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Evaluation of Budgeting System Using Activity-Based Budgeting: A Case Study at PT X

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Abstract — The purpose of this study is to answer the problem arising in PT X, a cleaning service company that is failing to achieve its target profit and suffering from the inaccurate allocation of its production costs. The analysis shows that the target profit cannot be achieved due to the incapability of the company and different goals between management and the marketing division. To improve budgeting accuracy, it is recommended that the company apply Activity-Based Budgeting and Time Driven Activity Based Costing to improve the tracking of company costs.

Keywords—Activity Based Budgeting (ABB), Time Driven Activity Based Costing (TDABC), services industry, cleaning service

I. INTRODUCTION

Asogwa, Elijah, and Etim (2017) describe the traditional budgeting system as a tool used by firms for planning that describes income and expenses to be incurred over a certain period [1]. Meanwhile, Libby and Lindsay define traditional budgeting systems as a budget-making process with a top–down approach command system in which resources and rewards will be made from top management to subordinate employees, otherwise, information will come from the bottom to top management [2].

Budget preparation using traditional methods has the disadvantage that it takes a long time [3]. Budget preparation using traditional methods does not reflect current conditions in firms when firms face a dynamic business environment [4]. Besides, traditional budgeting does not focus on corporate strategy and may conflict with it [2]. Uyar (2009) describes a traditional budgeting system as fixed performance contracts between a supervisor and subordinate to ensure thought is given to a positive appraisal when the budget target is reached [5].

Despite much criticism of the traditional budgeting system, however, traditional budgeting systems continue to be used as tools to oversee corporate performance and companies have no intention of ignoring their usefulness [6]. Criticisms of traditional budgeting systems have led to the emergence of principles that encourage improvements to the budgeting system, among others, by implementing Activity Based Budgeting [7].

According to Kaplan and Anderson, Activity Based Budgeting (ABB) is a tool that can be used by companies to arrange budgets based on the activity and capacity of resources owned by the company [8]. ABB has advantages compared with traditional budgeting systems that provide a more realistic budget because budgeting involves all managers to determine the activities to be performed based on the company's operational activities; therefore, the budget generated is following available resources as well as actual company conditions [9].

PT X is one PT X is a company that applies the traditional budgeting system. PT X is a building cleaning and maintenance service. PT X provides services to private, state-owned, and government agencies. PT X stands in 2015 until now the demand for services provided by PT X continues to increase. Thus, in 2017, the management of PT X raised the sales target to be achieved from 2016. The problem faced by PT X is not achieving the planned profit target in early 2017. PT X sets the monthly profit to be achieved to be at least 30% of sales.

However, until September 2017, when sales increased, profit targets were not achieved. Thus, the management of PT X wants to improve the accuracy of their budget preparation and to obtain more accurate information about the cost of products, especially direct costs. PT X also has problems calculating product costs based on direct costs and not allocating indirect costs or overhead costs. In fact, according to Hansen and Mowen (2007), product costs include direct costs, indirect costs, and overhead costs [10]. Thus, it is necessary to recalculate the product cost to determine the profitability of each product.

Based on the problems faced by PT X, this study aims to evaluate the traditional budgeting in PT X by using Activity-Based Budgeting. This research is expected to help PT X find the best method for setting a budget and determining product cost. The formulation of this research problem is as follows:

1. When viewed from the budgeting side, what factors cause the non-achievement of the profit target?
2. What is the profitability for PT X of all product costs generated using Time Driven Activity Based Costing (TDABC) by allocating indirect and overhead costs?
3. What are the benefits and costs to PT X for implementing Activity Based Budgeting?

II. LITERATURE REVIEW

A. Overview

This section describes previous research on traditional budgeting systems and ABB and the implementation of ABB in the service industry and related theories.

B. Critical evaluation

1) Traditional budgeting system

Libby and Lindsay explain that traditional budgeting uses a top–down command and supervision system in which decisions, resources, and rewards come from top management and are then passed on to employees at the bottom [2]. Meanwhile, information comes from employees at the bottom to top management. The same is also explained by Hope and Fraser who state that the traditional budget system uses a top–down approach in which the company's vision and mission are determined by top management [11]. The vision and mission are then translated by the planner and forwarded to the operational manager to create a budget. When the budget has been approved, it is then applied to the company's operational activities.

