



BUDGET ANALYSIS AS ONE OF THE PLANNING TOOLS AND PRODUCTION CONTROL

Hendra Railis¹

¹YAI Accounting Academy, Indonesia
Email: hendra_railis@yahoo.co.id

ABSTRACT

A developing company must have a goal so that activities within the company can achieve these goals. It is necessary to have a plan accompanied by effective control. One tool that can meet the planning and control needs is a budget because the budget is formal and systematic rather than the exercise of management responsibilities in planning, coordination, and oversight.

This study aims to determine the role of the budget as a means of planning and controlling production and to find out the application of the budget to the "Bahana Donut" home industry in City X. The type of approach in this research is the descriptive research method approach in case studies. The data analysis model in this study is to collect sales volume in 2018-2020.

From this analysis, the results obtained that: (1) the home industry "Bahana Donut" in City X has an advantage in producing donuts every year because this donut entrepreneur has not made a budget for production activities, to overcome this problem, the home industry "Bahana Donut" "City X requires the role of the budget as a means of planning and controlling production. (2) The production budget for donuts in 2021 is 39670 with a budget for wheat raw materials of 13223.64 Kg and a budget for purchasing wheat raw materials of Rp. 92,894,760, the budget for raw materials for sugar is 22003.94 Kg, and the budget for purchasing raw materials for sugar is Rp. 13,230,840, the budget for raw materials for eggs is 1101.97 Kg. The budget for purchasing raw materials for eggs is Rp. 13,227,960, the budget for raw materials for butter is 2203.94 Kg, and budget for purchasing raw materials for butter is Rp. 22,401,800, the budget for raw materials for oil is 3305.91 Kg, and the budget for purchasing raw materials for oil is Rp. 39,703,320.

Keywords: Budget, Planning Tool, Control Tool

INTRODUCTION

A growing company certainly has a goal so that activities within the company can be direct. Still, in the face of uncertain conditions, the company must have strategies to achieve effectively and efficiently to optimize the achievement of goals and the survival of the company. One of the tools that can meet planning and control needs is the budget. The budget is a formal and systematic approach rather than implementing management responsibilities in planning, coordinating, and monitoring (Adisaputra and Asri, 2007:6).

Judging from the importance of the budget in the company, achieving its goals requires budget preparation. In the preparation of the budget, there are two alternatives to the budget practice, namely, comprehensively and partially. The types of activities it covers include all company activities, both in marketing, production, finance, and general administration. This activity entirely means that the company prepares a budget in a comprehensive scope. While partially is the company's budget which is designed with a limited area which only covers part of the company's activities. Given that there are two alternatives in budgeting, the writer is interested in researching a comprehensive budgeting study on the "Bahana Donut" home industry.

In the "Bahana Donut" Home Industry, there are indications of problems in producing donuts which then have issues with all activities within the company every year, which is

constantly experiencing excess in production. In 2018 the company planned to sell 44635 boxes, but the sales realization is 40376 boxes, in 2018 it plans to sell 44325 packages, but the sales realization is 43437 boxes, and in 2020 it plans to sell 44610 boxes, but the sales realization is 39139 boxes, the information can be seen in the following table.

Table 1
 Home Industry "Bahana Donut" Sales Plan and Sales Realization in Box Unit

Year	Sales Plan	Sales Realization	Deviation
2018	44635	40376	4259
2019	44325	43437	888
2020	44610	39139	5471

Data Source: home industry "Bahana Donut."

The data explains that the excess in producing donuts means that the amount of raw materials needed to make donuts is also significant, thus affecting the company's expenses to fulfill the purchase of raw materials required. Therefore, this "Bahana Donut" home industry needs a solution in producing donuts, affecting all activities within the company. This reason makes the author feel the need to conduct research on " *Budget Analysis as a Tool for Production Planning and Control* " so that it can be seen the role of the budget as a means of planning and controlling production and the function of the budget in the home industry " *Bahana Donut*," and can provide input to industrial households "Bahana Donut" to funding for company activities so that company goals can be achieved effectively, efficiently and can minimize losses.

This research uses the formulation of the problem, namely, how is the role of the budget as a means of planning and controlling production in the "Bahana Donut" home industry? And with the aim of research to determine the role of the budget as a means of planning and controlling production in the home industry "Bahana Donut."

