Analysis of the Influence of Price, Quality, and Location on Decisions to Purchase Tuna Raw Materials and Its Impact on Company Performance at Pt Maluku Prima Makmur (PT MPM)

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Abstract

PT. Maluku Prima Makmur (MPM), which is located in Ambon City, Maluku, makes the fishing business its main business. All processes are integrated from upstream to downstream, from the catching process, and processing to domestic and overseas sales (Direct Export)—the main product of the company PT. MPM is in the form of frozen and fresh tuna products. This fresh tuna product will be exported directly to Japan in whole form via airplane cargo. In Japan, sales are carried out using an auction or fixed price system. Meanwhile, frozen tuna products will be exported to the USA.

The main problem currently faced by companies is that companies often have difficulty meeting export contract targets due to the dilemma of uncertainty over the price of tuna raw materials paid by the company, instability in the quality of raw materials, and fishing locations which are highly dependent on the season and weather. The company's raw material areas are spread from Banda, Seram and Papua waters.

This research uses quantitative methods, where according to Sugiyono (2013), quantitative research methods can be interpreted as research methods based on the philosophy of positivism, used to research certain populations or samples. The survey method was chosen as a reference source for primary data by using or distributing questionnaires. This research was conducted at PT. Maluku Prima Makmur is located in Ambon City, Maluku.

Based on the research results shown in Table 32 regarding the correlation coefficient on the indirect influence between variables, it is shown that the highest coefficient of determination value of the exogenous variable (X) on the endogenous variable (Y) with the mediation of the endogenous variable (Z) is the raw material quality variable (X2) on company performance (Y) through the mediation of purchasing decisions (Z) with a value of 0.2236. The third highest exogenous variable (X) on the endogenous variable (Y) mediated by the endogenous variable (Z) is the raw material price variable (X1) on company performance (Y) through the mediation of purchasing decisions (Z) with a value of 0.0838.
Based on the findings on the path coefficient as previously explained, the raw material quality variable is the variable that has the greatest contribution in influencing raw material purchasing decisions which ultimately can improve company performance.

**Keywords:** supply chain, company’s performance, raw materials, product, purchasing

**Introduction**

**Background**

The Indonesian seas have an area of approximately 3.1 million km² (territorial sea waters 0.3 million km² and archipelagic waters 2.8 million km²) and the waters of the Indonesian Exclusive Economic Zone (ZEEI) cover an area of approximately 2.7 million km² with a coastline along 81,000 km (Supriadi, 2011). This places Indonesia as a country that has enormous fisheries potential, with a wealth of many types of fish and other diverse marine products. For this reason, there is a need for sustainable utilization and processing of the fisheries sector.

The export value in the January-March period (first quarter) of 2019 increased by 13.5% when compared to the same period in 2018. In the first quarter of 2018, the tuna export value was 155.9 million USD, while in the first quarter of 2018 2019 the value was 176.6 million USD. It is known that in terms of value, the main destination countries for Indonesian tuna exports are the USA, Japan, Thailand, Italy, and Saudi Arabia (KKP, 2019).

**Table 1.** Volume and Share of TTC Production, 10 Largest Countries in the

(Source: RI KKP website, 2019)

Data from the Ministry of Maritime Affairs and Fisheries (2019) shows that the demand for and fulfillment of tuna raw materials for export shares has experienced very high results both in volume and percentage compared to other Asian and European countries.
PT. Maluku Prima Makmur (MPM), which is located in Ambon City, Maluku, makes the fishing business its main business. All processes are integrated from upstream to downstream, from the catching process, and processing to domestic and overseas sales (Direct Export)—the main product of the company PT. MPM is in the form of frozen and fresh tuna products. This fresh tuna product will be exported directly to Japan in whole form via airplane cargo. In Japan, sales are carried out using an auction or fixed price system. Meanwhile, frozen tuna products will be exported to the USA.

The main problem currently faced by companies is that companies often have difficulty meeting export contract targets due to the dilemma of uncertainty over the price of tuna raw materials paid by the company, instability in the quality of raw materials, and fishing locations which are highly dependent on the season and weather. The company's raw material areas are spread from Banda, Seram and Papua waters.

The instability of factors which are important elements in the supply chain will of course influence the pattern of purchasing decisions for raw materials. The picture that researchers can provide regarding a decrease in the supply of raw materials can be seen in the table of raw material acquisition for tuna from 2019-2021 as follows:

<table>
<thead>
<tr>
<th>NO</th>
<th>ITEM</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>BAHAN BAKU IKAN TUNA</td>
<td>795,327</td>
<td>689,705</td>
<td>514,598</td>
</tr>
</tbody>
</table>

Source: PT. Maluku Prima Makmur, 2022

Based on the table above, it appears that the acquisition of tuna raw materials continues to decline from 2019 to 2021, even though to meet the contract target the company must obtain 800,000 tons/year.

