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SERVING EXCELLENCE: CV. GAYO COFFEE ORO'S CONTRIBUTION TO ACCURATE ARABICA COFFEE EXPORT FORECASTS

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Demand forecasting is a crucial aspect for every business, as it involves predicting future events using specific techniques to make informed decisions. The decomposition method is a popular forecasting technique that employs four components, namely trend, seasonal, cycle, and random, to predict future events based on the repeating patterns observed in historical data. The coffee industry in Indonesia serves as a pertinent case study due to its significant demand, both domestically and through exports. This study focuses on CV. Oro Kopi Gayo, an Indonesian coffee processing company, which primarily produces Arabica coffee beans for export. However, the company faces challenges in meeting export demands during non-coffee season periods, resulting in production inefficiencies and strained business relationships. Consequently, accurate demand forecasting becomes crucial to optimize production and maintain positive stakeholder interactions. This research aims to develop an effective demand forecasting model for Arabica coffee exports, addressing the company's challenges. The study involves analyzing historical export data, identifying patterns, and applying the decomposition method to predict future demand accurately. By incorporating the trend, seasonal, cycle, and random components, the forecasting model can provide valuable insights for decision-makers. The primary data sources include export data from the International Coffee Organization (ICO) and the Ministry of Trade, providing a comprehensive understanding of the coffee export market in Indonesia. Additionally, qualitative data from interviews with key personnel within CV. Oro Kopi Gayo will complement the quantitative analysis, incorporating subjective judgments to enhance the forecasting model's accuracy. The anticipated research findings will not only assist CV. Oro Kopi Gayo in improving their production planning but also contribute to the wider body of knowledge in demand forecasting. The study's significance lies in its potential to provide valuable insights and practical implications for companies facing similar challenges in other agricultural sub-sectors. Moreover, by optimizing production planning, businesses can reduce production costs and enhance their competitiveness in the global market.

Keywords: demand forecasting, decomposition method, Arabica coffee exports, production planning, Indonesia, CV. Oro Kopi Gayo, agricultural sub-sector.

1. Introduction

Demand forecasting is the most important thing for every company in running a business. This is because forecasting is an activity to predict or predict what will happen in the future using certain techniques. According to [1] forecasting is the science and art of predicting future events. This can be done by involving taking historical data and projecting it to the future using a form mathematical model. Forecasting can also be a combination of a manager's subjective judgment and a mathematical model. One of the forecasting methods that can be used is the decomposition method. The decomposition method is a forecasting method that uses four components to predict future events. The four components are trend, seasonal, cycle, and random. This method is based on the fact that this activity will repeat itself with the same pattern [2].

Forecasting activities are often carried out on products with a large enough number of requests for each period. In Indonesia, coffee is an agricultural sub-sector with a large demand for its products both domestically and abroad (exports). Based on a report from the International Coffee Organization (ICO), it is known that Indonesia's coffee exports showed an increase of 1.21%. In 2020 coffee exports amounted to 375.60 thousand tons, while in 2021 coffee exports increased by 380.17 thousand tons. Based on data from the Ministry of

Trade, the trend of Indonesian coffee exports in the last five years has increased by an average of 1.14% per year (Ministry of Trade, 2019).

CV. Oro Kopi Gayo is one of the industrial sectors engaged in processing green beans into coffee products. This company is located in the Gayo highlands, precisely in the Mongal Village, Bebesen District, Central Aceh Regency, which was established in October 2013, and currently has 40 employees. The products produced include Arabica and Robusta coffee beans. But the export priority is Arabica coffee, and this product is the most dominant product produced by this company. Based on existing data, demand for Arabica coffee has not been able to meet export demand from outside due mainly to non-coffee season periods such as January, February, March, June, and July. It is known that coffee is a type of plant that has a harvest season in certain months, while the amount of coffee export demand is always there even though it is not in the coffee season. So that the company is often unable to meet the demand for coffee exports. This happens because the company does not know and never predicts (quantitatively predicts) the export demand that will be received for the next period. So the company does not know how much coffee to prepare.

