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Original Article

The Effect of Quality Service and Operational Standard Procedures to Operational Performance at CV Pabrik Tahu Sumedang

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Abstract

In the highly competitive food and beverage industry, operational efficiency is key to business sustainability; however, fluctuations in tofu consumption in East Jakarta as well as CV Pabrik Tahu Sumedang's production indicate challenges influenced by service quality and suboptimal implementation of Standard Operating Procedure (SOP). The objective of this research is to examine how Quality Service and Standard Operating Procedures (SOP) impact operational performance of CV Pabrik Tahu Sumedang. Operational performance is a crucial aspect of the food and beverage industry that affects efficiency, effectiveness, and customer satisfaction. The study utilises a quantitative method, gathering data through surveys given to CV Pabrik Tahu Sumedang employees. An analysis of the data was conducted using multiple linear regression to explore the correlation between Quality Service and SOP as independent variables, and Operational Performance as the dependent variable. The findings demonstrate that Quality Service positively and significantly influences Operational Performance. Similarly, the proper implementation of SOPs significantly improves operational efficiency and effectiveness. Furthermore, simultaneous analysis shows that Quality Service and SOPs together contribute significantly to enhancing Operational Performance. These findings confirm that optimising service quality and consistently implementing SOPs can enhance the factory's competitiveness and productivity. The originality of this research lies in analyzing the effect of service quality and standard operating procedures on operational performance in the context of the traditional food industry, which still lacks scientific exploration. This approach provides a new contribution in the context of operational management in small-medium enterprises based on local products.

Keywords: Efficiency, Operational Performance, Standard Operating Procedure, Tofu Industry, Quality Service.

1. Introduction

Global awareness of the importance of healthy and sustainable diets has led to increased consumption of plant-based foods, such as tofu, which is known to be protein-rich, affordable and environmentally friendly (Langyan et al., 2022). This trend not only supports individual health through a higher intake of fiber, vitamins, and minerals (Hertzler et al., 2020), but also has a positive impact on the environment by reducing greenhouse gas emissions and land use (Schwingshackl et al., 2020; Springmann et al., 2020). Currently, about 21.8% of the global population relies on plant-based proteins as their main source of nutrition (Yang, 2018), along with public health campaigns that encourage plant-based diets to tackle chronic diseases (Ferrari et al., 2022). However, challenges remain, such as the risk of vitamin B12 and iron

deficiency, which are generally easier to find in animal products, so a balanced diet plan is required (Mortensen, 2022). This development opens up great opportunities for the local plant-based food processing industry, including tofu producers, in supporting food security, sustainability and improved operational performance.

In Indonesia, tofu is not only consumed as a main side dish, but also as a snack food that has many variations, one of which is Sumedang tofu which is famous for its savory taste and crunchy texture. Demand for tofu, especially in urban areas such as Jakarta, shows a fairly stable trend despite annual fluctuations. Based on data from the Central Bureau of Statistics (2023), the average consumption of tofu per capita per week in East Jakarta during the period 2018-2023 has fluctuated, with a sharp decline in 2020 which is most likely due to the impact of the COVID-19 pandemic on people's purchasing power. These fluctuations are important to be observed by tofu industry players because they have direct implications for the company's production planning, distribution, and operational strategies.

Table 1. Average Weekly Per Capita Consumption by Bean Group in East Jakarta (Commodity Units)

Year	2018	2019	2020	2021	2022	2023
Average Tofu Consumption	0,153	0,156	0,143	0,164	0,153	0,147

Source: Central Bureau of Statistics (2023)

The data in Table 1, using the unit of commodity consumption per person per week in the East Jakarta area in Kilograms (Kg), shows fluctuations in the average per capita consumption per week for the legume group in East Jakarta from 2018 to 2023. In 2018, the consumption rate was 0.153 and rose slightly to 0.156 in 2019. However, in 2020, there was a significant decrease to 0.143. This is likely due to the COVID-19 pandemic which changed people's consumption habits due to economic and social restrictions. In 2021, consumption rose again to 0.164. This likely indicates economic recovery and stable consumer purchasing power. However, in 2022, it fell again to 0.153, and continued to decline in 2023 to 0.147. Despite its ups and downs, tofu consumption in Indonesia, especially in East Jakarta, remains high and stable as tofu is an affordable source of plant-based protein that is favoured by many.

However, despite the high demand for tofu, data on per capita consumption of legumes in East Jakarta over the past five years shows fluctuations. This can be caused by changes in commodity prices, alternative food trends, or dynamic purchasing power. This condition also affects businesses in the tofu sector, one of which is CV Pabrik Tahu Sumedang, a pioneer Sumedang tofu producer in Jakarta since the 1980s. Tofu production at CV Pabrik Tahu Sumedang throughout 2023 also experienced inconsistencies, with the highest and lowest production amounts occurring in significantly different months. These fluctuations indicate the importance of evaluating the efficiency and effectiveness of the company's operational performance.

In operational management, operational performance is influenced by various internal factors, two of which are service quality and the application of Standard Operational Procedure (SOP). Operational performance is a reflection of how effective and efficient an organization is in carrying out its business processes in order to achieve the set goals (Akpa et al., 2021). Two internal factors that play an important role in supporting operational performance are service quality and the implementation of Standard Operating Procedure (SOP). Service quality is defined as the level of service excellence felt by customers based on the conformity between expectations and reality received (Rust & Oliver, 1993). The dimensions of service quality according to the SERVQUAL model include reliability,

responsiveness, assurance, empathy, and physical evidence (Ambadas & Ram, 2024; Taylor, 2024). Meanwhile, SOP is a document that contains standardized procedures for implementing a job that aims to ensure the process runs consistently, efficiently, and controlled (Gaither & Frazier, 2002). Good SOP implementation supports the achievement of operational performance through increased productivity, reduced work errors, and efficient use of resources (Browning, 2021). By considering the importance of these two variables in the organization's operational system, it is necessary to conduct a more in-depth study to understand the role and influence of service quality and SOPs on improving operational performance.

A number of previous studies have shown that the implementation of good SOPs can improve work efficiency, as stated by Ardiansyach et al. (2022). On the other hand, service quality is proven to contribute to customer satisfaction and business competitiveness (Mmutle & Shonhe, 2017; Yahui et al., 2023). In line with the statement of Rashid & Rasheed (2024) that high service quality is proven to increase customer satisfaction and loyalty, they found that logistics service dimensions such as reliability and timeliness have a significant impact on consumer satisfaction. On the other hand, effective implementation of SOPs can drive efficiency and consistency of work processes (Shukor & Sheikhi, 2020), as evidenced by Ramirez-Vizarreta & Vega-Rodriguez (2024) which recorded an increase in operational efficiency through the Lean Warehousing approach in the MSME sector. In line with that, Olayiwola et al. (2024) also showed that the integration of quality management and SOPs had a positive impact on organizational performance and customer satisfaction in the cleaning services industry in Finland. These findings confirm that service quality and SOPs are important variables that need to be managed strategically in order to improve organizational operational performance.

