International Journal of Science and Research (IJSR)
ISSN: 2319-7064
ResearchGate Impact Factor (2018): 0.28 | SJIF (2018): 7.426

Employee Perception Analysis about the Effectiveness of Activity Based Costing, Overall Equipment Effectiveness and Cost Saving Potential on Product Profitability

Yuli Suryandari[1], Yudhi Herliansyah[2]

[1, 2]Postgraduate Program, Mercu Buana University, Indonesia

Abstract: ***This study aims to determine the effect of Activity Based Costing, Overall Equipment Effectiveness and Cost Savings Potential on Product Profitability in PT framas Indonesia based on employee perceptions. The population of this research is all employees working at PT framas Indonesia. Samples were obtained using purposive sampling method as many as 42 employees related to activity based costing variables, overall equipment effectiveness, cost saving potential, and product profitability. The method used in this study is multiple regression analysis with SPSS software. The results showed that: 1) Based on employee perceptions, the effectiveness of the application of Activity Based Costing did not significantly affect Product Profitability, 2) Based on employee perceptions, the effectiveness of applying Overall Equipment Effectiveness significantly affected the product, 3) Based on employee perceptions, Cost Saving Potential significant effect on product profitability.***

Keywords: Activity Based Costing, Overall Equipment Effectiveness, Cost Savings Potential, Product Profitability

1. Introduction

Business competition is a problem that will always be faced by companies. Superior product quality, convenience and comfort in obtaining products, and competitive prices will always be the target of consumers. This encourages companies to minimize production costs as a way to reduce product prices. Companies must set management strategies so that prices offered to consumers remain competitive without reducing product quality. One important element in pricing is cost. Costs that are too high will of course reduce product profitability or even cause losses. With low profits, businesses will find it difficult to survive given the ever increasing costs, especially labor costs. Economic uncertainty in developing countries such as Indonesia is also a challenge for companies.

Many factors need to be considered in building a strong business to face business challenges. One of them is the use of technology in improving all operational aspects of the industry, from supply chain efficiency to asset optimization. In cost evaluation, cost accounting methods become one of the important things. Cost allocation can be done using the Activity Based Costing method as a cost calculation method. Today many world companies are developing their cost accounting with Activity Based Costing. Application of Activity Based Costing method produces information that can be used by management in evaluating production costs with one of the cost savings goals.

In addition to cost information that can be obtained from the application of Activity Based Costing systems, the costs incurred in manufacturing companies, especially those that use many machines, can be analyzed through a "measure" of machine effectiveness, namely Overall Equipment Effectiveness. Increased production efficiency can also be analyzed using the Overall Equipment Effectiveness calculation.

Various methods are carried out by management to increase product profitability. However, the question that often arises is, is it true that the application of the Activity Based Costing method has an influence on product profitability? In addition, do other factors such as Overall Equipment Effectiveness and Cost Savings Potential also affect product profitability? To answer these questions, the authors are interested in getting empirical evidence about employee perceptions of the effectivity of the effectiveness of Activity Based Costig, Overall Equipment Effectiveness, and Cost Savings Potential on product profitability (empirical study at PT framas Indonesia).

2. Literature Review

Contingency Theory

Contingency theory is a behavioral theory which states that there is no one best way to design management strategies, the success of a management strategy depends on the company's internal and external situation. Fiedler (1974) suggests that the high and low work performance of a group is influenced by the motivational system of the leader and the extent to which the leader can control and influence certain situations.

When connected with variables in this study, namely the method of Activity Based Costing, the ratio of Overall Equipment Effectiveness, and the calculation of Cost Saving Potential. This variable is a tool that can provide analysis results in the form of the success rate of the company's strategy that has been applied by management.

Activity Based Costing

Licensed Under Creative Commons Attribution CC BY

Activity Based Costing method calculates each cost in each activity on the basis of different allocations. According to Lanen, Anderson, and Maher (2017: 460), "Activity Based Costing is a two-stage method of product cost calculation, which in the first stage will impose costs on activity costs, then charge it to the product based on each activity to produce the product".

