ACTIVITY BASED MANAGEMENT FOR INCREASE COST EFFICIENCY AND PROFITABILITY PG KREBET – EAST JAVA

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Abstract

The purpose of this research is to identify production activities and analyze the improvement of cost efficiency and profitability through the implementation of Activity Based Management. The data used were primary and secondary data data through interviews and documentation data collection techniques. This research method was descriptive qualitative method. The results showed that there were found four non-value-added activities and the selection of alternatives continuous improvements was cost reductions in each non-value-added activity, cost efficiency produced by sugar and drip products by 0.52%, which was valued at Rp. 762,596,166. The implementation of ABM by managing production costs can be applied US a continuous improvement step to production activities.

Keywords: *Activity Based Management (ABM), Activity Based Costing (A B C), Cost efficiency, Profitability*

1. INTRODUCTION

People must strive to gain excellence compete in an increasingly competitive business world. Setting the right price for the product can increase its value in competition with similar products . Be more responsive to The quality of products made by an organization is one ways that can help company win business competition (Ningsih & Zed, 2023) . Every step production carried out to increase Cost efficiency has a relationship with product quality . This is in accordance with the main objective company , namely maximizing profit (Sukirno, 2019) Product sales are the main source income companies , which makes price competition critical to survival life company . Low selling prices can have an impact sales and profits company .

Many businesses still use traditional accounting methods to calculate their cost of production. This method applies cost smoothing by assigning overhead costs to each product without consideration what is consumed during the production process . PT PG Rajawali I PG Krebet Baru unit uses traditional cost accounting methods to calculate the cost of production . At first, this method was capable overcome management of production costs , but this method can produce production cost distortions such as undercosting or overcosting , which can lead to fatal error in retrieval decision (Prastiti et al., 2016) . For that ABM helps company obtain relevant information and play an important role To use increase accuracy control costs (Parengkuan, 2013) ,

ABM is an innovation in managing production costs that must be used as a the first step in establishing a long-term strategy long to achieve company goals . ABM focuses on

activities management in production and aims to reduce waste of resources spent on things that do not add value (Fatimah & Santoso, 2020 ; Nasution et al., 2023) . Application ABM works as estimation savings cost Which will happen on year next as well as help management in deciding decisions more accurately (Ghazali, 2016) . *Activity Based Costing* (ABC) must be done first. ABC is a technique costing that aims to give data managers need to make decisions strategic and other options that may impact fixed costs and capacity . In analyzing cost structure , ABC provides useful complex data . Additionally, using ABC to create a cost calculator allows managers to take a closer look at the relationships between resources , activities , and cost objects when analyzing production processes . A B C used by ABM in repair as well as increase efficiency use source Power and second method mentioned on basically is One unity (Jusmani & Oktariansyah, 2021) .

ABM is a part of ABC that focuses on analytics activity . Analysis objectives activities according to (Lumentut et al., 2021) is to determine whether value - added activities help company or non- value added (no added value). Value - added activities increase The value of the product thus needs to be maintained , whereas non- value- added activities provide little added value and is a waste of time, resources , and space. Therefore, value - added activities are very important. Companies must overcome the problem of wasteful production costs through improvements continuous improvement (*continuous improvement*) in the analysis process activity . Between _ alternative for improvement The first continuous process is ***elimination*** , namely elimination activities that do not have added value for customers and the business, even though this removal has no impact on form , function , quality , or satisfaction customer . Second , namely ***reduction*** or cost reduction in activities that require a lot of time and resources and cannot be eliminated completely . Third , namely ***selection*** where selection activities by comparing design and quality decisions . The last one is ***sharing*** , which is division activities that have similar activities that focus on improvement efficiency activities by applying scale economical (Ratnawati & Kusniawati, 2016) .

Measuring how effective business processes and operations—including critical activities —are and how they can be improved to reduce costs and increase value for consumers is part of ABM (Manurung et al., 2022) . ABM also provides resources to management to improve mark activity key and method maintain superiority competitive company . In the implementation model Management Based Activities (ABM), planning is first carried out system and then identification , definition and classification are carried out activity . Furthermore, these steps are divided into several areas, namely: 1) Steps implemented based on Process Value Analysis (PVA), which focuses on accountability activity company and emphasizes maximization _ performance system as a whole compared to performance individual ; 2) The steps implemented are based on PVA. This implementation produces better decisions and reduced costs. These two actions work together to improve profitability company (Hansen & Mowen, 2007) .