Budget

According to Adisaputra and Anggarini (2007:21), a comprehensive budget is a process aimed at helping carry out planning and control functions effectively. This budget model includes: 1) Development and application of company goals in a broad and long-term sense (company vision and mission), 2) Formulating specific company goals, 3) Developing long-term profit planning strategies in a broad sense, 4) Developing profit strategies short term specifically with detailed responsibilities, 5) Creating a periodic performance reporting system with detailed responsibilities, 6) Developing follow-up procedures (*follow up*).

Thus corporate budgeting can be defined as preparing a budget made to achieve the company's goals to earn a profit. According to Tisnawatisule and Saefullah (2012: 96) see planning from three things, namely in terms of processes, management functions, and decision making. From the process side, the planning function is the basic process used to select goals and determine how will achieve these goals. From the management function side, planning is a function where the leader uses influence over his authority to choose or change the goals and activities of the organization.

According to Hafidhuddin and Tanjung (2013: 77), in planning, several aspects must be considered, namely 1) the results to be achieved, 2) the people who will do it, 3) time and priority scale, 4) funds (capital).

The verse explains that everyone should pay attention to what he has done for tomorrow (hereafter). This concept explains that the planning that will carry out must be adjusted to the circumstances of the situation and conditions in the past, present, and future predictions. Therefore, to carry out any future planning, current studies are needed.

When making a plan, company management must consider that the project is the stage that leads to the goal. So, planning must be determined so that it is a process to achieve the primary goal. However, even though it has been made in such a way, no one can predict

the benefit of the profit what will happen in the future, so Allah also shows us always to prepare planning and control (budget) to achieve the desired goals effectively efficiently.

Control is an effort or method taken to prevent deviations from expected or planned. In this case, the control seeks to minimize variations within the company. Control is a business or strategy used to correct the desired deviation and ensure the achievement of a goal and the implementation of the company's plans. So control is intended to confirm whether the work achieves satisfactory results following the company's goals that have been set.

The budget has several functions in a company because the budget is the company's strategy in achieving company goals. According to Haruman and Rahayu (2007:5), several functions of the budget in the management process are as follows:

- 1) In the field of *planning*
 - a. Helping management research and study all problems related to the activities to be carried out
 - b. Help direct all existing resources in the company in determining the direction
 - c. Assist or support company policies d) Help management choose company goals
 - d. Help stabilize available job opportunities
 - e. Helping to use physical tools more effectively
- 2) In the *coordinating* field
 - a. Help coordinate human resource factors with the company
 - b. Help assess the suitability of the company's activity plans with the state of the business environment faced
 - c. Help place the use of capital in profitable channels following and balance with the company's program
 - d. Help identify weaknesses in the organization
- 3) In the field of *controlling*
 - a. Help oversee activities and expenses
 - b. Help prevent wastage
 - c. Help set new standards

The budget has many benefits for the company; besides the budget having benefits, the budget also has weaknesses. According to Nafirin (2013:15), the help of the budget are: 1) All activities direct at achieving common goals, 2) Can be used as a tool to assess employee strengths and weaknesses, 3) Can motivate employees, 4) Create a sense of responsibility in employees, 5) Avoid waste and unnecessary payments, 6) Resources such as labor, equipment and funds can be used as efficiently as possible, 7) Educational tools for employees.

Sales Budget

The *sales budget* is a *budget* that is planned in more detail for the company's sales during the coming period, which includes plans for the type (quality) of goods to be sold, the amount (quantity), the price of the goods, the time of sale and the place/area of the sale. According to Haruman and Rahayu (2007:45), the sales budget is the basis for preparing other budgets and is generally prepared before preparing different budgets. Therefore the sales budget is often called the critical budget.

According to Haruman and Rahayu (2007:45), the purpose of preparing a sales budget is to plan as accurately as possible the level of sales in the future period by paying attention to data which is a reflection of events experienced by the company in the past, especially in the field of sales. The use of the sales budget itself as a working guide, a tool for coordinating and supervising work, and a basis for the preparation of other budgets.

Production Budget

According to Ambarriani (2014:362), the production budget is a plan for acquiring and combining the resources needed to carry out manufacturing operations that allow the company to achieve its sales goals and have the expected amount of inventory at the end of

the budget period.

According to Haruman and Rahayu (2007:58), production planning and scheduling is a factory task that involves determining the number of goods produced and determining production time. The factors that affect the size of the number of goods that the company must make during a specific time are 1) the number of goods that have been planned to be sold, as stated in the sales budget, 2) the capacity of factory machinery and equipment, 3) the workforce owned related to quality and quantity, 4) Stability of raw materials, 5) Owned working capital, 6) Warehouse facilities.

