Jurnal Akuntansi, Vol 9 No. 2, Juli 2022 p-ISSN 2339-2436
Http://doi.org/10.30656/Jak.V9i2.3105 e-ISSN 2549-5968

THE *TIME-DRIVEN ACTIVITY-BASED COSTING* THAN HOTEL MANAGEMENT METHODS FOR DETERMINING THE COST OF HOTEL ROOM SERVICE? (CASE IN THE GRAND NANGGROE HOTEL BANDA ACEH)

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Abstract

The aims of the research are to analyze the calculation of Time-Driven Activity-Based Costing (TDABC) with the hotel management method to calculate the cost of hotel room services at Grand Nanggroe Hotel Banda Aceh, and the causes of the differences to help the hotel management to determine which method is more efficient. The type of this research is a quantitative descriptive. The strategy is action research. The time horizon is a cross-sectional. The result showed that the cost of hotel room services by TDABC is higher for three type of rooms compared to the management method. This differences cause by the management method that allocated unit costs into one cost driver resulting in lower costs, besides that, the management method did not include facility costs such as labor costs and depreciation costs that related with room division. Furthermore, the result of this research indicates that there is IDR 882,940,385 an unused capacity cost which can be eliminated or maximized by the hotel management.

Keywords: TDABC, Time-Driven Activity-Based Costing, The Cost of Hotel Room Services.

INTRODUCTION

Aceh is a city with a high level of tourism. So that the hotel business in Aceh can be said to be growing rapidly. The hotel as a service business has several things that need to be considered, including the*occupancy rate*. Many factors can affect hotel room occupancy rates, including facilities, customer satisfaction and comfort, service quality, and price. Setting a reasonable selling price can provide benefits for the continuity of hotel operations (Wiyasha, 2007). The hotel's revenue comes from room sales, food and beverage sales, *ballroom*, and others. The hotel's biggest source of revenue usually comes from the *room division*. For this reason, it is necessary to calculate the right cost of goods so that the room selling price is determined according to the market and obtains optimal profit. The *cost* is the issuance value, which is calculated in currency units to obtain assets (Nafarin, 2017). Another definition of cost price is all costs incurred by company activities, ranging from raw material costs, direct labor costs, and indirect costs to produce products and/or services (Horngren, Sundem, Burgstahler, and Schatzberg, 2014).

Several methods for calculating cost of goods are the traditional method, the ABC method (*Activity-Based Costing*), and the TDABC (*Time-Driven Activity-Based Costing*). Briefly, the traditional method is used to allocate overhead costs based on the quantity or level of production units. Traditional methods are usually used in companies that use a lot of labor or are labor intensive (R. Hery Koeshardjono, 2016). The ABC method is usually used when a company has various types of production units so that it will be easier to calculate using the ABC method based on activities, not production units (Murnitasari, 2019). The allocation of overhead costs in the ABC method uses a*driver*called activity (Dewi, Kristanto, and Dermawan, 2014). The TDABC method is an updated version of the ABC method, which uses a two-pronged framework to allocate enterprise resource costs to cost objects. The first estimate is the time estimate, such as calculating the cost of supplying the capacity of the resource. The second estimate is the level of capacity costs to drive resource costs (Kaplan & Anderson, 2007). This method is usually widely used in service companies that use many activities in their business processes. In Kristina & Faliany (2016), it is stated that there is a requirement for a company to apply the TDABC method in its operations, which is to have*product diversity*and*consumption ratio*.

Martusa (2010) in (Satria, 2016) reveals that the traditional cost system is still widely used by companies even though it provides difficulties when calculating production costs. Cost allocation with this method results in deviations because overhead costs are not proportionally allocated to each unit produced and causes inefficiency in cost calculations (Agustami & Irawan, 2014). Hotel Grand Nanggroe is one of the most famous hotels in Banda Aceh and has a strategic location. Hotel Grand Nanggroe was founded by Mirwan Amir with 2 colleagues namely Ngadiman and Abdul Gani in 2007. Located on Jl. Tgk Imum Lueng Bata, Banda Aceh. *occupancy rate* is 55% overall, with 4,615 rooms sold out of 39,055 available rooms in 2019 or an average of 18.3% and only 13 rooms sold per day. After an interview with the manager of the accounting department of Grand Nanggroe Hotel, the hotel has not used standards in calculating the cost of room service, the hotel only calculates costs that are considered related to the cost of goods. The interview was conducted during the *Covid*-19 pandemic, but the data used in this study is sales data for 2019 so the results of this calculation are not related to the pandemic. Based on the results of research conducted, the authors try to analyze the comparison of the cost of goods calculated based on the TDABC method with the method used by the hotel. So the author uses "Comparative Analysis of the Determination of Basic Hotel Room Service Prices with the *Time-Driven Activity-Based Costing* at the Grand Nanggroe Hotel Banda Aceh" as the title of the study. The purpose of this study is that the Grand Nanggroe Hotel can see the difference in the method of calculating the cost of room service between what the hotel management does with the TDABC method and it is hoped that the Grand Nanggroe Hotel Banda Aceh can try to apply this TDABC method as a more cost-effective calculation of the cost of hotel room services. effective and efficient.