The main benefits of calculating costs with the method of Activity Based Costing according to Blocher (2013: 212) include:

1) **Better measurement of profitability**
   ABC presents information on production costs that are more accurate, leads to measurement of product and customer profitability, as well as strategic decisions that are better informed about pricing, product lines and market segments.
2) **Better decision making**
   ABC presents more accurate measurements of costs triggered by activities, helps management to increase the value of products and processes by making better decisions about product design, better decisions about support for customers, and encouraging projects that increase value.
3) **Process Improvement**
   The ABC system provides an information system to identify areas that must be improved.
4) **Cost Estimation**
   Increase information about product costs which leads to better estimation of order costs for pricing decisions.
5) **Costs of unused capacity**
   The ABC system can be used to analyze the costs that still exist even if the capacity or facilities owned are not used.

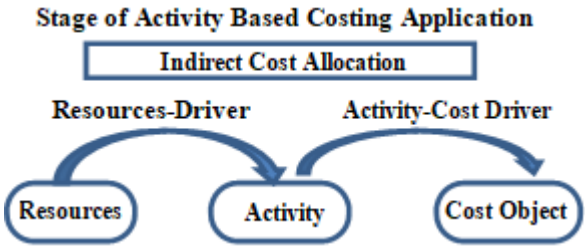
Charging is a process of charging costs into the 'cost pool' or 'cost object'. Direct costs can be traced directly to the 'cost pool' or 'cost objects' easily and can be connected economically. For example, the cost of materials needed for a particular product is a direct cost because the costs can be traced directly to the product.

On the other hand, in indirect costs, it cannot be traced easily, it is difficult to connect economically from cost to 'cost pool' or 'cost object'. That is, direct costs can be caused by two or more "cost pools" or objects that cannot be easily and economically traced directly. The cost of supervision of employees in the production and handling of materials is a good example of costs which generally cannot be traced to individual products, and therefore are indirect costs for products.

If indirect costs cannot be traced to 'cost pool' or 'cost object', the imposition of indirect costs is done using 'cost driver'. As a result, costs are charged to the 'cost pool' or 'cost object' which causes costs in a representative and reasonable manner.

Imposing indirect costs into the 'cost pool' or 'cost object' is called cost allocation, the form of imposition of costs where direct tracking of costs is not possible, so the 'cost driver' is used. 'Cost drivers' are used to allocate costs which are often referred to as allocation bases.

Thus, the stage of applying the Activity Based Costing method can be described as follows:



Overall Equipment Effectiveness

Overall Equipment Effectiveness (OEE) is the total measurement of performance related to availability of process productivity and quality. The OEE measurement shows how well the company uses its resources including equipment, workers and the ability to satisfy consumers in terms of deliveries in accordance with quality specifications according to consumers.

According to Nakajima (1989) in Ljungberg (1998), there are three concepts in Total Productive Maintenance (TPM), namely:
1) Use equipment effectively and maximally.
2) Care carried out by the user.
3) Small group activities.

Of the three things, OEE can be used for activities related to the operation, maintenance and management of production equipment and existing resources.

The accuracy of the equipment data performance size is the main key in prolonging the lifespan of equipment effectiveness from TPM activities. If the equipment is damaged so that it becomes the reason for production to fail, in this case it means that some activities of the TPM are not used optimally to solve the company's main problems. Production failure, including several costs, among others, with indirect costs and hidden costs. Nakajima (1988) states that OEE is a tool to measure the value of hidden costs on failed products.

Nakajima (1988) also states that the most effective use of OEE is when the process takes place with the use of equipment as the basis for quality control. The use of OEE can be very important for companies as a measure of the performance of equipment and machinery used in the production process.

Dal (1999: 1490) states that OEE can be used in several levels in a company. The first is, OEE can be used as a "Benchmark" to measure the company's plans in relation to the performance of machinery and production equipment. Second, the OEE value, the estimate of a production process, can be used to compare the performance of the production process in the company, with this system it will be seen which processes are not important so they can be eliminated. Third, if the production process is done individually, OEE

Licensed Under Creative Commons Attribution CC BY

can identify which engine has poor performance, so that the right steps for the machine or compliance can be decided.

The things needed in the Overall Equipment Effectiveness application in the company are by calculating the OEE component, namely:

1) Availability Ratio Element, which is used to measure OEE value is to pay attention to the total time of damage resulting from unscheduled downtime, set-up process and other unplanned damage.
2) Performance, is a measure of the ratio of actual speed of the equipment to the ideal speed.
3) Quality, which can be used to show the proportion of imperfect production with total production volume.