Raw Material Budget

According to Haruman and Rahayu (2007:73), the raw materials used in the production process are *grouped* into direct materials (*direct material*) and indirect raw materials (*indirect material*). Explicit raw materials are all-natural parts of the finished goods produced. Meanwhile, indirect raw materials are natural materials that play a role in the production process but are not directly visible in the finished goods produced. The raw material budget only plans the needs and use of direct materials. Indirect materials will prepare in the factory overhead budget.

The benefits of preparing a budget for raw materials that are used up for *production purposes include calculating* the cost of goods produced by the company and monitoring the use of raw materials.

Labor Budget

According to Haruman and Rahayu (2007:87), labor is classified into two groups, namely direct labor (*direct labor*) and indirect labor (*indirect labor*). Immediate work is directly involved in the company's production process, and its costs are linked to production costs or goods produced. Meanwhile, indirect workers are not directly involved in the production process and are associated with factory overhead costs.

Direct labor hours can be calculated in various ways, including analysis of motion and time. Motion analysis observes the movements carried out in the production process of a specific type of goods. At the same time, time analysis is the calculation of the time required for each activity carried out in the context of the production process.

RESEARCH METHOD

Research Types and Approach

The approach in research has a significant role in determining the direction of research activities so that research objectives can achieve by referring to the background and formulation of the problems that have been described.

According to Hasan (2015:2), research is the channeling of human curiosity about something or a problem with specific treatments such as checking, investigating, studying, and studying carefully and thoughtfully so that something is obtained, such as reaching the truth, getting answers, developing knowledge. , etc. The type of research in this research is qualitative research.

While the research approach used in this research is the case study method, according to Arikunto (2018:142), case research is carried out intensively in detail and depth on an organization, institution, or particular phenomenon.

Data and Data Sources

According to Hasan (2015: 82), data is information about a thing, and it can be something that is known or considered or assumed to be a fact depicted through numbers, symbols, codes, and others. In this study, the data and data sources used are 1). Primary data and 2). Secondary data

Data collection technique

According to Hasan (2015:83), data collection is the recording of events or things or

information or characteristics of some or all population elements that will support or support research—in this study uses several data collection techniques, namely 1). Observation, 2). Interview, 3). Documentation.

Data Analysis Model

In this discussion, the data obtained is connected with other data and then processed and arranged to conclude to solve the problems studied.

The analysis data model in this study uses qualitative analysis. According to Hasan (2015:98), qualitative analysis is an analysis that does not use mathematical models, statistical models, econometrics, or specific other models. The data analysis is limited to data processing techniques, such as data checking and tabulation, just reading the available tables, graphs, or figures, then doing descriptions and interpretations. The steps are:

1. Collecting all sales volume for 2018-2020
2. Analyze sales volume data by compiling a sales budget
3. Prepare production budget
4. Prepare raw materials budget
5. Prepare labor budget

RESULT AND DISCUSSION

The data obtained from the home industry "Bahana Donat" is the sales plan and sales realization and deviation for three years, 2018, 2019, and 2020, as follows:

Table 2
Sales Plan and Realization of Sales for 2018 in Boxes

Month	Sales Plan	Sales Realization	Deviation
January	4610	4415	195
February	4250	3971	279
March	4220	3728	492
April	3150	3012	138
May	3280	3481	-201
June	3845	3407	438
July	4325	4582	-257
August	4310	3512	798
September	3610	3407	203
October	3015	2402	613
November	2850	758	2092
December	3170	3701	-531
Amount	44635	40376	4259

Data Source: Home Industry "Donut Ingredients," Processed

The table above is the data on the sales of the home industry "Bahana Donut" in 2018. From the table above, it is known that the sales plan for donuts is 44635 boxes and sales realization in 2018 in 40376 boxes, so the deviation of donut sales is 4259 boxes obtained from:

The deviation year 2018 = number of sales plans – total sales realization
= 44635 boxes – 40376 boxes
= 4259 boxes