PT PG Rajawali I Unit PG Krebet Baru has Lots profit from the implementation of ABM. Due its height request to This basic ingredient , management must pay attention activity production closer . _ They have to make a decision appropriate and accurate cost allocation based on calculating the cost of production using the ABC method, and then implementing ABM as a method to improve non- value added activities.

2. RESEARCH METHOD

Type Which chosen on study in PT P.G Rajawali I Units P.G Krebet New is study qualitative descriptive aimed at understanding _ the phenomenon under study as well describe the research results by providing description , exposure and validation (Aziza, 2017; Dewantara & E-mail, 2011; Sugiyono, 2015) . The data in this research are primary data and secondary data. Primary data What is needed includes : 1) Type of product and 2) Activity production , while secondary data is needed among them that is : 1) Data usage And cost material standard ; 2) Cost power Work direct; 3) *Overhead* costs factory ; 4) O'clock power Work direct; 5) O'clock machine ; 6) Amount production ; 7) Quantity And price sell product; 8) Report price principal production company .

Data collection technique applied was interviews by asking a list of questions to information sources (*audience*), namely accounting & finance staff as well documentation in the form of secondary data obtained through the documents provided company To use complete technique interviews so that more data is obtained credible (Hardani et al., 2015; Sugiyono, 2018) .

Technique analysis data started with application calculation price principal production method *Activity Based Costing*
(A B C) by doing steps following This :

1. Identify cost source Power And activity production
2. Charge cost source Power on activity
3. Analyze activity based on levels
4. Determine trigger cost activity
5. Grouping *cost pool* Which homogeneous
6. Count tariff activity
7. Charge cost activity on product
8. Compile HPP with method A B C.

Based on results from application A B C so furthermore done application Activity Based Management(ABM) with do steps the following :

1. Identify that activity worth plus And No worth plus
2. Do calculation manipulation mark activity
3. Do calculation cost activity new after repair
4. Compile HPP with method ABM
5. Do comparison HPP before And after ABM
6. Count efficiency cost

3. RESULTS AND DISCUSSION

PT PG Rajawali I New PG Krebet Unit has seven station in progress functions and activities production Which different. Station the among them that is : 1) Station preparation For place truck carrier sugarcane Which lined up in page factory queue For supervision And weighing material standard ; 2) Station milking For place get roomie And push lost sucrose on sugarcane ; 3) Station purification For place remove dirt And bacteria Which contained on roomie ; 4) Station evaporation For place change roomie raw become roomie thick ; 5) Station crystallization For place cook roomie thick become

crystal sugar ; 6) Station son For place separate crystal sugar with mother liquor (*stroop*); and 7) Station solutions for packaging , supervision , and storage sugar as well as maintenance assets still.

3.1. Price Tree Production Method Traditional

Calculation price principal production method traditional Which applied by company served on table following:

Table 1.

Price Tree Production Method Traditional

Type Cost	**Product**	
	Sugar	**Drops**
Cost Material Raw	Rp 549.320.396.342	Rp 52.213.108.194
Cost Power Work Direct	Rp 29,770,531,939	Rp 2,829,700,145
Cost *Overheads* Factory	Rp 135.858.924.632	Rp 11,902,516,086
Price Tree Production	**Rp 714.949.852.913**	**Rp 66,945,324,425**
Amount Production (Kwintal)	868,684	360,621
Total Sale	**Rp 920.804.886.618**	**Rp 86,549,061,600**
Profit Dirty	**Rp 205.855.033.705**	**Rp 19,603,737,175**
Percentage Profit Dirty	22.36 %	22.65 %

Source : Data Company Processed

Table 1 shows calculation of the cost of production for sugar and molasses products using traditional methods . Cost comparison on each product is based from multiplying the production quantity by the selling price. This is implemented kareda difference difference price sell on product sugar And price sell on product drops Which tall that is reach IDR 820,000 per quintal .

3.2. Calculation Price Tree Production Use Method *Activity Based Costing* (A B C)

On calculation price principal production use method A B C step beginning Which done that is identify cost source Power and activities production Which served on table following :

Table 2.

