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EVALUATION OF IMPLEMENTING ACTIVITY-BASED COSTING IN AA BUSINESS UNIT (BLACK TEA PROCESSING) AT PT. XYZ

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ABSTRACT

Calculation of production costs using traditional costing has limitations in determining accurate production costs at a high level of product variety and complexity. Each type of product through different production activities causes different costs. The use of traditional costing can causes inaccurate decision making. This study aims to analyze the calculation of the cost of goods manufactured in AA business unit (black tea processing) at PT. XYZ with the implementation of Activity-Based Costing (ABC) on CTC (Crush, Tear, Curl) and Orthodox tea processing method. The research is a case study and a qualitative approaches. Research data obtained from interviews, observation, and documentation. The research was conducted by comparing the cost of tea production between the ABC and the traditional costing and analyzing the impact of the implementation of the ABC method on decision making. The results of this study indicate that the cost calculation with the application of ABC provides more accurate data and can help decision making.

Keywords: *Acivity-Based Costing, Case Study, Cost Management, Manufacturing Company.*

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1. INTRODUCTION

The agricultural sector has a fairly important role in economic activity in Indonesia, this can be seen from its contribution to the Gross Domestic Product (GDP) which is quite large, which is around 13.70% in 2020 or ranks second after the Manufacturing Industry sector (19,88. %) and the third rank is the wholesale and retail sector and car and motorcycle repair (12.93%). One of the sub-sectors with a large potential is the plantation sub-sector. The contribution of the plantation sub-sector in GDP is around 3.63% of the total GDP and 26.49% of the Agriculture, Forestry, and fishery sectors or is the first rank in the sector. This sub-sector is a provider of raw materials for the industrial sector, an absorber of labor, and a foreign exchange earner.

Tea is one of the plantation commodities that plays a major role in the Indonesian economy. Most of Indonesia's tea production is marketed abroad, so Indonesia has an important role in global tea availability. The tea industry is expected to experience an increase in global demand. The global tea market reached a volume of 6.71 million tonnes in 2020. In the forecast period 2022-2027, the market is expected to grow at a CAGR of 3.3%. In 2020, the market share for Indonesian tea products has reached 64 countries. In 2018 the volume of tea exports was 49,038 tons with a value of US\$ 108.5 million. Then in 2019 the export volume decreased by 12.70 percent to 42,811 tons with an export value of US\$ 92.3 million. After several years of declining export volumes, in 2020 export conditions increased by 5.73 percent to 45,265 tons with a value of US\$ 96.3 million (BPS, 2020).

The types of tea that are widely produced in Indonesia are green tea and black tea. Green tea is tea that does not undergo an enzymatic oxidation process or incubation process in its processing. The characteristic of green tea is that the smell of the leaves does not go away, because it does not undergo an enzymatic oxidation process, so it must be added with fragrances other than tea, such as jasmine flowers. Meanwhile, black tea is tea that has undergone an enzymatic oxidation process or incubation process in its processing. Black tea does not contain other elements outside the tea shoots.

Black tea is usually processed by two methods, namely the CTC method (Crushing, Tearing, and Curling) and the Orthodox method. CTC processing is a processing method that requires a light wilting rate (water content reaches 67-70%) with hard rolling properties. While the processing of Orthodox tea requires a heavy wilting rate (water content 52-58%) with lighter rolling properties. The difference between the processing of Orthodox black tea and CTC black tea is that Orthodox black tea is made from leaves that have been selected using the extract formula, while CTC black tea is made from coarse leaves. This black tea product is made with various types according to consumer needs, so that consumers can choose the type of product they will consume.

