support leadership or top management commitment as one of the most important factors that impact a firm's performance (Ooi, 2014). Leadership and top management support are expected to have an integral role in encouraging the practices and behaviours that lead to quality goals establishment, resource allocation, quality performance evaluation and quality improvement (Barouch & Kleinhans, 2016; Alidrisi & Mohamed, 2012). Furthermore, the leader of a firm is responsible for creating the appropriate environment/culture for innovation beside cultivating the innovation process, quality, finance management and aligning the current strategy with the innovation strategy in order to achieve innovative and competitive performance (Frolova & Lapina, 2015).

Severe competition exists in the table water industry; and surviving in such harsh competitive business environment needs the

adoption of certain strategies. Table water is one of the most sort after drinking water in Nigeria. In fact, its dominance in the industry made it to be addressed as “Pure water” by consumers. However, despite increasing advertisement and investing hugely in technology, it has been observed that table water companies in Keffi continue to perform below average in their operations as seen in their inability to extend their product outside Keffi even as similar products from other locations have been able to extend their reach to Keffi. This calls for a careful review of the internal activities of these companies and hence this study which examined the effect of total quality management of selected table water companies in Keffi, Nigeria.

A substantial amount of research has been dedicated to assessing the total quality in terms of management in organizations such as Marwa et al (2021) and Musa (2022). However, none of the earlier studies has investigated the implementation of these total quality management practices on performance of table water companies in Keffi, Nasarawa State. It is against this premise that this study wants to find out the effect of total quality management on performance of table water companies in Keffi, Nasarawa State.

The specific objectives of the study are to:

- i. examine the effect of customer focus on performance of Selected table water companies in Keffi, Nasarawa State.
- ii. determine the effect of continuous process improvement on performance of Selected table water companies in Keffi, Nasarawa State.
- iii. ascertain the effect of management commitment on performance of Selected table water companies in Keffi, Nasarawa State.

LITERATURE REVIEW

Total Quality Management

According to Heizer et al. (2017), TQM is the management of the entire organization so that it excels in all aspects of goods and services that are important to customers. Meanwhile, according to Sadikoglu et al. (2014), TQM is an approach that is widely practiced by companies to continuously improve the quality between services, products, and practices by considering customer requirements to improve customer satisfaction and company performance.

Total quality management plays a major role in stages right from initial establishment of the firm, safeguarding marketed products and controlling the overall quality- system chain (Patel and Maheswari, 2016). Al-Damen (2017) argued that total quality management is considered as a part of overall organizational culture adopted by people in order to satisfy the valued customer. (Raja & Malik, 2011) argues that there is a growing recognition with in the manufacturing sector that a holistic strategy is needed to bring competitive advantage in the market place and this can only be achieved through adopting TQM system.

Customer Focus

The main factor of TQM, in accordance with Richards (2012), is customer focus. Richards emphasizes that quality is defined by the customer and not by the organisation or the product or service manufacturer, since quality is what the end user expects. Hence, customer focus is what makes a quality improvement programme. Kima et al. (2012) defined customer focus as the continual and persistent effort in maintaining a close relationship with customers by acquiring constant feedback from customers to ensure customers’ needs and requirement are met

(Elshaer & Augustyn, 2016). An organization should determine the current and future needs of customers and consider their needs as requirements for the whole organization. This will result in more loyal customers and higher organizational performance (Barouch & Kleinhans, 2016).

Ezenyilimba et al., (2019) referred to customer focus as set of beliefs in sales that says that customers' needs and satisfaction are the priority of an organization. It focuses on dynamic interactions between the organization and customers as well as competitors in the market and its internal stakeholders. It involves a continuous improvement in business processes.

Continuous Process Improvement

Alolayyan et al., (2019) stated that continuous process improvement aims to achieve better efficiency and to optimize performance in a company. Under the preferred method, there are some possible solutions, but in general, continuous improvement consists of analysing an area of the company and thinking of ways of being more efficient. Abdullah et al., (2020) referred to continuous process improvement as an effort to improve all elements of an organization processes, tools, products, services, etc. Sometimes those improvements are big, often they are small. But what's most important is that they're frequent.