Cost Source Power

No	**Type Cost**	**Amount Cost**
1	Cost Power Work No Direct	IDR 8,597,233,724
2	Transportation Factory	IDR 2,334,749,824
3	Cost Office And General	IDR 8,886,914,652
4	*Quality Controls*	IDR 6,432,471,692
5	Tax Earth and Buildings	IDR 308,227,259
6	Insurance Factory	IDR 5,770,817,066
7	Cost Water, Electricity, And Telephone	IDR 2,473,207,314

8	Cost Material Helper	IDR 23,281,106,734
9	Cost Packaging And Transportation	IDR 10,635,679,356
10	Compensation Social and Clothes Service	IDR 1,812,067,379
11	Cost Maintenance Building	IDR 5,748,993,456
12	Cost Maintenance Machine And Inventory	IDR 39,479,331,422
13	Cost Shrinkage Assets Still	IDR 32,000,640,840
	Total	**Rp147.761.440.718**

Source : Data Company Processed

In Table 2 consists of 13 types of resource costs as well as the nominal value of each cost incurred by company during 2021. Resource costs are costs incurred company other than the main costs (*prime cost*) plays a role as component Which important on calculation price principal production. Furthermore on Table 2 served series activity production Which done company on every product Which generated as following:

Table 3.
Activity Production

No	Product Sugar	No	Product Drops
1	Supervision Material standard	1	Supervision Material standard
2	Weighing Material Raw Gross	2	Weighing Material Raw Gross
3	Demolition Payload	3	Demolition Payload
4	Weighing Truck Tara	4	Weighing Truck Tara
5	Scheduling Milking Sugarcane	5	Scheduling Milking Sugarcane
6	Arrangement Size Sugarcane	6	Arrangement Size Sugarcane
7	Cutting And Enumeration Sugarcane	7	Cutting And Enumeration Sugarcane
8	Milking Sugarcane	8	Milking Sugarcane
9	Filtering And Allocation Roomie Raw	9	Filtering And Allocation Roomie Raw
10	Weighing Roomie Raw	10	Weighing Roomie Raw
11	Warmup Roomie Raw in *Juice Heaters* 1	11	Warmup Roomie Raw in *Juice Heaters* 1
12	Separation Content Gas On Roomie	12	Separation Content Gas On Roomie
13	Mixing Milk Chalk	13	Mixing Milk Chalk
14	Decline Nira pH	14	Decline Nira pH
15	Warmup Roomie Raw in *Juice Heaters* 2	15	Warmup Roomie Raw in *Juice Heaters* 2
16	Filtering And Allocation Roomie Clear	16	Filtering And Allocation Roomie Clear
17	Evaporation Roomie Clear	17	Evaporation Roomie Clear
18	Arrest Roomie	18	Arrest Roomie
19	Cooking	19	Cooking
20	Cooling Crystal Sugar	20	Cooling Crystal Sugar
21	Separation Crystal Sugar	21	Separation Crystal Sugar
22	Drying Sugar Wet	22	Weighing And Shelter Drops
23	Filtering Sugar Dry Going to	23	Maintenance

	Sugar Son		
24	Supervision Quality Results Production		
25	Packaging Sugar		
26	Storage Sugar		
27	Maintenance		

Source : Data Company Processed

Table 3 shows activity production company for both products, starting from supervision material standard to separation crystal sugar . However, activity different sugars and molasses at the end of the production process , starting from storage sugar to activity separation crystal sugar . This is because activity separation crystal sugar produces products, namely droplets , after the activity separation crystal sugar . Apart from that, there are differences in activities production caused by differences in consistency and benefits of each product. This indicates that the product is sugar has 27 activities production and drip products has 23 activities . The second step taken in calculating the cost of production company that is charge cost source Power on activity . Each cost explored To use know big cost *overheads* factory Which consumed on each activity. Step next namely analyzing activity based on levels activity Which served on table following :

Table 4.
Levels And Cost Activity

No	Activity Production	Levels Activity	Cost Activity
1	Supervision Material standard	*Batches Levels Activities*	Rp 4,541,648,267
2	Weighing Material Raw Gross	*Batches Levels Activities*	Rp 1,815,126,898
3	Demolition Payload	*Batches Levels Activities*	Rp 1,964,284,887
4	Weighing Truck Tara	*Batches Levels Activities*	Rp 1,729,154,560
5	Scheduling Milking Sugarcane	*Batches Levels Activities*	Rp 2,045,651,072
6	Arrangement Size Sugarcane	*Batches Levels Activities*	Rp 2,136,852,239
7	Cutting And Enumeration Sugarcane	*Batches Levels Activities*	Rp 3,146,519,856
8	Milking Sugarcane	*Batches Levels Activities*	Rp 5,462,066,247
9	Filtering And Allocation Roomie Raw	*Batches Levels Activities*	Rp 2,890,779,265
10	Weighing Roomie Raw	*Batches Levels Activities*	Rp 1,326,659,348
11	Warmup Roomie Raw in *Juice Heaters* 1	*Batches Levels Activities*	Rp 4,754,141,831
12	Separation Content Gas On Roomie	*Batches Levels Activities*	Rp 3,101,558,464
13	Mixing Milk Chalk	*Batches Levels*	Rp 3,565,639,462