PT. XYZ is a company engaged in the plantation sector. One of its business units, namely the AA business unit, is engaged in the black tea processing industry. AA's business unit produces black tea with two types of processing, namely CTC and Orthodox. The production of black tea is sold both domestically and abroad. PT. XYZ produces dry tea using the Orthodox method as much as 14-16 tons per day. The dry tea is produced from 35-40 tons of wet tea leaves. Meanwhile, dry tea using the CTC method is produced as much as 12-14 tons per day. The dry tea is produced from 30-35 tons of wet tea leaves. Sales of black tea in bulk (bulk) are packaged in 3 options, namely paper sacks, cartons, and polybags. The black tea will then be sent to the auction place to be sold under an auction system based on market prices. In addition, black tea is also sold to local buyers.

The cost of black tea production consists of direct material costs, direct labor costs, and factory overhead costs. Direct material costs consist of plant costs and harvest costs. Direct labor costs consist of processing staff salaries, salaries & social costs of implementing employees, and PKWT labor. Factory overhead costs in tea production in the form of waste quality processing costs, extra fooding, alternative fuel (palm shell), allocation of power plants, allocation of own water installations, packaging tools and materials, indirect labor costs, tools and equipment, station maintenance costs, maintenance costs for factory buildings, and the allocation of heavy equipment for packing and transportation.

The calculation of the cost of tea production in the AA business unit uses the traditional costing method. The cost of CTC black tea and orthodox black tea is allocated based on a ratio of 40% for CTC and 60% for orthodox and then divided by the number of units produced for each type of black tea. This comparison is based on the comparison of the average number of units produced between CTC black tea and orthodox black tea. However, there are costs charged by the direct tracing method for some physically observable costs.

The difference between the two types of black tea processing lies in the withering, rolling, and drying processes. In the withering process, CTC black tea is wilted with low wilting while Orthodox black tea is wilted with heavy wilting. So the time required for wilting is faster for CTC black tea than for Orthodox black tea. The impact of this time difference on the withering process is that less fuel is used to wilt CTC black tea than Orthodox black tea. In the rolling process, CTC black tea and Orthodox black tea have different rolling properties. CTC black tea is processed with a hard rolling nature while Orthodox black tea is processed with a lighter rolling property. Different machines are required for the two winding properties. In the drying process, CTC black tea that has been wilted with low wilting has a high water content while orthodox black tea that has been wilted with heavy wilt has a low water content. So to reach a moisture level of about 5%, CTC black tea takes longer to dry than orthodox black tea. The impact of this time difference on the

drying process is that more fuel is used to dry CTC black tea than Orthodox black tea.

Several years ago, the production of Orthodox black tea in the AA business unit was stopped. The discontinuation of Orthodox black tea production was due to the production costs being too large and deemed not profitable enough by the management. The discontinuation of Orthodox black tea production did not last long and Orthodox black tea production was produced again. Orthodox black tea production resumed as sales declined when Orthodox black tea ceased to be produced. Historical data also proves that sales of Orthodox black tea are more than sales of CTC tea. So the management decided to re-produce Orthodox black tea. However, management is not yet fully convinced whether the decision is the right one.

The decision to stop or continue production of a product line requires adequate information. Information about costs is an important input for many managerial decisions. The AA business unit uses the traditional costing system in charging CTC and Orthodox black tea costs. Traditional costing systems are not able to contribute to decision making and provide high cost accuracy. In the traditional costing system, factory overhead costs are charged based on the number of units, while there is diversity between the two types of tea processing. Companies need a cost management information system to determine the right costing. At the product unit level, distorted manufacturing costs can cause managers to make significant decision-making errors.

One method of cost management that can be applied is Activity Based Costing. With this method, resource costs are traced to activities and from activities, these costs are accurately allocated to products according to the use of activities in each product. This is different from the traditional costing system, the product and the associated product volume are the cause of the cost. Cost calculation with Activity Based Costing can help management decision making to continue or discontinue orthodox black tea.