Table 3
Sales Plan and Sales Realization in 2019 in Box Units

Month	Sales Plan	Sales Realization	Deviation
January	4510	4413	97

February	4505	4638	-133
March	4520	4015	505
April	4010	3812	198
May	3745	3407	338
June	3720	4713	-993
July	3850	3806	44
August	3820	3740	80
September	3645	2253	1392
October	2565	764	1801
November	2540	3205	-665
December	2895	4671	-1776
Amount	44325	43437	888

Data Source: Home Industry "Donut Ingredients," Processed

The table above is the data on the sales results of the "Bahana Donut" home industry in 2019 from the table above, it is known that the planned sales of donuts amounted to 44325 boxes, and sales realization in 2019 amounted to 43437 boxes, the deviation of donut sales was 888 boxes obtained from:

The deviation year 2019 = number of sales plans – number of realized sales
 = 44325 boxes – 43437 boxes
 = 888 boxes

Table 4
 Sales Plan and Realization of Sales for 2020 in Boxes

Month	Sales Plan	Sales Realization	Deviation
January	4415	4201	214
February	4395	4618	-223
March	4410	3915	495
April	4375	3406	969
May	4120	3511	609
June	3860	3271	589
July	3415	3012	403
August	3120	3143	-23
September	3180	2038	1142
October	2950	869	2081
November	2845	3239	-394
December	3525	3916	-391
Amount	44610	39139	5471

Data Source: Home Industry "Donut Ingredients," Processed

The table above is data from the sales results of the "Bahana Donut" home industry in 2020, from the table above it is known that the planned sales of donuts amounted to 44610 boxes, and sales realization in 2020 amounted to 39139 boxes, the deviation of donut sales was 5471 boxes obtained from:

The deviation year 2020 = number of sales plans – number of realized sales
 = 44610 boxes – 39139 boxes
 = 5471 boxes

From the data above, when there is a shortage in selling donuts, this entrepreneur increases the production of donuts. Still, the addition of donuts is not accompanied by careful

planning, resulting in excess in the production of donuts for the next period and experiencing losses due to a large amount of expenditure incurred to benefit the output.

Therefore, the home industry "Bahana Donut" must have strategies to achieve its objectives effectively and efficiently, namely profit in this business and the company's survival. This work is to achieve a goal; planning and control are summarized in a budget.

1. Sales Budget

The preparation of the sales budget is to plan the level of sales in the future period by paying attention to data that reflects events experienced by the company in the past.

The data below is sales volume data for 2018-2020. The data reflects the sales plan for 2021 because every year, this entrepreneur realizes the sale of donuts due to the same factors. In January, for example, the demand for donuts rises because it is the beginning of a new year. There is a spike in demand for donuts in December because of Christmas Day. As a result of the Eid holiday policy, this entrepreneur does not have an entire month of entry for employees during Ramadan. With these factors, the 2018-2020 sales volume can reflect on compiling the 2021 sales budget by calculating the average sales volume for 2018-2020.

The result of the average sales volume for 2018-2020 is the sales plan for 2021 of 40985 boxes. With the following calculations:

$$\begin{aligned}\text{Average sales} &= (\text{total sales in 2018} + \text{total sales in 2019} + \text{total sales in 2020}): 3 \\ &= (40376 \text{ boxes} + 43437 \text{ boxes} + 39139 \text{ boxes}): 3 \\ &= 40985 \text{ box}\end{aligned}$$

Then from the sales plan of 40985 boxes, a sales budget can prepare by multiplying the selling price per box of Rp. 8.000, then the preparation of the sales budget for 2021 is the total sales budget for 2021 for 40985 boxes is Rp. 327,88,000, with the following calculation:

$$\begin{aligned}\text{Sales budget} &= \text{number of sales plans} \times \text{selling price of donuts per box} \\ &= 40985 \text{ boxes} \times \text{Rp. 8.000} \\ &= \text{Rp. 327,880,000}\end{aligned}$$

2. Production Budget

To support the sales plan, we first need to do the activity as preparation is necessary to prepare a production budget. The production budget is intended to determine the number of goods produced by the factory during one year and take into account the inventory level at the beginning and end of each year.