Still, there are contradictory results such as in the study of Rashid & Rasheed (2024), it was found that variables such as product availability, delivery time, and delivery cost did not have a significant influence on customer satisfaction, indicating that not all aspects of logistics service quality have a direct impact on operational performance or output. More complex results were found in the study by Pandey & Singh (2025) in the healthcare sector in China. The study showed a trade-off relationship between operational efficiency and service quality. In some cases, too much focus on efficiency comes at the expense of service quality. This suggests that improvements in efficiency do not always go hand in hand with improvements in service quality, and vice versa (Hartl, 2022).

However, studies that integrate the two variables simultaneously, especially in the context of traditional local food-based Micro, Small and Medium Enterprises (MSMEs), are still very limited. Based on the background of the existing problems, this study aims to examine the effect of service quality and SOP implementation on the operational performance of CV Pabrik Tahu Sumedang, in order to provide an empirical contribution to operational management practices in the food MSME sector

2. Literature Review

2.1. Operational Performance

Operational Performance is the result of efforts that can be achieved by individuals or companies in accordance with their respective rights and obligations in achieving organisational goals legally, according to the law, and not against norms and ethics (Mawardi, 2022). Performance includes the achievement of the company's operational and strategic goals, which are measured against specific indicators such as productivity, customer

satisfaction, and profit (Ratani, 2023). In other words, performance reflects the level of success of an organisation in managing resources and work processes to achieve optimal results in accordance with the expectations of stakeholders (Najar, 2020).

2.2. Quality Service

Referring to Kotler et al. (2019), service quality is any form of action or activity that can be provided by one party to another, which is generally intangible and does not result in ownership. This means that the services provided cannot be seen physically, but the benefits are felt by the customer. Meanwhile, Istiatin (2015) stated that service quality is defined as all activities carried out by service companies to meet customer expectations. From these two opinions, it can be concluded that service quality includes all the company's efforts to provide the best service in order to create a positive experience for customers and achieve their satisfaction.

2.3. Standard Operational Procedure (SOP)

Standard Operating Procedure (SOP) is a document that contains steps or work procedures that must be carried out routinely and sequentially in an operational activity. The main purpose of the SOP is to ensure that work is done correctly, precisely, and consistently so that work results are in accordance with predetermined standards (Tathagati, 2014). With the existence of SOP, everyone in the organization has clear guidelines in carrying out their duties, so as to minimize errors and improve work efficiency. Sailendra (2015) explained that the SOP serves as a guideline so that operational activities in an organization can run smoothly and in accordance with applicable procedures. SOPs also help organizations maintain the quality of services or products, and facilitate the process of evaluating and monitoring employee performance. Thus, SOPs not only play a role in standardizing processes, but also in supporting the achievement of overall operational performance.

2.4. Research Framework and Hypothesis

According to Syahrizal & Jailani (2023), the framework is a conceptual model of how theory relates to various factors that have been identified as important issues. Meanwhile, a hypothesis is a formal statement that explains the expected relationship between the independent variable and the dependent variable (Creswell, 2015; Kaur, 2017). Based on the explanation above, a framework can be arranged related to Quality Service as an independent variable that has an influence on Operational Performance as the dependent variable. Standard Operational Procedure as an independent variable also has an influence on Operational Performance as the dependent variable.

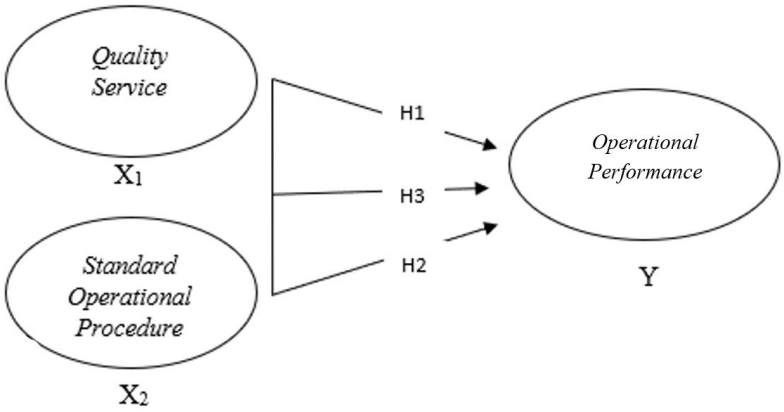

Figure 1. Research Framework

2.4.1. Effect of Quality Service on Operational Performance

Service quality is a measure of the extent to which a service meets or exceeds customer expectations (Syumantra & Aslami, 2022). In practice, superior service can increase customer satisfaction, strengthen loyalty, and impact more efficient business processes. Research by Yahui et al. (2023) on Starbucks in Malaysia found that customers tend to choose services with high quality, which not only increases satisfaction, but also strengthens the relationship between service quality and operational performance, especially in the food and beverage sector. This is supported by Ramirez-Vizarreta & Vega-Rodriguez (2024) which shows that improving service dimensions such as reliability and timeliness in the supply chain has a direct impact on operational efficiency in the MSME sector. Based on the research results presented, the research hypothesis is formulated as follows:

H1: Quality Service has a positive effect on Operational Performance.

2.4.2. Effect of Standard Operational Procedure on Operational Performance

SOP is a written document that explain the procedures for carrying out activities consistently and systematically, aiming to ensure the quality of work results and the efficiency of their implementation. In an operational context, SOPs function as a process control tool that can minimize variation, improve work accuracy, and speed up decision making. Santika & Putra (2024) stated that the implementation of SOPs thoroughly supports the effectiveness and efficiency of operational activities in the restaurant industry, which can be seen from the improvement of service quality and reduction of work errors. Other research by Pandey & Singh (2025) also showed that procedural consistency through an efficiency analysis (DEA) approach was able to improve the productivity of health services despite facing various resource constraints. Pratiwi & Aprinica (2023) concluded that the implementation of SOP in restaurant waiter service has an impact on increasing customer satisfaction, which in the long run has an impact on restaurant operational performance, such as increasing service speed and reducing complaints. Based on the results of the research presented, the research hypothesis is formulated as follows:

H2: Standard Operational Procedure has a positive effect on Operational Performance.