LITERATURE REVIEW

Cost

Accounting Cost accounting is a method of estimating the value of inventories in the balance sheet and income statement. Cost accounting provides the necessary direction in management accounting and financial accounting, relating to the costs required to acquire or use a resource within the organization (Dewi et al., 2014). By identifying *cost drivers* in decision making, the data obtained from cost accounting is used as a reference for future predictions. Dewi et al., (2014) in their book entitled Cost Accounting, the factor that causes costs is the*cost driver*.

Understanding Costs

Costs can be measured as the amount that must be spent to obtain something both goods and services (Horngren et al., 2016). According to Nafarin (2017), the notion of cost is divided into two types, namely a narrow understanding and a broad understanding. The narrow definition of cost only includes the concept of cost of goods/services, while the broad definition of cost includes the concept of cost of goods/services.of goods*cost*is the value of the issuance, which can be calculated in units of currency in order to obtain assets (Nafarin, 2017).

Cost Classification

According to Dewi et al (2014), the concept of cost classification is known as "*different costs for different purposes*" or the use of different costs for different purposes. The concept of costs used for external reporting purposes is different from the concept for internal reporting purposes.

The following is the classification of costs based on the relationship between these costs and the following (Dewi et al., 2014):

1. Products, including *product costs* and *period costs*. Product costs (*product costs*) include all aspects of costs needed to obtain or make a product, while periodic costs (*period costs*) are costs that are not included in product costs (Garrison, Noreen, and Brewer, 2016).
2. Production volume, including *fixed cost, variable vost,* and *semi variable cost*. Variable costs are costs that can change with changes in the level of company activity (Garrison et al., 2016). Fixed costs are costs whose unit level varies but the total cost is constant (Iryanie & Handayani, 2019). Semi-variable costs consist of two types of costs, namely fixed costs and variable costs (Garrison et al., 2016).
3. Departments, processes, and cost centers include *direct* and *indirect costs*. Direct costs are costs that are easily traceable to their cost object, while indirect costs are costs that cannot be easily traced to their cost object (Garrison et al., 2016).
4. The accounting period includes *capital expenditure* and *revenue expenditure*.
5. A decision, an action, or an evaluation, includes *sunk costs, differential costs, opportunity costs, controllable costs* and *uncontrollable costs.* (*differential cost*) is the cost difference between the two alternatives. Opportunity*cost*is the potential benefit that will be lost if one alternative has been chosen. Sunk*costs*are costs that have passed or have been issued and cannot be changed by any decision (Garrison et al., 2016).

Cost of Production Production

costs include costs given to organizational activities, starting from the cost of raw materials, direct labor costs, and indirect costs in producing a product/service. The cost of production includes all production costs, both fixed costs and variable costs (Horngren et al., 2016).

The cost of production in a service company includes all operational costs incurred in the process of delivering services. Cost of goods in service companies does not include the calculation of raw materials as in manufacturing companies because service companies do not have inventory, service companies only use labor costs and factory indirect costs in determining the cost of goods.

Calculation

Traditional Costing Costing

of costing in traditional costing is done by entering all product costs into a product and production volume (Garrison et al., 2016). Tracing costs in the *traditional costing* only carried out for the costs of raw materials and direct labor into each unit of output.

Activity-Based Costing

ABC (*activity-based costing*) was first introduced in the 1980s by Kaplan and Cooper to overcome problems in traditional costing systems (Kaplan & Anderson, 2007). Horngern *et al* define an activity as an event, task, or work unit with predetermined goals (Horngren et al., 2016). *Activity based costing* tries to identify real costs related to product costs as well as costs to serve customers based on the resources consumed (Kotler & Keller, 2016).

The ABC Calculation System is run in two stages, including several triggers, namely the*resource driver*and the*activity driver*. A*resource driver*is the first trigger used in an ABC system when resource costs are allocated to different activities that use the same resource. And the*activity driver*is used later in the process of allocating the cost of an activity to a final product or cost object (*final cost object*). others (Dewi et al., 2014).