Cost Saving Potential

Cost Saving Potential is a calculation of the potential that shows the achievement of targets at a position of costs that are lower than the estimated cost. In the past profit was obtained from the difference in selling prices determined based on the estimated cost of production, meaning profit is an independent factor determined by the manufacturer. However, at this time the price is determined by the market, so profit becomes dependent on production costs. The ability of companies to manage costs is the key determinant of business continuity in the future.

Mainardi (2009) stated "Cost savings is a strategy for the future. This initiative must be the catalyst that the organization needs to change ".

Joseph Berk in his book Cost Reduction and Optimization for Manufacturing and Industrial Company states that the purchase of raw materials on average has a proportion of more than 60% of the total cost. The correct management of materials will have a significant impact on the company's austerity initiatives.

Material is a variable component of the product, adding one raw material to the unit can increase the unit cost, but does not increase the number of units.

Product Profitability

The main purpose of the company is to get profit or profit. According to Sartono (2010: 122) "Profitability is the ability of companies to earn profits in relation to sales, total assets and own capital. According to Kasmir (2011: 196) "Profitability ratio is a ratio to assess a company's ability to seek profits". According to Irawati (2006: 58) "Profitability ratio is the ratio used to measure the efficiency of the use of company assets or is the ability of a company to generate profits during a certain period (usually every semester, quarterly, etc.) to see the company's ability in operating efficiently ". According to Roger J Best (2004: 10): "Customer satisfaction is one of the main sources of profit. A business with market orientation that is strong looking at current customers and potential customers as a source of profitability, cash flow, and income"

Based on the opinions of experts above, it can be concluded that profitability ratios are ratios to measure the effectiveness of management (management) of the company as indicated by the number of sales generated from sales and investment. Another thing that is not less important in product profitability is customer satisfaction.

According to Blocher (2013: 233) customer profitability analysis identifies customer service activities and cost drivers and determines the profitability of each customer or group of customers. Here, customer service covers all activities to complement sales and satisfy customers, such as advertising, telephone sales, shipping, billing, collection, telephone services, investigations, and other forms of customer service. Analysis of customer profitability allows managers to:

1) Identify the most profitable customers.
2) Manage service costs from each customer.
3) Introducing new profitable products and services.
4) Stop unprofitable products, services, or customers.
5) Direct the mix of customer purchases on product and service lines with higher margins.
6) Offering discounts in order to obtain greater sales volumes for customers with low service costs.
7) Choose the type of after-sales service that will be provided.

A good understanding of the profitability of the company's customers, both current and potential, can help companies to increase overall profits and become more competitive.

Hypothesis

Effect of Effectiveness of Application of Activity Based Costing of Product Profitability based on Employee Perception

Activity Based Costing method is an overhead allocation method based on activities related through the cost driver. Besides being used as a method of cost allocation, this method also provides information that can help management in making decisions. Information that can be taken among other things is activities that are allocated a large but not worthwhile cost. Based on this information, managers can evaluate whether these activities can be minimized or even eliminated. Based on these decisions profitability is expected to increase as an impact of cost savings on the basis of evaluating existing information.

H1: Effectiveness The application of Activity Based Costing method has a significant influence on Product Profitability based on Employee Perception.

Effect of Effectiveness of Overall Equipment Effectiveness on Product Profitability based on Employee Perception

Machines used for the production process do not always run normally. At certain times the machine requires maintenance and repair. Maintenance and repair of machinery will cause loss of idle time or downtime. In addition to loss of time, engine damage can also cause product defects caused by the ineffective production process. The losses arising from the damage to the engine were not clearly seen in the financial statements. Therefore this loss is called the term hidden cost. The effectiveness of the machine must be controlled so that

Licensed Under Creative Commons Attribution CC BY

it does not cause large hidden costs and affect the profitability of the product. The ratio for knowing the level of effectiveness of this machine is called Overall Equipment Effectiveness.

H2: Effectiveness of the Implementation of Overall Equipment Effectiveness has a significant effect on Product Profitability based on Employee Perception.

Effect of Effectiveness of Application of Cost Savings Potential on Product Profitability based on Employee Perception

Cost savings are the key to maximizing product profitability. Cost savings that have the most influence on product profitability are material cost savings. This requires management to set a strategy so that costs related to material can be reduced so that product profitability can increase. Based on material purchase data, managers can analyze products. Analysis is done to find out what products consume too much cost and the problems that cause the large amount of consumption.