2) Traditional budgeting system

According to Kaplan and Anderson, ABB is a tool that can be used by companies to arrange budgets based on its activity, capacity, and resources [8]. Sandison, Hansen, and Torok (2003) describe the Consortium for Advanced Manufacturing-International's concept of the "Activity-Based Approach for Planning and Budgeting" (ABPB) by using the closed-loop model [9]. The ABPB combines budget planning by determining the operational budget in the form of resources needed to meet production requirements and then determines the financial budget based on the resources needed in the coming period. In stage 1, the operational loop identifies activities that will be carried out to meet the estimated demand for goods/services by using activity consumption rates; these activities will be translated into resource requirements using the resource consumption rates. In stage 2, the financial loop will be made in the form of a financial plan based on the operational plan obtained in stage 1. Financial balance will be achieved if the financial plan meets the financial target. When a company knows the demand, activities, and resources, it can determine the cost of resources and apportion product/service costs appropriately.

3) Time-Driven Activity Based Costing (TDABC)

Kaplan and Anderson explain Time Driven Activity Based Costing (TDABC) as a simplification of Activity Based Costing, where there is transparency of the company's operating process. In the 1980s, Activity Based Costing was used by managers to obtain more accurate cost information; however, Activity Based Costing is costly because it takes a long time and involves many employees to collect activity data and calculate product costs [8]. Therefore, companies choose not to use Activity Based Costing or are already using it but not updating existing information in the system, resulting in inaccuracies in product cost calculations [8].

4) Application of Activity-Based Budgeting in the service industry

Research on the implementation of ABB in the cleaning service industry has never been done. However, Moustafa's (2005) study has similarities with this research that is done on a low IT environment industry on transportation services at the company in one of the construction companies [12]. Moustafa reports that ABB contributes positively to analyzing company-owned capacity, resource allocation, employee participation in budgeting, and identifying relationships between budget and company objectives [12]. However, there are problems encountered in implementing ABB, e.g.; employees do not want to switch from the old to the new system, no support from top management, and the absence of accountants who have good knowledge in the implementation of ABB.

C. Theory evaluation: performance theory

Performance theory explains behavior in which the actions of the company's employees have both positive and negative impacts on the company's goals [13]. Koopman defines work performance as abstract, invisible, and consisting of dimensions that cannot be measured directly [14]. Viswesvaran and Ones (2000) define work performance as a measure of harmony between the behavior and outcomes of employees and company goals [15]. There are two aspects to consider when defining "performance": behavioral aspects and outcome aspects [16]. Sonnentag (2002) describes behavioral aspects as including behavior such as selling computers or repairing machines; however, not all behavioral aspects relate to performance: performance only includes behaviors that are appropriate for organizational goals [16].

Job performance is central to organizational psychology and involves many activities that support employee performance such as training, individual assessment, and appraisal [15]. Companies need employees who have good performance in achieving company goals [16]. This study applies performance theory because the budget is considered as a fixed performance contract between employees and companies. Employees are judged to have good performance if their budget targets are achieved; otherwise, employees will be judged poorly if the budget target is not reached. Thus, the budget will affect employee performance and behavior as employees strive to reach the budget target and thereby improve their performance appraisal.

III. RESEARCH METHODOLOGY

A. Overview

This chapter was written to describe the methodology used in research to address the research problems as described in Chapter 1, namely:

1. When viewed from the budgeting side, what factors cause the non-achievement of the profit target?
2. What is the profitability for PT X of all product costs generated using Time-driven Activity Based Costing (TDABC) by allocating indirect and overhead costs?
3. What are the benefits and costs to PT X for implementing Activity Based Budgeting?

B. Research method

This study applied a qualitative approach and used observation, interviews, and documentation as data collection instruments. Observations were conducted on the company's business activities, interviews were conducted to obtain more in-depth information on the observations, and the documentation was studied to determine the budgeting system used and the calculated product costs. Quantitative

data in the form of financial data related to budgeting and product costing were also collected.