Previous research on educational institutions conducted by Wiyani (2020) stated that the application of ABC was able to create excellent service and increase customer satisfaction with an indication that there was an increase in the number of students every year, the budget needed to carry out PAUD activities could be met, and institutionally developed with establishment of Daycare Parks and Playgroups. Research on hospital inpatient services conducted by Waleny & Basri (2016) stated that the use of the ABC method in setting rates for inpatient services is presented more accurately and precisely. The hospitalization rate is distorted (undercosting and overcosting). Undercosting occurs in the Super VIP room rate, while the VIP Exclusive, I, II, and III room rates experience undercosting. The implementation of the Activity-Based Costing System in food processing companies conducted by Rahmaji (2013) states that the overhead costs of each product are charged to several cost drivers so that the Activity-Based

Costing System is able to allocate activity costs to each product appropriately based on each consumption. activity. Research conducted by Martusa & Adie (2011) on textile manufacturing companies states that calculations using an activity based costing system can produce a more precise cost of production so that it can be a good basis for determining the selling price of textile products. To set the appropriate selling price, mark up takes into account the competitive situation and the purchasing power of customers.

Based on the explanation above, this study aims to evaluate the application of activity based costing in the AA business unit (black tea processing) at PT. XYZ. Evaluation of the application of activity based costing is carried out considering the importance of accurate cost management information in making decisions to stop or continue the production of a product line.

2. LITERATURE REVIEW

2.1. COST MANAGEMENT

Cost management is the process of finding and executing projects or works based on the development and use of cost management information. Cost management information consists of financial information about costs and revenues and non-financial information about customer retention, productivity, quality, and other key success factors for the organization. Cost management requires an in-depth understanding of a company's cost structure. Cost management does not only focus on the short term but also the long term of activities and processes as well as the costs of goods, services, customers, suppliers, and other objects of interest. Cost management is important because it is useful for continuous improvement, total quality management, environmental cost management, productivity improvement, and strategic cost management (Blocher et al., 2019; Hansen et al., 2010).

2.2. TRADITIONAL COSTING

Traditional cost accounting systems assume that all costs can be classified as fixed or variable concerning changes in the units or volume of products produced. Thus, units of product or other drivers that are highly correlated with units produced, such as direct labor hours and machine hours, are the only drivers that are considered important. Because unit-based activity drivers are usually not the only drivers explaining cause-and-effect relationships, many products costing activities should be classified as allocation (Hansen & Mowen, 2018). Cost management has a much broader focus than that found in traditional costing systems. This is not only related to how much it costs but also to the factors that drive costs, such as cycle time, quality, and process productivity(Hansen et al., 2010).

2.3. ACTIVITY-BASED COSTING

ABC systems calculate the costs of individual activities and assign costs to cost objects such as products and services based on the activities performed to produce each product or service. The ABC costing system first traces costs to activities and then to products and other cost objects. The underlying assumption is that activities consume resources, and products and other cost objects consume activities (Kaplan & Cooper, 1998).

According to Blocher et al., (2019) the elements of production costs consist of direct materials, direct labor, and factory overhead. The philosophy that underlies activity-based costing is that there are certain activities that must be carried out to produce a product and these activities consume company resources to create the cost of the activity in question covering all things the company does that incur costs (Hansen et al., 2010).

The function of implementing ABC is to provide higher accuracy in calculating the cost of products and services compared to traditional costing systems because all products are not produced evenly and some products are produced in large quantities and some in small quantities, so production overhead costs have increased significantly and no longer correlated with productive machine hours or direct labor hours. ABC systems can also eliminate activities that do not add value because of product diversity. In addition, ABC can be useful for increasing value-added activities because the diversity of customer demands is growing rapidly (Hansen & Mowen, 2018).

Although Activity Based Costing looks superior to traditional costing systems, Activity Based Costing still has advantages and disadvantages. The advantages of Activity Based Costing according to Blocher et al., (2019) are as follows:

1. Better profitability measurement
Activity-Based Costing provides more accurate and informative product costs, leading to more accurate measurement of product profitability and better informed strategic decisions about pricing, product lines, and market segments.
2. Better decisions and control
Activity-Based Costing provides a more accurate measurement of the costs that arise because they are triggered by activities.
3. Better information to control capacity costs
Activity-Based Costing helps managers identify and control the cost of unused capacity.

