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Analysis of The Effect of Total Quality Management (TQM) Implementation of MSME Business Performance During the COVID 19 Pandemic (Study of Patin Processing Center XIII Koto Mesjid)

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ABSTRACT

The era of globalization has intensified economic competition, compelling both large enterprises and Micro, Small, and Medium Enterprises (MSMEs) to innovate and adapt for survival and growth. This study investigates the application of Total Quality Management (TQM) and its effects on business performance, with a focus on the patin fish farming community in Koto Mesjid village, Riau. The main issue discussed is the challenge faced by MSMEs in maintaining competitiveness amidst the pressures of global economic competition and the disruptions caused by the COVID-19 pandemic, which has affected organizational performance but also intensified business competition. A quantitative research approach was employed, involving a survey of 85 respondents from the entire population. Data were gathered through questionnaires, tested for validity and reliability, and analyzed using multiple linear regression with SPSS version 25. The findings demonstrate that management leadership, customer focus, information and analysis, and continuous improvement positively and significantly influence MSME business performance. In contrast, the process management variable did not have a significant effect. This research highlights the crucial role of TQM in achieving competitive advantage and underscores the importance of improving identified weak areas to enhance overall business outcomes.

Keywords: *Total Quality Management, Business performance, Small and Medium Enterprises,*

Introduction

Globalization has become a driving force for companies, pushing them to utilize all their capabilities and strategies to win against competitors and survive. Today, amid fierce competition in the era of globalization, companies are facing a rare obstacle: the Covid-19 pandemic. The pandemic has affected various economic sectors in Indonesia, resulting in a decline in company performance. Most sectors have shown unusually negative cumulative returns, and the stock market has experienced a significant decline [1]. Since the fourth week of January 2020, the IHSG has dropped 38 percent in only two months[2]. This is particularly evident in the accommodation, tourism, food and beverage, wholesale and retail trade, and transportation sectors, as well as in small and medium-sized enterprises [3].

The pandemic has caused shortages and increased production costs due to supply chain disruptions. According to Coordinating Minister for Economic Affairs, only 37% of industrial companies were able to operate in February 2020, while the remaining 60% shut down [4]. According to data from the Central Statistics Agency, the value of imports across all commodity groups decreased in February 2020 compared to January 2020. Imports of consumer goods fell by 39.91%, while imports of domestic raw materials decreased by 15.89%. This decline impacted business performance and industrial revenue in Indonesia, slowing production and consumption activities and ultimately reducing economic value. The global health situation further exacerbated the industrial landscape, prompting companies to implement special strategies to maintain investor value and confidence [5].

Companies with good operational strategies strive to improve business performance and competitiveness amid intense competition. Previous research has conducted many empirical studies to examine the impact of TQM practices on company performance. TQM is one of the most effective approaches for improving company performance [6], [7], [8]. TQM plays an integral role in the business activities of SMEs. It is an integrated approach to achieving and maintaining high-quality output. It focuses on maintenance, continuous improvement, and failure prevention at all levels and functions of the company to meet or exceed customer expectations [9]. However, while substantial evidence supports the positive impact of TQM on performance, there remains a gap in understanding the relationship between TQM and SME performance in specific contexts, there remains a gap in understanding how TQM affect the business performance of SMEs in different contexts, such as the Malaysian manufacturing sector, study found that TQM did not have a significant impact on either innovation or SME performance, which contradicts many previous studies [10]. This finding raises questions about the applicability of TQM practices across different industries, particularly in SMEs where TQM implementation may be inconsistent or less robust. TQM practices and their adaptability in times of crisis, such as economic downturns or pandemics, are also scarce. This gap highlights the need for further exploration into how contextual factors affect the implementation and outcomes of TQM, particularly in emerging markets or in industries with high volatility, to provide more nuanced insights into the relationship between TQM and SME performance

Data collected from the XIII Koto Mesjid Catfish Processing Center in Kampar District, Riau Province, shows that during the 2018-2019 period, the total production weight was 372,614 kg, with 1,284,876 kg of raw materials used. In 2019, the total production weight was 401,289 kg, with 1,383,755 kg of raw materials used. In 2020, the total production weight was 423,667 kg, with 1,460,919 kg of raw materials used. The data shows that production and raw material usage increased by 7.1% in 2019. However, the increase slowed to 5.2% in 2020. While there has been an annual increase in production, this slowdown in growth may be attributed to the impact of the pandemic, which began spreading in early 2020.