Time-Driven Activity-Based Costing

TDABC (*Time-Driven Activity-Based Costing*) is an extension of the ABC method and introduced in 2004 by Kaplan and Cooper. *TDABC* uses a framework that contains two types of estimates (ie, time estimates and cost estimates) to allocate enterprise resource costs into cost objects (Horngren et al., 2016).

According to (Kaplan & Anderson, 2007), the main input in the TDABC model is the time (capacity) required to do an activity and the level of capacity costs. This time estimate can be obtained by conducting observations or interviews regarding the time spent doing certain activities/sub-activities.

The advantages of the TDABC system according to (Kaplan & Anderson, 2007), as follows:

1. Simple, fast, and accurate when implemented
2. Well integrated because it uses the data presented by ERP (customer relationship management system)

3. Allocate costs for transactions and orders using a special marker.
4. Can be done monthly
5. Provide visibility and leverage capacity
6. Estimate resource threat
7. Can be easily scaled or applied to any enterprise model worldwide using software
8. Provides detailed information
9. Can be used by any industry or company

Cost of Cost Relationship with TDABC

Cost of goods is one factor important in determining the selling price. Cost of goods must be controlled in order to achieve the target price set (Wiyasha, 2007). Cost of goods can be determined by calculating the cost of making the product/service. One way to calculate the cost of goods is to use the TDABC method. TDABC helps management calculate indirect costs more accurately, resulting in more efficient cost of goods.

Riediansyaf, (2014), revealed that around 80% of hotel revenues are obtained from*room division*. He also stated that the TDABC method provides more accurate results and is flexible in costing. Maulidya (2016) also revealed that the TDABC method can produce estimates of cost of goods that are close to actual and can overcome problems in determining overhead costs which are difficult to calculate with certainty, causing the cost of services to always fluctuate.

The results of Lendrasari's research (2015) show that the cost of goods calculated using the TDABC method is lower than the calculation made by the hotel management. Therefore, it is recommended that the hotel fully use the TDABC method in calculating room costs.

METHOD

Research

object The object of the research is the Grand Nanggroe Hotel Banda Aceh, which is a 3-star hotel (***) having its address at Jl. Tgk Imum Lueng Bata, Cot Mosque district, Lueng Bata district, Banda Aceh.

Research Design The

type of research is descriptive and quantitative research. Descriptive research aims to provide a factual and accurate systematic description of the phenomenon under study (Rukajat, 2018). Quantitative research is research that uses numbers/numerics (Suryani & Hendryadi, 2016).

The purpose of this study was to analyze the calculation of TDABC (*time-driven activity based costing*). with the method used by hotel management to calculate the cost of room service at the Grand Nanggroe Hotel Banda Aceh, as well as the causes of the difference so that it can help the Grand Nanggroe Hotel Banda Aceh in determining which method is more efficient in calculating the cost of hotel room services.

The strategy in this research is *action research* . According to (Sujarweni, 2015), the *action research* is a process carried out by a person or group to want changes and produce conclusions that can be accounted for. The time horizon of this study is a *cross-sectional study.*

Data Sources and Data Collection Techniques The data

sources in this study are primary data in the form of interview data conducted to hotel management, and secondary data in the form of documentation related to hotel costs during 2019.

There are 2 data collection techniques in this study.method is as follows:

1. Field Research, which uses interview techniques with the manager of the resource department and the manager of the accounting department.
2. Literature Study, which uses book media or other literacy studies related to the research topic. The media used in this research are books, scientific articles, theses, theses, and other sources.

Research

Instruments Instruments in this study used interviews addressed to the hotel management, namely to the manager of the human resources department, the manager of the accounting department, the *housekeeping supervisor*, and *the front office leader*.

Data Analysis Techniques The data

analysis technique used in this research is comparative descriptive analysis with a quantitative approach. Descriptive research method is a research that involves quantitative data and qualitative information in data collection (Sekaran & Bougie, 2018). Comparative research aims to find basic answers regarding the causes of a phenomenon by analyzing the relationship between one dependent variable in a group and other dependent variables in different groups (Hamdi & Bahruddin, 2015).

It is said to be a comparative descriptive study because the researcher wants to identify and describe the differences between the calculations based on the TDABC method and the calculations that have been set by the hotel management and identify the causes of these differences.