2.4.3. Effect of Quality Service and Standard Operational Procedure together on Operational Performance

The combination of service quality and SOP is seen as two complementary elements in forming an effective work system. Good service quality can increase positive customer perceptions, while SOP ensures that such quality can be delivered consistently. Olayiwola et al. (2024) shows that the integration of quality management systems and standard operating procedures has a significant impact on improving overall service performance in the cleaning services industry. Other research by Ramirez-Vizarreta & Vega-Rodriguez (2024) implies that the success of operational efficiency is not only determined by one single aspect, but by the synergy between excellent service and efficient work process governance. Therefore, the third hypothesis is formulated as follows:

H3: Service quality and SOPs simultaneously have a positive effect on operational performance.

3. Methods

3.1. Research Design

In this study, the authors used an associative descriptive research method. This research is called associative because it aims to test the relationship between several interrelated variables. Where is the relationship between variable X (Quality Service and Standard Operational Procedure) and variable Y (Operational Performance). With the associative method, researchers hope to find out whether the relationship between Quality Service (X1) and Standard Operational Procedure (X2) has a significant positive relationship or vice versa to the Operational Performance variable (Y).

3.2. Operationalisation of Variables

The independent variables used in this study are Quality Service and Standard Operational Procedure. The dependent variable used in this study is Operational Performance.

Table 2. Variable Operationalisation

No.	Variable	Dimensions	Indicator	Scale
1.	Operational Performance (Y)	1. Product Quality	a) The level of customer satisfaction with product quality. b) The number of complaints or claims related to products received. c) the rate of product defects found during production or after receipt by the customer.	Likert
		2. Cost Efficiency	a) The factory can make efficient use of raw materials and other resources. b) The factory can optimally utilise available resources.	
		3. Reliability	a) The level of on-time delivery b) Percentage of orders delivered without errors.	
		4. Flexibility	a) The factory can respond to changing market needs.	
2.	Quality Service (X1)	1. Reliability	a) The factory can provide proper service to customers b) The factory can make timely delivery of products	Likert
		2. Responsiveness	a) The factory can help and respond to customer needs	
		3. Assurance	a) The factory can foster trust in customers b) The factory can create a sense of security for customers	
		4. Empathy	a) The factory can understand customers' problems b) The factory can provide the right solution to customers	
		5. Physical Evidence	a) The factory has facilities that support its operational procedures b) The factory has good equipment for its operational activities	
3.		1. Efficiency	a) The company can save production time.	

No.	Variable	Dimensions	Indicator	Scale
			b) The company can save its manpower and resources.	
	Standard Operational Procedure (X2)	2. Effectiveness	The factory can ensure that the SOPs that have been established have an impact in accordance with the needs and goals of the company.	Likert
		3. Consistency	The factory demonstrates consistency in all its operational procedures.	

3.3. Data Source

Data collection is a technique or method used by researchers to obtain the data needed to answer the problems to be studied. In this study, researchers obtained data through questionnaires as primary data and secondary data from books, scientific magazines, journals, websites, and other documents related to the topic.

3.4. Population and Sample

The population in this study were all employees who worked at the CV Pabrik Tahu Sumedang. In this study, the authors used Non Probability Sampling research techniques and the method used was Saturated Sampling, namely a sample where all members of the population and the sample were all employees of CV Pabrik Tahu Sumedang totalling 54 employees.

3.5. Data Collection Method

In this study researchers used a questionnaire and observation. The questionnaire uses a way of giving a set of questions or written statements to respondents to get the answers. The questions in this questionnaire are closed and structured, which means that the answers to be chosen by the respondent are not given the opportunity to choose or provide answers outside the answers given by the researcher, while observations are made to find out how the characteristics and habits of the respondents related to the research variables in order to further strengthen the results of this study.

3.6. Data Analysis Method

The data analysis technique in this study uses the help of the Stastitical Package for Social Sciences (SPSS) for Windows Release v29 programme. The variable measurement scale in this study refers to the Likert Scale, where each is made using a scale of 1-5 answer categories, each of which is given a score or weight, namely the number of scores between 1 and 5, with details:

Table 3. Likert Scale Values for Questionnaire Ratings

Value	Description
1	Strongly Disagree
2	Disagree
3	Neutral/sufficiently agree
4	Agree
5	Strongly Agree

Source : Sugiyono (2013)

a. Validity Test

The validity test is used to determine whether a questionnaire is valid or not. Validity test is the level of reliability and validity of the measuring instrument used. An instrument said to be valid means that it shows that the measuring instrument used to obtain data is valid or can be used to measure what should be measured (Sugiyono, 2017).

The validity test should be carried out on the evidence of the question tested for validity. We compare the results of r value with r table where df = n-2 with 5% sig. If r table < r value then it is declared valid, while r table > r value then the data is invalid and will be excluded from further analysis. The validity test uses the Person Product Moment correlation technique with the following formula:

$$r = \frac{n\sum - (x\,(\sum y)}{\sqrt{\{n\sum_X 2 - (\sum x\,)^2\}\{n\sum_y 2 - (\sum y)^2}}$$

Description:
r = Correlation Coefficient
x = Item score
y = Total item score
n = Number of samples (respondents)

b. Reliability Test

Reliability can be done jointly on all question items. The tool for measuring reliability is Cronbach's Alpha. If the Alpha value is> 0.600 then the variable is reliable, while if the Alpha value is <0.600 then the variable is not reliable.

1. Classical Assumption Test

If the data obtained cannot fulfil the requirements, the data must be replaced with new data that meets the research requirements that will answer the research hypothesis.

a. Normality Test

According to George & Mallery (2020), the normality test is useful for knowing whether the independent variable and the dependent variable in this study are both normally distributed, close to normal or not. As is known, the t and f tests assume that the residual values follow a normal distribution. If the variables are not normally distributed, the statistical test results will decrease.

b. Multicollinearity Test

Multicollinearity testing is seen from the VIF and tolerance values. Tolerance measures the selected independent variables that are not explained by other independent variables. So, a low tolerance value is the same as a high VIF value (because VIF = 1/tolerance). The commonly used cutoff value to indicate the presence of multicollinearity is a tolerance value ≥ 0.01 or equal to a VIF value ≤ 10'.

c. Heteroscedasticity Test

Heteroscedasticity is a sign that there is uneven variance among residuals, leading to inefficiency in the estimated value. Detecting heteroscedasticity can be achieved by examining a plot graph of the production value of the dependent variable (ZPRED) against its residuals (SRESID), with predicted values on the Y axis and studentised residuals on the X axis. Identifying heteroscedasticity involves examining specific patterns displayed on a scatterplot graph. The key factor influencing decision-making is:

1) If there is a certain pattern, such as the existing points forming a certain regular pattern such as wavy, widening then narrowing, then heteroscedasticity occurs.