H3: The effectiveness of the application of Cost Saving Potential has a significant effect on Product Profitability based on Employee Perception.

Research methods

The population in this study were all employees working at PT framas Indonesia including management, with a total of 585 employees. This study uses questionnaires with non-probability sampling techniques in sampling. This study uses the SPSS application program for processing data with a multiple regression analysis model.

3. Discussion

Description of the Effectiveness of the Application of Activity Based Costing

Based on the results of the SPSS analysis of the respondents' answers to questions related to the effectiveness variable of the implementation of Activity Based Costing. The questionnaire was well distributed, as evidenced by the mean value greater than the standard deviation value for each question. Most of the average results show values above 3, this means that the Implementation of Activity Based Costing is done effectively.

Description of the Effectiveness of Overall Equipment Effectiveness Variables

Based on the results of the SPSS analysis of respondents' answers to questions related to the variable Effectiveness of Overall Equipment Effectiveness Implementation. The questionnaire was well distributed, as evidenced by the mean value greater than the standard deviation value for each question. Most of the average results show values above 3, which means that the Implementation of Overall Equipment Effectiveness is done effectively.

Description of Effectiveness of Cost Saving Potential Variables

Based on the results of the SPSS analysis of the respondents' answers to questions related to the variable Cost Effective Saving Potential Implementation. The questionnaire was well distributed, as evidenced by the mean value greater than the standard deviation value for each question. Most of the average results show values above 3, this means that the Implementation of Cost Savings Potential is done effectively.

Description of Variable Product Profitability

Based on the results of the SPSS analysis of the respondents' answers to questions relating to the Product Profitability variable. The questionnaire was well distributed, as evidenced by the mean value greater than the standard deviation value for each question. Most of the average results show values above 3, this means that PT Framas Indonesia's products have good profitability.

Multicollinearity Test

Based on the results of Multicollinearity Test with SPSS software, it can be concluded that there are no symptoms of multicollinearity or there are no similarities between independent variables. This is evidenced by the VIF value in the range 1 to 10 on each variable.

Heteroscedasticity Test

Based on the Scatterplot Graph of the analysis using SPSS Software, it can be concluded that there is no Heteroscedacity in the data as evidenced by:

1) Data points spread above and below and around the number 0.
2) Data points do not gather just above or below.
3) The spread of data points does not form a wavy pattern widening then narrows and widens again.
4) Distribution of non-patterned data points.

Hypothesis testing

Ajusted R square value is 0.385 or 38.5%, it shows that the dependent variable is Product Profitability can be explained by the independent variable Effectiveness of Application of Activity Based Costing, Overall Equipment Effectiveness, and Cost Saving Potential. While 61.5% is explained by other variables outside of this study.

The results of the F test have a probability value of 0,000. This means that the model in this study is appropriate and can be used to explain the Product Profitability variable as evidenced by a probability value smaller than 0.05.

Based on the T Test which functions to explain how much influence an independent variable explains in the dependent variable. This is tested using a significance level of 0.05 or alpha 5%. If the value of t is less than 0.05 then the hypothesis is accepted. This means that the independent variables have a significant effect on the dependent variable.

T test results H1: Effectiveness The application of Activity Based Costing method has a significant effect on Product Profitability showing a sig value of 0.107. This value is greater than the alpha value of 0.05. Thus the hypothesis which states that the application of the Activity Based Costing method has a significant influence on the probability of the product being rejected. So that based on the analysis

Licensed Under Creative Commons Attribution CC BY

of employee perceptions, the effectiveness of applying the Activity Based Costing method does not significantly influence Product Profitability. Opinion Robert DeMichiei (2016) who argues that Activity Based Costing is the process of determining product costs that can be used to identify which production activities are efficient, so that any benefits that can still be obtained are correct when viewed in terms of financial benefits. But when viewed from other factors related to product profitability such as customer satisfaction, the amount of return on goods sold, etc., the effectiveness of the application of Activity Based Costing does not show a significant effect on Product Profitability.

This supports Roger J Best (2004) who states that customers are one of the main sources of profit. This means that when talking about profitability, it would be better to consider non-financial factors found in the business or industrial environment.