		Activities	
14	Decline Nira pH	*Batches Levels Activities*	Rp 3,332,828,395
15	Warmup Roomie Raw in *Juice Heaters* 2	*Batches Levels Activities*	Rp 3,973,268,385
16	Filtering And Allocation Roomie Clear	*Batches Levels Activities*	Rp 2,174,710,192
17	Evaporation Roomie Clear	*Batches Levels Activities*	Rp 3,954,601,422
18	Arrest Roomie	*Batches Levels Activities*	Rp 2,378,445,961
19	Cooking	*Batches Levels Activities*	Rp 6,762,462,689
20	Cooling Crystal Sugar	*Batches Levels Activities*	Rp 2,075,337,222
21	Separation Crystal Sugar	*Batches Levels Activities*	Rp 3,559,954,884
22	Weighing And Shelter Drops	*Products Levels Activities*	Rp 1,075,861,744
23	Drying Sugar Wet	*Batches Levels Activities*	Rp 2,992,130,810
24	Filtering Sugar Dry Going to *Sugar Son*	*Batches Levels Activities*	Rp 1,301,075,176
25	Supervision Quality Results Production	*Products Levels Activities*	Rp 6,410,046,249
26	Packaging Sugar	*Units Levels Activities*	Rp10,825,194,553
27	Storage Sugar	*Products Levels Activities*	Rp 5,259,952,300
28	Maintenance	*Facilities Levels Activities*	Rp53.205.488.341

Source : Data Company Processed

According to Table 4, activities at the batch level dominate the production level because most activities are carried out by processing material raw materials into finished products in bulk rather than considering quantity of product units produced . Due activity production produce sugar and molasses , supervision quality of production and storage sugar classified as activity product level . Activity packaging sugar is also classified as activity unit level because incur costs due to quantity packaged sugar . _ Activity maintenance categorized into activities level facility Because assisting the overall production process related to maintenance and depreciation _ company fixed assets .

After knowing rates and fees for each activity , the next step is to determine cost driver . Direct labor hours, machine hours , material units standards , and production units are influencing factors selection of cost drivers in activities production . According to the situation company , which does the season grind from May 25 to November 25, activity and driver fees adjusted. To find cost drivers, benchmark measure is used, which means the result of calculations highest correlation . _ Result of this step then grouped into homogeneous cost pools based on activities that have similar cost drivers .

After using ABC, the next step is to calculate the rates for each activity . This is done by dividing the activity costs against cost driver activities and then assign activity costs to each product. The aim of implementing ABC is so that activity costs for sugar and molasses products can be allocated appropriately according to different driver expenditures for each product. Calculation price principal production method A B C served on table following :

Table 5.
Price Tree *Activity* Method Production *Based Costing*
(A B C)

Type Cost	**Product**	
	Sugar	**Drops**
Cost Material Raw	Rp 549.320.396.342	Rp 52.213.108.194
Cost Power Work Direct	Rp 29,770,531,939	Rp 2,829,700,145
Cost *Overheads* Factory	Rp 135.114.513.618	Rp 12,646,927,100
Price Tree Production	**Rp 714,205,441,900**	**Rp 67,689,735,438**
Amount Production (Kwintal)	868,684	360,621
Total Sale	**Rp 920.804.886.618**	**Rp 86,549,061,600**
Profit Dirty	**Rp 206.599.444.718**	**Rp 18.859.326.162**
Percentage Profit Dirty	22.44 %	21.79 %

Source : Data Company Processed

Material costs raw materials , direct labor costs , production quantities , and total sales are the same as the cost of production using the conventional method , according to the ABC method calculation shown in Table 5. Cost of production of sugar products using the traditional method assessed too high (overcosting) compared to the ABC method, so it produces too much profit low ; cost of production of drip products using traditional methods assessed too low (undercosting) compared to the ABC method, so

Result of The two methods for calculating the cost of production are different because the traditional method only uses one type of cost driver, namely production units , while ABC uses four types of cost drivers. Differences in results in the two methods of calculating the cost of production due to traditional methods uses only one type of *cost driver , namely* production units , while ABC uses four types *of cost drivers* , namely direct labor hours, machine hours , material units raw materials , and production units with factory *overhead* costs charged to each activities appropriately according to activity cost consumption . In following up on the price calculation results principal production method A B C so calculation *Activity Based Management* (ABM) is necessary done.