It is known that the total sales budget for 2021 in 40741 boxes, and it is also known that the initial inventory is 4916 boxes, the ending inventory is 3601 boxes, so the summary of production is as follows:

Sales year 2021	40985 box
Ending inventory	<u>3601 box +</u>
Need	44586 box
Initial inventory	<u>4916 box -</u>
Quantity to be produced	39670 box

The allocation of production levels for each month, namely: production for one year, in 39670 boxes. Production per month: 39670 boxes: 12 = 3305.8 boxes or 3300 boxes. If the monthly production is 3300 boxes, then the shortfall is 39670 boxes – (3300box x 12) = 70 boxes. The production shortfall of 70 boxes is allocated to the months where the sales level is highest, namely in January, February and December, so the production budget for 2021 is the production budget for the home industry "Bahana Donut" in 2021, which is 39370 boxes, for January and February the total is 39,370 boxes. The production was 3330

boxes, and in December, the total production was 3310 boxes because there were high sales in those months.

3. Raw Materials Budget

Raw materials are materials that can support a production unit. Below are the raw materials used in the donut production process for 36 boxes, as follows:

Table 5 Raw Material Standards for 36 Boxes

Raw Material Type	Raw Material Size (Kg)	Price Per Kg	Total (Rp)
Flour	12	7.000	84.000
Sugar	2	6.000	12.000
Egg	1	12.000	12.000
Butter	2	10.000	20.000
Oil	3	12.000	36.000

Data Source: Home Industry "Donut Ingredients," Processed

In this study, the raw material studied was the primary raw material for making donuts because the amount of expenditure incurred to make donuts was giant compared to auxiliary raw materials such as spices, nuts, cheese, meisis, chocolate, donuts, etc. Then the ending raw material inventory in 2021 and the beginning raw material inventory in 2020 for each raw material are as follows:

Table 6 Ending Inventory and Beginning Raw Material Inventory

Material Type raw	Ending Supplies (Kg)	Initial inventory (Kg)
Flour	477,72	430,68
Sugar	12,08	10,88
Egg	3,62	3,26
Butter	91,08	54,84
Oil	28,95	26,25

Data Source: Home Industry "Donut Ingredients," Processed

From the data obtained above, it can be seen that *the SUR (Standard Usage Rate) for 36 boxes of donuts*, so that the raw material requirement budget for each production plan is as follows:

a) Budget for raw material needs and purchase of wheat raw material needs

The budget for wheat raw material needs is how much flour is needed to produce donuts. The budget for wheat raw materials in 2021 per 36 boxes is the budget for raw material needs for flour for the 2021 production plan of 1101.97 boxes, which is 13223.64 Kg of flour, with the following calculation:

The planned amount of flour needs = Production plan X SUR
 = 1101.97 box X 12 kg of flour
 = 13223.64 Kg of flour

So the budget for the purchase of wheat raw materials in 2021 is:

Wheat raw material budget 13223.64 Kg
 Ending inventory 477.72 Kg +
 Amount of flour raw material 13701.36 Kg
 Initial inventory 430.68 Kg -
 13270.68 Kg

Total purchases of wheat raw materials 13270.68 Kg The allocation of total

investments of wheat raw materials for each month, namely: Purchases of grain raw materials during 2021, is 13270.68 Kg. So the buying of grain raw materials per month is 13270.68 Kg: 12 months = 1105.89 Kg or 1100 kg. If the purchase of grain raw materials per month is 1100 Kg, then the shortage of wheat raw materials is 13270.68 Kg – (1100 Kg x 12 months) = 70.68 Kg. The need for 70.68 kg of wheat flour is allocated to the months with the highest raw material requirements, namely January, February, and December of 23.56 kilograms.

b) Budget for raw material needs and purchase of raw material needs for sugar

The budget for wheat raw material needs is how much flour is needed to produce donuts. The budget for raw materials for sugar in 2021 per 36 boxes is the budget for raw material needs for sugar for the 2021 production plan of 1101.97 boxes, which is 2203.94 kg of sugar, with the following calculation:

The planned amount of sugar needs = Production plan X SUR
 = 1101.97 box X 2 kg of sugar
 = 2203.94 Kg sugar

So the budget for the purchase of raw sugar for 2021 is:

Sugar raw material budget	2203.94 Kg
Ending inventory	<u>12.08 Kg +</u>
Amount of raw sugar	2216.02 Kg
Initial inventory	<u>10.88 Kg –</u>
	2205.14 Kg

Total purchases of raw materials for sugar 2205.14 Kg The allocation for purchasing raw materials for sugar for each month is: Purchases for raw materials for sugar during 2021 is 2205.14 Kg. So the purchase of raw materials for sugar per month is 2205.14 Kg: 12 months = 183.76 Kg or 180 Kg. If the purchase of raw materials for sugar is 180 Kg per month, then the shortage of raw materials for sugar is 2205.14 kg – (180 Kg x 12 months) = 45.14 Kg. The need for 45.14 kilograms of raw material for sugar is allocated to the months with the highest demand for raw materials, namely January, February, and December.

