THE APPLICATION OF ACTIVITY-BASED COSTING (ABC) AND JOB ORDER COSTING (JOC) AT WISATA BAHARI RESTAURANT MANADO

PENERAPAN ACTIVITY-BASED COSTING (ABC) DAN JOB ORDER COSTING (JOC) DI RESTORAN WISATA BAHARI MANADO

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Abstract: ABC is used to determine more accurate product costs by tracing activities required, especially for the purpose of decision making. ABC can show to management about the high cost of low-volume products. Smokie Crab and Grilled Squid from Wisata Bahari Restaurant, Manado, are the sample. The purpose of this research is make more accurate calculation of the cost, which can provide information on the cost of production is more clear for owner of Wisata Bahari Restaurant Manado, so as to obtain the cost of goods sold better in the competition. There are several ways to determine the cost of goods sold as cost calculation system based on order (job order costing), cost calculation system based on process (process costing), activity-based costing system (ABC), determining the selling price of normal (normal pricing), and others. JOC is to calculate the cost of goods selling by any order, whether raw materials, labor, and overhead. While ABC system uses activity as the pricing of goods selling. Of these activities, the overall total cost charged to each product. Between ABC and JOC calculation for Smokie Crab and Grilled Squid, there are differences between the selling price. For smokie crab, better if Wisata Bahari Restaurant using ABC calculation. But for grilled squid, JOC calculation.

Keywords: activity-based costing, job order, selling price

Abstrak: *ABC digunakan untuk menentukan biaya produk yang lebih akurat dengan menelusuri kegiatan yang diperlukan, terutama untuk tujuan pengambilan keputusan. ABC dapat menunjukkan kepada manajemen tentang biaya tinggi produk volume rendah. Kepiting asap dan cumi bakar dari Restoran Wisata Bahari, Manado, adalah sampel. Tujuan penelitian ini adalah perhitungan harga yang lebih akurat, yang dapat memberikan informasi tentang biaya produksi yang lebih jelas untuk pemilik restoran Wisata Bahari Manado sehingga untuk mendapatkan harga pokok penjualan yang lebih baik dalam kompetisi. Ada beberapa cara untuk menentukan harga pokok penjualan sebagai sistem perhitungan biaya berdasarkan pesanan (job order costing), sistem perhitungan biaya berdasarkan proses (biaya proses), biaya berdasarkan aktivitas sistem (activity based costing), penentuan harga jual normal (harga normal), dan lain-lain. JOC untuk menghitung harga pokok penjualan dengan berbagai urutan, baik bahan baku, tenaga kerja, dan biaya overhead. Sementara sistem ABC menggunakan aktiftas sebagai harga jual barang. Kegiatan ini, total biaya keseluruhan dibebankan pada setiap produk. Antara ABC dan perhitungan untuk kepiting asap dan cumi bakar, ada perbedaan antara harga jual. Untuk kepiting asap, lebih baik jika restoran Wisata Bahari menggunakan perhitungan ABC cost. Tapi untuk cumi bakar, perhitungan JOC.*

Kata kunci : activity-based costing, job order, harga jual

INTRODUCTION

Research Background

Entering the era of globalization and free trade bring change to the world of business in Indonesia. One of its impact on the domestic industry that is increasing competition to be faced. Companies should not only be able to compete with local companies, but also must be able to compete with foreign companies. For this reason, companies in Indonesia must be able to create a strong foundation for the company. Price competition, quality, and so make the most of the company had to improve various aspects of the company to be able to face the competition. The company has always claimed to be able to make the right decisions so that the company can survive in the business world.

Country's economy depends on a large amount of existing industries, particularly the service sector such as insurance companies, financial institutions, health care, transportation, and restaurant. Most of the corporate sector more venturing into the field of service industry to create competition, they are required to provide quality customer service at a reasonable cost.

Control costs, companies need a proper accounting system in particular calculation method of determining the cost to produce accurate cost information pertaining to costs ministry activities for control costs. There are several ways to determine the cost of goods sold as cost calculation system based on order (job order costing), cost calculation system based on process (process costing), activity-based costing system (activity-based costing), determining the selling price of normal (normal pricing) , and others.