2) If there is no clear pattern, and the points spread above and below the number 0 on the Y axis, then there is no heteroscedasticity or homosdkedastisitas.

3.7. Data Analysis Method

a. Multiple Linear Regression Analysis

Because in this study there is more than one independent variable that will be tested to determine its effect on the dependent variable, the regression analysis process carried out is using multiple regression analysis. According to Multiple Linear Regression Analysis is a general statistical method used to examine the relationship between one dependent variable (Y) and several independent variables (X1, X2, XK) (Drapper & Smith, 1981). The formula used in multiple linear regression is as follows:

$$\mathbf{Y = a + b1X_1 + b2X_2 + e}$$

Description:
Y = Operational Performance
a = Constant number.
X_1 = Quality Service.
X_2 = Standard Operational Procedure.
e = Standard error
b1, b2 = regression coefficient for each independent variable.

b. Analysis of the Coefficient of Determination (R2)

The coefficient of determination (R^2) evaluates how well the model can account for variations in the dependent variable. R^2 ranges from zero to one. A low R^2 suggests that the independent variables have limited ability to explain the variation in the dependent variable. Conversely, a value near one indicates that the independent variables offer nearly all the necessary information to forecast the variation in the dependent variable. An issue with the coefficient of determination is its tendency to favour models with more independent variables, as R^2 tends to rise with every additional independent variable, even if the variable does not significantly impact the dependent variable. To address this bias, many researchers suggest using the Adjusted R^2 value when assessing the most suitable regression model (Ghozali, 2016a). With the following formula:

$$\mathrm{CD} = r^2 x\ 100\%$$

Description:
CD = Coefficient of Determination
r^2 = Squared Correlation Coefficient

3.8. Hypothesis Test

In this research project, an experiment is being conducted to assess how career advancement and the quality of service impact the performance of employees. To test this, the following methods are being employed:

1) Partial Test (T Test)

The t-test is applied to assess if the independent variable has a substantial impact on the dependent variable, as stated by Ghozali (2016b). In this study, the significance level is set at 5%, indicating a 5% chance of making an incorrect judgement when determining the critical value.

2) Decision making

If the likelihood (sig t) is greater than α (0.05), then the null hypothesis is affirmed, indicating that there is insufficient evidence of a significant impact of the independent variable (X) on the dependent variable (Y).

If the likelihood (sig t) is less than α (0.05), then the null hypothesis is dismissed, suggesting that there is a notable impact of the independent variable (X).

3) Simultaneous Test (F Test)

The F test is used to determine the combined effect of independent variables on the dependent variable. According to Nasrullah et al. (2024), it shows whether the independent variables as a group affect the dependent variable. The conditions for the f test with a significant level of 5% or 0.05 are outlined in the following manner:

a. If the F-value < F-table Ho is accepted and rejects Ha, meaning that the independent variables together do not significantly affect the dependent variable.
b. Meanwhile, if the F-value> F-table value, Ho is rejected and accepts Ha, meaning that the independent variables together significantly affect the dependent variable.

4. Results and Discussion

4.1. Research Results

4.1.1. Data Analysis Results

A. Analysis of Respondent Characteristics

In this survey, there were more male participants than female participants, with 72% of the 39 participants being male and 28% of the 15 participants being female, making up the total of 54 participants. The participants were categorised into 4 different groups based on their age. The first group included 15% of participants who were under 25 years old, the second group consisted of 30% of participants aged between 26-30 years, the third group had 44% of participants aged between 30-45 years, and the fourth group had 11% of participants aged over 46 years old.

The majority of participants in the study fell into 4 different categories based on their level of education. The first group had 82% of participants with a high school or vocational high school education, which equalled 44 people. The second group had 13% of participants with a D3 education, which was 7 people. The third group included 5% of participants, which was 3 people, and the fourth group had 0% representation. The majority of participants had a length of service between 11-15 years, which accounted for 52% of participants or 28 people. The second group had a work experience of 6-10 years, representing 32% or 17 participants. The third group had a work experience of less than 5 years, making up 9% or 5 participants. The fourth group had a work experience of more than 16 years, accounting for 7% or 4 participants.

B. Research Instrument Test

1) Validity Test

In this research, a validity test was conducted to evaluate the data collected to determine its accuracy if the significance level was lower than 0.05 or 5%. The test determined that if the calculated correlation coefficient (rvalue) exceeded the critical value (r table), then the questionnaire or instrument items were considered to be valid. With a sample size of n=54 and degree of freedom df=52, the critical r table value obtained was 0.2681.

Since the calculated rvalue was 0.2681, it was concluded that all statements related to Operational Performance were valid as each rvalue exceeded the r table value. Similarly, all

statements regarding Quality Service and Standard Operational Procedure were deemed valid based on the same analysis.

2) Reliability Test

In this research, an instrument is considered reliable when its Cronbach Alpha value is equal to or greater than 0.600. Conversely, if an instrument's Cronbach Alpha falls below this threshold, it is deemed unreliable. As part of the assessment, a total of 9 instruments measuring Quality Service, 4 instruments assessing Standard Operational Procedure (SOP), and 8 instruments focusing on Operational Performance were validated. The analysis findings indicate that both independent and dependent variables are reliable, as evidenced by Cronbach's Alpha values exceeding 0.600, thereby endorsing the credibility of the results.

3) Classical Assumption Test

a. Multicollinearity Test

In assessing multicollinearity, the common approach involves examining the values of the Variance Inflation Factor (VIF) and Tolerance. When the Tolerance exceeds 0.10 and the VIF is less than 10, it indicates that the regression model is free from multicollinearity issues.

Table 4. Multicollinearity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	10,465	3,721		2,813	0,007		
	Quality service	0,009	0,069	0,011	0,126	0,900	0,989	1,012
	Standard operational procedure	1,365	0,145	0,798	9,390	0,000	0,989	1,012

a. Dependent Variable: Operational Performance

Source: SPSS V 20 Data Processing Results

Looking at Table 4, it is evident that the VIF value is 1.012 which is less than 10, and the Tolerance value is 0.989 which is greater than 0.10 for all the variables examined in this research. This indicates that there is no strong or close linear correlation among the independent variables. Therefore, the regression analysis conducted in this study does not detect any multicollinearity issues, meeting the criteria for a reliable regression model.

b. Normality Test

Normality testing is conducted on the residuals of the study data using the Kolmogorov Smirnov test. When the histogram displays a normal distribution, the data is deemed normal, and if the PP plot forms a straight diagonal line, the data is also considered normal.