The steps that must be taken to implement the TDABC system in this study are as follows:

1. Identification of activities (in this study the focus is on *room division* so that the identification of activities is activities related to room service).
2. Calculate practical capacity estimates. Practical capacity can be calculated by multiplying the number of workers in each activity with data on the real working hours of workers provided by the hotel management during the last year, namely 2019.
3. Calculate the estimated allocation of capacity costs. Every activity carried out to provide services to consumers, the costs incurred need to be calculated, starting from *the Front Office* to *Housekeeping*. The cost estimate includes the costs associated with employees in each activity.
4. Calculates the cost per unit of each activity (*capacity cost rate*/ CCR). The cost per unit of each activity can be calculated by dividing the estimated cost allocation of the capacity that has been sought (in point 3) by the estimated practical capacity that has been sought (in point 2) for each activity.

5. Identify and calculate the estimated time of productive activities. Standard time activities can be found by observing or conducting questions and answers with the workforce.
6. Calculate the cost of productive capacity. The cost of productive capacity can be found by multiplying the standard productive time of activity by the cost per unit (point 4). Productive time standard data obtained from interviews with managers of each department.
7. Calculates the cost of unused capacity with the formula:
   Cost of unused capacity = (practical capacity - estimated productive time) x cost per unit.
8. Calculate the cost of hotel room services. This can be done by adding the previously searched cost of the activity. However, in this calculation the author will add other costs that are considered relevant, namely: electricity costs, *breakfast*costs, room equipment depreciation costs, *front office* equipment depreciation costs *housekeeping*.
9. Comparing the calculation of cost of goods used by hotel management with the calculation of TDABC and draw conclusions. The comparison is made only by looking at the final figure for calculating the cost of goods using TDABC with the calculations made by the hotel management.
10. Draw a conclusion. The final conclusion is a summary of the calculations that have been carried out.

RESULTS AND DISCUSSION

Research Results

Overview of the Grand Nanggroe

Hotel The Grand Nanggroe Hotel was founded by Mirwan Amir together with 2 colleagues, namely Ngadiman and Abdul Gani in 2007. Located on Jl. Tgk Imum Lueng Bata, Cot Mosque district, Lueng Bata district, Banda Aceh. Hotel Grand Nanggroe is 15 minutes from Sultan Iskandar Muda International Airport and only takes 10 minutes to reach the city center, making Hotel Grand Nanggroe one of the strategically located hotels in Banda Aceh.

The facilities at Grand Nanggroe Hotel include 107 rooms with 3 types of rooms, *Executive Suite Room, Grand Deluxe Room,* and *Deluxe room*, restaurant and *room service*, meeting rooms, *room service* and *pool bar*, swimming pool, fitness center, prayer, *doctor on call, airport shuttle service, business center, laundry* & *dry cleaning*, cafe and karaoke room, *massage*, and car rental. In addition, the room facilities provided by Hotel Grand Nanggroe are air conditioning (AC), *direct dial telephone*, TV, *WiFi*, hot and cold water, *hairdryer*, minibar, coffee maker, instant coffee and tea, newspapers, *bed side shopping, guest supplies & guest amenities*, and 24-hour room service.

Table 1. Grand Nanggroe Hotel Room Prices in 2019

Room Type and Size Room	Price Nett
Executive Suite Room (7x7 m)	IDR 2,250,000
Grand Deluxe Room (7x3.5 m)	IDR 1,200,000
Deluxe Room (7x3.5 m)	IDR 900,000

Source: Hotel Grand Nanggroe

Vision and Mission of the Hotel

Grand Nanggroe Hotel's vision is "to create a good image by providing maximum and dynamic services to improve quality and make Grand Nanggroe Hotel the choice in Banda Aceh".

The mission of Hotel Grand Nanggroe is to work together for customer satisfaction through high competence and dedication to provide solutions and various alternatives to deal with problems that arise. Besides emphasizing quality and providing the best service.

