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PRODUCTION AREA PLANNING AT UD PADU PADAN WOVEN IN KUPANG CITY

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ABSTRACT

The study entitled Production Area Planning at UD Padu Padan Tenun, Kupang City aims to determine and explain the planning of production areas and raw materials for weaving at UD Padu Padan Tenun. Data collection techniques in this study are observation, interviews, and documentation. While the data analysis technique uses forecasting and Break Event Point (BEP). The results of the study showed that the number of forecasts for sales of woven shirts at UD Padu Padan Tenun showed that in 2024 there were 65 pieces, in 2025 there were 67 pieces and in 2026 there were 69 pieces. The results of the Break Event Point (BEP) analysis showed that if UD Padu Padan Tenun produced 69,531 pieces of woven shirts or Rp. 104,201,680, then Padu Pada Tenun would not make a profit or suffer a loss because at that time UD Padu Padan Tenun was in a state of basic return. And if the company produces below the BEP point, the company will experience a loss, and vice versa if the company produces above the BEP point, the company will experience a profit. Based on the research results, it is suggested that it can be a consideration for the company in relation to decision making in determining the number of orders and good planning for the inventory of woven raw materials in order to facilitate the production process in the company. And for the company UD Padu Padan Tenun, it is necessary to make a production plan or number of orders.

***Keywords**: (a) Production Area, (b) Planning*

1. INTRODUCTION

The development of the industrial world today is experiencing an increasingly rapid increase with many new industries being managed and producing products in various kinds. With the development of these industries, of course, it must be supported by the ability of management that is able to properly manage these production factors as input from the industry in order to continue to exist and compete in the business world.

In its development, small industries need to be considered and directed, not only large industries. With the direction given, small industries are expected to become the main drivers in an efficient, competitive economy with a strong structure. This is in line with the opinion put forward by Indriyo Gitosudarmo (2003:12) who stated that small industries are expected to be able to produce quality and high-value products, so that they are not less competitive than products produced using tools.

Production area planning is a matter of determining how much production must be produced in a certain period. This problem must be considered and implemented by the production

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management. With that target, production plans and programs such as procurement of materials, labor, auxiliary materials, the necessary equipment and the process that can be planned more carefully. Therefore, the production area needs to be determined first. In determining the production area or production target, past demand data is taken into account. These factors will influence and determine the size of the production target.

Determining the right production area will be meaningful for the company in seeking available production factors. Uncertainty in determining the production area will result in uncertainty in the allocation of production factors which will result in greater financial losses. Inaccurate determination of the production area will result in smaller profits obtained by the company. This loss occurs because the company has not been able to calculate and predict the needs of the future production process, so there are still many remaining products that are not sold out.

East Nusa Tenggara Province is one of the provinces in Indonesia that has a very diverse arts and culture. One of them is the weaving craft that has grown and developed from generation to generation in society. The developments that have occurred have made small weaving industries emerge in various regions in East Nusa Tenggara Province. Kupang City, which is the capital of East Nusa Tenggara Province, is the center for gathering cultures from all regions in East Nusa Tenggara and of course is the center for the development of small weaving industries spread throughout the Kupang City area with data from the last 3 years from the Central Statistics Agency (BPS) of Kupang City, namely in 2019 the number of small industries was 6132, in 2020 the number of small industries was 4682, in 2021 the number of small industries small 3585 and in 2022 the number of small industries is 8702.

Padu Padan Tenun is a small industry engaged in the weaving sector that combines weaving into various types of products including Woven Dresses, Woven Jackets and Woven Suits. Padu Padan Tenun uses original NTT weaving which is designed in such a way without eliminating the meaning of the weaving itself and has always been a modern fashion for millennials and adults. Based on available data obtained by researchers in the last 5 years (2019-2023) can be seen in table 1 as follows:

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Table 1
Number of Production and Sales of Products at UD Padu Padan Tenun 2019-2023

YEAR	TYPE PRODUCT	PRODUCTION (Pcs)	AMOUNT SALES (Pcs)	REMAINDER (Pcs)
2019	Woven Dress	72	60	8
	Woven Jacket	70	0	20
	Woven Coat	30	22	8
2020	Woven Dress	71	5	16
	Woven Jacket	60	8	22
	Woven Coat	25	5	10
2021	Woven Dress	61	50	9
	Woven Jacket	65	45	20
	Woven Suit	32	6	6
2022	Woven Dress	63	56	7
	Woven Jacket	60	50	10
	Woven Coat	35	8	7
2023	Woven Dress	74	70	4
	Woven Jacket	50	35	15
	Woven Coat	40	30	10
Amount	Woven Dress	341	291	44
	Woven Jacket	305	218	87
	Woven Coat	162	121	41