3.3.Application *Activity Based Management* (ABM)

ABM aims to exercise control activity production To use repair sustainable . Application ABM begins with identification activity value added and non- value added

activities . Activity worth plus influential big to product So so need maintained , whereas activity Which No worth plus give rise to waste And give A little mark for consumer , so that need done repair sustainable with alternative *elimination, reduction, selection,* and *sharing.* Following is a table classification activity :

Table 6.
Classification *Value Added* And *Non Value Added*

No	Activity	*Value Added*	*Non Value Added*			
			Elimination	*Reduction*	*Selection*	*Sharing*
1	Supervision Material Raw			√		
2	Weighing Material Raw Gross	√				
3	Demolition Payload	√				
4	Weighing Truck Tara	√				
5	Scheduling Milking Sugarcane	√				
6	Arrangement Size Sugarcane			√		
7	Cutting And Enumeration Sugarcane	√				
8	Milking Sugarcane	√				
9	Filtering And Allocation Roomie Raw	√				
10	Weighing Roomie Raw	√				
11	Warmup Roomie Raw in *Juice Heaters* 1	√				
12	Separation Content Gas On Roomie	√				
13	Mixing Milk Chalk	√				
14	Decline pH Roomie	√				
15	Warmup Roomie Raw in *Juice Heaters* 2	√				
16	Filtering And Allocation Roomie Clear			√		
17	Evaporation Roomie Clear	√				
18	Arrest Roomie	√				
19	Cooking	√				
20	Cooling Crystal Sugar	√				
21	Separation Crystal Sugar	√				
22	Weighing And Shelter Drops	√				
23	Drying Sugar Wet	√				
24	Filtering Sugar Dry Going to *Sugar Son*	√				
25	Supervision Quality Results Production	√				
26	Packaging Sugar	√				
27	Storage Sugar			√		
28	Maintenance	√				

Source : Data Company Processed

Four Non- value added activities , according to Table 6, include monitoring material default , settings size sugarcane , screening and allocation roomie clear , and storage sugar . As a result, it was decided to use an alternative subtraction as repair . The following is an explanation of the reasons for each activities : 1. Activities supervision material Raw materials are made before sugar cane harvested to ensure that the seeds planted sugar cane own good quality and campy , but Because inspection completeness of documents and supervision quality takes quite a long time, this activity does not have value- added.

No added value , activity arrangement size Cane is done when the volume is full . This cause decline quality sugarcane because waiting too long is damaging sucrose in sugar cane , so time is wasted .

Because of filtering repeatedly and warm up twice sap to kill and settle _ bacteria , activity filtering and allocation roomie clear does not have mark addition .

There isn't any mark additional storage _ sugar Because quality sugar will decreases if stored too long in the warehouse , if it's sugar placed in the same room full , and because of electricity costs increased to maintain temperature warehouse in accordance with warehouse standard operational procedures (SOP) to ensure quality The sugar in the packaging is maintained. The next step is calculating the engineering mark activity . The following is a table related to activity costs Which No worth plus :

Table 7.

Cost Activity Who does not Worth Plus

Activity Production	BTKTL	Transportation Factory	Office and general	Water, Electricity& Tel	Wrap & Transport
Supervision Material Raw	Rp108.318.311	IDR 26,568,642	Rp38,831,093	Rp30,656,126	-
Arrangement Sugar Cane Size	Rp61,776,398	-	Rp20,941,152	Rp21,988,210	-
Filtering and Allocation Roomie Clear	Rp43,254,986	-	Rp21,203,424	Rp31,381,068	-
Storage Sugar	Rp183,046,340	-	Rp58,911,466	Rp63,119,428	Rp52,599,523
Total	Rp396,396,035	IDR 26,568,642	Rp139,887,135	Rp147.144.831	Rp52,599,523

Source : Data Processed Company

Table 7 shows that activity supervision material standard have costs that can be reduced amounting to IDR 204,374,172, or 4.5% of the total cost, and that the 95.5% cost is maintained Because This activity helps the production process in receiving material standard and improve final product quality . Reduced costs include indirect labor , transportation from factory to office , public transportation , and water, electricity , and telephone costs .