Meanwhile, according to Dwivedi & Chakraborty (2016), there are three advantages possessed by the Activity Based Costing system, including:

1. Traditional cost systems that always use one cost driver such as machine hours or labor hours tend to be inaccurate in assigning costs. With the Activity Based Costing system, the costing becomes more accurate because the production process or service based on activity will be prioritized. Significant activities in the production process will be determined and appropriate cost drivers are sought. With multiple cost drivers, accuracy will increase.
2. Activity Based Costing system will eliminate cost distortion. Usually, a single cost driver in a traditional costing system will result in cost distortion so that the costs for products with high volume production levels will be too high and costs for products with low production levels will be too low.

3. Activity Based Costing system can improve the efficiency of the production process and eliminate non-value added costs. Thus the Activity Based Costing system can provide better and more accurate information about costs in decision making.

The weakness of activity based costing according to Sembiring et al., (2018) namely:

1. Allocation
Not all costs have appropriate or non-dual cost drivers of resource consumption or activity. Some costs may require allocation to departments or products by volume measure because it is practically impossible to find the activity that causes the cost. Examples are facility support costs such as information system costs, factory manager salaries, factory insurance, and land and building taxes for factories.
2. Ignoring fees
The cost of a product or service identified by an Activity Based Costing system tends not to cover all costs associated with that product or service. Product or service costs usually do not include costs for activities such as marketing, advertising, research, development, and product engineering, although most of these costs can be traced to a product or service. Product costs do not include these costs because generally accepted accounting principles for financial reporting require that these costs be treated as periodic costs.
3. Expensive and time consuming
Activity-based costing is not easy and takes a lot of time to develop and implement. For companies that have used traditional volume-based accounting systems, implementing a new system is likely to be expensive.

3. RESEARCH METHODS

The research method used in this research is a case study. According to Sekaran & Bougie (2016), case studies can be used to obtain a clear picture of a problem from various angles and perspectives using various data collections. The data collection can be a specific object, event, or activity, such as a specific business unit or organization. The object of case study research is a particular individual, group, organization, event, or situation. Data collection was obtained through interviews, observation, and documentation.

Interviews in this study were conducted in a semi-structured manner. According to Saunders et al. (2019), semi-structured interviews provide an opportunity to be able to modify and develop questions from a predetermined list of questions. New questions can arise from participants' interpretations based on the context and characteristics encountered. Interviews were conducted on 9 and 10 May 2022. Interviews were conducted to the head of the factory to obtain production data and production flow for each type of tea and to the TUK assistant to obtain historical data on fixed assets. The results of these interviews will be compiled into a transcript for further analysis.

In this study, observations were made to observe the use of production equipment, production flow, and employee productivity. Observation involves the planned observation, recording, analysis, and interpretation of behavior, actions, or

events (Sekaran & Bougie, 2016). In making observations, it is necessary to have an implicit attitude so that the object presents a natural environment without any changes in conditions and behavior because it is being watched (Adams et al., 2014).

Document analysis method was used to obtain secondary data required from this research. The secondary data are in the form of annual reports, other financial data related to costs, information on activities that cause costs, and other supporting data related to the calculation of the production costs of tea processing in the AA business unit.