Source: Mix and Match Weaving, (2024)

From the data in Table 1, the production volume and sales volume at UD Padu Padan Tenun fluctuate or go up and down from year to year, this shows that the number of products produced by the company has not made a production plan every year and only makes plans based on estimates, so that sometimes it does not match the company's expectations, this causes there to still be products that are not sold out, this can affect the level of profit that will be obtained by the company. In this study, the researcher only focused on 1 type of product, namely Woven Dress. Because this product is the most in demand by consumers.Based on the description of the background above and also the existing problems, the researcher is interested in conducting research with the title "Production Area Planning at UD Padu Padan Tenun Woven in Kupang City".

Planning

Planning is a process to determine things to be achieved or goals in the future and determine the various stages needed to achieve those goals. Planning is one of the most important functions of management where there are various activities that define the goals of the organization, create strategies, and develop organizational work plans.

Production

If examined further, the meaning of production can be viewed from two angles, namely: The definition of production in a broad sense is an effort to create utility due to placetime and

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procession. 2. The definition of production in a narrow sense is an effort to change the form of goods into new goods (form utility).

Production Planning

In producing goods and services, it is best to make a production plan first and then use it as a guideline in carrying out production activities for a company.

Production Area

Production area is the amount or output of each item produced by taking into account the production factors owned in order to achieve maximum profit (Ahyari, 1994:19).Therefore, the production area must also be planned/determined so that the company can obtain maximum profit.

2. RESEARCH METHODS

In this study, the data analysis technique used is qualitative data analyzed descriptively while quantitative data in this case is production volume analyzed based on production forecasts using the linear trend method and break event point. This study was conducted at UD Padu Padan Tenun located on Jln Bajawa, RT 044, RW 011, Oebufu Village, Oebobo District,Kupang City, East Nusa Tenggara. Data collection techniques used in this study are observation, interviews, documentation.

3. RESEARCH RESULTS AND DISCUSSION

1. Sales Volume

The following is a calculation of the forecast for Woven Dress sales at UD Padu Padan Tenun based on sales data for 2019-2023 which can be used as a basis for forecasting for the next 3 years or from 2024-2025.

2026, as presented in the table below:

Table 2
Calculation of Woven Dress Sales Forecast at UD Padu Padan Tenun

Year	Dress Sales Weaving (Y)	X	XY	X^2
2019	60	-2	-120	4
2020	55	-1	-55	1
2021	50	0	0	0
2022	56	1	56	1
2023	70	2	140	4
∑	291	0	21	10

Source: Mix and Match Weaving, (2024)

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From the table above, it is known that during the last 5 years in Padu Padan

Weaving spent 291 Woven Dress sales and was determined in the year 2020 as the base year to determine the forecast for the next 3 years. The values of variables a and b are:

a==291 =58.2
n 5
b =25 =2.5
$x^2$10
1. In 2024, with the value of x = 3
Y = a + bx
= 58.2 + 2.1 (3)
= 58.2 + 6.3
= 65 Pcs

So in 2024, it is estimated that UD Padu Padan Tenun will be able to sell 65 Tenun Dresses.

2. In 2025, with the value of x = 4
Y = a + bx
= 58.2 + 2.1 (4)
= 58.2 + 2.1
= 67 Pcs

So in 2025, it is estimated that UD Padu Padan Tenun will be able to sell 67 Tenun Dresses.

3. In 2026, with the value of x = 5
Y = a + bx
= 58.2 + 2.1 (5)
= 58.2 + 10.5
= 69 Pcs

So in 2026, it is estimated that UD Padu Padan Tenun will be able to sell 69 Tenun Dresses.
For more details, please see the Dress Tenun at sales forecast table.

UD Padu Padan Tenun from 2024-2026 as follows:

Table 3
Calculation Results of DressTenun Sales Forecast at UD Padu
2024-2026 Weaving Festival

Year	Number of Dresses Weaving (Pcs)
2024	65 Pcs
2025	67 Pcs
2026	69 Pcs

Source: Mix and Match Weaving, (2024)

Based on the data above, it can be seen that there is a steady increase during the next 3 years of production. The results of this calculation can be used as a basis for determining the area of production that should be produced by UD Padu Padan Tenun in the next few years, with the assumption that the availability of raw material prices and supporting materials is relatively

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constant, consumer demand does not decrease, the availability of business capital, and there is no excessive sales surplus each year.