Due to this, the role of a Coordinator in the company to predict the number of product requests to be produced is very important. Because predicting inaccurate demand will result in increased production costs and can damage the relationship between business partners and consumers. Therefore, to anticipate these problems, predictions of the possibility of a decrease or increase in sales in the future period are made by obtaining accurate information through forecasting results.

2. Literature Review

Forecasting is the activity of estimating what will happen in the future by utilizing the information available at that time, to weigh activities in the future. Forecasting is a process of compiling information about successive past events to predict future events [3]. Forecasting activity is a business function that

seeks to estimate product sales and usage so that the product can be produced in the right quantity. Forecasting is an objective calculation using past data to determine something in the future such as quantity and quality in various production matters [4]. Forecasting activity is a business function that seeks to estimate the demand and use of products so that they can be produced in the right quantity. Forecasting is a prediction of future demand based on several forecasting variables and historical time series data [5]

The function of forecasting is to forecast demand and independent demand items in the future. And the purpose of forecasting is to get a forecast that can minimize errors that can be measured by Mean Square Error (MSE). With sales forecasting, it means that the company's management has got a picture of the company in the future so that the company's management gets very meaningful input in determining company policies [6]. **2.1. Types of Forecasting**

Organizations generally use 3 main types of forecasting in planning future operations, namely [7] :

1. Economic forecasts explain the business cycle by predicting the inflation rate, availability of money, and funds needed to build housing and other planning indicators.
2. Technological forecasts pay attention to the level of technological progress that can launch attractive new products. By paying attention to the factory's need for new equipment.
3. Demand forecast is a projected demand for a company's products or services also called sales forecasting, which directs the company's production, capacity, and scheduling systems and acts as input for financial, marketing, and personnel planning.

The steps of the forecasting method are analyzing past data, determining the data used, projecting with past data using the method used, and considering several factors of change (changes in policies that may occur including changes in government policies and the development of community potential) [8]. **2.2. Characteristics of Good Forecasting**

Good forecasting has several important criteria, including accuracy, cost, and convenience. The explanation of these criteria is as follows [9] :

1. ***Accuracy***

The accuracy of a forecasting result is measured by the results of the habit and the consistency of the forecast. Forecasting results can be said if the forecast is too high or low compared to the reality that happened. Forecasting results are said to be consistent if the magnitude of the forecasting error is relatively small. Forecasting that is too low will result in a shortage of inventory so that consumer demand cannot be met immediately. As a result, the company may lose customers and lose sales profits. Forecasting that is too high will result in a buildup of inventory so that a lot of capital is absorbed in vain. The accuracy of these forecasting results plays an important role in balancing the ideal inventory.

2. ***Cost***

The cost required in making a forecast is dependent on the number of items being forecasted, the length of the forecasting period, and the forecasting method used. The three factors that trigger costs will affect how much data is needed, how the data is processed (manually or computerized), how the data is stored, and who are the seconded experts. The choice of forecasting method must be adjusted to the available

funds and the level of accuracy to be obtained. For example, important items will be predicted using a simple and inexpensive method. This principle is the adoption of Pareto's law (ABC analysis).

3. ***Convenience***

The use of forecasting methods that are simple, easy to make, and easy to apply will provide benefits for the company. It is useless to use sophisticated methods, but they cannot be applied to company systems due to limited funds, human resources, and technological equipment.

2.3. Forecasting Purpose

The main purpose of forecasting is to forecast future demand, to obtain an estimate that is close to the actual situation. Forecasting will never be perfect, but even so, the results of forecasting will provide direction for a plan. A company usually uses a forecasting procedure that begins with environmental forecasting, followed by forecasting sales at the company, and ends with forecasting market demand.