C. Data analysis

Quantitative data were analyzed by descriptive analysis, which generates a summary of data that can provide information about the problems [17]. Qualitative data were analyzed by content analysis and descriptive analysis. The content analysis allows researchers to analyze words to understand the raw data better [18]. Content analysis is used to analyze the words used by interview participants and in documents. Descriptive analysis is used to describe the data more specifically concerning the research problem [19].

IV. Results and Discussions

A. Factors affecting non-achievement of the company's profit target

The inability of PT X to achieve the target profit it set in early 2017 is caused by several factors. Based on interviews conducted with some respondents, the following examples illustrate these causes.

1) Not reaching the sales target

PT X management sets the sales target to be achieved per technician at Rp20,000,000 per month, but this target has not been reached. Sales targets by management do not reflect the company's capabilities to achieve them. Thus, the fixed monthly sales target is not achieved, and PT X still has to pay the employee's salaries, which is a fixed cost, resulting in higher costs while sales and profit targets are not achieved. Hanninen explains that budget preparation by traditional methods uses assumptions and estimates, such as increases from the previous year, and that do not reflect the company's current condition [20].

2) The difference between management and marketing objectives

There is no similar purpose among management, technicians, and the marketing department, which strives to meet all consumer demand despite not meeting the minimum order target of Rp350,000. This action is detrimental to technicians because they cannot achieve the sales targets per day, resulting in not achieving sales and corporate profit targets. Libby and Lindsay explain that traditional budgets do not focus on corporate strategy because the company's strategy includes not only financial information but also non-financial information [2]. In the case of PT X, the marketing department has a goal to attract and retain consumers who have and will use the services of PT X so that marketing seeks to meet consumer demand; however, this is contrary to management objectives that resulted in not reaching sales targets, hence, the budget does not reflect the company's strategy. In this case, performance theory can explain the positive and negative actions of management and marketing that affect the company's goals. Behavior management is used by setting a target profit to be achieved with the aim that the company performs well and is sustainable in the long-term. Instead, the action of the marketing department is to accept all requests even if they do not meet the minimum order; thus, technicians cannot reach their target, which negatively impacts on the company's goals.

3) Advertising cost is one of the most significant cost components of the total cost

According to interviews with the management, PT X uses internet marketing services, and advertising costs represent 15% of the total budget. Currently, most of the services offered are for laundry service; therefore, ads for sofa washing services have a higher frequency than for other services. However, PT X has not made an adequate analysis of the profitability level of each product and does not allocate direct and overhead costs to product costs. Thus, PT X does not know for sure whether the sofa washing service, with a higher ad frequency, is profitable.

B. Product cost calculation by allocating indirect and overhead costs

Under ABB, product cost is calculated using the TDABC model [8]. The TDABC model is designed to calculate salary load, machine usage load, and transportation load. This is because all three are costs that include repetitive activities and employees are the main resources in the company. As for other direct costs, indirect costs and overhead costs are discretionary costs that will be calculated based on management justification. Based on the analysis, it is concluded that PT X requires one marketing employee, one technician, and one vacuum machine unit. From the calculation results presented in Table I, it can be seen that each service provides a level of positive and negative profitability. General cleaning services (washing bathrooms, chairs, and couches, office carpet cleaning, floor polishing, spring bed washing, and car seat washing) provide a positive level of profitability. Meanwhile, to wash a couch without a backrest and carpet wash the house gives a level of negative profitability. By knowing the level of profitability for each service, PT X can focus on increasing sales for those services and making improvements to services that provide low levels of profitability. PT X also can realize that services such as sofa washing are not profitable compared with other services. This is important because PT X vigorously advertises its sofa washing service at a cost that is disproportionate to its profitability. For products that have negative profitability, PT X must analyze its cost allocation.

Based on the time standards used in the TDABC model to calculate salary, transportation, and machine usage costs, the cost of cleaning service products is lower than traditional costing. Thus, PT X can encourage employees to be more efficient in providing cleaning services to consumers by not neglecting the quality of services provided. The faster the work is completed, the more jobs that can be done in the time. Therefore, adding more employees and technicians will lower job completion times. Besides, by knowing the profitability level of each product, PT X can determine the minimum price for the next period, particularly because PT X wants to focus on finding contract clients in 2018, which will require lower prices. By knowing information about product costs, PT X can determine new prices for the future period. PT X sets prices by comparing with competitors' prices and adds margins of 30%. The prices of such products using TDABC are displayed in Table II. All cleaning services have a lower price than the initial price except washing chairs, washing the couch without a backrest, washing an L sofa, and carpet washes the house.