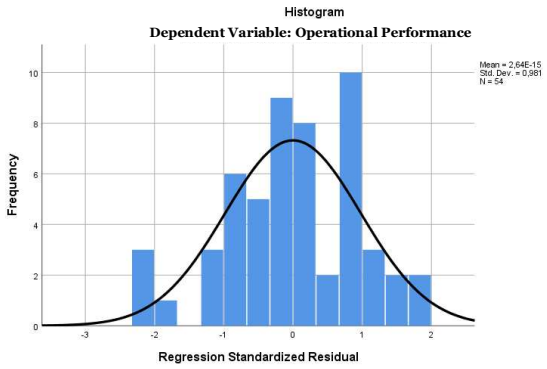

Figure 2. Histogram Graph
Source: SPSS V 20 Data Processing Results

According to the diagram in Figure 2, the curve appears to be normally distributed as indicated by the histogram not leaning to one side. This regression model seems appropriate for analysis and suggests that the data in the study follow a normal distribution.

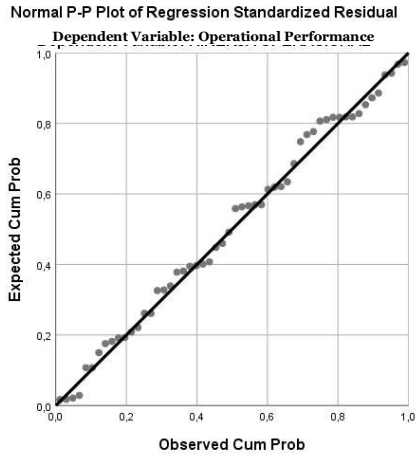

Figure 3. Normality Results of Normal P-Plots Graphs
Source: SPSS V 20 Data Processing Results

According to the information provided in Figure 3, the data points on the P-Plots graph appear to be evenly distributed along the diagonal line, suggesting that the data follows a normal distribution.

c. Heteroscedasticity Test

Heteroscedasticity indicates the presence of different variations in the regression model. One way to detect it is by looking at the pattern on the scatter graph between the predicted value (ZPRED) and the residual (SRESID). The presence of a certain pattern indicates heteroscedasticity, while a random distribution indicates the absence of such problems. The test results are shown in the following illustration:

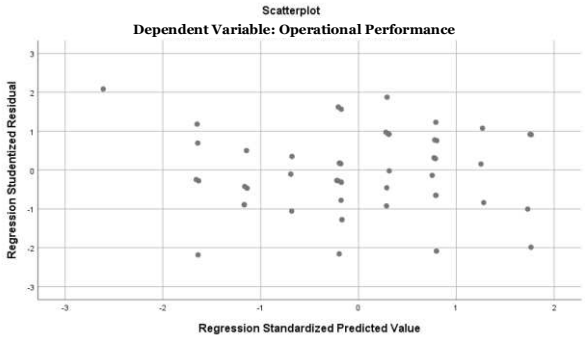

Figure 4. Heteroscedasticity Test Results
Source: Results of SPSS V 20

According to Figure 4, the scatterplot used to test heteroscedasticity shows a distinct pattern, with points dispersed both above and below 0 on the Y axis. From this, it can be inferred that the data analysis model does not exhibit heteroscedasticity.

4) Data Analysis Method

a. Multiple Linear Regression Analysis

This analysis aims to determine the extent of the influence of the Operational Performance variable (Y) when associated with two independent variables, namely Quality Service (X1) and Standard Operational Procedure (SOP) (X2).

Table 5. Multiple Linear Regression Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
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	Standard operational procedure	1,365	0,145	0,798	9,390	0,000	0,989	1,012

a. Dependent Variable: Operational Performance
Source: SPSS V 20 Data Processing Results

Based on the calculation results of table 5 above, the multiple linear regression equation can be arranged as follows:

$$\mathbf{Y = 10,465 + 0,009X_1 + 1,365\ X_2}$$

a. The constant value (α) = 10.465 means that if Quality Service and Standard Operational Procedure (SOP) are 0 or constant (fixed and unchanged), then the Operational Performance value is 10.465.
b. The coefficient value (β1) of Quality Service is 0.009, which means that if the Quality Service variable increases by 1% assuming the Standard Operational Procedure variable is constant, then operational performance will increase by 0.009 with a positive direction. However, based on the statistical test results, this effect is not significant

because it has a p-value of 0.900 (greater than 0.05). Thus, it can be concluded that improving Quality Service has no significant effect on Performance.

c. The coefficient value (β2) of Standard Operational Procedure is 1.365, which means that if the Standard Operational Procedure increases by 1% assuming the Standard Operational Procedure variable is constant, then operational performance will increase by 1.365 with a positive direction. So if the Standard Operational Procedure increases, the Operational Performance will also increase.

b. Coefficient of Determination Analysis

The main purpose of the coefficient of determination is to assess the impact that the independent variables, such as Quality Service (X1) and Standard Operational Procedure (X2), have on the dependent variable, Operational Performance (Y).

Table 6. Coefficient of Determination Test Results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,797[a]	0,636	0,621	2,16747

a. Predictors: (constant), standard operational procedure, quality service
b. Dependent variable: operational performance

Source: SPSS V 20 Data Processing Results

According to the findings in Table 6, it is evident that the coefficient of determination (R2) is 0.300 or 30.0%. This suggests that Quality Service and Standard Operational Procedure contribute 30.0% to Operational Performance, with the remaining 70.0% influenced by unexamined variables like external factors (market conditions, government policies, or changes in consumer trends) or internal factors (technology, human resource management, or production process efficiency).

5) Hypothesis Test

a. T test (Partial Test)

The t statistical test primarily indicates the extent to which an explanatory variable contributes on its own to explaining the variation in the dependent variable.