Hilton and Platt explained that the cost calculation system based on order (job order costing or job costing), Cost of Goods Sold are accumulated for each order (job) apart. In order for the calculation of the cost based on the order to be effective, orders must be separately identified. So that the details of the calculation of the cost based on the order in accordance with the required effort, there must be significant differences in the cost per unit of an order with another order. In the cost calculation system based on process (process cost system) of raw materials, labor, and manufacturing overhead costs charged to the center. fees charged to each unit is determined by dividing the total fees charged to the cost center to the total units produced (Hilton and Platt, 2011).

Activity-Based Costing (ABC) recognizes that many other costs in fact can be traced - not to units of output, but rather to the activities required to produce the output. ABC can show to management about the high cost of low-volume products. (Huynh et al, 2013) The core of ABC Method not only accurately calculates the cost of good (products or services) but also help the organizations definite value-added activities and non-value-added activities and support credible information for managers to make good decisions.

Wisata Bahari is one of the restaurants located in Manado, which is engaged in the service industry, determine the basic price by using job order costing system. Job order costing accumulates costs of direct materials, direct labor, and overhead charged to each order. However, due to the vast range of products provided by the company to accumulate the costs associated with the products, and combine all of them, with the aim of avoiding the ineffectiveness of the product counting one by one, in order to obtain the cost of goods sold. Costs - costs related to cost of goods sold, cannot be said to be accurate, as not all costs included in the calculation of the cost.

Company tries to avoid ineffectiveness as it needs more time to explore the costs associated with the production, so there are some costs that are not taken into account. With the cost of which is not taken into account, this resulted in cost information presented is not maximal, and cannot provide adequate information for the management of the company. In fact, these companies include companies that are competitive in price competition. Therefore, required a more accurate calculation of the cost, which can provide information on the cost of production is more clear, so as to obtain the cost of goods sold better in the competition.

Activity-based costing system, is used to determine more accurate product costs by tracing activities required, especially for the purpose of decision making. Given the competitive rivalry among other seafood restaurants, some of people are interested in comparing the system used by the restaurant, in the form of job order costing to activity-based costing, to obtain sufficient information, so that could affect the profitability of the restaurant. Hilton and Platt said that, job order costing is a costing method in which costs are accumulated for each order. Details regarding a charge card orders are recorded in order (job cost sheet), which can be paper

or electronic form. Although many orders can be done simultaneously, each card is different from the fee order business to another business. Activity-based costing does not use a charge card. Activity-based costing is using movers or trigger (driver) as the basis for allocating boarding of a resource to a variety of different activities. This is what a fundamental difference of job order costing and activity-based costing. (Hilton and Platt, 2011).

The two differences : it can be compared to what the basis of job order costing, cost card orders can provide information cost of goods sold calculation better, or activity-based costing, using the trigger as the basis for resource allocation better in presenting information cost of goods sold. This research came based on the above considerations. These methods, in calculating the cost price, apply complexity, variety, and specific features. A distinct feature of this method is the ability to diagnose exact costs and to present the non-financial information to improve the performance and efficiency of activity (Rajabi et al, 2012).

The new change in the business environment demands the organizations to gather the relevant data and information about the customers, costs, procedures, services, products and activities. ABC is perceived as the most accurate costing system by some of practitioners and academics (Godil et al, 2013).

Research Objective

The objective of this research is to analyze Activity-Based Costing system (ABC) and Job Order Costing system (JOC) can be applied and used to calculate the cost of goods sold in Wisata Bahari Restaurant Manado.

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THEORETICAL FRAMEWORK

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Activity Based Costing (ABC) System

Activity Based Costing (ABC) is about system that identified the activities progress and calculate the detail of price of the activities for all the product and services. The concept of the ABC system changes according to the development of the implementation of the ABC system itself. In early development, the ABC system is used as a tool to improve the accuracy of the cost calculation product. Factory overhead costs are covered by the scope of the ABC system at that time. But at the current rate of progress, the ABC system is no longer limited to the cost accounting focus to product cost calculation. ABC system has evolved in such a way that it becomes a new way of doing business.