Organizational Structure

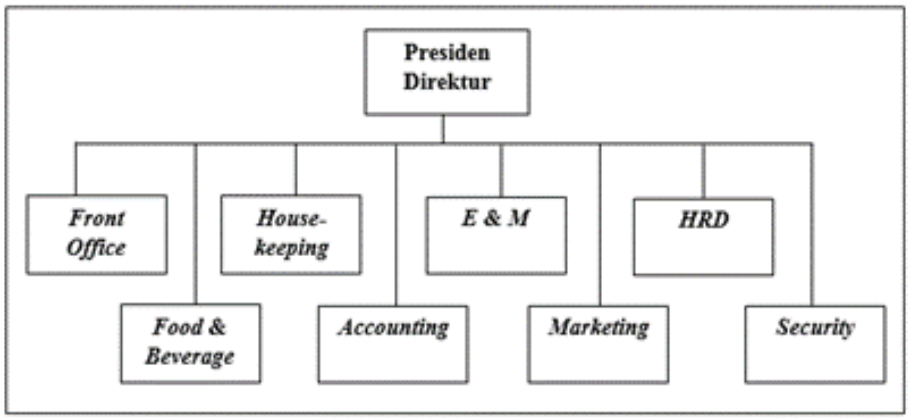

Figure 1. Organizational Structure of the Grand Nanggroe Hotel

Discussion

The cost reporting period used in this study is one year, taking the year 2019. The initial stage of the author made several observations to see the business processes of the Grand Nanggroe Hotel. In addition to making observations, the authors also conducted interviews and documentation to obtain information related to the cost of hotel room services. At the time of conducting the research, the author's space was limited due to the COVID-19 pandemic.

The information regarding room sales in 2019 and the cost of room services obtained from interviews with *accounting* is as follows:

Table 2. Number of Rooms Available for Sale in 2019

Room Type	Number of Rooms	Number of Rooms Available
Executive Suite Room	4	1,460
Grand Deluxe Room	28	10,220

Deluxe Room	75	27,375
Total	107	39,055

Source: Hotel Grand Nanggroe

Table 3. *Occupancy Rate* Hotel Grand Nanggroe 2019

Room Type Room	Sold	Rooms Available	*Occupancy Rate*
Executive Suite Room	350	1,460	24%
Grand Deluxe Room	2,500	10,220	24.5%
Deluxe Room	1,765	27,375	6 ,5%
Total	55	4,615 39,055	%
Average			18.3%

Source: Hotel Grand Nanggroe

Table 4. Sales Revenue of Grand Nanggroe Hotel Room Services 2019

Room Types Rooms	Sold	Room Selling Price Room	Service Revenues
Executive Suite Room	350	Rp2,250,000	Rp787. 500,000
Grand Deluxe Room	2,500	Rp1,200,000	Rp3,000,000,000
Deluxe Room	1,765	Rp900,000	Rp1,588,5000
Total	Rp5,376,000,000	4,615 Rp4,350,000	Source

: Hotel Grand Nanggroe

Table 5. Basic Room Prices Based on Hotel Management Calculations in 2019

Room Type	Basic Room Price
Executive Suite Room	IDR 177,425
Grand Deluxe Room	IDR 148,875
Deluxe Room	IDR 148,375

Source: Hotel Grand Nanggroe

Calculation of Cost of Hotel Room Using TDABC

Identification of Activities

There are 4 (four) activities that focus on *room division*, namely *check-in/check-out* activities, guest delivery activities by *bell-boys*, room preparation activities, and *laundry*. Of the four activities, there are 2 departments involved, namely the *Front Office* and *Housekeeping departments.*