c) Budget for raw material needs and purchase of raw material needs for eggs

The budget for wheat raw material needs is how much flour is needed to produce donuts. The budget for raw materials for eggs in 2021 per 36 boxes is the budget for raw material needs for eggs for the 2021 production plan of 1101.97 boxes, which is 1101.97 kg of eggs, with the following calculations:

Planned number of egg needs = Production plan X SUR
 = 1101.97 box X 1 kg egg
 = 1101.97 Kg eggs

So the budget for purchasing raw materials for eggs in 2021 is:

Egg raw material budget	1101.97 Kg
Ending inventory	<u>3.62 Kg +</u>
Egg raw material quantity	1105.59 Kg
Initial inventory	<u>3.26 Kg –</u>
	1102.33 Kg

Total purchase of raw egg raw materials 1102.33 Kg The allocation of the purchase of raw materials for each month, namely: Purchase of raw materials for eggs during 2021, is 1102.33 Kg. Then the purchase of raw eggs per month 1102.33Kg: 12 months = 91.86 Kg or 90 Kg. If the purchase of raw materials for eggs is 90 Kg per

month, then the shortage of raw materials for eggs is 1102.33 Kg - (90 Kg x 12 months) = 22.33 Kg. The lack of raw materials for 22.33 Kg eggs is allocated to the months with the most natural material needs, namely January, February, and December.

d) Raw material requirement budget and purchase of butter raw material requirement

The budget for wheat raw material needs is how much flour is needed to produce donuts. The budget for raw materials for butter in 2021 per 36 boxes is the budget for raw material needs for butter for the 2021 production plan of 1101.97 boxes, which is 2203.94 kg of butter, with the calculation:

$$\begin{aligned}\text{The planned amount of butter needs} &= \text{Production plan} \times \text{SUR} \\ &= 1101.97 \text{ box} \times 2 \text{ kg butter} \\ &= 2203.94 \text{ Kg of butter}\end{aligned}$$

So the budget for purchasing butter raw materials in 2021 is:

Butter raw material budget	2203.94 Kg
Ending inventory	<u>91.08 Kg ±</u>
Amount of raw butter	2295.02Kg
Initial inventory	<u>54.84 Kg -</u>
	2240.18 Kg

Total purchase of butter raw materials 2240.18 Kg The allocation of total purchases of butter raw materials for each month, namely: Purchase of butter raw materials in 2021, is 2240.18 Kg. So the purchase of butter raw materials per month is 2240.18 Kg: 12 months = 186.68 Kg or 100 Kg. If the purchase of butter raw materials per month is 100Kg, then the shortage of butter raw materials is 2240.18 Kg - (100 Kg x 12 months) = 1040.18Kg. The need for raw material for butter, 1040.18 Kg, is allocated to the months that require the most natural materials, namely January, February, and December.

e) Raw material requirements budget and purchase of crude oil needs

The budget for wheat raw material needs is how much flour is needed to produce donuts. The budget for raw materials for 2021 per 36 boxes is the budget for raw material needs for production plans for 2021 of 1101.97 boxes, which is 3305.91 kg of oil, with the following calculations:

$$\begin{aligned}\text{The planned amount of oil requirement} &= \text{Production plan} \times \text{SUR} \\ &= 101.97 \text{ box} \times 3 \text{ kg of oil} \\ &= 3305.91 \text{ Kg of oil}\end{aligned}$$

So the budget for the purchase of crude oil in 2021 is:

Oil raw materials budget	3305.91 Kg
Ending inventory	<u>28.95 Kg ±</u>
Amount of crude oil	3334.86 Kg
Initial inventory	<u>26.25 Kg -</u>
	3308.61 Kg

Total purchases of crude oil 3308.61 Kg The allocation of total purchases of crude oil for each month, namely: Purchase of crude oil in 2021, is 3308.61 Kg. So the purchase of raw materials per month is 3308.61 Kg: 12 Months = 275.72 Kg or 200 Kg. If the purchase of crude oil is 200Kg per month, then the shortage of crude oil is 3308.61 kg - (200 Kg x 12 months) = 908.61 Kg. The need for 908.61 kilograms of crude oil is allocated to the months that require the rawest materials, namely January, February, and December.