Table 7. T-test results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	10,465	3,721		2,813	0,007
	Quality service	0,009	0,069	0,011	0,126	0,900
	Standard operational procedure	1,365	0,145	0,798	9,390	0,000

a. Dependent Variable: operational performance

Source: SPSS V 20 Data Processing Results

Calculation of t_{table} df = n-k-1 = 54 - 2- 1 = 51, t_{table} value = 1, 675 (rounded to 2, 008).

a. The Effect of Quality Service on Operational Performance

Based on the results of the t $_{test}$ where the t_{value} and t_{table} values are 0, 126 < 1, 675. in addition, it is known that the sig value, 0, 900> 0.05 or 5% so that it can be said that Ho is

accepted and Ha is rejected. meaning that Quality Service cannot have an effect or a significant relationship on Operational Performance.

b. Effect of Standard Operational Procedure on Operational Performance

According to the t test results showing t_{value} and t_{table} values of 9, 390 > 1, 675, as well as a sig value of 0.000 < 0.05 or 5%, it can be concluded that Ho is rejected and Ha is accepted. This indicates that Standard Operational Procedure has a considerable impact on Operational Performance.

b. F Test (Simultaneous Test)

The F test is used to assess the combined impact of independent variables on the dependent variable in multiple linear regression. The hypothesis testing results for this type of regression analysis are as follows:

Table 8. F Test Results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	417,905	2	208,953	44,478	0,000[b]
	Residual	239,595	51	4,698		
	Total	657,500	53			

a. Dependent Variable: operational performance
b. Predictors: (Constant), standard operational procedure, quality service

Source: Primary data processed by SPSS V 20

Calculations of F_{table} df = n – k – 1 = 54 – 2 – 1 = 51, F_{table} value= 3, 18
Formula: df (N1) = k – 1 = 3 – 1 = 2
df (N2) = n – k = 54 – 3 = 51

According to the F test results in Table 8, it is evident that Fhitung is greater than Ftabel, with 44.478 exceeding 3.18. Furthermore, the significance value is less than 0.005 or 5%, indicating that Ho is rejected and Ha is accepted. This suggests that both Quality Service and Standard Operational Procedure have a positive and significant impact on the Operational Performance of CV Pabrik Tahu Sumedang when considered together.

4.2. Discussion

4.2.1. The Effect of Quality Service on Operational Performance

The t-test results show that the t-value of 0.126 is below the t-table of 2.008, with a significance level of 0.900 which far exceeds the 0.05 significance limit. This shows that there is no significant influence between service quality on operational performance at CV Pabrik Tahu Sumedang. This result occurs because the characteristics of the tofu processing industry are more oriented towards production volume and process efficiency than on aspects of service to customers. In the context of a company that focuses on production output, service quality tends not to be a major determinant of operational success. Customers generally do not interact directly with the service process intensively, so service aspects do not have a direct influence on indicators of efficiency, productivity, or output quality.

This finding suggests that in the context of traditional food processing companies such as CV Pabrik Tahu Sumedang, service quality has not been a determining factor in achieving operational performance. This is in contrast to the service or retail sector, where service quality has a more direct relationship to customer satisfaction and operational performance, as found in the studies of Yahui et al. (2023) and Rashid & Rasheed (2024). This difference

confirms that the role of service quality is contextual and not necessarily a universal determinant of performance. In addition, these results reinforce the findings of Pandey & Singh (2025) who highlight the potential for service quality to become a burden if it is not aligned with operational efficiency demands. Thus, companies need to tailor service improvement strategies to their industry characteristics so as not to create inefficiencies that disrupt core operational performance.

4.2.2. The Effect of Standard Operational Procedure on Operational Performance

The t-test results show that the t-value of 9.390 is greater than the t-table of 2.008, with a significance value of 0.000 <0.05. This shows that SOPs have a positive and significant effect on operational performance. This significant effect is explained by the role of SOPs as an important foundation in creating work consistency, process efficiency, and error reduction. This significant effect shows that SOP has been implemented systematically and effectively in supporting the company's operational activities. A good SOP serves as a guideline for consistent and efficient work implementation, so as to reduce work errors, increase process speed, and ensure the quality of production results. In the context of the food industry such as CV Pabrik Tahu Sumedang, where work processes are routine and repetitive, SOPs have a key role in creating work stability and efficiency.

The research findings show that SOP (Standard Operating Procedure) have a significant and direct influence on improving the operational performance of CV Pabrik Tahu Sumedang. SOPs not only act as work guidelines, but also as a management control tool that ensures the consistency of the production process. The existence of structured and disciplined SOPs has proven to be able to increase the efficiency of work time, reduce the level of work errors, and facilitate the performance evaluation process. Documented procedures allow all workers to clearly understand the stages of work, their respective responsibilities, and the quality standards that must be achieved. In the context of manual-based to semi-modern processing industries such as tofu factories, this is especially important given the variety of labor and limitations of automation. SOPs are also a means of standardizing product quality, which has implications for improving customer satisfaction and business competitiveness. This result reinforces previous studies conducted by Santika & Putra (2024) and Ramirez-Vizarreta & Vega-Rodriguez (2024), that good SOP can improve operational effectiveness and process efficiency in the food and MSME sectors. This finding confirms that SOP have a real contribution to improving operational performance, especially in the context of manual or semi-modern production-based industries. SOP is a instrument that not only regulate workflow, but also support quality standardization, time efficiency, and labor productivity.

4.2.3. The Effect of Quality Service and Standard Operational Procedure Together on Operational Performance

The F test shows the f-value of 44,478> f-table 3.18 with a significance of 0.000 <0.05. This means that service quality and SOP simultaneously have a positive and significant effect on operational performance. These results indicate a synergy between service quality and SOPs in supporting operational performance. Structured SOP supports the smooth running of internal processes, while service quality helps maintain customer satisfaction and strengthen the company's reputation. When both are implemented simultaneously, the company not only gains work efficiency, but is also able to provide an adequate service experience for stakeholders. This strengthens the integration between front-office and back-office elements in one solid work system.

This finding confirms that service quality and SOPs are not standalone variables, but rather complement each other in an effort to improve operational performance. In the context of food processing companies, this synergy can encourage efficient production processes while maintaining service standards that can support distribution and customer relationships. This is in line with the research of Olayiwola et al. (2024) and Amin (2020), which state that the integration of service quality and SOP can significantly improve organizational efficiency and output. This simultaneous effect occurs because although service quality partially has no effect, its existence supports the image of professionalism and strengthens the customer experience when integrated with effective work processes through SOPs. The combination of the two creates synergy between the "front-end" (customer service) and "back-end" (production process) aspects, which together drive overall operational performance. This is in line with the research of Olayiwola et al. (2024) and Amin (2020), which state that the integration of service quality and SOP can significantly improve organizational efficiency and output.