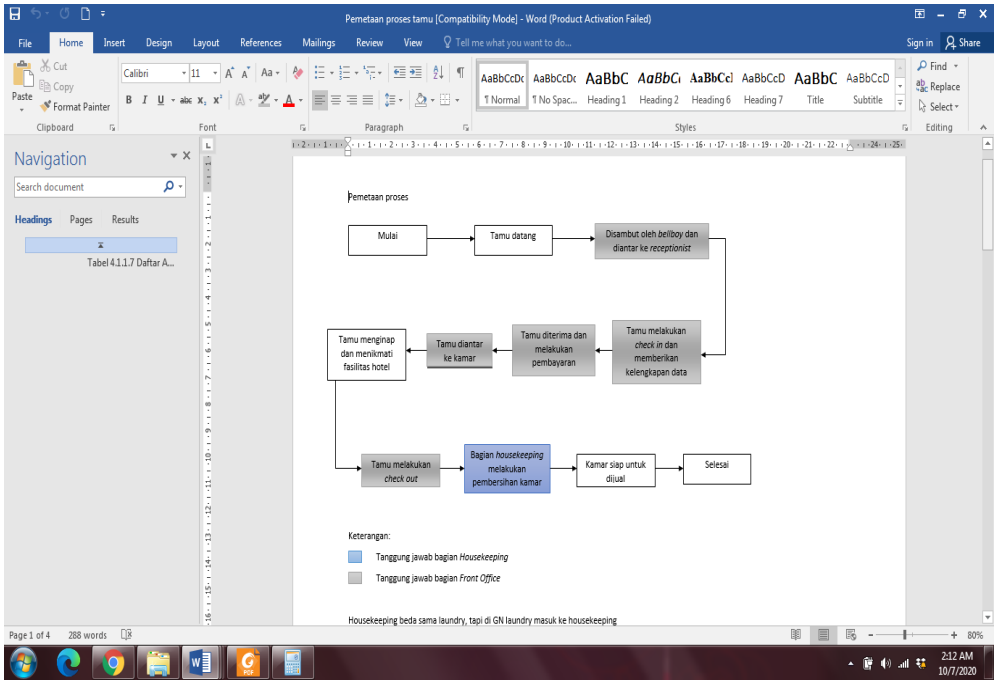

Figure 2. Business Processes at Grand Nanggroe Hotel

Calculating Annual Practical Capacity Estimates Practical

capacity is a measure to measure the efficiency level of an activity's performance. Practical capacity is calculated based on data on labor hours at the Grand Nanggroe Hotel during 2019 obtained through interviews with respective department managers.

Table 6. Estimated Practical Capacity of *Front Office* in 2019

Activities	Number of Workers Working	Hours Annual	Practical Capacity
Check-in/Check-out	6 people	153,300 minutes	919,800 minutes per year
Bell-boy	2 people	153,300 minutes	306,600 minutes per year
Total	8 people	153,300 minutes	1,226 .400 minutes per year

Source: Data Processed in 2020

Table 7. Estimated Practical Capacity of the *Housekeeping* in 2019

Activities	Number of Workers Working	Hours Annual	Practical Capacity
Room Preparation	7 people	153,300 minutes	1,073,100 minutes per year
Laundry	4 people	153,300 minutes	613,200 minutes per year
Total	11 people	153,300 minutes	1,686,300 minutes per year

Source: Data Processed in 2020

Calculating the Estimated Annual Capacity Cost Allocation Capacity

costs are costs that are incurred constant each period even though the output is different. The allocation of capacity costs in this study was calculated based on the salaries of workers at the Grand Nanggroe Hotel and the cost of equipment depreciation during 2019 obtained through interviews with respective department managers.

Table 8. Estimated Allocation of *Front Office* in 2019

Information	Activity	
	Check-in/Check-out	*Bell-boy*
Costs Computer depreciation costs	IDR 5,420,000	-
Labor	208.800.000	69,600,000
Annual cost allocation	214,220,000	. 600,600
The estimated cost allocation for the *front office* is IDR 283,820,000		

Source: Data Processed in 2020

Table 9. Estimated Cost Allocation for *Housekeeping* in 2019

Description of the Cost	Activities	
	Room Preparation	*Laundry*
Equipment depreciation	IDR 10,372,500	IDR 2,750,000
Labor costs	243,600,000	Rp139,200.000
Inventory cost	Rp151,706,700	Annual
	Rp236,511,425	
cost allocation	Rp405,679,200	Rp378,461,425
department *housekeeping* is Rp784,140,625		

Source: Data Processed in 2020

Calculating Unit Cost of Each Activity Per Year Unit

cost per activity (*capacity cost rate*/ CCR) is obtained by dividing the estimated capacity cost allocation by the estimated practical capacity for each each activity.

Table 10. Cost Calculation of *Front Office* in 2019

Activity	Estimated Cost Allocation	Capacity Practical Capacity	Unit Cost
Check-in/Check-out	IDR 214,220,000	919,800 minutes	IDR 233 per minute
Bell-boy	IDR 69,600,000	306,600 minutes	IDR 227 per minute
Total	IDR 283,820,000	1,226. 400 minutes	IDR 460 per minute

Source: Data Processed in 2020

Table 11. Department Unit Cost Calculation *Housekeeping* in 2019

Activity	Estimated Cost Allocation	Capacity Practical Capacity	Unit Cost IDR
Room Preparation	405,679,200	1,073,100 minutes	IDR 378 per minute
Laundry	IDR 378,461,425	1.686.300 minutes	Rp.995 per minute

Source: Data Processed in 2020

Identifying and Calculating Estimated Time for Productive Activities

The estimated time for productive activities can be found by multiplying the standard time by the number of activities carried out. Data regarding the standard of time and the number of activities carried out were obtained from interviews with each department.