When viewed from the time horizon, the purpose of forecasting can be classified into 3 groups, namely [10] :

1. Long-term forecasting, generally 5 to 20 years, this plan is used for production planning and resource planning, in this case, the application of top management is needed in planning forecasting objectives.
2. Medium-term forecasting, generally monthly or quarterly, is used to determine cash flow calculations and budget determination in production planning and control, in this case, the role of middle management is needed in planning forecasting objectives.
3. Short-term forecasts, generally daily or weekly, are used to make decisions about the scheduling of labor, machinery, raw materials, and other short-term production resources. The role of low management is needed in setting forecasting goals.

3. Methods

The decomposition method is a forecasting method that uses four main components in predicting future values. The four components include trend, seasonal, cyclical, and random. This method is based on the fact that this activity will repeat itself with the same pattern [2]. Decomposition method is a method used if the data has 4 patterns, namely trend, cyclical, seasonal, and irregular [11]. After the patterns are obtained, the data are separated. The decomposition method has the basic principle that time series data needs to be broken down (decomposed) into several patterns and each component of the time series is identified separately to help to improve the accuracy or accuracy of forecasting and help better understand the behavior of the data series.

In the decomposition method, four components give the effect of a time series which includes, three components that can be identified because they have certain patterns, namely trends, cycles, and seasonality, while the irregular components cannot be predicted because they do not have a systematic pattern and the motion is unpredictable order. The decomposition method decomposes the time series into several components, which components are used to describe and estimate the time series.

The advantage of this method compared to other methods is that the pattern or components can be broken down (decomposition) into sub-patterns that show each component of the time series separately

and this separation often helps improve forecasting accuracy and helps separate the behavior of the data series more efficiently good.

Changes to something usually have a complex pattern, for example, there is an element that is increasing, fluctuating, and irregular. To carry out analysis and forecasting is generally very difficult, so decomposition is usually carried out into 4 components, namely trends, seasonal fluctuations, cyclical fluctuations, and random changes [2]. In simple terms the equation can be illustrated as follows: Y_x = Data Pattern + Error

Y_x = (trend, cyclical, seasonal) + Error

Y_x = T_x, S_x, C_x + I_x Information:

Yx = period time series data x

Tx = trend period x

Cx = cyclical fluctuation period x

Sx = seasonal fluctuations period x

Ix = residual variation or period error x

3.1. Trend

The trend is the average change over the long term. The long-term trend movement shows the general direction of development, namely the trend of the data, whether it is up or down. A trend is an upward or downward trend movement in the long term obtained from the average change from time to time and the value is quite average. Calculating the trend moment value can be done by several methods, including the following [15]:

1. ***Linear Trend***

The linear trend method is a method where the equation obtained results in the number of forecast errors of least squares when compared to the equations produced by other methods. The linear trend can also be interpreted if the time series data is depicted in a plot close to a straight line. The formula used is as follows: $Y' = a + bx$

$$b = \frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2}$$

$$a = \frac{\sum y}{n} - b\frac{\sum x}{n}$$

Information:

y' : trend value a : constant number

b : the slope or coefficient of the trend line's slope y : periodic data x : time period value

n : lots of data

2. ***Parabolic Trend***

The parabolic trend is a trend with variable X with the highest rank of 2. The parabolic trend produces a projection line that is not straight, but curved. Not all problems are suitable for using this method, it is usually suitable for problems where the data pattern is a curve. The trend equation is as follows:

$Y' = a + bx + cx^2$ Information:
Y = trend value
X = time period
A, b, c = constant

3.2. Seasonal Variation

Seasonal variation (S) is one component of the decomposition method. It is important to understand seasonal variations because over some time, for example, a year, there are repeated variations. Seasonal variation is a tidal wave that repeats itself in no more than one year. In forecasting, this seasonal variation is usually expressed in the form of an index and is called the seasonal index. The relationship between the components of change is usually expressed by multiplication as follows: $X = T \times M \times S \times R$