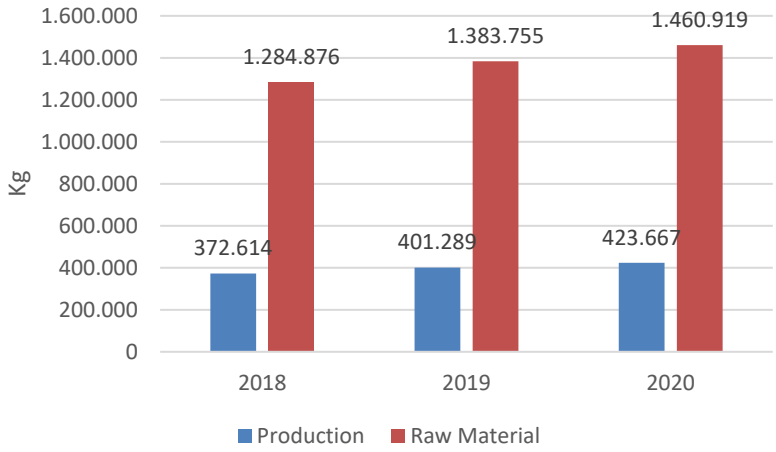

Figure 1. Production quantity and raw material usage

The COVID-19 pandemic has affected various economic sectors, including the fisheries sector and MSMEs, through disruptions in the supply chain, distribution, and market demand, which have impacted business performance. Based on this background, the main issue can be identified as follows: whether the implementation of a Total Quality Management (TQM) strategy that considers several indicators can influence business performance during the pandemic. This study examines the implementation of strategies by SMEs in addressing these issues through the implementation of a TQM strategy.

Theoretical Study and Hypothesis Formulation

Various studies have been conducted to identify the critical factors that ensure the success of quality management. Quality management is a comprehensive approach that focuses on achieving and maintaining high output standards, with an emphasis on continuous improvement and defect prevention at all levels of the organization [9]. Furthermore, TQM is a new paradigm in business operations that seeks to maximize organizational competitiveness by focusing on customer satisfaction, employee engagement, and continuous improvement of product quality, services, human resources, processes, and the organizational environment [11].

TQM construction has been defined in various ways in previous empirical studies. This study uses one model as the basic framework for TQM construction and supplements it with several variables from other

models. The Malcolm Baldrige National Quality Award (MBNQA) criteria, accepted by several experts as a representation of TQM practices, consist of six organizational practice criteria and one organizational performance criterion. The TQM practices embodied in these criteria are leadership, strategy and planning, customer focus, information and analysis, human resource management, and process management [6]. However, other studies suggest that a company's success can be evaluated using various performance measurements [12], [13], [14].

Business Performance

Performance is defined as the extent to which an organization or company fulfils its performance objectives, as well as the key steps in meeting customer needs [15]. In a broader context, company performance is also defined as the company's ability to manage its resources to generate profits in the short and long term [16]. In addition to financial aspects, company performance reflects the level of achievement of the company in carrying out activities or tasks that are its responsibility to optimize its vision, mission, and established goals. This level of achievement can be evaluated using various methods, one of which is by comparing achievements against targets or with the performance of other companies in the same industry [17]. Furthermore, company performance can be measured through three main categories, namely financial performance based on profitability, operational performance based on product quality as well as production efficiency and effectiveness, and market-based performance [17]. In addition, organizational performance can also be measured from the aspects of company quality and operations [18].