Reduction of costs for activities arrangement size sugarcane worth IDR 104,705,760, or 4.9% of the total cost, was carried out because This activity helps the production process by cutting thin cane to increase performance Next activity , cutting and chopping sugarcane . This cost reduction consists of of labor costs .

Filtering and allocation roomie clear experience cost reduction of IDR 95,839,478, which is 4.4% of the total costs for the operation. Because this operation is a collection an important activity that serves to organize allocation roomie to the stage evaporation , 96.1

% of the costs are retained . Fees for storage sugar reduced amounting to IDR 357,676,756, or 6.8% of total costs, including indirect labor costs, office and general costs , as well as water, electricity and telephone costs . Guard quality inventory of finished goods before they are marketed to consumers is the main goal of this business, so that 93.2% of costs are maintained . Costs deducted include indirect labor costs , general and office costs , water and electricity costs .

Reduce indirect labor, such as power safety and cleanliness , save costs because they too many and inefficient because maximizing performance machine . By reducing the use of transportation plant and materials fuel , transportation costs factory reduced . By implementing a paperless policy and optimizing performance scanner machine rather than machine photocopying , office and general costs are reduced . Lowering water, electricity and telephone costs can be achieved by implementing savings policies energy as well as reduce frequency of electricity and telephone use . By utilizing forklifts as much as possible, packaging and transportation costs can be reduced .

Once it's known manipulation mark as well as savings efforts made on non- value added activities so need done calculation cost activity new after repair form *reduction.* Cost. BOP product charged repeat on fourth activity No worth plus with objective For know total BOP product sugar And drops For material COGS calculation after implementation ABM. Following is a table cost *overheads factory* after repair :

Table 8.
Cost Overheads Factory After Repair

No	Activity Production	Cost *Overhead* After Repair	
		Product Sugar	Product Drops
1	Supervision Material standard	Rp 3,960,798,703	Rp 376,475,391
2	Weighing Material Raw Gross	Rp 1,657,573,883	Rp 157,553,015
3	Demolition Payload	Rp 1,793,784,959	Rp 170,499,928
4	Weighing Truck Tara	Rp 1,579,063,944	Rp 150,090,616
5	Scheduling Milking Sugarcane	Rp 1,868,088,559	Rp 177,562,513
6	Arrangement Size Sugarcane	Rp 1,855,756,165	Rp 176,390,314
7	Cutting And Enumeration Sugarcane	Rp 2,873,401,932	Rp 273,117,923
8	Milking Sugarcane	Rp 4,987,958,897	Rp 474,107,350
9	Filtering And Allocation Roomie Raw	Rp 2,639,859,624	Rp 250,919,640
10	Weighing Roomie Raw	Rp 1,211,505,317	Rp 115.154.031
11	Warmup Roomie Raw in *Juice Heaters* 1	Rp 4,341,482,320	Rp 412,659,511
12	Separation Content Gas On Roomie	Rp 2,832,343,189	Rp 269,215,275
13	Addition And Mixing Milk Chalk	Rp 3,256,141,957	Rp 309,497,505
14	Decline Nira pH	Rp 3,043,538,890	Rp 289,289,505
15	Warmup Roomie Raw in *Juice Heaters* 2	Rp 3,628,388,689	Rp 344,879,696
16	Filtering And Allocation Roomie Clear	Rp 1,898,424,736	Rp 180,445,978
17	Evaporation Roomie Clear	Rp 3,611,342,018	Rp 343,259,403

18	Arrest Roomie	Rp	2,171,996,851	Rp	206.449.109
19	Cooking	Rp	6,175,480,927	Rp	586,981,761
20	Cooling Crystal Sugar	Rp	1,466,529,478	Rp	608,807,745
21	Separation Crystal Sugar	Rp	2,515,629,133	Rp	1,044,325,751
22	Weighing And Shelter Drops		-	Rp	1,075,861,744
23	Drying Sugar Wet	Rp	2,992,130,810		
24	Filtering Sugar Dry Going to *Sugar Son*	Rp	1,301,075,176		
25	Supervision Quality Results Production	Rp	6,410,046,249		
25	Packaging Sugar	Rp	10,825,194,553		
27	Storage Sugar	Rp	4,902,275,544		
28	Maintenance	Rp	48,587,251,953	Rp	4,618,236,388
	TOTAL	Rp	134.387.064.457	Rp	12,611,780,095

Source : Data Company Processed

In Table 8 factory *overhead costs* experience savings on fourth activity production that has been done repair sustainable (*continuous improvement*). There are differences nominal produce total cost Factory *overhead* on both products is incurred decline compared with total factory *overhead costs* before implement ABM.