Ogbonna and Harris (2019) referred to continuous process improvement as certain unique combination of machines, tools, methods, materials, and people engaged in production. Terziovski (2020) defined continuous process improvement as a technique that is frequently promoted to gradually improve a process; however, should all processes be efficient at the design stage of the process, rather than making efforts to continually improve a process over

a period that is costing additional time and resources.

Management Commitment

Fadjar et al., (2021) defined management commitment as an important factor to help operational managers successfully implement accounting information system. Management plays a key role to encourage and create the right atmosphere to bridge the recruitment of employees with the use of new information system applications. Bahri et al., (2020) referred to management commitment as an essential in environmental effect "business organizations can have on improving the effectiveness of the environment of the planet – and its resources.

Goffin and Jackson (2018) referred to management commitment as the adoption and implementation of successful achievement. It is imperative to innovation in a company, particularly "environmental consider that the alliance of the "three processes of systems and top management support can affect new people, strategy and operations" is essential in the system initiatives success by promoting employee execution of strategy. Julian and Nhat (2017) defined management commitment as a way of building trust with the employees. They are able to buy the idea of quality and employ the strategies in their daily activities within the organization.

Operational performance

Performance measurement is considered as a quantifiable indicator used to assess results and outcomes which produce reliable data on the efficiency and effectiveness of programs (Hung et al,2011). It is very important for the effective management of organizations, and it refers to how well companies can achieve their objectives (Lackal et al., 2006).

According to Zhu et al. (2008), Operational performance is the ability of a manufacturing

company to produce and deliver products to customers. Elvin (2016) states that two factors can affect operational performance, namely internal and external factors. Internal factors consist of access to capital, entrepreneurial abilities, human resources, marketing, business plans, and financial knowledge, while external factors consist of government support, legality, social networks, access to information, social and culture, business competition, and coaching.

In the research of Kuruppuarachchi and Perera (2016), operating performance is measured using four competitive priorities as the main components to be able to have good performance in operations, namely cost, quality, delivery, and flexibility as a measurement of operational performance. According to Moehariono (2014) operation performance is a performance related to the effectiveness of the use of every resource used by a company such as capital, raw materials, technology, and others.

Customer focus and performance

Mohammed et al. (2019) examined the impact of TQM system on the operational performance of the pharmaceutical manufacturing companies operating in Ethiopia. Data for this study was collected using self-administered questionnaires. The survey was carried out on 65 respondents drawn from 13 companies. Out of 65 questionnaires distributed among these companies, a total of 57 got returned. Through comprehensive literature review, seven critical success factors of TQM that are relevant to the pharmaceutical industry are identified. Correlation & regression analyses are used to investigate the relationship between TQM variables on the one side and common operational performance measures (Quality, Cost, and Delivery & Flexibility to volume) on the other side. The Correlation analysis reveals that there is strong

relationship between TQM practices and operational performance among the pharmaceutical manufacturing companies. The outcome of regression analysis indicates that customer focus, process management, product design and people management have significant contribution to at least one of the operational performance measures.

Chauke et al (2019) assessed the effectiveness of total quality management (TQM) on the operations performance at the bakery firm in the city of Tshwane, Pretoria South Africa. For the sake of bringing this study into operation, the researcher utilised a descriptive research design. Data was collected through a well-structured questionnaire from a sample of 110 employees working for the bakery firm. Analyses of data was performed through the use of the Statistical Package for Social Sciences. Results showed that employees had a negative perception on total quality management factors that include leadership, knowledge management, supplier management, customer focus, employee involvement and process management. A significant positive relationship was also found between total quality management (leadership, knowledge management, supplier management, customer focus, employee involvement and process management) and operational performance.