Leadership Management

Leadership is an activity that influences individuals or groups using a specific style so that they are willing to be guided to achieve predetermined goals. In the context of total quality management (TQM), leadership plays a strategic role in setting the direction of the organization and building systems that support high performance, organizational learning, and individual growth [6]. Furthermore, Top management leadership in TQM is very important because it plays a role in creating value, establishing systems, and supporting overall quality improvement in the organization [19]. Thus, strong leadership in TQM implementation positively contributes to overall business performance. Based on the above explanation, the hypothesis proposed in this study is:

H1: Management leadership in the implementation of TQM has a positive effect on business performance.

Customer Focus

In general, businesses have the primary goal of attracting and retaining customers. This is important because customers are the ones who will use the output directly or as input in their work processes [20]. In line with this, customer focus involves paying special attention to various aspects such as complaints, satisfaction, price, product defects, delivery time, and collaboration with customers [20]

In the context of Total Quality Management (TQM), a deep understanding of processes and a focus on customers are key factors for organizations in recognizing and valuing the importance of quality. All management efforts in TQM are directed toward one primary goal: customer satisfaction, which must always be a priority for all employees [17]. Furthermore, delivering product and service quality that meets or exceeds customer expectations remains a key factor in determining an organization's competitive position, long-term sustainability, and ability to adapt in dynamic market environments [21]. Based on the above description, the hypothesis proposed in this study is:

H2: Customer satisfaction and relationships in the implementation of TQM have a positive effect on business performance.

Information and Analysis

According to literature on total quality management (TQM), organizations that consistently collect and analyze information will achieve higher levels of success than organizations that do not [6]. Information management in TQM plays a crucial role in maintaining customer focus, promoting quality excellence, and enhancing business performance [22]. For information to contribute optimally to the organization, quality-related information must be available and integrated into the management system [17]. In this context, the effectiveness of information and analysis in TQM can be measured through several key indicators, namely data completeness, communication, and actual conditions[19]. In other words, the better the management of information and analysis within an organization, the greater its impact on improving business performance. Based on this, the hypothesis proposed in this study is:

H3: Information and analysis in the implementation of TQM have a positive effect on business performance.

Process Management

Process management is a factor that has a direct effect on business results [23]. In the context of TQM implementation, process management focuses on managing manufacturing processes so that they operate as expected, without damage, lost materials, equipment, tools, and workforce capabilities [9]. Furthermore, process management refers to the combination of machines, methods, materials, tools, and people working in production [24]. This approach is systematic, where all company resources are utilized efficiently and effectively to achieve optimal business performance [25]. Based on this understanding, the hypothesis proposed in this study is:

H4: Process management in the implementation of TQM has a positive effect on business performance.

Continuous Improvement

In order to achieve success, every company needs to implement a systematic process for continuous improvement. Continuous improvement is a process that can eliminate waste and losses, thereby meeting customer needs or desires [21]. Overall industrial productivity will increase because waste and inefficiency will decrease. Every quality improvement effort will eliminate or reduce waste in the system, thereby reducing unit costs [20]. Continuous or ongoing improvement will enhance the quality of a company's products and processes [26]. The indicators taken from the previous research are Consistency, Production Program, Production System [18].

H5: Continuous improvement in the implementation of TQM has a positive effect on business performance.

Research Methods

This study uses quantitative methods. Data was collected in Desa XIII Koto Mesjid, located in Kampar Regency, Riau. The research location was selected based on the fact that there are nine government-assisted MSMEs in the area that have boosted the local economy. The variables used in this study are adopt on previous research [27]. As presented in Figure 2 below.