From the calculation of product cost with TDABC, the ratio of earnings from the current product price can be determined. As shown in Table III, PT X earnings are only 4.6% if the price is calculated by using TDABC plus a margin of 30%. Therefore, to increase market share, PT X must increase its margin while remaining below its competitors' prices.

TABLE I. PROFITABILITY OF EACH PRODUCT (IN THOUSAND RUPIAHS)

No	Office Cleaning	House Cleaning	Apartment Cleaning	Bathroom Cleaning				Specialist Cleaning Chairs	Specialist Cleaning Sofa					Specialist Cleaning Carpet		Floor Polishing Service	Specialist Cleaning Spring Bed				Specialist Cleaning Car Seat
				2X2	2X3	2X4	3X4		Standard Size Sofa	Super Size Sofa	Puff Sofa	Sofa Bed	L-Shaped Sofa	Office Carpet	Home Carpet		Single Size	Mediu m Size	Mediu m Size	King Size	
Direct Cost*	12.980	13.036	9.454	1.308	1.551	1.964	2.337	59.531	45.918	11.779	7.635	19.527	27.493	17.553	3.340	44.590	8.124	5.914	5.953	14.681	12.449
Indirect Cost*	4.990	4.990	4.990	4.080	4.803	5.526	6.250	8.468	48.104	9.998	2.710	14.598	6.524	19.525	4.772	29.106	5.671	6.406	6.730	17.013	14.188
Overhead*	9.071	9.071	9.071	3.628	4.665	5.701	6.738	3.421	14.254	2.695	454	3.887	1.944	7.775	389	8.811	4.147	106	103	12.440	3.887
Total	27.040	27.096	23.514	9.017	11.019	13.192	15.324	71.420	108.276	24.472	10.799	38.013	35.961	44.853	8.501	82.507	17.941	12.426	12.785	44.133	30.525
Unit	6.300	6.300	6.300	180	180	180	180	4.500	6.300	900	270	540	180	9.000	450	9.000	360	360	360	720	1.350
Cost per Unit	4.292	4.301	3.732	50.094	50.094	73.288	85.135	15.871	17.187	27.191	39.997	70.394	199.785	4.984	18.891	9.167	49.836	34.517	35.515	61.297	22.611
Prior Price Before TDABC	25.000	25.000	25.000	350.000	450.000	550.000	600.000	20.000	50.000	65.000	35.000	150.000	250.000	15.000	15.000	17.000	200.000	250.000	270.000	300.000	50.000
Margin	482%	481%	570%	599%	635%	650%	605%	26%	191%	139%	-12%	113%	25%	201%	-21%	85%	301%	624%	660%	389%	121%

TABLE II. PRODUCT PRICE AFTER ALLOCATING INDIRECT COSTS AND OVERHEAD COSTS (IN RUPIAH)

No	Products		Prior Price Before TDABC	Price Based on TDABC
1	Office Cleaning		25.000	5.580
2	House Cleaning		25.000	5.591
3	Apartment Cleaning		25.000	4.852
4	Bathroom Cleaning	2x2	350.000	65.122
		2x3	450.000	79.584
		2x4	550.000	95.274
		3x4	600.000	110.676
5	Specialist Cleaning Chairs		20.000	20.632
6	Specialist Cleaning Sofa	Standar Size	50.000	22.343
		Super Size	65.000	35.349
		Sofa Puff	35.000	51.996
		Sofa Bed	150.000	91.512
		L-shaped Sofa	250.000	259.721
7	Specialist Cleaning Carpet	Office Carpet	15.000	6.479
		Home Carpet	15.000	24.558
8	Floor Polishing Service		17.000	11.918
9	Specialist Cleaning Spring Bed	Single Size	200.000	64.787
		Medium Size	250.000	44.787
		Medium Size	270.000	46.169
		King Size	300.000	79.685
10	Specialist Cleaning Car Seat		50.000	29.394