The results of the test t of H2: Effectiveness of Overall Equipment Effectiveness Implementation has a significant effect on Product Profitability showing a sig value of 0.001. This value is smaller than the alpha value of 0.05. Thus the hypothesis which states that the effectiveness of the application of Overall Equipment Effectiveness has a significant effect on the Probability of Products accepted. So that based on the analysis of employee perceptions, the effectiveness of implementing Overall Equipment Effectiveness has a significant effect on Product Profitability. The results of this study prove that Overall Equipment Effectiveness cannot only be used for decision making related to investments or assets. The research of Heru Winarno and Susilonoto in 2016 which has been described previously, focuses on measuring the effectiveness and condition of the engine. So that the research is only limited to the conclusion of the usage ratio without tracing the further influence of the low effectiveness of the machine. The low effectiveness of the machine, if traced further causes many defective products that can be sent to customers or consumers.
The results of this study are in line with the research conducted by Ladan Hassani and Gholamreza Hashemzadeh (2015). The conclusion of the study is Overall Equipment Effectiveness has a significant effect on production losses. Production losses directly impact on product profitability. So this research supports the research conducted by Ladan Hassani and Gholamreza Hashemzadeh regarding the influence of Overall Equipment Effectiveness on product profitability.

The results of the H3 t test: Effectiveness of the Application of Cost Savings Potential has a significant effect on Product Profitability showing a sig value of 0.007. This value is smaller than the alpha value of 0.05. Thus the hypothesis which states that the effectiveness of the application of Cost Savings Potential has a significant influence on the Probability of Products accepted. So that based on the analysis of employee perceptions, the effectiveness of applying Cost Saving Potential has a significant effect on Product Profitability. The analysis of the cost savings that can be made on the company, will indirectly produce or provide additional information about the process or which part of the constraint. This information will require further analysis of the causes or roots of the problems that occur in a particular process. So that the problems that make the small profitability of the product will decrease and impact on increasing the profitability of the product.

This study supports Mainardi's 2009 statement: "Cost savings is a strategy for the future. This initiative must be the catalyst that the organization needs to change ". Product profitability in this study includes factors related to business continuity, as an example is customer satisfaction through the return of goods. Likewise in research that can be concluded that monitoring the potential cost savings has a significant effect on the high or low profitability of a product. With procedures or costs that are simpler and smaller, of course the problems that are the cause of the small profitability will be easier to identify.

Table

Table 1: Description of the Effectiveness of the Application of Activity Based Costing

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ABC1	42	2.00	5.00	4.7381	.62701
ABC2	42	4.00	5.00	4.8333	.37720
ABC3	42	4.00	5.00	4.9762	.15430
ABC4	42	2.00	5.00	4.4048	.88509
ABC5	42	3.00	5.00	4.3095	.68032
ABC6	42	2.00	5.00	4.5714	.66783
ABC7	42	1.00	5.00	4.2857	1.06578
ABC8	42	2.00	5.00	4.4762	.83339
ABC9	42	1.00	5.00	3.2143	.89812
ABC10	42	3.00	5.00	4.5476	.67000
ABC11	42	3.00	5.00	4.5476	.67000
ABC12	42	1.00	5.00	3.6667	1.26234
Valid N (listwise)	42				

Note: ABC: Respondents' answers to the questionnaire questions variable effectiveness of the implementation of Activity Based Costing
Source: SPSS Analysis Results

Table 2: Description of Effectiveness of the Implementation of Overall Equipment Effectiveness Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
OEE1	42	3.00	5.00	4.4048	.62701
OEE2	42	3.00	5.00	3.6429	.82111
OEE3	42	1.00	5.00	3.9762	.97501
OEE4	42	3.00	5.00	4.6190	.53885
OEE5	42	3.00	5.00	4.5952	.54368
OEE6	42	1.00	5.00	4.0952	1.10010
OEE7	42	3.00	5.00	4.7143	.55373
OEE8	42	2.00	5.00	3.8095	.83339
OEE9	42	3.00	5.00	4.6667	.52576
OEE10	42	2.00	5.00	4.3571	.90585
OEE11	42	1.00	5.00	4.2619	1.06059
OEE12	42	4.00	5.00	4.8810	.32777
OEE13	42	3.00	5.00	4.5714	.73726
Valid N (listwise)	42				

Note:
OEE: Respondents' answers to questionnaire questions are the effectiveness variables of Overall Equipment Effectiveness.