Previous Research

Kee and Schmidt (1998) research is about a comparative analysis of utilizing activity-based costing and the theory of constraints for making product-mix decisions, discuses about Activity-based costing (ABC) and the theory of constraints (TOC) represent alternative paradigms for evaluating the economic consequences of production-related decisions. Vazakidis et al. (2010) discuss about Activity-Based Costing in the Public Sector. The paper discussed the basic beginnings, the processes of activity-based costing and whether this costing method can be applied in the Public Sector, where the need for precise cost estimating information increases continuously. Wen-Cheng Lin, Ching-Wu Chu, and Chin-Feng Liu is talking about financial statement analysis and Activity-Based Costing analysis for shipping industry : A data envelopment analysis approach.

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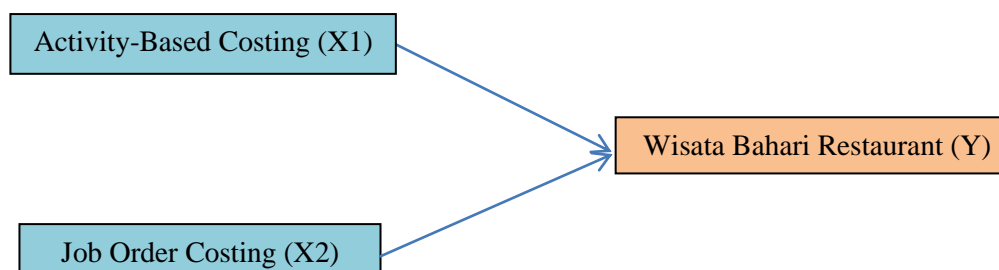
Figure 1 : Framework
Source : Research

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RESEARCH METHOD

Type of Research

This research uses a descriptive research. Using descriptive research for being able to describe data and characteristic about the analysis cost at Wisata Bahari Restaurant. Descriptive research give accurate and systematic data, because it is only have one variable. The goals from descriptive research is to offer the researcher to describe or result which relevant from the data that we calculate, maybe this research can be useful for other organization or individual who wants to make same type of research. Collecting the data, the authors used data collection techniques that can support and strengthen the analysis in the discussion of the study results.

Place and Time of Research

The study was conducted at Wisata Bahari Restaurant Manado during May to July 2013.

Population and Sample

Population is generalizeed to the object/subject which have a certain quantity and characteristic that is required by researcher to studying and to gain conclusion (Sekaran, 2005).The population in this research are foods serve in Wisata Bahari Restaurant. The sample of this research is. The sampling design is saturated samples that is considered as the best way of getting some basic information effective and more accurate (Sekaran 2005). The Sampling Method of this research is using a judgment sampling Method. Which are smokie crab and grilled squid.

Data Collection Method

This research is using a secondary data which is the restaurant list prices, theoretical review and some interview method by using formula for calculate the Activity-Based-Costing price in every menu for price above Rp 500.000,-/serving.

Data Analysis Method

The researcher used descriptive analysis, the research done by collecting data on the costs incurred Wisata Bahari Restaurant, thus presenting an overview of the actual state of Wisata Bahari Restaurant, whether Wisata Bahari Restaurant has been charged with the appropriate grouping, counting exact cost of the product and set the price accordingly. Also analyzed the cost data, resulting in a calculation of the cost and the selling price of the product is more appropriate. Then, from the results of the analysis can be concluded and suggestions.

RESULT AND DISCUSSION

Result

We calculate the indentified and classified by category, then we are identify the drivers of each activity cost to get the result. The following table will explain the following regarding the classification of costs along with the cost driver and driver of the product.

Table 1. Cost Driver and Cost Driver Classification (Smokie Crab)

No	Activity		Driver	Price per Driver (Rp)	Cost Driver (Rp)	Amount (Rp)
1	Unit Level Activity					
	a.	Raw Material				
		1 Kg Crab	Gr	10.100,00	17.851,00	180.295.100,00
	b.	Auxiliary raw materials				
		Margarine	Kg	9.400,00	12,75	119.850,00
		Sugar	Kg	11.200,00	51	571.200,00
		Chicken Broth	Kg	52.200,00	22,5	1.174.500,00
		Soy Sauce	Kg	12.300,00	22,5	276.750,00
		Ajinomoto	Kg	1.800,00	12,75	22.950,00
		Garlic	Kg	16.000,00	12,75	204.000,00
		Juhi Sauce	Kg	62.500,00	225	15.937.500,00
		Lime	Kg	22.000,00	2,55	56.100,00
		Turmeric Leaf	Package	2.000,00	425	850.000,00
		Smooth Shrimp Paste	Kg	35.000,00	12,75	446.250,00
		Charcoal	Kg	10.000,00	255	2.550.000,00
	c.	Electricity	KWH	1.350,00	12.560	16.956.000,00
	d.	Labor	Hour	150.000,00	293	43.950.000,00
2	Batch – related activity					
	e.	Telephone	Day		30	1.524.164,00
	f.	Cleaning Service	Day		30	7.714.600,00
3	Facility sutaining activity					
	g.	Building Depreciation	Hour	4.600,00	720	3.312.000,00
	h.	Other Depreciation				
		Other Assets	Hour	4.200,00	720	3.024.000,00
		Kitchenware	Hour	24.400,00	293	7.149.200,00
		Furniture	Hour	10.100,00	293	2.959.300,00
		Aquarium Tank	Hour	300,00	720	216.000,00