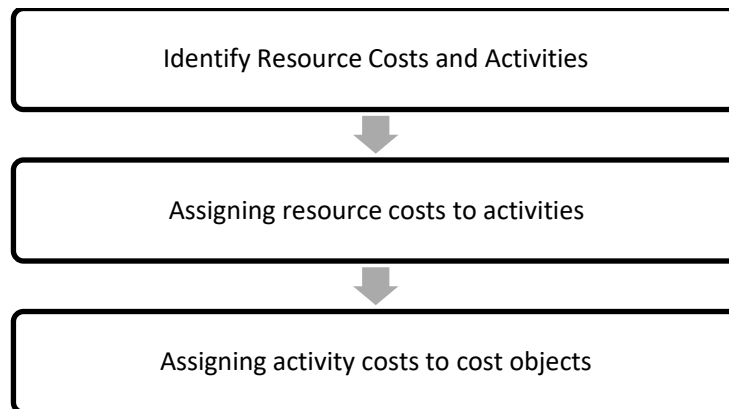


Figure 1. Activity Based Costing Model.

Calculation with the Activity based costing method begins with identifying the activity. Identification of the activities of the tea processing is done by observation, interviews, and financial data. Each activity is identified the actions performed in the activity, the resources consumed in the activity, the time spent on an activity, and the activity driver used for the activity. The second step is to assign resource costs to activities. The assignment is done by interview, observation, and secondary data in the form of management reports. Resource costs can be assigned to activities through direct tracing and allocation. The costs charged with allocation require determination of the resource driver.

The third step is to measure the amount of consumption of each cost object. There are two cost objects produced, namely CTC and Orthodox. The measurement of the amount of consumption is done by observation, interviews, and other supporting data. The right activity driver is needed in assessing the proportion of resource consumption. The fourth step is to calculate activity rates. Activity rates are calculated by dividing Activity Cost by Activity Capacity. Information about activity costs is obtained from the second step and information about activity capacity is obtained from the third step. The final step is to assign activity costs to cost objects. The activity rates that have been calculated in the fourth step are multiplied by the basis for the allocation of each cost object. So that the production costs for each type of tea can be known based on Activity-Based Costing.

The second research question is to analyze the comparison of tea production costs between traditional costing and Activity-Based Costing. The analysis is carried

out in order to see the benefits of calculating costs using Activity Based Costing in decision making.

4. ORGANIZATION PROFILE

PT. XYZ is a company engaged in the plantation industry. The company has 16 business units with the establishment of business units based on the geographical location of the plantation area of PT. XYZ, because plantations are in many different areas. There are 2 business units that focus on tea processing, namely the AA and BB business units, where the AA business unit is the place where the research is conducted. There are 2 business units that focus on crumb rubber factories (CRF), namely the CC and DD business units. The business unit that focuses on palm oil mills (PKS) has 12 business units in different places, namely the EE, FF, GG, HH, II, JJ, KK, LL, MM, NN, OO, and PP business units.

The AA business unit is one of 16 business units in PT. XYZ. Operational activities carried out by the AA business unit start from harvesting tea leaves. Furthermore, the harvest is sent to the factory for further processing based on 2 types of processing, namely CTC and Orthodox. The CTC tea processing process produces 8 types of black tea, while the Orthodox tea processing process produces 19 types of black tea. Sales of black tea in bulk are packaged in 3 options, namely paper sacks, cartons, and polybags. The black tea will then be sent to several auctions to be sold under an auction system based on market prices. Black tea is also sold to local buyers.

The tea production process begins with receiving raw materials from the garden by weighing the tea leaves. Next, the wet leaves are placed on WT (Withering Trough) for the withering process. After the moisture content reaches 70%, leaf shedding (transfer from WT to milling machine) is carried out for some of the tea leaves. Furthermore, some of the tea leaves are processed by the CTC processing process. Some of the tea leaves that were still in the WT were passed down when the water content had reached 55-56%. Furthermore, some of the remaining leaves are processed with the Orthodox process. After the processing is complete, a tester and packing are carried out for both types of processing.