Licensed Under Creative Commons Attribution CC BY

Source: SPSS Analysis Results

Table 3: Description of the Effectiveness of Cost Saving Potential Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CSP1	42	3.00	5.00	4.7381	.49680
CSP2	42	2.00	5.00	4.3095	.74860
CSP3	42	3.00	5.00	4.0476	.76357
CSP4	42	2.00	5.00	3.6190	.90937
CSP5	42	1.00	5.00	4.1905	1.06469
CSP6	42	2.00	5.00	4.1667	.93487
CSP7	42	2.00	5.00	4.3810	.79487
CSP8	42	2.00	5.00	4.1190	.86115
Valid N (listwise)	42				

Note:
CSP: Respondents' answers to questionnaire questions variable effectiveness of applying Cost Saving Potential.
Source: SPSS Analysis Results

Table 4: Description of Product Profitability Variable

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PP1	42	3.00	5.00	4.4286	.70340
PP2	42	1.00	5.00	3.1905	.94322
PP3	42	2.00	5.00	3.7619	.84995
PP4	42	2.00	5.00	3.4524	.77152
PP5	42	2.00	5.00	4.1190	.99271
PP6	42	3.00	5.00	4.5476	.63255
Valid N (listwise)	42				

Note:
PP: Respondents' answers to questionnaire questions Product Profitability variable.
Source: SPSS Analysis Results

Table 5: Hypothesis Test

Model	Adjusted R Square	Sig a = 0.05	Remark
1	0.385	0.000	
Activity Based Costing		0.107	H1 Rejected
Overall Equipment Effectiveness		0.001	H2 Accepted
Cost Saving Potential		0.007	H3 Accepted
Variabel Dependen: Profitabilitas Produk			

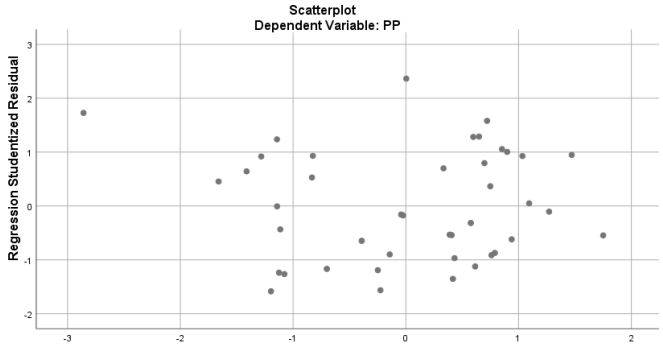


Figure1: Scatterplot Graph

Notes :
PP : Product Profitability
Source : Results of SPSS analysis

4. Conclusion

After testing and analyzing data related to the effect of the effectiveness of the application of Activity Based Costing, Overall Equipment Effectiveness, and Cost Saving Potential variables on Product Profitability, conclusions can be obtained, among others:

1) Based on Employee Perception Analysis, Effectiveness of Application of Activity Based Costing does not have a significant effect on Product Profitability. One of the factors that influence the low level of influence of the Activity Based Costing application on product profitability in PT Framas Indonesia is in this study, the profitability variable used is broader product profitability. The profitability variable used has a broader scope, namely the profitability of products related to consumers. So that the effect of the application of accounting methods for Activity Based Costing costs is getting smaller. This is because this method tends to be more appropriate when used as an analytical tool for decisions related to finance, but it is not appropriate when used as the main tool for decision making in a wider scope. In the practice that occurs in PT Framas Indonesia, the results of the Activity Based Costing method are not only used for financial decision making, but also for analyzing the return of products even if only a small portion.
2) Effectiveness of the Implementation of Overall Equipment Effectiveness has a significant effect on Product Profitability, this occurs because PT Framas Indonesia is a company that uses quite a lot of machinery and other equipment in its production process. So that the optimization of machines and equipment used in company operations is very important influence on product profitability. Unstable engine performance will make the opportunity for the product to fail. Without proper supervision procedures, it is very vulnerable to these failed products being sent to consumers. This certainly affects the level of customer satisfaction and raises costs for producing and sending back to consumers.
3) Effectiveness of the Application of Cost Savings Potential has an effect on product profitability, it is caused by activity activities carried out or assessed as an opportunity to save costs indirectly will improve performance and productivity and quality of the product. High quality products or according to standards will minimize costs incurred due to failed products and excessive use of raw materials. Cost Saving Potential analysis will indirectly reduce or even eliminate non-value-added activities. So that the company's performance becomes better and more efficient.