The quality of raw materials greatly influences purchasing patterns made by buyers in the procurement department at PT MPM. Company performance is greatly influenced by the decision to purchase raw materials made by the company's buyer team, where if the determination made by the buyer is optimal, namely the buyer gets raw materials with quality that meets company standards at a competitive purchase price according to the limits set by the company, so the company's performance in terms of revenue will increase. Also, with competitive purchasing prices for raw materials, because the distance traveled by fishermen is
close, the company's target for contract fulfillment will be increasingly fulfilled, which automatically increases the company's share value, which leads to increased performance as well.

Previous studies that researchers obtained from literature studies related to the influence of price, product quality, and location on purchasing decisions and company performance, researchers found that most of these studies used research objects in the form of finished products and researchers have not found research with the series of variables as mentioned previously on objects in the production of raw material products. This leads to the consequences of different theoretical approaches to the observed variables, especially raw material purchasing variables and company performance. For this reason, researchers want to examine whether a series of variables - price of raw materials, quality of raw materials, and location of raw materials - have proven to be significant in influencing company performance.

**Company performance**

Performance is the ability demonstrated by showing progress or results (Yurniwati, 2008). Company performance is a measure of the success of a company which is measured within a specified time period. The results obtained are an indicator in assessing an activity and strategy that has been prepared, planned and implemented to identify whether the strategy is appropriate or otherwise (Prakosa, 2005). The performance targets set by the company will motivate personnel to work together to achieve the expected goals, where good performance will have an impact on the sustainability of the company.

Porter, in Thatte, et al (2013) The essence of company performance is the company's ability to produce at low costs in the industry or be unique in the industry in several popular aspects thereby providing value to consumers. Developing a sustainable competitive advantage is currently increasingly difficult. Companies or organizations can maintain a competitive advantage until the services they provide and the pattern of how they deliver them have attributes that match the criteria of a number of customers. In providing more value to customers, companies must pay attention to several dimensions of competitive advantage. Measures in assessing the achievement of competitive advantage are very necessary to determine the extent to which a company has a competitive advantage compared to its competitors.

**Company Performance Measurement**

One important aspect in measuring company performance is that company performance is used by management as a basis for making decisions and evaluating the performance of management and related units in the company's organizational environment. Measuring company performance that places too much emphasis on a financial perspective often eliminates other points of view which are of course no less important—for example, measuring customer satisfaction and the process of adapting to change, so that in performance measurement a balance is needed between financial and non-financial performance measurements. This balance between financial and non-financial performance measurements will help the company know and evaluate its overall performance.
In this research, considering that company performance will be measured from a non-financial perspective, the researcher adapted the Balanced Scorecard concept in taking a measurement approach from a non-financial perspective with considerations as stated in the opinion of Lusch (1994) in the previous paragraph. The Balanced Scorecard is a method for assessing company performance by considering interconnected perspectives to measure company performance, namely: financial, customer, internal business processes, and learning and growth processes. The Balanced Scorecard emphasizes financial and non-financial perspectives, which are then measured and monitored on an ongoing basis (Kaplan and Norton, 1996).

Kaplan (1996) said that measuring financial performance within a company will encourage companies to stick too much to achieving and maintaining short-term financial profits, this causes companies to invest more in short-term investments and pay less attention to investments that can create long-term value, such as intangibles and intellectual assets that can generate growth in the future. The emphasis on measuring financial performance causes companies to reduce spending on product development, improving production processes, developing human resources, information technology, data bases and systems, as well as market and consumer development. In the short term, decisions oriented towards financial performance appear to reduce expenses and increase income listed in the profit and loss report, but this condition has a cannibalistic effect on company assets and the creation of economic value in the future. The limitations of measuring financial performance lead to the need for complements that can anticipate these limitations.

**Raw Material Purchase Decisions**

In carrying out the production process, a company will face many complex problems, which require making the right decisions. This is because decision making is futuristic, meaning it is related to the future, the future, where the effects and influence last quite a long time (Sudrajat 2010: 2). According to Terry in Sudrajat (2010: 1), decision making is the selection of certain behavioral alternatives from two or more existing alternatives. This opinion is not different from Stoner's opinion in Sudrajat (2010:1) that decision making is a process used to choose an action as a way of solving problems. Meanwhile, Ikasari (2011:2) believes that decision making is a management action in selecting alternatives to achieve targets. Based on these opinions, it can be concluded that decision making is the process of selecting the best alternative from several alternatives to solve a problem.