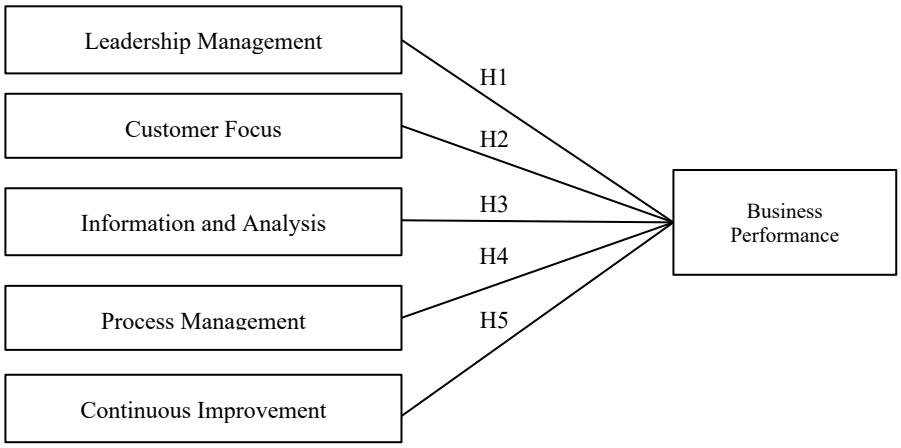

Figure 2. Research framework

Data Collection

Data collection in this study was conducted through observation and questionnaires. Observation was carried out by directly observing the research object, namely the Patin Fish Processing Center in XIII Koto Kampar, Kampar Regency. The purpose of this method was to collect data in the form of a list of names and numbers of MSMEs that are centralized, as well as information about the total raw materials and production carried out over the last three years.

The data collection instrument used a questionnaire with data measurement using the Likert scale. The Likert scale is frequently used in social research to numerically assess individuals' attitudes and viewpoints related to societal issues [28]. Each item on the Likert scale instrument has response gradations ranging from very positive to very negative, expressed as “Strongly Agree,” “Agree,” “Undecided,” “Disagree,” and “Strongly Disagree.” The most positive response is given the highest score, while the most negative response is given the lowest score. With a population of 85 people, the sample was determined using the census

technique, which uses the entire population. The data obtained through this questionnaire was then analyzed to obtain an overview of the respondents' perceptions and attitudes toward the implementation of Total Quality Management at the catfish processing center in XIII Koto Kampar, Kampar Regency.

Testing Validity and Reliability

In this study, validity testing was performed using IBM SPSS. The validity of the questionnaire instrument was tested based on the respondents' Likert scale answers, which were then analyzed using Pearson's product-moment correlation. Data from a questionnaire with a Likert scale will reveal what the author intended by comparing r count and r table. If r_(count) is greater than r_(table), it can be concluded that the indicator is valid. Then, by comparing the Sig. (2-tailed) value, if the significance level is below 5% (0.5), it can be concluded that the questionnaire is valid; if the significance level is above 5% (0.5), it can be concluded that the questionnaire is not valid or does not meet the validity criteria.

Reliability testing was performed in this study to determine whether the instruments used to measure the obtained data were reliable. Reliable instruments are instruments that, when used several times to measure the same object, produce consistent results. A questionnaire can be considered reliable based on the Cronbach's alpha value (α); if the Cronbach's alpha value is greater than 0.60, the instrument is considered reliable. Conversely, if Cronbach's alpha is less than 0.60, the instrument is considered unreliable.

Classical Assumption Test

Classical assumption testing is performed to ensure that the resulting regression equation is accurate in estimation, unbiased, and consistent. First, the normality test examines whether the independent and dependent variables in the regression model are normally distributed. If the data are not normal, the statistical results will be inaccurate. Normality can be tested using the One Sample Kolmogorov-Smirnov method, where the data are considered normal if the sig value is above 0.05. Second, the multicollinearity test aims to detect correlations between independent variables in the regression model. Multicollinearity can cause large standard errors and small t-values, which in turn will reduce the reliability of the model. Multicollinearity is detected by looking at the Tolerance and Variance Inflation Factor (VIF) values, where a Tolerance below 0.10 or a VIF above 10 indicates multicollinearity. Third, the heteroskedasticity test aims to determine whether the residual variance in the regression model is constant. Heteroskedasticity can be identified by looking at the scatterplot or by comparing the predicted values of the dependent variable (ZPRED) and the residual error (SRESID). If there is no particular pattern on the scatterplot and the points are scattered randomly around the y-axis, it can be concluded that there is no heteroskedasticity. A good regression model is one that meets all these classical assumptions, so the results of the analysis can be relied upon.