TABLE III. PROFIT COMPARISON

	Prior Price Before TDABC	Based on TDABC
Sales	2,250,000,000	869,460,409
Expense	829,263,615	829,263,615
Profit	1,420,736,385	40,196,794
Percentage Profit to Sales	63%	4.6%

C. The proposed implementation of Activity Based Budgeting at PT X

Costs that can be estimated using ABB are costs that have a standard and repeatedly occur, especially those costs incurred by the demand from consumers and products [8]. Meanwhile, discretionary costs, such as advertising costs, research, and development costs, employee training costs, and general customer support costs, are expenses that are unpredictable and cannot be estimated using ABB.

In this study, the costs budgeted by using ABB are the salaries of employees and technicians, the burden of machine use, transportation costs, and the burden of drug use. The costs of maintenance of vehicles and equipment, advertising costs, pulse, and speedy fees, equipment costs, VPS costs, intercom, and email, electricity costs, catering costs, gathering costs, bank administrative fees, and alms cannot be made standard for each source; thus, these cannot be calculated using ABB. While the cost of office rent and equipment lease expenses can be determined, the total of both expenses is only 7.79% and does not significantly affect the total cost.

In Table IV, we can see the ABB proposal on PT X and the analysis of variance by comparing the traditional budget system and ABB. Calculations based on ABB take into account the number of employees and machines. As shown in Table 4.4, based on current product prices, total sales become Rp2.250.000.000. The calculation of the salary expense budget using the traditional method is Rp652.500.000 while using ABB it is Rp206.500.000; the variance of the salary expense budget with the traditional method is smaller because the salary data used in the ABB calculation does not take into account employee benefits. Similar to salary expense, the depreciation expense increased from Rp1.097.750 to Rp15.847.750 due to the addition of three vacuum machine units. The cost of using drugs when using traditional methods is Rp166.095.900, whereas according to ABB Rp108.219.580, the calculation of drug expenses is calculated based on the standard for each product and has a smaller variance than the traditional method.

So far, the calculation of transportation costs is based on the number of kilometers between the head office and the client's address, e.g., the cost of transportation to Central Jakarta is Rp20.000 while to East Jakarta it is Rp25.000.

There is no set standard for transportation costs, only distance estimates by marketing employees. By using the distance calculation, transportation cost is Rp77.350.250 from January to September. If using the traditional budget,

then the transportation expense budget is Rp198.420.450; however, if calculated on a time basis, the total amount of the transportation cost would be Rp107.899.246. PT X should calculate transportation cost based on time because it better reflects the actual cost; e.g., due to traffic conditions in Jakarta, the same distance can be traveled in different times. Besides, the cost of machine usage must be calculated as direct cost and depreciation costs.

D. Cost–Benefit analysis of Activity Based Budgeting at PT X

The implementation of ABB presents both positive and negative impacts for PT X as follows

1. ABB provides information about product cost and resource requirements more accurately.

ABB using Time Driven Activity Based Costing provides more accurate information about product cost and company resource requirements. Thus, PT X can more accurately determine the number of resources and costs to be incurred in 2017.

2. ABB provides information about activities that assist PT X in developing Standard Operating Procedures (SOPs) for each cleaning service.

The Time Driven Activity Based Costing model identifies activities and time required for service cleaning service. The development of a Time Driven Activity Based Costing model helps PT X in developing SOPs because PT X does not have SOPs.

3. ABB implementation is difficult because the company is still in the revamping phase; however, the application of ABB can be considered for future implementation.

PT X is still in the stage of improving both in financial and operational terms. In 2017, PT X was fixing financial reporting and in the process of preparing operational SOPs so that PT X assumes that it has not been able to apply ABB in 2018 [21]. However, PT X considers ABB to be applied in the future as the company's activities will become more complex and require an instrument that is accurate in calculating the cost of cleaning service. There needs to be training given to employees about ABB implementation.

4. ABB training needs to be provided to all employees.

The implementation of ABB requires commitment from all employees; therefore, there needs to be training given to employees about how to be more efficient in providing cleaning services. Also, training is required for accounting staff on how to calculate product costs using ABB.