**Price (XI)**

Prices are the basic measuring tool of an economic system because prices influence the allocation of production factors. Prices are based on the value that a person or entrepreneur is willing to release the goods or services they own to other parties (Kotler, 2012). The relationship between price and purchasing decisions is that price influences consumer decisions in making purchases, the higher the price, the lower the purchasing decision, conversely, if the price is low, the purchasing decision is high (Kotler and Armstrong, 2005).

From a consumer's perspective, price is often used as an indicator of value when the price is related to the perceived benefits of a good or service. Thus it can be concluded that at a certain
price level, if the benefits felt by consumers increase, the value will also increase (Tjiptono, 2007).

**Quality (X2)**
Product quality is one of the important things in choosing a product. Consumers want the best product quality when making purchasing decisions.

According to Kotler (2007) product quality is the characteristics and characteristics of a good or service that influence its ability to satisfy stated or implied needs. According to Shaharudin et al. (2010) product quality is the most important factor for selecting each brand or model, especially in a market environment where there is intense competition and competitive pricing. Quality reflects all dimensions of product offerings that produce benefits for consumers (Fernando & Aksari, 2017).

**Location (X3)**
According to Soepono (1999) location theory is basically a science that explains where and how an economic activity chooses its location optimally. Thus, location decisions are decisions about how a company decides where to optimally locate its factory or production facilities. Location factors are factors that influence location decisions for economic activities such as production activities or service provision activities.

One way to increase tuna production is by increasing unit effort, namely by deploying fishing units or fleets to fishing locations that are thought to be densely populated.

**Hypothesis**

H1= It is suspected that there is an influence of the price of tuna raw materials on the decision to purchase raw materials at PT. Maluku Prima Makmur

H2= It is suspected that there is an influence on the quality of tuna fishing on decisions to purchase raw materials at PT. Maluku Prima Makmur

H3= It is suspected that there is an influence of tuna fishing location on decisions to purchase raw materials at PT. Maluku Prima Makmur

H4= It is suspected that there is an influence of the price of tuna raw materials on company performance through the raw material purchasing decision variable as a mediating variable at PT. Maluku Prima Makmur

H5= It is suspected that there is an influence of the quality of tuna fish raw materials on company performance through the raw material purchasing decision variable as a mediating variable at PT. Maluku Prima Makmur
H6= It is suspected that there is an influence of the location of tuna raw materials on company performance through the raw material purchasing decision variable as a mediating variable at PT. Maluku Prima Makmur

H7= It is suspected that there is an influence on the decision to purchase tuna raw materials on the performance of the PT company. Maluku Prima Makmur

H8= It is suspected that there is an influence of raw material prices on company performance with purchasing decisions as mediation at PT. Maluku Prima Makmur

H9= It is suspected that there is an influence of raw material quality on company performance with purchasing decisions as mediation at PT. Maluku Prima Makmur

H10=It is suspected that there is an influence of raw material location on company performance with purchasing decisions as media at PT. Maluku Prima Makmur

Research Framework
Based on the hypothesis explained above, the research framework in the figure below is presented. In this research model, purchasing decisions are considered as dependent variables, while raw material prices, raw material quality and raw material location are taken as independent variables. Meanwhile, company performance is taken as a mediating variable.

![Conceptual framework](image)

**Picture.1 Conceptual framework**
Source: Results of researchers' thoughts (data processed 2022)

Method
Types and Research Approaches
This research uses quantitative methods, where according to Sugiyono (2013), quantitative research methods can be interpreted as research methods based on the philosophy of positivism, used to research certain populations or samples. The survey method was chosen as a reference source for primary data by using or distributing questionnaires.

Research sites
This research was conducted at PT. Maluku Prima Makmur is located in Ambon City, Maluku.
Population
According to Sugiyono (2013) Population is the number of generalized areas which include objects/subjects that have certain qualities and characteristics that have been determined by the researcher and then a conclusion can be drawn.

The population in this research are buyers in the procurement department of PT. Maluku Prima Makmur as many as 33 people.