Continuous process improvement and performance

Musa (2022) studied the impact of continuous improvement on business performance in Jigawa state. The study adopted a descriptive research design. A sample size of 300 employees was randomly selected from the ministries. Questionnaire was used for data collection and data were analyzed using the descriptive statistics, correlation statistics and inferential statistics. The study found that continuous

improvement has insignificant effect on business performance. The study recommended that to improve the quality of their products and respond to ever-increasing customer needs, there is need for continuous improvement.

Marwa et al (2021) determine the partial and simultaneous influence of the dimensions of total quality management (TQM) implementation on the operational performance of MSMEs in Malang City and to find out what dimensions of TQM are considered to be dominant in influencing operational performance during the Covid-19 pandemic. This research was conducted on MSME Entrepreneurs in Lowokwaru District, Malang City with a total sample of 45 respondents. Collecting data using a questionnaire and Likert scale to measure the dimensions. The instrument test in this study uses validity and reliability tests, and the analysis method uses multiple linear regression analysis. The results showed that all dimensions of TQM had partial effect except the dimensions of Long-Term Commitment and Unity of Purpose.

Management commitment and performance

Zakiah & Nurazwa (2020) examined the relationship between TQM practices and operational performance in manufacturing industry in Malaysia. Five dimensions of TQM practices were studied which are organizational leadership, customer satisfaction and relationships, human resources focus, strategic planning and development, and supplier quality management. This research employed a quantitative research method. Survey questionnaire were randomly distributed to 364 manufacturers in Johor. The final response rate of 13.74% was achieved. The Statistical Package Social Science (SPSS) was used to run the descriptive analysis, normality test and Spearman correlation analysis. The findings showed that the level

of TQM practices and operational performance is at high level.

Khaled (2019) examined the effect of top management commitment on university performance in Jordan. A structured survey was conducted and selected 10 public and 10 private universities in Jordan via cluster random sampling. The study was analyzed using SEM-AMOS package 22.0 based on resource-based theory. Data were collected using structured questionnaires with ten-point Likert interval scale. Based on the analysis, the study found that top management commitment has statistically significant effect on university performance in Jordan. Consequently, the study recommended that there is a direct need to focus on top management commitment for boosting university performance and its sustainability in Jordan. However, this study was carried out in a tertiary institution while this study will be conducted on SMEs.

Theory of Structural Contingency

The study is based on the contingency theory by Donaldson (1996). This theory asserts that organizations ought to fit their structure with different contingency factor in order to improve their general performance. Concerning this particular study, it means that organizations have to relate their structure with the different aspects of Total Quality Management in a bid to enhance performance. The structural contingency theory is based on the notion that there is no single desirable or most effective structure fit for all organizations but rather organizations have an obligation to match their structure with the existing contingency factors as well as the operating environment if they are to achieve sustainable growth through improved performance. The most important contingency factors include; technology, size of an organization, uncertainty, transparency, general accountability and critical assets.

METHODOLOGY

The study adopted a Survey research design, using primary data in the form of a structured questionnaire and multiple regression to examine the effect of TQM on the performance of selected table water companies in Keffi, Nasarawa State. The population of the study was of employees in 7 registered table water companies in Keffi, Nasarawa State. Since the sample is small, Census sampling technique was used to determine sample size. The study used purposive sampling procedure to select the respondents. Which is a sampling technique carried out by taking samples from the population-based on certain criteria (Ghozali, 2018). The questionnaire was structured using a five-point Likert scale. A scale containing 15 items developed by Yusr et al (2014) was adopted to measure Customer focus (5 items), Continuous process

improvement (5 items), Management commitment (5 items) and 5 items developed by Adem and Virdi (2020) was adapted to measure operational performance. Accordingly, a total number of 104 questionnaires were completely filled and returned giving a reasonable response rate of 93%. Hence all further analyses were carried out using the 104 valid responses. Data was analysed using multiple regression analysis with the aid of SPSS. The model is specified thus:

$$PERF_i = \beta_0 + \beta_1 CF_i + \beta_2 CPI_i + \beta_3 MC_i + e_i$$

Where: PERF = Performance, CF = Customer Focus, CPI = Continuous Process Improvement, MC = Management Commitment, e = Error term (5% = 0.05), β_0 = Intercept, $\beta_1 \beta_2 \beta_3$ = Coefficients of independent variables; i = cross sectional data