Raw Material Planning Analysis

Table 4
Composition of Raw Materials Used to Produce Woven Dresses
Per One Production Times

No	Raw material	Unit	Amount
1.	Woven Sarong	pcs	5
2.	Lurik Fabric	Meter	5

Source: Mix and Match Woven Fabrics after being processed by the author, (2024)

Thus, based on the data above, it can be seen that the use of raw materials in 2023 is as follows:

Woven Sarong 291 x 5 = 1,455

Lurik Fabric 291 x 5 = 1,455

So the overall use of raw materials at UD Padu Padan Weaving years 2023 is 1,455 Woven Sarongs and 1,455 Lurik Cloths Meters.

In addition to calculating the use of raw materials for Woven Dresses in 2023, the use of raw materials can also be calculated based on sales forecasts for 2024-2025.

2026, namely as follows:

1. Year 2024

Woven Sarong 65 x 5 = 325

Lurik Fabric 65 x 5 = 325

2. Year 2025

Woven Sarong 67 x 5 = 335

Lurik Fabric 67 x 5 = 335

3. Year 2026

Woven Sarong 69 x 5 = 345

Lurik Fabric 69 x 5 = 345 For more details, see the following table:

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Table 5
Results of Calculation of Raw Material Usage for Woven Dresses at UD Padu Padan Woven Fabric 2024-2026

No	Type of Material	Unit	Year		
			2024	2025	2026
1	Woven Sarong	Pcs	325	335	345
2	Lurik Fabric	Meter	325	335	345

Source: Data Processed by Author, (2024)

Based on the calculation of raw materials for the production of Woven Dresses at Padu Padan Weaving in 2024-2026, where each year there is an increase in the amount of raw materials.

Workforce Planning Analysis

The workforce employed at Padu Padan Tenun is 13 people. Based on production data in 2023, UD Padu Padan Tenun produced 74 Woven Dress Pieces and employed 4 workers.

Average production of UD Padu Padan Tenun in one month: 74 Pcs: 12 = 6 Pcs/month
So the average is 6 : 4 = 2
 Average number of Woven Dresses produced by a permanent worker in one month:
2 Pcs x 12 months = 24 Pcs

By knowing the level of productivity of the permanent workforce in one year, the number of workers can be calculated to balance it.

So we can know the amount of direct labor needed by UD Padu Padan
Weaving for 2024-2026 is:
1. Year 2024
Woven Dress = 65 : 24 = 3 People
So, the average size of the workforce required by UD Padu Padan Tenun for the year is 2024 is 3 people.
2. Year 2025
Woven Dress = 67 : 24 = 2.79 = 3 People
So, the average size of the workforce required by UD Padu Padan Tenun for the year is 2025 is 3 people.
3. Year 2026
Woven Dress = 69 : 24 = 2.87 = 3 People
So, the average size of the workforce required by UD Padu Padan Tenun for the year is 2025 is 3 people.

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Table 6
Labor Calculation Results
At UD Padu Padan Weaving in 2024-2026

No	Year	Number of workforce requirements
1	2024	3
2	2025	3
3	2026	3

Source: Data processed by the author, (2024)

Based on calculations, the number of permanent workers at UD Padu Padan Weaving in 2024 will be 3 people, in 2025 there will be 3 people, and in 2025 there will be 3 people, and in 2026 as many as 3 people.

Production Cost Analysis

The research results show that the costs incurred by Padu PadanTenun in 2023 per production:

Table 7
Details of the Use of Woven Dress Production Costs at UD Padu Padan TenunTahun 2023

Year	Cost Details	Amount
1Time production per month in 2023	1.Raw Material Cost -Woven Sarong Rp. 1,200,000/Pcs x 5 x 4 -Lurik Fabric Rp.50,000/Meter x 5 x 4	 = Rp.24,000,000 = Rp.1,000,000
	2. Permanent Labor for 1 Month Rp.2,000,000/month x 4 people	= Rp.8,000,000
	3.Factory Overhead Costs -Electricity -Production Equipment Maintenance	 = Rp.3,000,000 = Rp.200,000
	Total	Rp.36,200,000

Source: Processed Data, (2024)

The total cost that Padu Padan Tenun must spend per production in 2023 is IDR 36,200,000. During 2023, the company was able to sell 291 pieces of Woven Dress at a price of Rp. 1,500,000/piece. So, the total income received by UD Padu Padan Tenun was Rp. 436,500,000. Thus, the company made a profit during the Woven Dress production activities in 2023 of (Rp. 436,500,000) – (Rp. 36,200,000)

= Rp.400,300,000.