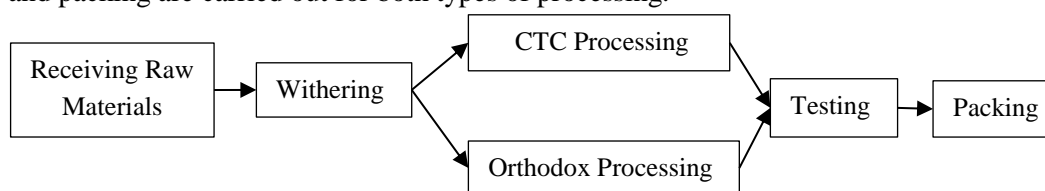


Figure 2. Steps of Tea Processing.

5. RESULT AND DISCUSSION

The first step in implementing an Activity-Based Costing system is to analyze activities and resource costs at PT. XYZ. Activities that occur during the tea processing consist of receiving raw materials, withering, rolling, fermentation, drying, testing, and packing. Receiving raw materials is the activity of removing wet leaves from the truck to be weighed and then placed in the WT (Withering Trough). This activity uses a machine in the form of a weighbridge, monitor scales, printers, and UPS. Direct labor was employed to carry out the transfer of the wet tea leaves.

Withering activity is the initial stage of the tea processing process which is the main key to success in further tea processing. Wet tea leaves are spread on WT at a low build-up rate. Withering serves to reduce the water content in the tea leaves so that the tea shoots weaken it will ease the grinding process and lay the foundations for fermentation. The principle of withering is to pass warm air through the tea leaves until it reaches a certain degree of wilting. This activity uses machines in the form of a monorail, Withering Trough, and Heat Exchanger. Direct labor is employed to do the turning of the leaves so that withering can be evenly distributed. The resources used in this process are water, electricity, and alternative fuel (palm shell).

Rolling activity is an activity of grinding tea leaves using an OTR machine. Other machines used in this process are Rotor Vane, DIBN, RWS, Wet Tea Grinder, Ventilator, and Humidifier. In Orthodox processing, after rolling, sifting is carried out. The process is repeated between rolling and sifting to obtain powders 1, 2, 3, and 4 in the Orthodox processing. Direct labor is hired to do manual milling and employees to look after the machines. The resources used in this process are water and electricity.

Fermentation activity is the activity of oxidizing tea leaves to increase polyphenol compounds. This activity aims to improve the taste, color, and aroma of tea. This activity uses a machine in the form of a ventilator and a humidifier. Fermentation activities and rolling activities have the same workforce. The resources used in this process are water and electricity.

Drying activity is an activity to stop fermentation and reduce water content at temperatures of 110-120°C (in-let), and 80-100°C (out-let). This activity uses machines in the form of a Dryer, Conveyor, and Ventilator. Direct labor is employed to carry out the transfer of tea. The resources used in this process are water, electricity, and alternative fuel (palm shell).

Sorting activity is an activity to separate processed tea based on its type. This activity uses machines in the form of Midletone, Cutter, Chopper Machine, Vibro Blank, Morres, Vibro Morres, Jackson, Siliran, Vibro Finish, Idian Sortir c/w Feeding, and Ventilator. The resources used in this process are water and electricity.

Testing activity is an activity to test the quality of tea. Direct labor is employed to carry out these tests for each batch of each type of tea. Packing activity is the activity of packing dry tea to be then sent for the sales process. Direct labor is hired to do the packing. In this activity using machines in the form of BIN, Blender, Packer Paper Sack, Scales, vibrator, and Ventilator.

After knowing the activity with the level of activity, the next step is to assign overhead costs to activities based on the number of resources consumed by these activities. At PT. XYZ has separate costs per activity, already separated per type of

tea, and some are separated by production unit. Table 1 shows the allocation of overhead costs into each activity.