5. Suggestion

Based on the results of the research that has been done, the suggestions that can be given by the author include:

1) It is necessary to increase employee knowledge regarding the purpose of reporting made. This is to avoid misunderstanding the filling or updating of data in the report. On the other hand employees will understand if something strange or abnormal happens in the data

Licensed Under Creative Commons Attribution CC BY

provided, so that this can be an initial control in data quality.

2) For an increase in the Overall Equipment Effectiveness ratio, especially the Availability ratio, the author recommends that management focus more on the three down times that often occur namely, component waiting time, mold change, and color change. To reduce component waiting time, production can be done earlier for the first component, so that if there are quality or engine problems in the first component, it will not interfere with the productivity of the next component. Whereas for the change of mold and color, the author recommends making a schedule that does not overlap between one machine and the other, in the sense that the mold and color change schedules are adjusted to existing human resources.
3) In the case of Cost Saving Potential, if traced deeper into the causes of material reuse is a color incompatibility with sales forecast, the author's suggestions include making other products (substitute products) that can be resold or used in the company's operations so that the material it does not become a waste.
4) Formed a special section in charge of overseeing the quality of accounting data, or can also be made an internal control on each part that processes the raw data.
5) A review of the obstacles that occur in production activities is carried out so that production problems cannot be dealt with quickly.

References

[1] Skydel, S. (2017). *Kottke Trucking Expands Operations Based on Analytics Sound EquipmentChoices*. Accessed on December 12, 2017 from World Wide Web: http://www.fleetequipmentmag.com/kottke-trucking-operation-analytics-equipment/
[2] Yunus, Y. (2016). *Honeywell Tingkatkan Produktivitas Kilang Minyak PetroVietnam.* Accessed on December 12, 2017 from World Wide Web: http://industri.bisnis.com/read/20161109/44/600799/honeywell-tingkatkan-produktivitas-kilang-minyak-petrovietnam
[3] Fatima. (2017). Kemisrekdikti Ready for Doctoe Scholarship. Accessed on December 13, 2017 from World Wide Web: http://www.beritasatu.com/pendidikan/421463-kemrisrekdikti-siapkan-beasiswa-untuk-pendidikan-kedokteran.html
[4] Popesko, B., Zamecnic, R., & Kolkova, A. (2016). Profitability Analysis of Urban Mass Transport Lines Using Activiy-Based Costing Method: An Evidence from The Czech Republic. *ENGINEERING Science, 14* (3), 335-344
[5] Javid, M., Hadian, M., Ghaderi, H., Ghaffari, S., & Salehi, M. (2016). Application of the Activity-Based Costing Method for Unit-Cost Calculation in a Hospital. *GLOBAL Journal of Health Science, 8* (1), 1916-9744
[6] Pettersson, A. I. (2013). To Evaluate Cost Savings in a Supply Chain: Two Examples from Ericsson in the Telecom Industry. *OPERATIONS and Supply Chain Management, 6* (3), 94-102
[7] Baluch, N., Abdullah, C. S. B., & Mohtar, S. (2010). Measuring OEE in Malaysian Palm Oil Mills. *INTERDICIPLINARY Journal of Contemporary Research in Bussiness. 4* (2), 733-743
[8] Winarno, H., & Susilonoto. (2016). Total Productive Maintenance Analysis for Increasing Production Efficiency by Using the Overall Equipment Effectiveness Method at PT. Full Steel Harsco. *PUBLICATION of Scientific Works at the Yogyakarta National Technology College*
[9] Hassani, L., Gholamrez., & Hashemzadeh. (2015). The Impact of Overall Equipment Effectiveness on Production Losses in Moghan Cable & Wire Manufacturing. *INTERNATIONAL Journal for Quality Research, 9* (4), 565-576
[10] Tomar, R. & Soni, P. K. (2016). Analysis of Performance by Overall Equipment Effectiveness of the Injection Moulding Section of an Automobile Industry. *INTERNATIONAL Research Journal of Engineering and Technology*, 3(82), 379-381
[11] Elqorni, A. (2011). *Fiedler's Leadership Theory "Contingency Theory".* Retrieved 12 January 2018 from World Wide Web: https://elqorni.wordpress.com/2011/06/21/teori-kepemimpinan-fiedler-%E2%80%9Ccontingency-theory%E2%80%9D/
[12] Lanen, W. N., Anderson, S. W., & Maher, M. W. (2017). *Fundamentals of Cost Accounting(5th ed).* New York: Mc Graw Hill Education.
[13] Blocher, J. E., Stout, D. E., & Cokins, G. (2013). *Strategic Emphasis on Cost Management (5th ed).* New York: Mc Graw Hill Education.
[14] Amrih, P. (2014). *Overall Equipment Effectiveness.* Retrieved on 10 January 2018 from World Wide Web: http://www.pitoyo.com/catatanpitoyo/index.php/oee/97-sejarah-oee
[15] Redaksi. (2012). *Cost Savings Strategies in the Material Perspective.* Accessed on February 20, 2018 from World Wide Web: http://shiftindonesia.com/strategi-penghematan-biaya-dalam-perspektif-material-cut-the-right-cost-bagian-1/
[16] Exousia. (2012). *It's Time to Think About Cost Savings !!.* Accessed on January 5, 2018 from World Wide Web : http://exousia-consulting.blogspot.co.id/2012/12/ini-saatnya-memiikirkan-mengenai.html
[17] Agus, R. S. (2010). *Financial Management Theory and Application (4th ed).* Yogyakarta: BPFE
[18] Hidayat, A. (2018). *Definition of Profitability According to Experts.* Accessed on January 16, 2018 from World Wide Web: https://www.indosaja.com/2018/01/05/pengertian-profitabilitas-menurut-ahli/
[19] Sujarweni, V. W. (2016). *Examine Research Accounting with SPSS.* Yogyakarta: Pustaka Baru Press.
[20] Soekardan, D. (2016). An Analysis of Activity Based Costing: Between Benefit and Cost Its Implementation. *INTERNATIONAL Journal of Scientific & Technology Research. 5.* 334-339
[21] Aleem, M. Khan, A. H., & Hamad, W. (2016). A Comparative Study of the Different Costing Techniques and Their Application. *AUDIT Financia, 11* (143), 1253-1263