Data Analysis Techniques

This study uses two analytical approaches, namely descriptive statistical analysis and multiple linear regression analysis. Descriptive statistics were applied to analyze data collected through questionnaires and observations, providing summaries through measures such as mean and standard deviation. This approach is widely used for representing research findings in a quantitative format [29]. thereby providing an overview of data characteristics and patterns. Furthermore, multiple linear regression analysis was used to test the influence of independent variables, namely management leadership (X1), customer focus (X2), information and analysis (X3), process management (X4), and continuous improvement (X5), on the dependent variable, business performance (Y). Through this analysis, researchers can identify the extent to which independent variables influence business performance, providing a comprehensive understanding of the relationships between variables in the research context.

Model Evaluation Test

In this study, model testing was conducted by applying a partial t-test to analyze the influence of each independent variable on the dependent variable individually. Meanwhile, the simultaneous F test was used to evaluate the influence of all independent variables together on the dependent variable. In addition, the coefficient of determination (R^2) was used to measure the extent to which the independent variables were able to explain the variation in the dependent variable.

Results and Discussion

Respondent Characteristics

Based on primary data collected from 85 respondents, information was obtained regarding the demographic characteristics of respondents, including gender, age, length of employment, and educational level. Based on gender, the respondents consisted of 40 men (47.06%) and 45 women (52.94%), so the ratio of male to female respondents in this study was almost equal. In terms of age, respondents aged 20 to 30 had the

highest percentage, followed by those aged 31 to 40, indicating that most respondents were within the productive age range. Based on length of employment, the majority of respondents had been working for 2 to 5 years, totalling 44 people (51.77%), followed by respondents with more than 5 years of employment, totalling 31 people (36.47%), while respondents who had been working for less than 2 years numbered 10 people (11.76%). This indicates that the majority of respondents have sufficient work experience across nine different SMEs, thereby expected to possess adequate knowledge about their respective business units. Based on educational level, most respondents had a high school education, totalling 62 people (72.95%), followed by respondents with a junior high school education, totalling 21 people (24.70%), and respondents with an elementary school education, totalling 2 people (2.35%). This data shows that most respondents have a secondary education background, which may influence their understanding of business management in MSMEs.

Testing Validity and Reliability

Based on the results of the validity test of the research instrument on 85 respondents with a confidence level of 95% ($\alpha = 5\%$) and degrees of freedom (df) = N – 2 = 83, a table r value of 0.213 was obtained, where a statement is considered valid if the calculated r value is greater than the table r value and is positive. The analysis results show that all statement items in the variables of managerial leadership, customer focus, information and analysis, process management, continuous improvement, and business performance have calculated r values exceeding the table r value (0.213), so all statement items are deemed valid. Thus, it can be concluded that all questionnaire items in this study meet the validity criteria and are suitable for measuring the variables under study.

In this study, reliability testing was conducted by calculating Cronbach's Alpha values for each variable instrument. Data is considered reliable if the Cronbach's Coefficient Alpha value is > 0.60, while if the value is < 0.60, the data is considered unreliable. Based on the reliability test results using SPSS version 25 on 85 respondents, all variables tested, namely management leadership (X1), customer focus (X2), information and analysis (X3), process management (X4), continuous improvement (X5), and business performance (Y), had a Cronbach's Alpha value > 0.60. Thus, it can be concluded that all questionnaire statements in this study are reliable and can be relied upon as a data collection tool.

Descriptive statistical analysis

This study uses Research Variable Statistics to analyze respondents' answers to each item in the questionnaire. This study analyzes based on mean and standard deviation values. Then, the average for each variable is obtained through interval values. The maximum and minimum values are obtained from the Likert scale scores. The interval categories are obtained through the following calculations:

$$Interval = \frac{(Maximum\ Value - Minimum\ Value)}{Number\ of\ categories} = \frac{(5-1)}{5} = 0.8 \quad (1)$$

The analysis results show that for the Management Leadership variable (X1), the mean value ranges from 3.95 to 4.41, with an average of 4.24, indicating that the implementation of management leadership in MSMEs is very good. For the Customer Focus (X2) variable, the mean value ranges from 4.04 to 4.60, with an average of 4.32, indicating very good implementation. The Information and Analysis (X3) variable has a mean value between 4.24 and 4.38, with an average of 4.29, indicating very good implementation. The Process Management variable (X4) obtained an average mean of 3.91, which falls into the good category. For the Continuous Improvement variable (X5), the mean value ranges from 4.08 to 4.48, with an average of 4.25, indicating very good implementation. Finally, for the Business Performance variable (Y), the mean average of 4.38 indicates very good business performance. Overall, the research results show that the implementation of each variable in the SMEs is categorized as good to very good.