This means that the data that occurs (X) can be calculated by multiplying the trend value by the seasonal index, cyclical, and random changes. To calculate the seasonal index, several methods can be used, namely:

1. The method of overall average
2. Simple average method
3. Method of percentage against the trend
4. Method of percentage to moving average

3.3 Cyclic Variation

Cyclic variation is a change in something that repeats itself over more than one year. Cyclic variation is expressed in the form of a cyclical index. The method commonly used to determine the cyclical index is the residual method. The specific steps in the residual method depend on whether the analysis starts on an annual, quarterly, or monthly basis. If the data used is monthly or quarterly, then the influence of trends and seasonal waves must be removed. If the data is annual data, then only the influence of the trend is omitted.

3.4 Random Variation

Random variation is a tidal wave of something that usually happens suddenly and is difficult to predict. In the decomposition method, forecasting is done by combining the components that have been obtained, namely trends, and seasonal indices, preferably with cyclical indices and random changes. But the pattern of cyclical motion is difficult to predict because the factors that influence it are many, as well as random motion which is very difficult to predict. Therefore, forecast values usually only use trend values (T) and seasonal movements (M). So the forecast value is made with the following formula: $Y = T \times M$.

3.5 Previous Research

Before this research was conducted, there were several previous studies related to problems using the Decomposition method. Some of these studies are as follows:

1. Research on the Moving Average Multiplicative Decomposition Method for Forecasting Rice Production Levels in Central Sulawesi Fields was conducted [16].

2. Research on the Forecasting Model for The Lue Garden Recreational Park Visitor Volume Using the Trend Moment Decomposition Method was conducted [17]. The decomposition method is used to predict time series data which shows trend moment patterns and seasonal effects.
3. Research on Forecasting the Number of Airplane Passengers Using the Decomposition Method (Case Study: Airport Operator Unit (UPBU) Class II Frans Seda Maumere) was conducted [18]. This study aims to determine the forecast of the number of arrivals and departures of aircraft passengers at the Airport Operator Unit (UPBU) Class II Frans Seda Maumere from 2018 – 2022.
4. Research on Decomposition Method For Forecasting The Number Of Participants Of New Family Planning In Surabaya [19]. Indonesia is one of the countries with a large population. The Family Planning Program (KB) was established to control population growth. This study aims to forecast new family planning participants in the city of Surabaya in 2019 using the decomposition method.
5. Research on Forecasting A, B, O, and AB Blood Type Demand Using Exponential Smoothing Methods and Decomposition Methods at UTD PMI Malang City was conducted [20].

4. Results and Discussion

4.1. Data Collection

The data used is secondary data, namely data obtained from the company archives CV. Gayo Coffee Oro. The data is used as a basis for forecasting the demand for Arabica coffee exports in 2022. These data are in the form of reports on coffee export requests in companies from 2017 to 2021. The data on Arabica coffee export demand in 2017 to 2021 can be obtained seen in Table 1 below:

Table 1. Arabica Coffee Export Demand Data from 2017 to 2021

No	Month	Arabica Coffee Export Demand Data (kg)				
		2017	**2018**	**2019**	**2020**	**2021**
1	January	134400	96000	172800	96000	76800
2	February	76800	115200	96000	134400	192000
3	March	57600	57600	134400	134400	134400
4	April	19200	19200	76800	57600	96000
5	May	38400	57600	57600	115200	38400
6	June	76800	38400	38400	96000	115200
7	July	57600	76800	76800	115200	115200
8	August	19200	38400	19200	19200	57600
9	September	172800	153600	172800	172800	230400
10	October	115200	134400	134400	192000	172800
11	November	115200	153600	96000	211200	211200
12	December	38400	38400	57600	76800	96000
	Amount	**921600**	**979200**	**1132800**	**1420800**	**1536000**

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4.2. Data Processing

The data processing process using demand data from 2017 to 2021 to find out the results of forecasting Arabica coffee export demand obtained in 2022. The data processing process carried out in the Arabica coffee export demand forecasting process with the decomposition method is as follows:

1. Create a scatter diagram for the number of Arabica coffee export requests

Figure 1 shows that the pattern of Arabica coffee export demand data that is formed is a positive trend pattern, where the number of requests for each year from 2017 to 2021 continues to increase.