Data analysis technique
The analysis used in this research is path analysis which aims to determine how much influence one variable has on other variables. The form of the path equation is as follows:

Structural equation I: \( Z = \rho z_1X_1 + \rho z_2X_2 + \rho z_3X_3 + \epsilon_1 \)

Structural equation II: \( Y = \rho y_1X_1 + \rho y_2X_2 + \rho y_3X_3 + \rho yZ + \epsilon_2 \)

Results and Discussion
Coefficient of Determination (R2)
Structure Determination Coefficient I

A causal structural model as used by researchers to solve research problems requires statistical proof that the structure is built from the right variables to describe the situation in the research problem. To carry out this proof, the researcher used multiple regression to test the coefficient of determination in each structure. The calculation of the coefficient of determination in structure I is as follows:

<table>
<thead>
<tr>
<th>Model Summary</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.777</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Sumber: Research results, 2022 (data processed)

In the model summary table, it can be seen that the structural path analysis model I has a correlation coefficient (R) value of 0.777, a determination coefficient (R square) value of 0.603 or 60.3%. This shows that by using the path analysis model, the exogenous variables, namely price of raw materials (X1), quality of raw materials (X2), location of raw materials (X3), have an influence on changes in the purchasing decision variable (Z) of 60.3%.

Calculation of Structure Regression Equation I (Z)
In calculating the first structural regression equation (I), the regression equation \( Z = \rho z_1X_1 + \rho z_2X_2 + \rho z_3X_3 + \epsilon_1 \) will be calculated simultaneously to show that together the variables in the equation have an effect on the dependent variable where the results of the calculation are shown in table 25 as follows:
Table 4: Structural Regression Calculation (Z)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1,624</td>
<td>2</td>
<td>812</td>
<td>7.741</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>1,584</td>
<td>30</td>
<td>52.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3,208</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research results, 2022 (processed data)

In the table above, it is known that the results of the F test can be used to test the path regression model whether the variables price of raw materials, quality of raw materials, location of raw materials simultaneously have a significant effect on purchasing decisions.

From the calculations, the Fcount value is 2.741. Based on a significance level of 0.05 and degrees of freedom (DF) with the numerator provisions: the number of variables is reduced by 1 or 4 − 1 = 3 and the denominator: the number of cases is reduced by $33 - 3 = 30$. With these provisions, the Ftable number is obtained as 2.4. So, from the results above it can be compared that the Fcount value is $2.741 > F_{table} = 2.4$ and the significance value is Sig. $0.000 < 0.05$. Thus, it can be said that overall there is a significant influence between the price of raw materials, the quality of raw materials, and the location of raw materials on purchasing decisions.

Calculation of Structural Regression Equation II (Y)

In calculating the first structural regression equation (I), the regression equation $Y = \rho y x_1X_1 + \rho y x_2X_2 + \rho y x_3X_3 + \rho y z Z + \varepsilon_2$ will be calculated simultaneously to show that together the variables in the equation have an effect on the dependent variable where the results of the calculation are shown in table 26 as follows:

Table 5: Structural Equation Testing II (Y)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>298,268</td>
<td>4</td>
<td>74,562</td>
<td>45,258</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>194,974</td>
<td>30</td>
<td>6,502</td>
<td>2.022</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>493,242</td>
<td>32</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: 2022 research results (processed data)

From the calculations, the Fcount value is 45,258. Based on a significance level of 0.05 and degrees of freedom (DF) with the numerator provisions: the number of variables is reduced by 1 or 5 − 1 = 4 and the denominator: the number of cases is reduced by $33 - 3 = 30$. With these provisions, the F table number is $2.47$. So, from the results above it can be compared that the
Fcount value is 45.258 > Ftable value 2.47 and the significance value is Sig. 0.000 < 0.05. So H0 is rejected and H1 is accepted. This means that there is a significant and simultaneous influence between raw material prices, raw material quality, raw material location, and purchasing decisions on company performance.

**Path Analysis Diagram**
The magnitude of the path coefficient is shown by the path diagram output using SPSS 17 software. The path coefficient results for all variables can be obtained seen in figure 5 below:

![Path Analysis Diagram](image)

Based on the diagram above, it can be seen that there are two similarities in the structure of path analysis, namely:

\[
Z = \rho zx1X1 + \rho zx2X2 + \rho zx3X3 + \varepsilon_1
\]

\[
Z = 0.204 X1 + 0.544 X2 + 0.268 X3 + \varepsilon_1
\]

If we look at the structural equation I above, it can be seen that the price of raw materials (X1), the quality of raw materials (X2), the location of raw materials (X3) are three types of exogenous variables which together influence the endogenous variable of purchasing decisions. (Z).

\[
Y = \rho yx1X1 + \rho yx2X2 + \rho yx3X3 + \rho yzZ + \varepsilon_2
\]

\[
Y = 0.189X1 + 0.306 X2 + 0.247X3 + 0.411+\varepsilon_2
\]

If we look at the structural equation I above, it can be seen that the price of raw materials (X1), location of raw materials (X3), purchasing decisions (Z) are three types of exogenous variables which together influence the endogenous variable of company performance (Y). And purchasing decisions (Z) are an intermediary variable between raw material quality (X2) and company performance (Y), so that raw material quality can indirectly influence company performance.