Table 3.1: Population of employees

S/N	Table Water Companies	Population
1	P & P	18
2	M & M ^{rs}	15
3	Nsuk	15
4	KHADON	16
5	CHRYSLER	17
6	Awadu	15
7	Ashiplus	16
	Total	112

Source: Field Survey, 2024

RESULTS AND DISCUSSION

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.468 ^a	.219	.213	.4575	2.017

a. Predictors: (Constant), CF, CPI, MC

b. Dependent Variable: PERF

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	20.777	3	6.926	33.088	.000 ^b
	Residual	73.888	100	.209		
	Total	94.665	103			

a. Dependent Variable: PERF

b. Predictors: (Constant), CF, CPI, MC

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.908	.320		9.080	.000		
	CF	-.057	.065	-.245	3.879	.000	.543	1.657
	CPI	.381	.060	.290	1.714	.450	.584	1.712
	MC	.579	.061	.616	1.453	.380	.521	1.920

a. Dependent Variable: PERF

Source: SPSS Output, 2024

The result, as shown in the tables above reveal an R-square value of 0.219 which signifies that approximately 22% of the variation in performance (PERF) could be explained by the combination of customer focus, continuous process improvement and management commitment. The remaining 78% variation could be explained by other factors or variables not included in this study. The f-statistics stood at 33.088 and also the probability of the f-statistics was found to be significant at 5% level of significance ($p < 0.000 < 0.05$) which therefore, indicates that the model is fit to measure the association between the variables under study.

The regression line $CLT = 2.908 - 0.057CF$ indicates a negative effect of customer focus on performance which could imply that imply that an excessive focus on meeting customer expectations might divert resources

or attention away from optimizing internal processes, leading to a negative impact on operational performance. The probability of t-statistics stood at 0.000 which is greater than 0.05 level of significance thereby indicating that the effect is significant and as such the study accepts the alternate hypothesis which states that customer focus has a significant effect on the performance of table water companies in Keffi, Nasarawa State.

The regression line $CLT = 2.908 + 0.381$ indicates a positive effect of continuous process improvement on performance which could imply that the initiatives or methods employed for continuous improvement may need refinement or that other factors not considered in the study might be influencing operational performance more significantly. The probability of t-statistics stood at 0.450 which is greater than 0.05 level of

significance thereby indicating that the effect is not significant and as such the study accepts the null hypothesis which states that continuous process improvement has no significant effect on the performance of table water companies in Keffi, Nasarawa State.

The regression line $CLT = 2.908 + 0.579$ Indicates a positive effect of management commitment on performance which could imply that factors other than management commitment might be influencing operational performance more significantly or that the current level of commitment is not effectively translating into tangible operational improvements. The probability of t-statistics stood at 0.380 which is greater than 0.05 level of significance thereby indicating that the effect is not significant and as such the study accepts the null hypothesis which states that management commitment has no significant effect on the performance of table water companies in Keffi, Nasarawa State.

CONCLUSION AND RECOMMENDATIONS

This study looks at how total quality management affects the performance of table water companies in Keffi, Nasarawa State. The study draws the conclusion that total quality management is crucial in defining operational performance based on research findings. The study concludes that total quality management practices, particularly customer focus, continuous process improvement, and management commitment, play a crucial role in shaping operational performance of table water companies in Keffi, Nasarawa State.

Based on these, the study recommends that:

1. Table water companies should carefully reassess their strategies for customer focus and operational

efficiency. They should consider conducting a detailed analysis to identify specific areas where customer-centric practices might be negatively affecting operational efficiency. This could involve streamlining processes, improving supply chain management to enhance overall performance without compromising customer satisfaction.