Table 1. Activity Cost Pool

No	Activity	Indirect Labor Costs	Waste Quality Treatment	Tools and Equipment	Extr a food	Alter native Fuel (Palm Shell)	All oca tion of Po wer Ge ner atio n	All oca tion of Ow n Wa ter Inst alla tion	Stati on Mai nten ance	Build ing Fac tory Mai nten ance	Pac kin g Cos ts	Amo unt
1	Receiving Raw Materials	9,083,825	-	-	-	-	-	-	-	-	-	9,083,825
2	Withering	9,083,825	-	121,600	-	80287217	80,768,599	339,335	408,534,904	4,726,084	-	583,861,564
3	Rolling	13,625,738	265,513	144,400	3,322,064	-	54,082,417	1,357,338	188,175,925	1,237,784	-	262,211,180
4	Fermentat ion	9,083,825	-	159,600	830516	-	1,257,387	1,018,004	11,244,246	1,237,784	-	24,831,362
5	Drying	9,083,825	-	220,400	3,944,951	379,826,801	58,253,983	1,357,338	347,389,136	2,475,568	-	802552003
6	Sorting	9,083,825	279,487	152,000	5,813,613	-	38,594,373	339,335	82,004,810	3,825,878	-	140,093,320
7	Testing	4,541,913	-	-	1038.145	-	-	-	-	-	-	5,580.058
8	Packing	4,541,913	-	152,000	2,076,290	-	3,757,367	-	5,260,466	2,475,568	208,301,327	226,564,931
	Total	68,128,688	545,000	950,000	17,025,580	460,14,018	236,714,126	4,411,350	1,042,609,487	15,978,666	208,301,327	2,054,778,242

Next, the third stage, Next, the third stage, it is to measure the amount of activity consumption of each cost object. The AA business unit produces two types of black tea, namely CTC and Orthodox. The two types of black tea are cost objects that need to be measured by the amount of consumption activity. It is shown in Table 2, where the activity driver is selected based on the strong relationship between the driver and costs in the activity.

Table 2. Consumption Activity of Each Cost Object

No	Activity	Activity Drivers	CTC	Orthodox	Total Drivers
1	Receiving Raw Materials	number of production batches	24	24	48
2	Withering	amount of fuel used	25.138	72,644	97,782
3	Rolling	machine working hours	240	216	456
4	Fermentation	machine working hours	264	240	504
5	Drying	machine working hours	384	312	696
6	Sorting	machine working hours	240	240	480
7	Testing	number of production batches	24	24	48
8	Packing	total manpower	4	6	10

The next step is to calculate activity rates. Activity rates are measured by dividing activity cost by activity capacity. Table 3 shows the activity rates for each activity.

Table 3. Activity Rates

No	Activity	Activity Cost	Activity Capacity	Activity Rates
1	Receiving Raw Materials	9,083,825	48 batches	189,246
2	Withering	583,861,564	97,782 kg	5,971
3	Rolling	262,211,180	456 hours	575,025
4	Fermentation	24,831,362	504 hours	49,269
5	Drying	802552003	696 hours	1,153,092
6	Sorting	140,093,320	480 hours	291,861
7	Tester	5,580,058	48 batches	116,251
8	Packing	226,564,931	10 people	22,656,493

The final step of implementing Activity based Costing is to allocate activity costs into cost objects based on activity consumption which has been calculated in the third stage and activity rates which have been calculated in the fourth stage. The assignment of activity costs to cost objects is shown in Table 4.

Table 4. Assigning Activity Costs to Cost Objects

No	Activity	Activity rates	CTC (Q= 191,295)		Orthodox (Q= 227,216)	
			Base Allocation	Amount	Base Allocation	Amount
1	Receiving Raw Materials	189,246	24	4,541,913	24	4,541,913

No	Activity	Activity rates	CTC (Q= 191,295)		Orthodox (Q= 227,216)	
			Base Allocation	Amount	Base Allocation	Amount
2	Withering	5,971	25.138	150,100,346	72,644	433,761,219
3	Rolling	575,025	240	138,005,884	216	124,205,296
4	Fermentation	49,269	264	13,006,904	240	11,824,458
5	Drying	1,153,092	384	442,787,312	312	359,764,691
6	Sorting	291,861	240	70,046,660	240	70,046,660
7	Testing	116,251	24	2,790,029	24	2,790,029
8	Packing	22,656,493	4	90,625,972	6	135,938,958
				911,905,019		1,142,873,223

After the assignment of activity costs to the type of tea has been completed, it can be compared the processing costs per month with Traditional Costing and with Activity-Based Costing. The results of this calculation can be seen in the following Table 5.