Classic Assumption Test

This study uses classic assumption tests to avoid flaws in the multiple linear regression model. The classic assumption tests conducted include normality, multicollinearity, and heteroscedasticity tests. The normality test was performed using the Kolmogorov-Smirnov (K-S) technique with SPSS version 25. Based on criteria, the data is normally distributed if the significance value is > 0.05 [30]. The test results showed an Asymp. Sig. (2-tailed) value of 0.159, indicating that the data is normally distributed.

Next, the multicollinearity test aims to detect correlations between independent variables. A good regression model is free from multicollinearity, as indicated by a tolerance value > 0.10 and VIF < 10. The

results of the analysis using SPSS version 25 show that all independent variables meet these criteria, so there is no multicollinearity.

Finally, the heteroscedasticity test aims to determine whether there is inequality in the residual variance between observations. This test was conducted using the Glejser technique with SPSS version 25. If the significance value is > 0.05, then there is no heteroscedasticity. The analysis results show that all variables have significance values above 0.05, namely Management Leadership (0.851), Customer Focus (0.091), Analytical Information (0.783), Process Management (0.083), and Continuous Improvement (0.226). Thus, there is no heteroscedasticity issue in the regression model of this study.

Multiple Regresion Analysis

Tabel 1. Multiple regresion result

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
Constant	2.566	1.492		1.719	.090
Leadership Management (X1)	.137	.053	.233	2.580	.012
Customer focus (X2)	.204	.065	.312	3.123	.003
Information Analysis (X3)	.246	.118	.220	2.077	.041
Process Management (X4)	.113	.069	.113	1.639	.105
Continuous Improvement (X5)	.146	.066	.165	2.209	.030

By knowing the regression model and the results of multiple linear regression, the following regression equation is obtained:

$$Y = 2.566 + 0.233 + 0.312 + 0.220 + 0.113 + 0.165 + e \quad (2)$$

Based on the regression analysis results, the regression equation can be interpreted as follows. Y represents the predicted value of Business Performance. The constant value of 2.566 indicates that if the variables of Management Leadership (X1), Customer Focus (X2), Information and Analysis (X3), Process Management (X4), and Continuous Improvement (X5) are considered to have no effect (valued at zero), then Business Performance still has a base value of 2.566.

Furthermore, the beta coefficient indicates the level of influence of each independent variable on Business Performance. The Management Leadership (X1) variable has a coefficient of 0.233, meaning that an increase of one unit in this variable will increase Business Performance by 0.233, assuming all other variables remain constant. The Customer Focus variable (X2) has a coefficient of 0.312, indicating that a one-unit increase in this variable will increase Business Performance by 0.312, which is the largest influence among the other variables.

For variable Information and Analysis (X3) has a coefficient of 0.220, which means that a one unit change in this variable will increase Business Performance by 0.220. The Process Management variable (X4) has a coefficient of 0.113, indicating that a one-unit increase in this variable will increase Business Performance by 0.113. Finally, the Continuous Improvement variable (X5) has a coefficient of 0.165, indicating that each one-unit increase in this variable will increase Business Performance by 0.165. Based on these results, it can be concluded that all independent variables have a positive influence on Business Performance, with Customer Focus (X2) making the most dominant contribution.