Table 2. Cost Driver and Cost Driver Classification (Grilled Squid)

No	Activity		Driver	Price Per Driver (Rp)	Cost Driver (Rp)	Amount (Rp)
1.	Unit Level Activity					
	a.	Raw Material				
		Squid	Serving	4.500,00	3.583,00	16. 123.500,00
	b.	Auxilliary Raw Materials				
		Tomato Sauce	Kg	10.500,00	65,16	684.180,00
		Chili Sauce	Kg	9.850,00	65,16	641.826,00
		Ajinomoto	Kg	1.800,00	16,29	29.322,00
		Chicken Broth	Kg	52.500,00	16,29	850.338,00
		Paper Powder	Kg	120.000,00	16,29	1.954.800,00
		Sugar	Kg	11.200,00	32,58	364.896,00
		Garlic	Kg	16.000,00	16,29	260. 640,00
		Angciu	Kg	14.500,00	3,26	47.270,00
		Soy Sauce	Kg	12.300,00	65,16	801.468,00
	c.	Electricity	KWH	1.350,00	12.560,00	16. 956.000,00
	d.	Labor	Hour	150.000,00	293	43. 950.000,00

Table 2. Cost Driver and Cost Driver Classification (Grilled Squid)

No	Activity	Driver	Price Per Driver (Rp)	Cost Driver (Rp)	Amount (Rp)
2	Batch-related activity				
	e. Telephone	Day		30	1.524.164,00
	f. Cleaning Service	Day		30	7.714.600,00
3	Facility Sutaining Activity				
	g. Building Depreciation	Hour	4.600,00	720	3.312.000,00
	h. Other Depreciation				
	Other Assets	Hour	4.200,00	720	3.024.000,00
	Kitchenware	Hour	24.400,00	293	7.149.200,00
	Furniture	Hour	10.100,00	293	2.959.300,00
	Aquarium Tank	Hour	300,00	720	216.000,00

Each cost driver can be charged to the product after classifying costs. Results obtained from the sum total of the cost driver will be the cost of production of the product. Production costs will be added to the amount of profits as expected. Wisata Bahari Restaurant is expected profit of 30% of the cost of production. Following the calculation of production costs and cost of goods sold.

Table 3. Selling Price based on Activity

No	Activity	Product Cost	
		Smokie Crab (Rp)	Grilled Squid (Rp)
1	Raw Material	180.295.100,00	16.123.500,00
2	Auxiliary raw materials	22.209.100,00	5.634.740,00
3	Electricity	16.956.000,00	16.956.000,00
4	Labor	43.950.000,00	43.950.000,00
5	Telephone	1.524.164,00	1.524.164,00
6	Cleaning Service	7.714.600,00	7.714.600,00
7	Building Depreciation	3.312.000,00	3.024.000,00
8	Other Depreciation	13.348.500,00	13.348.500,00
	Cost of Goods Sold	289.309.464,00	108.275.504,00
	Cost of Goods Sold (gr/porsi)	16.206,91	30.219,23
	Expected Profit (30%)	4.862,07	9.065,77
	Selling Price (/gr/porsi)	21.068,98	39.285,00
	Rounding off	21.100,00	39.300,00

Table 3 calculation that the boarding of goods sold using the activity-based costing system for product smoked crab Rp 21.100 / grams and for grilled squid products Rp 39.300 / serving.