Table 5. Production Costs Using Traditional Costing vs Activity-Based Costing

Description	Traditional Costing		Activity Based Costing	
	CTC	Orthodox	CTC	Orthodox
Raw Material Cost	1,986,507,599	2,361,287,541	1,986,507,599	2,361,287,541
Labor Cost	303,948,933	440,018,889	303,948,933	440,018,889
Factory Overhead Cost	534,794,439	1,519,983,803	911,905,019	1,142,873,223
Total Production Cost	2,825,250,971	4,321,290,233	3,202,361,551	3,944,179,653
Tea Produced (kg)	191,295	227,216	191,295	227,216
Cost of Production per kg	14,769	19018	16,740	17,359

Based on Table 5, the cost of production using traditional costing for CTC black tea is Rp. 14,769/kg. Meanwhile, the cost of production using traditional costing for Orthodox black tea is Rp. 19,018. There is a price difference of IDR 4,249/kg between the two types of black tea.

The cost of production using Activity-Based Costing for CTC black tea is Rp. 16,740/kg. This shows that so far the cost of production of CTC has been undervalued by a difference of Rp1,971. Meanwhile, the cost of production using

Activity-Based Costing for Orthodox black tea is Rp. 17,359/kg. This shows that so far the cost of production of CTC has been overvalued by a difference of Rp. 1,659.

Although this study does not intend to analyze pricing policy because pricing is based on market mechanisms and pricing still requires a lot of other information. However, from the cost information in Table 5 it can be stated that the selling price offer for Orthodox black tea can still be lowered. The calculation of the cost of Orthodox black tea using the Activity-Based Costing method shows that the cost of producing Orthodox black tea is lower. So the price quote can still be lowered. The selling price of black tea with CTC type can also be increased because the production cost of CTC black tea is actually higher. So CTC tea can be quite profitable.

6. CONCLUSION AND DISCUSSION

Based on the previous analysis and discussion, it can be concluded that the calculation of processing costs at PT. XYZ with Activity Based Costing method is divided into five stages. The first stage is to identify, define, and classify the main activities and attributes in tea processing at PT. XYZ. The second stage is that the costs of existing resources will be allocated to activities using resource drivers. The third stage is to identify cost objects and determine the amount of each activity consumed by a particular cost object. The fifth stage is to calculate activity rates. The last stage, after obtaining activity rates, can determine the production costs of each cost object in the form of CTC black tea and Orthodox black tea.

There are differences in the results of the calculation of the cost of each type of tea between the traditional method and the Activity Based Costing method. This difference occurs because of differences in the assignment of overhead costs to the traditional method compared to the Activity Based Costing method. The traditional method allocates overhead costs based on a comparison of 40% for CTC and 60% for Orthodox while the Activity Based Costing method, overhead costs are allocated through activities and then to cost objects. As a result of the calculation, the cost of processing CTC black tea is undervalued when compared to the Activity Based Costing method. Meanwhile, the cost of processing Orthodox black tea is overvalued when compared to the Activity Based Costing method. This is due to differences in cost allocation, especially in withering, rolling, and frying activities.

The implementation of the Activity Based Costing method should be applied because this system can provide accurate processing cost information so that the decisions that will be taken by the management will be better and more precise. For example, by using the Activity Based Costing method, the company can make a better price quote. Management can increase the quote for CTC black tea and lower the offer for Orthodox black tea. Management also doesn't need to consider stopping the production of Orthodox black tea because in reality Orthodox black tea is quite profitable.

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