5. The needs for the readiness of resources in the implementation of ABB.

To be able to implement ABB, companies must have human and other resources that support the implementation. Human resources include accounting staff with the ability to calculate product costs based on activity. Besides, information systems are also required to provide accurate time data automation [12]. PT X does not yet have an information system that can support the implementation of ABB.

From the analysis, it is concluded that ABB provides benefits to PT X in accurately determining the product cost. This is consistent with research conducted by Piertzak (2014) that ABB provides accurate information about product costs and budgeting reflects the operational activities that occur in the company [21]. However, PT X does not yet have an information system that aids the implementation of ABB. ABB requires substantial investments to build systems that can provide timely information [22].

PT X is considering implementing ABB within the next three to four years. This is because PT X needs to build an operational system and readiness to support the implementation of ABB. Also, PT X does not yet have an accountant who can assist with the implementation of ABB in the company.

According to performance theory, employees exhibit behaviors that have both positive and negative impacts on corporate goals. The author concludes that the setting of profit targets by management has a positive impact on the goals and survival of the company. Meanwhile, behaviors such as accepting orders that do not meet the minimum order requirement have a negative impact on corporate goals because it does not contribute to achieving the company's goals.

V. CONCLUSION

This research attempted to analyze factors related to PT X not achieving its target profit. In conducting the analysis, descriptive analysis and content analysis were used to analyze qualitative and quantitative data. Quantitative data were obtained through company documentation, and qualitative data were obtained through observation and interviews, and used as an explanation of quantitative data obtained previously.

The results of the analysis show that the reasons why PT X cannot achieve its target profit are: (1) PT X sales targets do not reflect the company's capability; (2) minimum order sizes are not achieved; and (3) advertising costs are disproportionally allocated to an unprofitable service.

The product pricing method used by PT X is a traditional method that only takes into account direct costs and does not allocate indirect and overhead costs to product prices. This research analyzes product prices by using Time Driven Activity Based Costing. By allocating indirect and overhead loads, several products were found to have a negative level of profitability (washing the couch without back and carpet washing the house). By knowing the profitability level of each service offered, PT X can focus on products that provide higher margins and lower product costs. Besides, PT X should increase the number of employees in marketing (1), technicians (1), and increase the number of vacuum machines units by one.

TABLE IV. VARIANCE ANALYSIS OF TRADITIONAL BUDGET SYSTEMS AND ACTIVITY-BASED BUDGETING

	Traditional Method	Actual	Variance	ABB Method	Actual	Variance
Sales	2.250.000.000	1.238.728.875	1.011.271.125	2.250.000.000	1.238.728.875	1.011.271.125
Salaries Expense	652.500.000	501.311.691	151.188.309	206.500.000	501.311.691	(294.811.691)
Machine Expense	-	-	-	15.526.521	-	15.526.521
Chemical Expense	166.095.900	58.732.000	107.363.900	108.219.580	58.732.000	49.487.580
Transportation Expense	198.420.450	77.350.250	121.070.200	107.899.246	77.350.250	30.548.996
Maintenance Expense - Vehicle	5.250.000	15.694.598	(10.444.598)	5.250.000	15.694.598	(10.444.598)
Maintenance Expense - Machine	787.500	4.644.300	(3.856.800)	787.500	4.644.300	(3.856.800)
Rent Expense (Machine)	11.700.000	12.300.000	(600.000)	15.600.000	12.300.000	3.300.000
Contribution margin	1.215.246.150	601.334.934	1.390.893.534	1.811.854.653	601.334.934	796.496.010
Operational Expense						
Advertising Expense	201.522.803	164.488.659	37.034.144	201.522.803	164.488.659	37.034.144
Internet Expense	36.527.479	20.562.175	2.900.933	11.731.554	20.562.175	2.900.933
Supplies Expense	27.000.000	26.616.503	383.498	27.000.000	26.616.503	383.498
VPS, Interkom, and Email Expense	5.580.000	5.904.459	(324.459)	5.580.000	5.904.459	(324.459)
Electricity Expense	13.456.161	23.074.773	(9.618.612)	13.456.161	23.074.773	(9.618.612)
Rent Expense - Office	30.937.500	30.937.500	-	30.937.500	30.937.500	-
Backlink Expense	-	1.000.000	(1.000.000)	-	1.000.000	(1.000.000)
Catering Expense	41.250.000	45.507.650	(4.257.650)	41.250.000	45.507.650	(4.257.650)
Depreciation Expense	15.097.750	54.769.534	(39.671.784)	15.847.750	54.769.534	(38.921.784)
Telecommunication Expense	-	7.876.609	(7.876.609)	-	7.876.609	(7.876.609)
Zoho Application Expense	-	1.205.906	(1.205.906)	-	1.205.906	(1.205.906)
Total	**371.371.692**	**381.943.768**	**(23.636.446)**	**347.325.768**	**381.943.768**	**(22.886.446)**
Other Expense						
Bank Administration Expense	405.000	2.621.000	(2.216.000)	405.000	2.621.000	(2.216.000)
Charity Expense	13.500.000	24.560.000	(11.060.000)	13.500.000	24.560.000	(11.060.000)
Employee Gathering Expense	8.250.000	-	8.250.000	8.250.000	-	8.250.000
Tax Expense – Vehicle	-	3.757.900	(3.757.900)	-	3.757.900	(3.757.900)
Tax on Giro Sevices	-	712.550	(712.550)	-	712.550	(712.550)
Retribution Expense	-	1.620.000	(1.620.000)	-	1.620.000	(1.620.000)
Commision Expense	-	125.000	(125.000)	-	125.000	(125.000)
Training Expense	-	4.794.535	(4.794.535)	-	4.794.535	(4.794.535)
Total	**22.155.000**	**38.190.985**	**(16.035.985)**	**22.155.000**	**38.190.985**	**(16.035.985)**
Profit	**821.719.458**	**181.200.182**	**1.430.565.965**	**1.442.373.885**	**181.200.182**	**835.418.441**