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Break Even Point Analysis

To be able to carry out this analysis, costs must be classified into variable cost elements and fixed costs, namely as follows:

Table 8
Variable Cost of Woven Dresses at UD Padu Padan Tenun

- Woven Sarong (5 Sheets) Rp. 1,200,000 x 5 Pcs x 4	= Rp.24,000,000
- Lurik cloth Rp.40,000 x 5 Meters x 4	= Rp.1,000,000
Amount	= Rp.25,000,000

Source: Data processed by the author, (2024)

So, the amount of variable costs incurred is Rp. 25,000,000 which is used to produce 341 Woven Dresses. The variable costs are

Rp.25,000,000 : 341 = 73,313

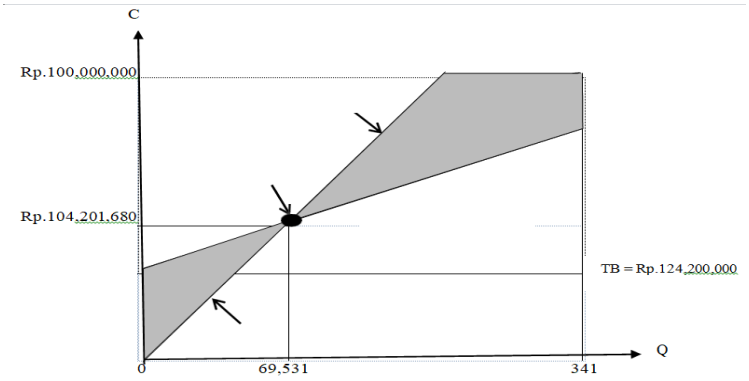
1. Variable Cost for Weaving = 73,313.
2. Fixed Costs
   - Labor 4 x Rp.2,000,000 x 12 months = Rp.96,000,000
   - Electricity = Rp.3,000,000
   - Production Equipment Maintenance = Rp.200,000
   - Amount = Rp.99,200,000

□ BEP in Mix and Match Weaving Rp.104.201.680

At this point the company is in a break-even state. The relationship between income, sales, and costs of the number of woven dresses produced by UDPadu Padan Tenun can be described as follows:

BEP Calculation Graph for UD Padu Padan Weaving in 2023

Figure 1



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From the graph above, it shows that if UD Padu Padan Tenun produces 69,531 Woven Dresses or Rp. 104,201,680, the company does not make a profit or loss because the company is at the break-even point due to the minimum amount that must be produced by the company. If the company produces below that amount, then The company will experience losses because the sales results obtained cannot cover the costs incurred by the company and if the company produces above that amount, the company will make a profit.

4. CONCLUSION

From the results of research conducted by researchers on production area planning At UD Padu Padan Tenun in Kupang City, the author draws the following conclusions:

1) In carrying out its production activities, UD Padu Padan needs to carry out production planning in the previous year, so that it can predict the level of production in the coming year, where in 2024 it is predicted that base sales will be 65 pcs, in 2025 as many as 67 pcs and in 2026 as many as 69 pcs.
2) From the calculation of costs received from the sales of Woven Dresses and the costs incurred by UD Padu Padan Tenun in 2023 to produce Woven Dresses, UD Padu Padan Tenun made a profit of IDR. 400,300,000.
3) The need for the number of workers at UD Padu Padan Tenun from 2024-2026 there will be an increase in the workforce. Based on the calculation of production workforce. Woven Dress from 2024 as many as 3 people, 2025 as many as 3 people, and 2026 as many as 3 people. The calculation is obtained from the planned production volume in a certain year divided by the productivity level of UD Padu Padan Tenun's workforce.
4) The results of the analysis show that if UD Padu Padan Tenun produces 69,531 Woven Dresses or Rp. 104,201,680, then UD Padu Padan Tenun does not make a profit or suffers a loss because at that point UD Padu Padan Tenun is in a break-even state and if UD Padu Padan Tenun produces below the BEP point, the company will experience a loss, and vice versa if UD Padu Padan Tenun produces above the BEP point, the company will make a profit.

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