**Discussion**
Based on the research results shown in Table 32 regarding the correlation coefficient on the indirect influence between variables, it is shown that the highest coefficient of determination value of the exogenous variable (X) on the endogenous variable (Y) with the mediation of the endogenous variable (Z) is the raw material quality variable (X2) on company performance (Y) through the mediation of purchasing decisions (Z) with a value of 0.2236. The third highest
exogenous variable (X) on the endogenous variable (Y) mediated by the endogenous variable (Z) is the raw material price variable (X1) on company performance (Y) through the mediation of purchasing decisions (Z) with a value of 0.0838. Based on the findings on the path coefficient as previously explained, the raw material quality variable is the variable that has the greatest contribution in influencing raw material purchasing decisions which ultimately can improve company performance, the strategy related to efforts to fulfill raw material quality is as follows:

**Purchasing Strategy**
Purchasing strategies relate to obtaining raw materials, parts and supplies needed to carry out operating functions. Purchasing strategy is very important because materials and components purchased from suppliers comprise 50% of total production costs in manufacturing companies. The basic purchasing options are multiple, sole, and parallel sourcing, especially for suppliers consisting of fishermen.

In multiple sourcing, the company as the buyer orders fish of a certain grade that has been determined from several suppliers. Multiple sourcing has traditionally been considered superior to other purchasing approaches because (1) it forces suppliers to compete for better profits from their buyers and reduces purchasing costs, and (2) if one supplier cannot deliver, then you can use another supplier, so that the raw material supply is guaranteed to always be there when needed. Multiple sourcing has become one way for purchasing companies to monitor relationships with their suppliers. As long as its suppliers can provide proof that they can find products that meet specifications, they will remain on the buyer's list of approved suppliers for custom parts and supplies.

**Logistics Strategy**
Logistics strategy is related to the flow of products into and out of the manufacturing process. Two strategic efforts that can be carried out by PT MPM related to this strategy are centralization and continuous sourcing in terms of the quality of suppliers and the raw materials they send.

**Conclusion**
Recommendation

Based on the results of the analysis and research conclusions, recommendations from researchers can be given as follows:

1. The results of the analysis show that the raw material price variable (X1) has a significant influence on company performance indirectly through the purchasing decision variable as mediation. This means that the raw material price variable has a positive effect on the performance of the PT company, MPM Ambon. This indicates that determining raw material price certainty is getting better because it will improve company performance driven by purchasing decisions as a mediating variable which strengthens the relationship between the dependent and independent variables.

2. The results of the analysis show that the raw material quality variable (X2) has a significant influence on company performance indirectly through the purchasing decision variable as
mediation. This means that the raw material quality variable has a positive effect on the performance of the PT company. MPM Ambon. This indicates that the higher the quality of the raw materials obtained, the company's performance will improve, driven by purchasing decisions as a mediating variable which strengthens the relationship between the dependent and independent variables.

3. The results of the analysis show that the raw material location variable (X3) has a significant influence on company performance indirectly through the purchasing decision variable as mediation. This means that the raw material location variable has a positive effect on the performance of the PT company. MPM Ambon. This indicates that the closer the location of the raw materials, the lower the operational costs and the quality of the raw materials that meet standards, the company's performance will improve, driven by purchasing decisions as a mediating variable that strengthens the relationship between the dependent and independent variables.

4. The results of the analysis show that the purchasing decision variable (Z) has a significant influence on company performance. This means that the purchasing decision variable has a positive effect on the performance of the PT company. MPM Ambon. By continuing to purchase raw materials regularly, controlling supplier growth, and the company's ability in operational activities will have a good influence on the company's performance. This indicates that purchasing decisions are able to mediate the variables of raw material prices, raw material quality and raw material location on company performance.

5. Based on the research conducted, it is hoped that the results of this research can provide benefits for the company and can be used as a reference for future researchers. Some input provided for further research development is as follows:

a) Variables other than price, quality and location in the research can be added more fully, for example (promotion, process, people and others)

b) The scope and objects of research can be further expanded to include areas of research objects that are similar or not

c) The characteristics of respondents are further expanded

d) Contributions to further research can be more beneficial with a wider research scope

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