2. Table water companies should reevaluate their approaches to continuous process improvement. This may involve a closer examination of the specific improvement initiatives in place, the methods used for implementation, and the metrics used to measure operational performance. The companies should consider collaborating with process improvement experts to identify areas for enhancement and to fine-tune their improvement strategies.
3. Table water companies should explore the nuances of management commitment and its impact on operational performance. The companies should consider conducting a deeper analysis to identify specific aspects of management commitment that might need reinforcement or adjustment. This could involve assessing the consistency and visibility of management support for operational improvement initiatives, ensuring that commitment is effectively communicated throughout the organization.

REFERENCES

- Abdullah, M. M., Uli, J., & Tari, J. J. (2020). The importance of soft factors for quality improvement and organizational performance. *International Journal Productivity and Quality Management* 4(3): 366-382.
- Al-Ababneh, M. (2012). Implementing Total Quality Management in the Hotel Industry. <http://dx.doi.org/10.2139/ssrn.3633067>
- Al-Damen, R. (2017). The impact of Total Quality Management on organizational performance Case of Jordan Oil Petroleum Company. *International Journal of Business and Social Science*, 8(1), 192-2002.
- Alidrisi, H. & Mohamed, S. (2012), "Resource allocation for strategic quality management: A goal programming approach". *International Journal of Quality and Reliability Management*, Vol. 29(3), pp. 265-283.
- Alolayyan, M. N., Ali, K. A. M., & Idris, F. (2019). Total quality management and operational flexibility impact on hospital performance: A structural modeling approach. *International Journal of Productivity and Quality Management* (11): 212-227.
- Anil, A. P., & Satish, K. P. (2016). Investigating the relationship between TQM practices and Firm's performance: A conceptual framework for Indian organizations. *Procedia Technology*, 24(555), 554-561.
- Bahri, S., Hamzah D. & Yusuf M. R. (2020). Implementation of Total Quality Management and Its Effect on Organizational Performance of Manufacturing Industries Through Organizational Culture in South Sulawesi, Indonesia. *Journal of Business and Management* 5(1) 10-24.
- Barouch, G. & Kleinhans, S. (2016). Learning from criticisms of quality management. *International Journal of Quality and Service Sciences*, 7(2/3), 201-216.
- Chauke, S.S., Edoun, E. & Mbohwa, C. (2019), "The effectiveness of total quality management and operations performance at a bakery firm in the city of Tshwane, South Africa", *Proceedings of the International Conference on Industrial Engineering and Operations Management*, pp. 2896-2907.
- Donaldson, L. (1996). *For positivist organization theory*. Sage.
- Elshaer, I. A. & Augustyn, M. M. (2016), "Direct effects of quality management on competitive advantage", [International Journal of Quality & Reliability Management](#), Vol. 33 No. 9, 1286-1310.
- Ezenyilimba, E. P., Ezejiofor, R. A., & Afodigbueokwu, H. E. (2019). Effect of total quality management on organizational performance of deposit money banks in Nigeria. *International Journal of Business & Law Research*, Vol 7(3):15-28.
- Fadjar, A., Sukandi, D., Mentari, R., Sihombing, F., & Hasbiya, R.M. (2021). Management Commitment, Accounting Information Systems and Quality of Accounting Information. *Psychology and Education Journal*, 58(3), 564-572.