The next step that needs to be taken after knowing the amount of factory overhead costs after repairs So it is necessary to calculate the cost of production after using the ABM method. The following is a table price calculation principal production after application ABM :

Table 9.
Price Tree Production After Application ABM

Type Cost	**Product**			
	Sugar		**Drops**	
Cost Material Raw	Rp	549.320.396.342	Rp	52.213.108.194
Cost Power Work Direct	Rp	29,770,531,939	Rp	2,829,700,145
Cost *Overheads* Factory	Rp	134.387.064.457	Rp	12,611,780,095
Price Tree Production	**Rp**	**713,477,992,738**	**Rp**	**67,654,588,434**
Amount Production (Kwintal)	868,684		360,621	
Total Sale	**Rp**	**920.804.886.618**	**Rp**	**86,549,061,600**
Profit Dirty	**Rp**	**207.326.893.879**	**Rp**	**18,894,473,166**
Percentage Profit Dirty	22.52 %		21.83 %	

Source : Data Company Processed

Table 9 show calculation price principal production after done repair sustainable on activity production company . Based on the calculation of the cost of production before and after the implementation of ABM Table 5 and Table 9 show the cost of production for sugar products experience difference amounting to IDR 727,449,162 with loading cost Which too tall (*overcosting*) so that profit Which generated by method A B C assessed not enough optimal, the same as the cost of production for drip products experience difference amounting to IDR 35,147,005 with excessive cost charging high (*overcosting*) so that it is less than optimal profit generated by the ABC method. Based on production units produced company in 2021 which is high so that it accumulates difference efficiency cost from second that product that is worth Rp 762,596,166.

Based on table the can is known that enhancement profit dirty from sale product Which influence percentage profit dirty experience change between before and after implementing ABM. Percentage profit dirty Which obtained from sale product sugar ABM experience enhancement from before application ABM that is as big as 22.44% And increased to 22.52% with a difference enhancement profit dirty of 0.08% i.e. worth Rp 727.449.162. So Also on product drops Also experience enhancement percentage profit dirty from before application ABM was 21.79% and increased to 21.83% with a difference enhancement profit dirty of 0.04% ie worth Rp 35,147,005.

The final step taken in implementing ABM is calculating the resulting cost efficiency from repair sustainable form *reduction* cost to activity No worth plus. Objective did it calculation efficiency cost that is For know performance activity company after repair sustainable . Following This is calculation efficiency cost :

$$\text{Efisiensi Biaya} = \frac{\text{Biaya yang tidak memiliki nilai tambah}}{\text{BOP sebelum penerapan ABM}} \times 100\%$$

$$\text{Efisiensi Biaya} = \frac{\text{Rp } 762.596.166}{\text{Rp } 147.761.440.718} \times 100\%$$

$$\text{Efisiensi Biaya} = 0{,}52\%$$

Source : Data Company Processed

Implementing ABM can improve cost efficiency and optimize profit earned _ from income main company in the form of proceeds from product sales . ABM can increase focus management with do allocation cost For increase mark for consumer . ABM Also can measure effectiveness And efficiency activity production as well as identify repair sustainable necessary done to minimize cost activity Which issued company . On study This generated efficiency cost as big as 0.52% that is worth IDR 762,596,166.

4. CONCLUSION

At the PG Krebet Baru Unit of PT PG Rajawali I, there is four worthless activity _ additions added to the system management based activity (ABM). This is surveillance material default , settings size sugar cane , screening and division roomie clear , and storage sugar . Repair sustainable — or repair Keep going continuous —performed on activities that do not have value- added. This is done by selecting an alternative cost reduction by reducing the costs attached to activities . The results achieved covers enhancement cost efficiency of 0.52%, or IDR 762,596,166, and an increase profit on sugar products of 0.08%, or IDR 727,449,162, and an increase profit on drip products of 0.04%, or IDR 35,147,005. Because fourth These activities must be maintained to support the production process , options alternative cost reduction is selected. By using ABM, management objectives can be determined by categorizing activity production .