T Test

First, the effect of Management Leadership on Business Performance shows a t-count value (2.580) greater than the t-table (1.990) with a significance value of 0.012, which means there is a positive and significant effect, so Hypothesis 1 is accepted, and Hypothesis 0 is rejected. Second, the effect of Focus on Customers on Business Performance shows that the t-count value (3.123) is greater than the t-table (1.990) with a significance value of 0.003, which also indicates a positive and significant effect, so Hypothesis 2 is accepted, and Hypothesis 0 is rejected. Third, the effect of Information and Analysis on Business Performance shows a t-count value (2.077) greater than the t-table (1.990) with a significance value of 0.041, which indicates a positive and significant effect, so Hypothesis 3 is accepted, and Hypothesis 0 is rejected. Fourth, the effect of Process Management on Business Performance shows the t-count value (1.639) is smaller than the t-table (1.990) with a significance value of 0.105, which means there is no significant effect, so Hypothesis 4 is rejected. Fifth, the effect of Continuous Improvement on Business Performance shows that the t-count value

(2.209) is greater than the t-table (1.990) with a significance value of 0.030, which means that there is a positive and significant effect, so Hypothesis 5 is accepted, and Hypothesis 0 is rejected.

F Test

Tabel 2. F Test result

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	313.190	5	62.638	36.484	.000
Residual	135.633	79	1.717		
Total	448.824	84			

From table 4.18 of the F statistical test results, it can be seen that the calculated F value is 36,487, which is greater than the F table value of 2,330 (F count> F table). The significance value is 0.000, which is smaller than 0.05. Thus, it can be concluded that the variables of Management Leadership (X1), Customer Focus (X2), Information and Analysis (X3), Process Management (X4), and Continuous Improvement (X5) simultaneously have a significant effect on Business Performance (Y). This means that the five hypotheses stating a significant influence on the Business Performance variable are accepted or proven.

R Squared Test (R^2)

Tabel 3. R Squared result

Model Summaryb				
Model	**R**	**R Square**	**Adjusted R square**	**Std. Error of the Estimate**
1	.835	.698	.679	1.310

Based on Table 4.16 of the R Square test results, it can be interpreted that the R value of 0.835 indicates a very strong relationship between the independent variable and the dependent variable. The R Square value of 0.698 indicates that the Management Leadership (X1), Customer Focus (X2), Information and Analysis (X3), Process Management (X4), and Continuous Improvement (X5) variables jointly influence the Business Performance (Y) variable by 69.8%, while the remaining 30.2% is influenced by other variables outside this study. In addition, the Adjusted R Square value of 0.679 indicates that the ability of these variables to explain Business Performance is 67.9%, with the remaining 32.1% explained by other factors not examined.

Discussion

Based on the test results, the effect of Management Leadership on Business Performance shows a t-count value of 2.580, which is greater than the t-table of 1.990, with a significance value of 0.012 (<0.05). This shows that Management Leadership has a positive and significant influence on Business Performance in MSMEs in Kampar Regency. The better the management leadership in the implementation of TQM, the better the resulting business performance. Effective leadership allows optimal resource management, increases productivity, and provides clear direction for improving business quality. This finding is in line with the opinion of Vincent Gasperz [20], which states that leadership in quality management can improve human performance and productivity. Based on descriptive statistics, item X1.4 (Business owners consider quality as their responsibility) has the lowest mean value (3.95), which is a recommendation to further improve business performance.

Furthermore, the effect of Focus on Customers on Business Performance also shows a significant positive effect. The t-count value of 3.123 is greater than the t-table of 1.990, with a significance value of 0.03 (<0.05). This means that the higher the focus on customers, the better the business performance achieved. Focus on customers in TQM implementation helps companies understand consumer needs and expectations better, which in turn improves customer satisfaction and business performance. This finding is supported by Dewi (2012), who states that the quality expected by consumers is an important factor for the survival of the company. Item X2.6 (Customer complaints are recorded and reviewed properly) has the lowest mean value (4.04), which indicates that improving customer service can improve business performance.