5. Conclusion

This study aims to determine the effect of Quality Service and Standard Operating Procedures (SOP) on the Operational Performance of CV Pabrik Tahu Sumedang. Based on the results of data analysis and hypothesis testing, it can be concluded that Service Quality does not have a significant effect on operational performance. Although service quality is often considered an important factor in organizational success, in the context of a production plant such as CV Pabrik Tahu Sumedang, it turns out that other aspects such as internal management and procedural efficiency play a more important role. In contrast, Standard Operating Procedures (SOP) were shown to have a significant and positive influence on operational performance. Good and consistent implementation of SOP can improve work efficiency, maintain production quality, and minimize errors in operational processes. When both variables are tested simultaneously, namely Service Quality and SOP, the results show a strong influence on operational performance, but with the dominant influence of SOP. This suggests that although service quality has a supporting role, the main strength in improving operational performance lies in the effective implementation of SOP.

The results of this study support the main objective of the research, which is to identify the relative influence of Service Quality and SOP on operational performance. In addition, the findings also provide reinforcement to the theory that process-based management contributes directly to operational outcomes, particularly in the manufacturing industry. Compared to some previous studies that emphasize the importance of customer service improvement, this study shows that in certain contexts such as factories, structured internal factors are more decisive for the final outcome.

The implications of this study are relevant from both an academic and practical perspective. The insignificant effect of Service Quality on operational performance suggests that companies need to reconsider their emphasis on service aspects, especially if it is not supported by procedural efficiency. Service improvement alone is not enough to produce significant changes in operational performance, especially in the context of production. In contrast, the significant role of SOP confirms that the implementation of systematic and standardized procedures is crucial in maintaining consistency of production output and work efficiency. This supports the argument that regular supervision, periodic training, and a deep understanding of SOP are important elements in improving operational performance. Overall, the two variables, namely Service Quality and SOP, are able to explain the contribution to

operational performance by 63.6%, with the dominant influence coming from SOP. This shows the importance of integration between strategic and operational aspects in achieving optimal work efficiency, especially in industries that are highly dependent on the production process.

Based on the results of the study, it is recommended that CV Pabrik Tahu Sumedang focus more on improving the consistent application of Standard Operating Procedures (SOP), considering that this variable is proven to have a significant effect on operational performance. Strengthening SOPs can be done through routine training, periodic supervision, and utilization of technology to support production efficiency. Although Service Quality does not show a statistically significant effect, companies are still encouraged to maintain and improve service aspects through employee training in responsiveness and empathy, as well as conducting regular customer satisfaction surveys. In addition, interdivisional coordination and monitoring of production data need to be improved to ensure smooth distribution and informed decision-making. Future researchers are also expected to explore other variables that may affect operational performance, so that the resulting study becomes more comprehensive.

6. References

Akpa, V. O., Asikhia, O. U., & Nneji, N. E. (2021). Organizational Culture and Organizational Performance: A Review of Literature. *International Journal of Advances in Engineering and Management*, *3*(1), 361–372. https://doi.org/10.35629/5252-0301361372

Ambadas, T. G., & Ram, P. S. (2024). Service Quality Management: A Literature Reviews. *International Journal for Multidisciplinary Research (IJFMR)*, *6*(2), 1–7. https://doi.org/10.36948/ijfmr.2024.v06i02.16957

Ardiansyach, H. T., Widjajanti, K., & Rusdianti, E. (2022). Pengaruh penerapan standar operasional prosedur dan GeoKKP terhadap kinerja pegawai dengan motivasi kerja sebagai variabel moderator. *Jurnal Riset Ekonomi Dan Bisnis*, *15*(2), 76–94. https://doi.org/10.26623/jreb.v15i2.4163

Browning, J. (2021). Incorporating Economic Decisions into Reservoir Simulation to Support Accurate and Efficient Optimization and Analysis of Field Development Strategies. In *SPE Western Regional Meeting Proceedings* (Vol. 2021). https://doi.org/10.2118/200854-MS

Creswell, J. W. (2015). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. pearson.

Drapper, N. R., & Smith, H. (1981). Applied Regression Analysis. John Willey & Sons. *Inc. NY*.

Ferrari, L., Panaite, S.-A., Bertazzo, A., & Visioli, F. (2022). Animal-and plant-based protein sources: a scoping review of human health outcomes and environmental impact. *Nutrients*, *14*(23), 5115. https://doi.org/10.3390/nu14235115

Gaither, N., & Frazier, G. (2002). Operations Management, 9rd Cincinnati. *Ohio: South-Western*.

George, D., & Mallery, P. (2020). 2a IBM SPSS Statistics Processes for PC. In *IBM SPSS Statistics 23 Step by Step* (pp. 22–39). Routledge.

Ghozali, I. (2016a). Quantitative and qualitative research design for accounting, business, and other social sciences. *Publisher: Primary Yoga*.

Ghozali, I. (2016b). *Structural equation modeling: Metode alternatif dengan partial least square (PLS)*. Badan Penerbit Universitas Diponegoro.

Hartl, G. (2022). Quality Control and Risk Management in Biobanks. In *Biobanks in Lowand Middle-Income Countries: Relevance, Setup and Management* (pp. 65–71). https://doi.org/10.1007/978-3-030-87637-1_10

Hertzler, S. R., Lieblein-Boff, J. C., Weiler, M., & Allgeier, C. (2020). Plant proteins: assessing

their nutritional quality and effects on health and physical function. *Nutrients*, *12*(12), 3704. https://doi.org/10.3390/NU12123704

Istiatin, E. N. (2015). Pengaruh kualitas pelayanan terhadap kepuasan konsumen pada dealer PT. ramayana motor sukoharjo. *Jurnal Paradigma Universitas Islam Batik Surakarta*, *13*(01), 115736. https://media.neliti.com/media/publications/115736-ID-pengaruh-kualitas-pelayanan-terhadap-kep.pdf

Kaur, S. P. (2017). Writing the hypothesis in research. *Amarjeet Kaur Sandhu*, *122*.

Kotler, P., Keller, K., Brady, M., Goodman, M., & Hansen, T. (2019). *Marketing Management: 4th European Edition*. Pearson UK.