- Fotopoulos, C., Psomas, E. & Vouzas, F. (2010), "ISO 9001:2000 implementation in the Greek food sector", *The TQM Journal*, Vol. 22 (2), 129-142.
- Frolova, I. & Lapina, I. (2015), "Integration of CSR principles in quality management". *International Journal of Quality and Service Sciences*, Vol. 7(2/3), pp. 260-273.
- Ghozali, I. (2018). *Aplikasi Analisis Multivariate dengan Program IBM SPSS 25*. Semarang: BP UNDIP.
- Goffin, I. R. & Jackson, D. N. (2018) Organizational commitment and job performance: It's the nature that commitment that counts. *Journal of applied Psychology*, 7(4): 152-156.
- Heizer, J., Render, B., & Munson, C. (2017). *Operations Management: Sustainability and Supply Chain Management Twelfth Edition*. Pearson
- Hung, R. Y. Y., Lien, B. Y. H., Yang, B., Wu, C. M., & Kuo, Y. M. (2011). Impact of TQM and Organizational learning on Innovation Performance in the High-tech Industry. *International Business Review*, 20(2), 213- 225.
- Kafetzopoulos, D. P., Psomas, E. L., & Gotzamani, K. D. (2015). The impact of quality management systems on the performance of manufacturing firms. *International Journal of Quality & Reliability Management*, 32(4), 381–399.
- Khaled, A.H. (2019) effect of top management commitment on university performance in Jordan. *International Journal of Productivity and Performance Management*. 58 (3), 215-237.
- Kima, C. T., Shin, N. W., & Kima, S. (2010), " An empirical study of customers' perceptions of security and trust in e-payment system", *Electronic commerce Research and Applications*, Vol. 9 (1), 84-95.
- Kuruppuarachchi, D., & Perera, H. S. C. (2016). Impact of TQM and technology management on operations performance. *The IUP Journal of Operations Management*, 3, 23–47.
- Lackal, L., Pasin, F., & Liman, M. (2006). Quality Management Practices and Their Impact on Performance. *International Journal of Quality and Reliability management*, 23(6), 625-646.
- Marwa, J. N., Zulfikarijah, F., & Supriyati, T. S. (2021). The Effect of Total Quality Management Implementation on Operational Performance of MSMEs in Malang City. *Jamanika*, Vol. 01 (03), 199-207.
- Moehariono. (2014). *Pengukuran Kinerja Berbasis Kompetensi (Edisi Revi)*. Jakarta: Raja Grafindo Persada.
- Mohammed, S., Brahma, G. J., & Aderaw, S. (2019). Impact of Total Quality Management (TQM) on Operational Performance of Ethiopian Pharmaceutical Manufacturing Plants. *International Journal of Engineering and Management Research*, Vol. 9 (4).
- Mukhtar, S. A. (2016). Modeling Total Quality Management Dimensions for SME Performance. *Journal of Education and Social Sciences*, 3(7):165-169
- Musa, Y. (2022) impact of continuous improvement on business

- performance in Jigawa state. *Journal of Market Focused Management*, 2 (4), 361–386.
- Ogbonna, C., & Harris, L. (2020). Leadership Style, Organizational Culture and Performance: Empirical Evidence from UK Companies. *The International Journal of Human Resource*, 11(7) 766-788.
- Ooi, K. B. (2014) TQM: A facilitator to enhance knowledge management? A structural analysis, *Expert Systems with Applications*, Vol 41 (11), 5167-5179.
- Patel, S., & Maheswari, D. (2016). Total quality management: The need of the hour for pharmaceutical industry. *Asian Journal of Pharmaceutical Technology & Innovation*, 04(19), 71-78.
- Raja, W. B. & Malik, S. A. (2011). Evaluating the effect of total quality management practices on business performance: A study of manufacturing firms of Pakistan. *International Journal of Business and Social Science*, 2(9), 110-117.
- Richard, J. (2012). Total Quality Management, *Business Management and Strategy*, 3(2), 36-42.
- Ross, J.W. (1993), *Total Quality Management: Text, Cases, and Readings*, St Lucie Press, Delray Beach, FL.
- Sin, K. Y., Jusoh, M. S., & Sim, C. L. (2022). The effects of total quality management practices on sustainable performance: perspective from Malaysia. *International Journal of Services and Operations Management*, 42(1), 1-31
- Terziovski, M. (2020) ‘Achieving performance excellence through an integrated strategy of radical innovation and continuous improvement’, *Journal of Measuring Business Excellence*, 6(2):5–14.
- Yusr, M. M., Mokhtar, S. S. M., & Othman, A. (2014). The effect of TQM practices on technological innovation capabilities: Applying on Malaysian manufacturing sector. *International Journal for Quality Research*, 8(2) 197–216.
- Zakiah, M. Z., & Nurazwa, A. (2020). TQM practices and operational performance in manufacturing industry in Malaysia. *Research in Management of Technology and Business*, 1 (1) 13-27.