The effect of Information and Analysis on Business Performance shows a positive and significant relationship. The t-count value of 2.077 is greater than the t-table of 1.990, with a significance value of 0.041 (<0.05). This means that the better the management of information and analysis is implemented, the more business performance is achieved. Effective information and analysis allow companies to make more informed and data-based decisions, which ultimately improves business performance. Previous Research supports these findings, which emphasize the importance of information and analysis in improving management quality and performance [13], [17]. Based on descriptive statistics, item X3.4 (The organization is aware of conditions that affect product quality) with the lowest mean value (4.26) indicates that a better understanding of the company's internal and external conditions can boost business performance.

Conversely, the effect of Process Management on Business Performance does not show a significant effect. The t-count value of 1.639 is smaller than the t-table of 1.990, with a significance value of 0.105 (> 0.05), which means that the process management variable has no significant effect on business performance. Process management is one of the key dimensions of TQM. However, this finding contradicts with previous research which states that process management has a significant effect on company performance [27]. In contrast, other studies have reported similar findings, process management along with other TQM practices, did not have a significant direct impact on innovation or the performance of SMEs in Malaysia [10].

There are a number of reasons why these discrepancies exist. First, MSMEs tend to put a lot of value on being able to quickly adjust to changes in market demand, which happens a lot. Because of this, their major focus is on being flexible in their operations and being able to quickly respond to customer requests. In this case, process formality and optimization, which are generally the most important parts of process management, are not a priority. Second, small and medium-sized businesses (SMEs) have limited resources, such as money, workers, or time, which makes them focus on addressing short-term demands instead of making process changes that may pay off in the long run. Third, the COVID-19 pandemic had a big effect as well. During the crisis, small and medium-sized businesses (SMEs) focused on survival measures including changing their working capital and increasing their distribution networks instead of optimizing their internal processes, which would have required more resources. So, although though process management is an important part of TQM, it doesn't have a big effect on how well a company works in the near term.

Finally, the effect of Continuous Improvement on Business Performance also shows a positive and significant effect. The t-count value of 2.209 is greater than the t-table of 1.990, with a significance value of 0.030 (<0.05). This means that continuous improvement efforts made in TQM implementation contribute significantly to improving business performance. Continuous improvement helps companies to identify areas that need improvement and continue to improve product quality and business processes. This finding is in line with previous opinion, which states that continuous improvement is a key element in improving business performance [27]. Item X5.2 (The organization is aware of and records every error) has the lowest mean value (4.08), which indicates that recording and analyzing errors can improve business quality and performance.

Conclusion

Based on the results of the analysis and discussion of research on the effect of Total Quality Management (TQM) implementation on MSME business performance during the COVID-19 pandemic in the XIII Koto Mesjid Patin Processing Center, several things can be concluded. First, there is a significant partial effect of the TQM variables, namely Management Leadership, Customer Focus, Information and Analysis, and Continuous Improvement on MSME business performance in the XIII Koto Mesjid Patin Processing Center. Second, there is no significant partial effect of the Process Management variable on the business performance of these MSMEs. Third, simultaneously, the implementation of TQM involving management leadership, customer focus, information and analysis, and continuous improvement has a significant effect on the business performance of MSMEs in the XIII Koto Mesjid Patin Processing Center. Finally, based on the Standardized Coefficient Beta value, the Focus on Customers variable shows the most dominant influence with a value of 0.312, which means that focus on customers has a greater contribution to improving business performance compared to the other variables studied.

Based on the results of the analysis, discussion, and conclusions of this study, the authors provide several suggestions for MSME owners in the XIII Koto Mesjid Patin Processing Center, including continuing and being consistent in applying Management Leadership, Focus on Customers, paying attention to Information and Analysis, and making Continuous Improvements in MSME operations because these variables are proven to have a significant effect on business performance. In addition, MSME owners are advised to further improve the application of these variables in their business operations, as well as pay attention to low-scoring items such as increasing awareness of responsibility for product quality, handling customer complaints, understanding conditions that affect product quality, and recording errors in operations to maintain quality and reduce production errors. Future researchers are expected to expand the scope of research by involving other unexplored TQM variables, as well as using a larger number of respondents and more diverse data analysis methods to obtain more accurate and objective results, so that the recommendations provided can be more useful. For example, aspects of employee involvement or a strong organizational culture in TQM may not be fully influenced by the existing variables,

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