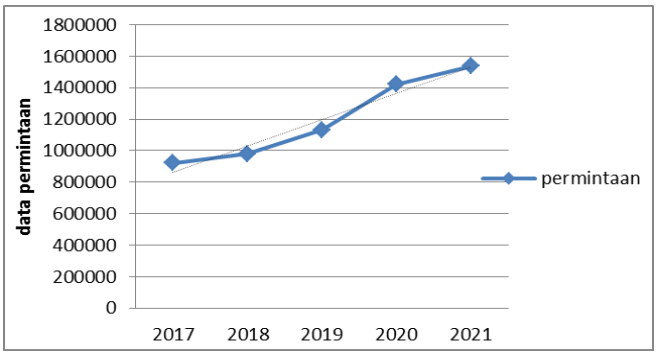

Fig 1. Arabica Coffee Export Demand Trend Chart

Figure 2 shows that the data pattern that is formed repeats itself at a certain time. The average demand for Arabica coffee exports rose in September, then stabilized until November, and again declined in December. The data pattern shows fluctuations in seasonal data patterns.

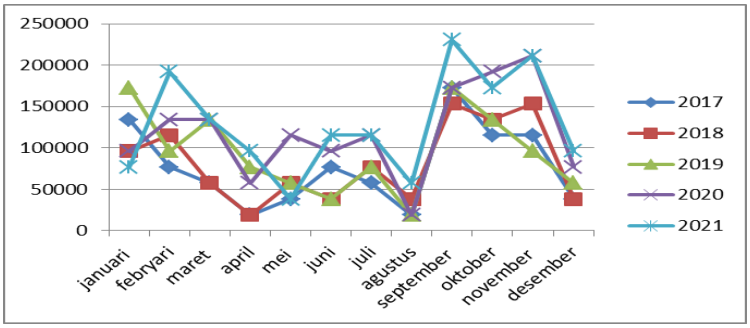

Fig 2. Arabica Coffee Export Demand Seasonal Chart

2. Determine the value of the seasonal index

The seasonal index value is a number that shows the relative value of the variable y which is periodic data for all months in a year. Determining the value of the seasonal index from the coffee export demand data is carried out using the simple average method. The results of the calculation of the seasonal index value can be seen in Table 2.

Table 2. The Seasonal Index Value of Arabica Coffee Export Demand

No	Month	Seasonal %
1	January	115.3846
2	February	123.0769
3	March	103.8462

4	April	53.84615
5	May	61.53846
6	June	73.07692
7	July	88.46154
8	August	30.76923
9	September	180.7692
10	October	150
11	November	157.6923
12	December	61.53846

3. Determine the trend equation for Arabica coffee export demand

The linear trend equation with regression is obtained with a smoothed value. The results of the calculation of the smoothed value can be seen in Table 3.

Table 3. Smoothed Value of Arabica Coffee Export Demand

Month	**Year**				
	2017	**2018**	**2019**	**2020**	**2021**
January	116480	83200	149760	83200	66560
February	62400	93600.01	78000.01	109200	156000
March	55466.67	55466.67	129422.2	129422.2	129422.2
April	35657.14	35657.14	142628.6	106971.4	178285.7
May	62400	93600.01	93600.01	187200	62400
June	105094.7	52547.36	52547.36	131368.4	157642.1
July	65113.04	86817.39	86817.39	130226.1	130226.1
August	62400	124800	62400	62400	187200
September	95591.49	84970.21	95591.49	95591.49	127455.3
October	76800	89600	89600	128000	115200
November	73053.66	97404.88	60878.05	133931.7	133931.7
December	62400	62400	93600.01	124800	156000