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REFERENCE

Aziza, N. (2017). Research Methods Research Methods. *Qualitative Research Methods* , 43.

Dewantara, KH, & E-mail, S. (2011). Qualitative Description as a Method in Performance Research. *Harmonia: Journal of Arts Research and Education* , *11* (2), 173–179. https://doi.org/10.15294/harmonia.v11i2.2210

Fatimah, A., & Santoso, AA (2020). Increasing Cost Efficiency Through Activity Based Management. *Journal of Research and Applications: Accounting and Management* , *4* (2), 229–238. https://doi.org/10.33795/jraam.v4i2.010

Ghazali, R. (2016). Cost Analysis of Ribbed Smoked Sheet Production Activities to Achieve Efficiency Using the Activity Based Management Method Approach. *Journal of Accounting and Business , 1* (1), 50–59.

Hansen, D.R., & Mowen, M.M. (2007). *Managerial Accounting* (8th ed.). Thomson South Western.

Hardani, Andriani, H., Ustiawaty, J., Utami, EF, Istiqomah, RR, Fardani, RA, Sukmana, DJ, & Auliya, NH (2015). *Qualitative and Quantitative Research Methods* (April Issue).

Jusmani, J., & Oktariansyah, O. (2021). Activity Based Management as an Instrument for Management in Cost Efficiency. *Journal of Media Wahana Ekonomika* , *18* (3), 377. https://doi.org/10.31851/jmwe.v18i3.6658

Lumentut, L. N. F., Morasa, J., & Pinatik, S. (2021). Implementation of Activity Based Management to Improve Efficiency at Hotel Diantha Bitung. Implementation of Activity Based Management to Improve Efficiency at Hotel Diantha Bitung. *EMBA Journal* , *9* (3), 812–821.

Manurung, S., Hartoto, Priantana, RD, Fuadi, R., Daud, RM, Nugroho, L., Maryasih, L., Lautania, MF, Jefriyanto, Meutia, R., Bangun, R., Yulistiyono, Ariani, NE, Djuanda, G., & Chania, I. (2022). Management Accounting. In G. Djuanda (Ed.), *Angewandte Chemie International Edition, 6(11), 951–952.* (1st ed., Vol. 2). Widina Bhakti Persada Bandung.

Nasution, NA, Anggraini, T., & Syafina, L. (2023). Analysis of the Implementation of Activity Based Management to Increase Production Cost Efficiency at PT. Perkebunan Nusantara IV Medan. *Journal of Islamic Accounting Competency* , *3* (1), 1–19. https://scholar.google.com/citations?view_op=view_citation&hl=en&user=JF-AbwoAAAAJ&pagesize=100&citation_for_view=JF-AbwoAAAAJ:4OULZ7Gr8RgC

Ningsih, MS, & Zed, EZ (2023). the Influence of Brand Image, Price and Promotion on Customer Purchase Interest in Good Day Cappuccino Sachet Coffee At the …. *Journal of Economics* , *12* (03). https://ejournal.seaninstitute.or.id/index.php/Ekonomi/article/view/2403%0A https://ejournal.seaninstitute.or.id/index.php/Ekonomi/article/download/2403/1729

Parengkuan, M. (2013). Identification of Non Value Added Activities through Activity-Based Management to Improve the Efficiency of the Sedona Manado Hotel. *Journal of Research in Economics, Management, Business and Accounting* , *1* (3), 109–117.

Prastiti, AED, Saifi, M., & Zahro, Z. (2016). Analysis of determining the cost of production using the Activity Based Costing System (SYSTEM ABC) method (case study at CV. Indah Cemerlang Malang). *Journal of Business Administration (JAB)* , *39* (1), 16–23. business administration.studentjournal.ub.ac.id%0A16

Ratnawati, T., & Kusniawati, A. (2016). Internal Audit Activity Based Management to Assess Efficiency and Effectiveness in the Production Department of CV. Herbal Bagoes Malang City. *JEA17: Journal of Economic Accounting* , *1* (01). https://doi.org/10.30996/jea17.v1i01.644

Sugiyono. (2015). Research and Development Methods Qualitative, Quantitative and R&D Approaches. *Educational Research Methods: Qualitative, Quantitative, and R&D Approaches* , 130.

Sugiyono. (2018). Sugiyono Quantitative Qualitative Research Methods. *Quantitative Qualitative Research Methods* , 6.

Sukirno, S. (2019). *Introductory Microeconomic Theory* (3rd ed.). Rajawali Press.