4. Labor Cost Budget

This labor cost budget arises because of the production department employees who are bound by time in producing and the number of goods delivered. The production budget must be made by the "Bahana Donut" home industry in City X in 2021 in 39670 boxes, so the budget for employee working hours and wages for 2021 is per 30 boxes.

The standard working hours to produce 36 donut boxes is 2.16, obtained from accurate sales volume data in 2018, 2019, and 2020. Namely in 2018, the sales volume was 40376: $(12 \times (8 \text{ hours} \times 26 \text{ days})) = 16.17$ boxes. The result of 16.17 boxes is the number of donuts produced in 1 hour, so one box can complete in 0.06 hours, which is obtained from $(1 \text{ box}: 16.17 \text{ boxes}) \times 1 \text{ hour} = 0.06 \text{ hours}$. It is known that to produce one box of donuts is 0.06 hours, and then for 36 boxes of donuts, it takes 2.16 hours.

In 2019 the sales volume was 43437: $(12 \times (8 \text{ hours} \times 26 \text{ days})) = 17.40$ boxes. The result of 17.40 boxes is the number of donuts that can produce in 1 hour, so one box of donuts can complete in 0.06 hours, which is obtained from $(1 \text{ box}: 17.40 \text{ boxes}) \times 1 \text{ hour} = 0.06 \text{ hours}$. It is known that to produce one box of donuts is 0.06 hours, and then for 36 boxes of donuts, it takes 2.16 hours.

In 2020 the sales volume was 39139: $(12 \times (8 \text{ hours} \times 26 \text{ days})) = 15.68$ boxes. The result of 15.68 boxes is the number of donuts that can produce in 1 hour, so one box of donuts can complete in 0.06 hours, which is obtained from $(1 \text{ box}: 15.68 \text{ boxes}) \times 1 \text{ hour} = 0.06 \text{ hours}$. It is known that to produce one box of donuts is 0.06 hours, and then for 36 boxes of donuts, it takes 2.16 hours.

From the real data, the budget for the working hours needed for employees in producing donuts in 2021 is 39670 with a standard working hour of 2.16 hours, so the employee's work needs in 2021 are 2380.2 DLH. With the following calculations:

$$\begin{aligned}\text{Budget working hours 2021} &= \frac{39670 \text{ boxes}}{36 \text{ boxes}} \times 2.16 \text{ hours} \\ &= 2380.2 \text{ DLH}\end{aligned}$$

The 2021 working hour budget of 2380.2 DLH with a labor wage of 38,500 per hour for seven employees is calculated, a 2021 workforce wage budget of Rp. 91,637,700, with the following calculation:

$$\begin{aligned}\text{Labor wages in 2021} &= 2380.2 \text{ DLH} \times \text{Rp. } 38,500 \\ &= \text{Rp. } 91,637,700\end{aligned}$$

CONCLUSION

From several analyses of the production activities in the "Bahana Donut" home industry in City X that have been described, it can conclude that the role of the budget is as a means of planning and controlling production. From the sales data and sales realization, a budget can be used for planning and controlling the production of donuts for the next period.

Data for 2018-2020 can be used as a reference for preparing the 2021 budget. The sales budget for 2021 is 40985 boxes with a selling price of Rp. 327,880,000, a 2021 production budget of 39670 parcels can be prepared from the sales budget, so it can be seen that the budget for raw material needs and raw material purchases can be made. The budget for the need for wheat raw materials in 2021 is 13223.64 per 36 boxes. The budget for the purchase of wheat raw materials is Rp. 92,894,760, the budget for raw materials for sugar is 22003.94 Kg, and the budget for purchasing raw materials for sugar is Rp. 13,230,840, the budget for raw materials for eggs is 1101.97 Kg, and the budget for buying raw materials for eggs is Rp. 13,227,960, budget for raw materials for butter is 2203.94 Kg and budget for purchasing raw materials for butter is Rp. 22,401,800, the budget for raw materials for oil is 3305.91 Kg and the budget for buying raw materials for oil is Rp. 39,703,320. The data results can be used as production planning and control for 2021.

ACKNOWLEDGMENTS

The author would like to thank all people and society for their support and encouragement throughout the process until the completion of this research. It is hoped that it can use as reading material to add insight and views of readers and a source of reference and information for the same research size and a comparative study in the context of studying science.

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