Based on the smoothed value obtained, then with this value, the trend equation can be determined. The trend equation model obtained is as follows: Y = a + bx

$$b = \frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2}$$

$$\frac{60(205713361.5) - 1830\,(5990400)}{60(73810) - (1830)^2}$$

$$\frac{1380369690}{1079700}$$

$$1278.4752$$

$$a =$$

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$$= \frac{\frac{n\sum xy - \sum x \sum y}{n\sum x^2 - (\sum x)^2}}{} - b\frac{\sum x}{n}$$

$$= \frac{5990400}{60} - \frac{1278.4752(1830)}{60}$$

$$Y = \frac{}{-}$$

=
99840 38993.4936
60846.5064
60846.5064 + 1278.4752*X*

4. Determine the monthly trend value for Arabica coffee export demand The results of the calculation of the trend value can be seen in Table 4 below:

Table 4. Trend Value of Arabica Coffee Export Demand

Month	Year					
	2017	**2018**	**2019**	**2020**	**2021**	**2022**
January	62124.95	77466.65	92808.36	108150.1	123491.8	138833.46
February	63403.43	78745.13	94086.83	109428.5	124770.2	140111.94
March	64681.9	80023.6	95365.31	110707	126048.7	141390.41
April	65960.38	81302.08	96643.78	111985.5	127327.2	142668.89
May	67238.85	82580.55	97922.26	113264	128605.7	143947.36
June	68517.33	83859.03	99200.73	114542.4	129884.1	145225.84
July	69795.8	85137.5	100479.2	115820.9	131162.6	146504.31
August	71074.28	86415.98	101757.7	117099.4	132441.1	147782.79
September	72352.75	87694.45	103036.2	118377.9	133719.6	149061.26
October	73631.23	88972.93	104314.6	119656.3	134998	150339.74
November	74909.7	90251.4	105593.1	120934.8	136276.5	151618.21
December	76188.18	91529.88	106871.6	122213.3	137555	152896.69

5. Forecast of Demand for Arabica Coffee Exports in 2022

Calculating the forecast number of Arabica coffee export requests on the CV. Oro Kopi Gayo in 2022 by multiplying the trend value each month by the seasonal index and dividing by 100. The results of the calculation of the forecast for Arabica coffee export demand can be seen in Table 5 below:

Table 5. Forecast of Arabica Coffee Export Demand for 2022

No	Month	Forecasting Results	Rounding
1	January	160192.457	160192
2	February	172445.462	172445
3	March	146828.506	146829
4	April	76821.7089	76822
5	May	88582.9927	88583
6	June	106126.574	106127
7	July	129599.97	129510
8	August	45471.6273	45472
9	September	269456.9	269457

10	October	225509.609	225509
11	November	239090.261	239090
12	December	94090.2705	94090

Based on the results of data processing that has been carried out, it can be seen that the demand for Arabica coffee exports has increased. The number of requests for Arabica coffee exports in 2021, which is 1536000 kg, will increase in 2022, which is 1754216 kg with a percentage increase of 14%.

6. Forecasting Error Value Calculation

The calculation with MAPE is done by subtracting the actual value from the forecasting result, then the result after being absolute is divided by the actual value per each period, then the results are added together. The lower the MAPE value, the ability of the forecasting model used can be said to be good. The results of the calculations can be seen in Table 6 below:

Table 6. Mean Absolute Percentage Error (MAPE) Results

No	**Month**	**Actual Data**	**Forecasting Data**	**|At - Ft /At |**
1	January	76800	160192.457	-1.0858393
2	February	192000	172445.462	0.1018466
3	March	134400	146828.506	-0.092474
4	April	96000	76821.7089	0.1997739
5	May	38400	88582.9927	-1.3068488
6	June	115200	106126.574	0.0787624
7	July	115200	129599.97	-0.1249997
8	August	57600	45471.6273	0.210562
9	September	230400	269456.9	-0.1695178
No	**Month**	**Actual Data**	**Forecasting Data**	**|At - Ft /At |**
10	October	172800	225509.609	-0.3050325
11	November	211200	239090.261	-0.1320562
12	December	96000	94090.2705	0.019893
Jumlah				3.82760
MAPE				0.2734
MAPE %				27.34%