Langyan, S., Yadava, P., Khan, F. N., Dar, Z. A., Singh, R., & Kumar, A. (2022). Sustaining protein nutrition through plant-based foods. *Frontiers in Nutrition*, *8*, 772573. https://doi.org/10.3389/fnut.2021.772573

Mawardi, K. (2022). Analisis Faktor Yang Mempengaruhi Kinerja Operasional Perusahaan Freight Forwarding Dalam Menunjang Kegiatan Ekspor. *Jurnal Ekonomi, Bisnis Dan Manajemen*, *1*(1), 39–56. https://doi.org/10.58192/ebismen.v1i1.17

Mmutle, T., & Shonhe, L. (2017). Customers' perception of Service Quality and its impact on reputation in the Hospitality Industry. *African Journal of Hospitality, Tourism and Leisure*, *6*(3), 1–25. https://www.researchgate.net/profile/Tsietsi-Mmutle/publication/319208588_Customers'_perception_of_Service_Quality_and_its_impact_on_reputation_in_the_Hospitality_Industry/links/599c02c8a6fdcc500349d4d4/Customers-perception-of-Service-Quality-and-its-impa

Mortensen, T. M. B. (2022). Is the Focus on Healthy Eating Drowning in the Discussion About Sustainable Food? *Kompass Nutrition & Dietetics*, *2*(2), 73–74. https://doi.org/10.1159/000526838

Najar, B. W. (2020). Efficiency and/or Effectiveness in Managing Organizations. *Journal of Education and Culture Studies*, *4*(2), 131–138. https://doi.org/10.22158/jecs.v4n2p131

Nasrullah, A., Sukmawati, S., Saumi, T. F., Dwiyanti, W., Jumhana, E., Mubarika, M. P., Ratnasari, S., Hidayanti, N., & Islami, N. (2024). SPSS: Pengolahan Data untuk Penelitian Ekonomi dan Bisnis. *EDUPEDIA Publisher*, 1–174.

Olayiwola, R. K., Tuomi, V., Strid, J., & Nahan-Suomela, R. (2024). Impact of Total quality management on cleaning companies in Finland: A Focus on organisational performance and customer satisfaction. *Cleaner Logistics and Supply Chain*, *10*, 100139. https://doi.org/10.1016/j.clscn.2024.100139

Pandey, U., & Singh, S. (2025). Incorporating Contextual Factors into a Comprehensive Analysis of Operational Efficiency and Service Quality in Healthcare Sector. *International Journal of Mathematical, Engineering and Management Sciences*, *10*(2), 300–350. https://doi.org/10.33889/IJMEMS.2025.10.2.017

Pratiwi, K. R., & Aprinica, N. P. I. (2023). Implementasi Prosedur Operasi Standar Pelayanan Pramusaji di Restoran. *Jurnal Ilmiah Pariwisata Dan Bisnis*, *2*(9), 2096–2103. https://doi.org/10.22334/paris.v2i9.551

Ramirez-Vizarreta, T. B., & Vega-Rodriguez, L. V. (2024). Application of Lean Warehousing Strategies in Footwear Trading SMEs: A Case Study on Enhancing Operational Efficiency in Peru. *Proceedings of the International Conference on Industrial Engineering and Operations Management*, 72–83. https://doi.org/10.46254/BA07.20240012

Rashid, D. A., & Rasheed, D. R. (2024). Logistics service quality and product satisfaction in e-commerce. *Sage Open*, *14*(1), 21582440231224250. https://doi.org/10.1177/21582440231224250

Ratani, C. A. U. (2023). A Conceptual Roadmap to Success: Understanding the 7 Determinants of Business Performance. *International Journal of Neurolinguistics & Gestalt Psychology*, *3*(2), 1–16. https://doi.org/10.52522/ijngp.v3i2.1

Rust, R. T., & Oliver, R. L. (1993). *Service quality: New directions in theory and practice*.

Sage Publications.

Sailendra, A. (2015). *Langkah-Langkah Praktis Membuat SOP (Standard Operating Procedures)*. Trans Idea Publishing.

Santika, I. D. A., & Putra, I. N. T. D. (2024). Evaluasi Penerapan Standar Operasional Prosedur (SOP) Dalam Meningkatkan Kualitas Operasional Di Cendrawasih Restoran Golden Palace Hotel Mataram. *Journal Of Responsible Tourism*, *4*(1), 145–150. https://doi.org/10.47492/jrt.v4i1.3472

Schwingshackl, L., Watzl, B., & Meerpohl, J. J. (2020). The healthiness and sustainability of food based dietary guidelines. In *bmj* (Vol. 370). British Medical Journal Publishing Group. https://doi.org/10.1136/BMJ.M2417

Shukor, S. A., & Sheikhi, A. (2020). Implementation Strategies for ERP Adaptation in Malaysian SME Agricultural Sector. *Journal of Theoretical and Applied Information Technology*, *98*(24), 3983–3996. https://api.elsevier.com/content/abstract/scopus_id/85101353162

Springmann, M., Spajic, L., Clark, M. A., Poore, J., Herforth, A., Webb, P., Rayner, M., & Scarborough, P. (2020). The healthiness and sustainability of national and global food based dietary guidelines: modelling study. *BMJ*, *370*. https://doi.org/10.1136/bmj.m2322

Sugiyono. (2017). Metode Penelitian Penelitian Kuantitatif, Kualitatif dan R&D. In *Bandung: Alfabeta*.

Syahrizal, H., & Jailani, M. S. (2023). Jenis-jenis penelitian dalam penelitian kuantitatif dan kualitatif. *QOSIM: Jurnal Pendidikan, Sosial & Humaniora*, *1*(1), 13–23. https://doi.org/10.61104/jq.v1i1.49

Syumantra, R. F., & Aslami, N. (2022). Analysis Of Service Quality Dimensions Towards Customer Satisfaction At Bpjs Employment In Medan Branch Office. *Journal of Humanities, Social Sciences and Business (JHSSB)*, *1*(4), 7–14. https://doi.org/10.55047/jhssb.v1i4.217

Tathagati, A. (2014). *Step by step Membuat SOP (Standar Operating Procedure)*. Kota Salatiga, Jawa Tengah : Efata Publishing.

Taylor, R. (2024). Unveiling Customers' Perceptions: a Comprehensive Analysis of Service Quality Dimensions. *The American Journal of Management and Economics Innovations*, *6*(04), 1–6. https://doi.org/10.37547/tajmei/volume06issue04-01

Yahui, L., Siwen, C., Anis, N. S. B. A., Guodong, S., Yuanhao, G., Hung, D. K. M., & Azmi, N. A. (2023). How Service Quality Influence Customer Satisfaction: A Case Study of Starbucks in Malaysia. *International Journal of Tourism and Hospitality in Asia Pasific (IJTHAP)*, *6*(3), 29–41. https://doi.org/10.32535/ijthap.v6i3.2173

Yang, S. Y. (2018). Trends of world cereals and pulses following the human populations. *Biomedical Journal*, *1*(4), 1–4. https://doi.org/10.26717/BJSTR.2018.11.002098