Licensed Under Creative Commons Attribution CC BY

[22] Salem, S. E. A., & Mazhar, S. (2014). The Benefits of THE Application of Activity Based Cost System - Field Study on Manufacturing Company Operating In Allahabad City-India. *IOSR Journal of Bussiness and Management, 16*(11), 39-45
[23] Ghanbari, M. Khorasani, H., Manesh, M. Z., & Khoshnava, B. (2016). Reasons of Limited Development of Activity Based Costing Comparet to Traditional Costing. *INTERNATIONAL Researc Journal of Applied and Basic Sciences, 10*(2), 183-189
[24] Sivaselvam, E., & Gajendran, S. (2014). Improvement of Overall Equipment Effectiveness In a Plastic Injection Moulding Industry. *IOSR Journal of Mechanical and Civil Engineering, 5*(53), 12-16
[25] AlI, R., & Ali, M. (2012). Measuring OEE in Malaysian Palm Oil Mills. *INTERDICIPLINARRY Journal of Contemporarry Research In Bussiness, 4* (2),733-743
[26] Andayani, L., Yudiaatmaja, F., & Cipta, W. (2016). Effect of Liquidity Sales on Profitability in Trade, Service and Investment Companies in the Indonesia Stock Exchange in 2014. *E-JURNAL Bisma University of Education Ganesha Department of Management. 4* (1)
[27] Jiwadhana. R. S. P., & Triaryati, N. (2016). Effect of Leverage and Profitability on Hedging Decisions by Indonesian Manufacturing Companies. *E-JURNAL Manajemen Unud, 5*(1), 31-58
[28] Santoso, A. (2016). Increasing Profitability in the Go Public Banking Industry in Indonesia. *MEDIA Tre, 11*(1), 99-112
[29] Roger J. Best (2004). *Market-Based Managament Strategies for Growing Customer Value and Profitability (4th ed)*. PEARSON Prentice Hall.

Licensed Under Creative Commons Attribution CC BY