In determining the budget based on the ABB, there was an increase in salaries and depreciation costs due to the addition of the number of employees and machines. For transportation costs, the calculations performed so far are based on the number of kilometers. However, if calculated over time, the amount of transportation costs is more significant and more reflective of the actual conditions. This is because the condition of Jakarta roads means the same distance can be traveled in different times. Thus, the calculation of transportation costs should be time-based. Besides, PT X needs to take into account the cost of the machine in the calculation of product and depreciation costs.

This study also analyzes the costs and benefits of ABB implementation on PT X. ABB provides benefits to PT X in the form of accurate cost information and assists PT X to develop Standard Operating Procedures (SOPs) for its operational activities. However, the application of ABB requires an automated information system that can integrate company activities. PT X considers using ABB in the next three to four years as it needs to prepare the employee's resources and commitments as well as the company's SOPs.

According to performance theory that employee behavior has both positive and negative impacts on corporate goals, the author concludes that the behavior of management in setting profit targets has a positive impact on corporate goals and corporate survival in the future. Meanwhile, the behavior of marketing employees that accept orders that do not meet the minimum order requirement has a negative impact on the achievement of corporate objectives because it does not contribute to meeting budget targets.

A. Suggestions for further research

Companies need to consider the company's capability in setting profit targets and strategic profitability analysis to evaluate the strategies used in profit planning. If the strategy is not valid yet, then corrective action should be taken to achieve the defined strategy objectives. PT X needs to communicate strategy to all employees to ensure that all employees have the same goals so that there is integration between one division and the other division.

PT X also needs to allocate indirect and overhead costs in the calculation of product costs. To calculate product cost, PT X can use the Time Driven Activity Based Costing method, which can then be used as a basis for

activity-based budgeting in the next period. Through Time Driven Activity Based Costing, PT X can improve its time efficiency in the provision of cleaning services to consumers, thus saving costs.

B. Limitations of the study

The authors realize there are limitations in the data collection and analysis of product costs of PT X. There are confidential data, such as employee allowances and product cost structure; however, only aggregate data were available for this study. This study only examines the direct costs for budget calculations by using ABB; therefore, further research is expected to calculate the indirect costs and overheads in the preparation of the ABB.

Besides, in developing the TDABC model, observations are not made of all the cleaning services offered by PT X. For unobserved services, the determination of activity and timing of interviews will be better if subsequent research can make observations to develop TDABC models for each product.

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