Based on Table 6 above, it can be seen that the result of calculating the error rate with MAPE is 27.34%. These results indicate that the MAPE range is in the 20 - 50% range, so it can be said that the MAPE results have a decent forecasting model capability so that the method used, namely the decomposition method, can be used as a reference to determine the prediction of coffee export demand for 2022.

4.3. Forecasting Using POM QM Software For Windows

After calculating the demand forecasting using the decomposition method, the researchers also used the POM QM For Windows software to see the accuracy of the results of the demand forecasting obtained. The results of calculations using POM QM software for Windows are as follows:

Future Period	Unadjusted Forecast	Seasonal Factor	Adjusted Forecast
61	138833.5	1.154	160192.5
62	140112.0	1.231	172445.6
63	141390.5	1.038	146828.6
64	142669.0	.538	76821.76
65	143947.5	.615	88583.04
66	145225.9	.731	106126.7
67	146504.4	.885	129600.1
68	147782.9	.308	45471.66
69	149061.4	1.808	269457.1
70	150339.8	1.5	225509.8
71	151618.3	1.577	239090.5
72	152896.8	.615	94090.33
73	154175.3	1.154	177894.5
74	155453.8	1.231	191327.7

Fig 3. POM QM Forecasting Results

Based on the calculation results of forecasting demand for Arabica coffee exports with the decomposition method obtained and with the help of POM QM software For Windows have the same results and have an error rate of 27.34% with a decent forecasting model capability. Thus forecasting with the decomposition method can be applied to forecasting future demand. The results of the forecasting calculations obtained can be seen in Table 7 as follows:

Table 5. Forecast of Arabica Coffee Export Demand for 2022

No	Month	Decomposition Method Forecasting Results	POM QM Forecasting Results For Windows
1	January	160192.457	160192.5
2	February	172445.462	172445.6
3	March	146828.506	146828.6
4	April	76821.7089	76821.76
5	May	88582.9927	88583.04
6	June	106126.574	106126.7
7	July	129599.97	129600.1
8	August	45471.6273	45471.66
9	September	269456.9	269457.1
10	October	225509.609	225509.8

11	November	239090.261	239090.5
12	December	94090.2705	94090.33
	Jumlah	**1754216.338**	**1754217.69**

5. Conclusion

Based on the results of the discussion of the research that has been done, the following conclusions can be drawn:

1. The use of the decomposition method in forecasting the demand for Arabica coffee exports in 2022, which is 1754216 kg, obtains a value close to the results of forecasting using POM QM for windows, which is 1754218 kg. Based on the results of these calculations, the use of the decomposition method in forecasting the demand for coffee exports obtains accurate results. Based on the forecasting results obtained, shows that the demand for Arabica coffee exports continues to increase every year. Where in 2017 the demand for coffee exports was 921600 kg, in 2018 it was 979200 kg, in 2019 it was 1132800 kg, in 2020 it was 1420800 kg, in 2021 it was 1536000 kg, and the forecast results in 2022 were 1754216 kg.
2. Based on the results of forecasting calculations using the decomposition method, the results of forecasting coffee export demand in 2022 are as follows:

In January of 160192 kg, February of 172445 kg, March of 146829 kg, April of 76822 kg, May of 88583 kg, June of 106127 kg, July of 129510 kg, August of 45472 kg, September of 269457 kg, October of 225509 kg, November 239090 kg, and December 94090 kg. The number of coffee export requests obtained in 2022 is 1754216 kg.

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