Table 12. Estimated Time of Productive Activities of *Front Office* in 2019

Activities	Standard	Many Activities	Estimated Time of Productive Activities
Check-in/Check-out	15 minutes	rooms	69,225 minutes
Bell-boy	8 minutes	rooms	36,920 minutes
Total	23 minutes	rooms	106,145 minutes

Source: Data Processed in 2020

Table 13. Department Activities *Housekeeping* in 2019

Description	Standard Time	Many Activities	Estimated Time of Productive Activities
Room Preparation			
Executive suite room	35 minutes	350 rooms	12,250 minutes
Grand deluxe room	25 minutes	2,500 rooms	62,500 minutes
Deluxe room	25 minutes	1,765 rooms	44,125 minutes
The estimated productive time for room preparation activities is 118,875 minutes			
Laundry	720 minutes	260 times	187,200 minutes
The estimated productive time for *Laundry* is 187,200 minutes			
Department's Estimated Productive Time *Housekeeping* is 306,075 minutes			

Source: Data processed in 2020

Calculating Productive Capacity Costs Capacity

costs p productive by multiplying the standard of productive time of activity by the cost per unit. Productive time standard data obtained from interviews with managers of each department.

Table 14. Department Productive Capacity Costs *Front Office* in 2019

Activities	Standard	Unit	Costs Productive Capacity Costs
Check-in/Check-out	15 minutes	per unit	IDR 3,495 per unit
Bell-boy	8 minutes	per unit	IDR 1,816 per unit
Total	23 minutes	IDR 460 per unit	IDR 5,311 per unit

Source: Data Processed in 2020

Table 15. Cost of Productive Capacity of the *Housekeeping* in 2019

Description	Standard time	Unit	Cost of Capacity
Preparation			
Executive Suite Room	35 minutes	Grand	378 IDR 13,230
Deluxe Room	25 minutes	Deluxe IDR 378	IDR. 9.450
Room	25 minutes	Rp378	IDR9.450
Cost of Productive Capacity Preparation Room IDR32.130			
Laundry	720 Minutes	IDR617	IDR444.240
Cost of Productive *of Housekeeping* Rp476.370			

Source: Data Processed Year 2020

Calculating the Cost of Unused Capacity

The cost of unused capacity can be interpreted as a cost incurred by the company that reflects the cost of capacity that is not utilized optimally. These costs are expected to assist companies in assessing the efficiency of time and costs used by the workforce. The cost of unused capacity can be found by subtracting the practical capacity of each activity by the estimated productive activity time and multiplied by the unit cost of each activity.

Table 16. Department Unused Capacity Costs *Front Office* in 2019

Information	Activities	
	CI/CO	*Bell-boy*
Capacity (a)	919.800	306.600
Estimated Time For Productive Activities (b)	69.225 minutes	36.920 minutes
Cost (c)	Rp233	Rp227
Unused Capacity Cost (a – bxc)	Rp198.183.975	Rp61.217.360
Percentage (b / ax 100%)	7,5%	12%

Source: Data Processed Year 2020

Table 17. Department's Unused Capacity Costs *Housekeeping* in 2019

Description	Activities	
	Room Preparation	*Laundry*
Capacity (a)	1.073.100	613.200
Estimated Time For Productive Activities (b)	118.875 minutes	187.200 minutes
Cost (c)	Rp378	Rp617
Unused Capacity Cost (a – bxc)	Rp360.697.050	Rp262.842.000
Percentage (b / ax 100%)	11%	30,5%

Source: Data Processed Year 2020

Descri**Calculating the Cost of Hotel Room Service**

The input data in this stage comes from all the stages that have been carried out previously and also adds activities that are considered relevant, namely breakfast activities and *overhead* which include electricity costs, washing costs, and *chemical*. Based on the results of the interview, the cost required for this activity is IDR 50,000 for 1 (one) room of all types.

Table 18. Calculation of the Cost of Hotel Room Service in 2019

Description		Room Type		
		Executive Suite	*Grand Deluxe*	*Deluxe*
Cost Productive Capacity	*Check-in/check-out*	Rp3.495	Rp3.495	Rp3.495
	Bell-boy	Rp1.816	Rp1.816	Rp1.816
	Room Preparation	Rp13.230	Rp9.450	Rp9.450
	Laundry (Rp444.240/3)	Rp148.080	Rp148.080	Rp148.080
Breakfast		Rp50.000	Rp50.000	Rp50.000
Energy cost	Electricity	Rp25.600	Rp16.000	Rp16.000
POMEC	Washing fee	Rp44.000	Rp35.500	Rp35.000
	Chemical	Rp15.295	Rp15.295	Rp15.295
Basic Price Room Service		Rp301.516	Rp279.636	Rp279.136

Source: Data processed in 2020

Comparing Calculations

The comparison of the cost of room service based on the company's method with the TDABC method can be seen from the following table:

Table 19. Comparison of Calculation of Cost of Cost of Hotel Room Services Room

Room Type	Cost		Differences
	Company Method	TDABC Method	
Executive Suite Room	Rp177.425	Rp301.516	Rp124.091
Grand Deluxe Room	Rp148.875	Rp279.636	Rp130.761
Deluxe Room	Rp148.375	Rp279.136	Rp130.761

Source: Grand Nanggroe Hotel, processed in 2020

The calculations carried out by hotel management only include four cost elements. The first is the room equipment fee of IDR 32,080 for the *grand deluxe* and *deluxe room*types, IDR 42,540 for the *suite type.* The second is the electricity fee of Rp. 16,000 for the type of *grand deluxe* and *deluxe room*, 25,600 for the type of *suite*. The third cost element entered by the hotel management is the washing and *chemical* of Rp. 50,295 for the *deluxe*, IDR 50,795 for the *grand deluxe*, and IDR 59,295 for the *suite*. The last is the breakfast fee of IDR 50,000 for all room types.

The calculation of the cost of room service for the three types of rooms has differences, the TDABC method is greater than the hotel management method. The difference between TDABC calculations and hotel management calculations for *suite* IDR 124,091 for *grand deluxe* room types for *deluxe* IDR 130,761. The difference is due to the company's method of allocating *unit costs* into one *cost driver* so as to produce lower costs, besides that the company's method does not include facility costs such as labor costs and depreciation costs involved with *room division*.

After analyzing the results of calculating the cost of room service at the Grand Nanggroe Hotel for 2019, the author concludes that TDABC can be applied to service companies such as Hotel Grand Nanggroe to calculate the cost of room service because it shows the efficiency of the product processing process and utilization of time capacity. After the calculation, there are unused capacity costs or costs incurred by the company that are not utilized optimally that the Grand Nanggroe Hotel spent during 2019 amounted to IDR 882,940,385 which was separated by two departments, namely IDR 259,401,335 for the *front office* and IDR 623. 539,050 for the *housekeeping department.* By knowing these conditions, the hotel management can evaluate these costs which should be removed or minimized by maximizing the use of costs for cost efficiency.

Based on the calculation results, it is recommended that the hotel use the TDABC method in determining the cost of service for their hotel rooms. Although the calculation results show that the TDABC method is greater than the method used by hotel management, the calculation using the TDABC method has several advantages over the method used by the company. The first advantage in applying the TDABC method is to overcome problems in allocating costs based on activities that are not carried out by the company. As in the *check-in/check-out* which has an unused capacity cost of RP198,183.975, which means that employees in these activities only use 7.5% of their practical capacity to carry out productive activities. Thus, the hotel management can evaluate employees and their work system.

Another advantage is that the TDABC method is considered more flexible in dealing with changes in demand for hospitality services because the cost is calculated based on the time of use. The hotel management also agrees that the calculation using the TDABC method is considered more effective and makes it easier for them to calculate the cost of goods for *room division.*

CONCLUSION

Based on this research, although the results of the calculation of room service costs are relatively high, the TDABC method is feasible to use to calculate the room service costs of Grand Nanggroe hotels. Compared with the enterprise method, the TDABC method has several advantages. The main advantage of the TDABC method is that the cost price calculation considers the costs that may be incurred by each activity. In addition, the application of the TDABC method at the Grand Nanggroe hotel can overcome one of the problems of the method applied by the company, namely the problem of *resource sharing* where the TDABC calculation is based on time in the use of resources for each activity.Some of the contributions of this research for the Grand Nanggroe Hotel are to help identify the types of costs that are relevant in calculating the cost of goods sold, allocate costs more precisely based on the time used, identify costs that are not used optimally by the company so that these costs can be minimized, and help the company in applying a new method in calculating the cost of service for Grand Nanggroe hotel rooms.

Research Limitations

The limitations in this study, namely: The data obtained in this study may not have a 100% accuracy rate due to limitations in data collection. This study only uses 2019 data, so it is likely to get different results for research in the following or previous years.The research only uses the scope of *room division* because the majority of hotel revenues come from *room division*.

Suggestion

Based on the results of the research as well as the discussion and conclusions and limitations of the study, the authors suggest to the following parties: Practical Advice. Grand Nanggroe hotel management should try to apply the TDABC calculation in determining the cost of hotel room services that are more in line with the standards so that the cost information obtained is more detailed and helps the management in making the right decisions. For further researchers to use the scope of *food* & *beverage* in calculating TDABC.

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