Comparing the cost of goods sold between Activity-Based Costing, Job Order Costing and Wisata Bahari Job Costing

Table 4. Comparison of Job Order Costing, Activity Based Costing and Wisata Bahari Job Costing (Smokie Crab)

Description	Job Order Costing (Rp)	Activity-Based Costing (Rp)	Job Costing (Rp)
Cost of Goods Sold	98.256,04	289.309.464,00	91.000,00
Cost of Goods Sold (gr/plate)	14.036,58	16.206,91	13.000,00
Expected Profit (30%)	4.210,97	4.862,07	3.900,00
Selling Price (gr/plate)	18.247,55	21.068,98	16.900,00
Rounding off	18.200,00	21.100,00	16.900,00

The table 4 shows that Job Order Costing for Cost of Goods Sold per gram at Rp 14.036.- while Activity Based Costing at Rp 16.206.- and Wisata Bahari Job Costing 16.900.-. The highest selling price is Activity Based Costing at Rp 21.068 and the lowest selling price is Wisata Bahari Job Costing at Rp 16.900.-

Table 5. Comparison of Job Order Costing, Activity Based Costing and Wisata Bahari Job Costing (Grilled Squid)

Description	Job Order Costing (Rp)	Activity-Based Costing (Rp)	Job Costing (Rp)
Cost of Goods Sold	34.750,73	108.563.504,00	22.950,00
Cost of Goods Sold (Gr/plate)	34.750,73	30.299,61	22.950,00
Expected Profit (30%)	10.425,22	9.089,88	6.885,00
Selling Price (Gr/Plate)	45.175,95	39.389,49	29.835,00
Rounding Off	45.100,00	39.300,00	29.900,00

Table 5 shows that Job Order Costing for Cost of Goods Sold per ons at Rp 34.750.- while Activity Based Costing at 30.299,61.- and Wisata Bahari Job Costing Rp 29.900.-. The highest selling price is Job Order Costing at Rp 45.175 and the lowest selling price is Wisata Bahari Job Costing at Rp 29.900.-

Table 6. Comparison of Selling Price per ons/serving between Wisata Bahari Job Costing and Job Order Costing

Product	Cost of Goods Sold (Gr/serving)		Difference (Rp)
	Wisata Bahari Job Costing (Rp)	Job Order Costing (Rp)	
Smokie Crab	16.900,00	18.247,55	1.347,55
Grilled Squid	29.835,00	45.175,95	15.340,95

Smoked crab products, there is a difference of Rp 1.347 / grams and grilled squid difference Rp 15.340 per serving. Calculations were applied Wisata Bahari Restaurant, based on the calculation of the standard since the beginning of this restaurant opened, and may experience price increases in the present, but it is not comparable. This difference is also due to increase in overhead, electricity power, depreciation and others.

Table 7. Comparison of Selling Price per gr/serving between Wisata Bahari Job Costing and Activity Based Costing

Product	Cost of Goods Sold (Gr/Serving)		Difference (Rp)
	Wisata Bahari Job Costing (Rp)	Activity-Based Costing (Rp)	
Smokie Crab	16.900,00	21.068,98	4.168,98
Grilled Squid	29.835,00	39.389,49	9.554,49

Smokie Crab, there is a difference between Wisata Bahari Job Costing and Activity Based Costing the difference Rp 4.168 / grams for while Rp 9.554 / serving for grilled squid. The difference is caused by the calculation of activity-based costing system using the total consumption overall boarding. While job costing is applied Wisata Bahari Job Costing calculated per unit.

Table 8. Comparison of Selling Price per ons/serving between Job Order Costing and Activity Based Costing

Product	Cost of Goods Sold(grams/serving)		Differences (Rp)
	Activity Based Costing (Rp)	Job Order Costing (Rp)	
Smokie Crab	21.068.98	18.247,55	2.821,43
Grilled Squid	39.389,49	45.175,95	5.786,45

The calculation of cost of goods selling by the method of job order costing and activity based costing system, there is a difference of Rp 2.821 / grams for crab smoked and grilled squid amounting to Rp 5.786 / serving. The difference is due to the calculation method of job order costing using cost per unit. Job order costing is calculate the cost of goods selling by any order, whether raw materials, labor, and overhead. While activity-based costing system uses activity as the pricing of goods selling. Of these activities, the overall total cost charged to each product.

Discussion

The data analysis shows that there are a slightly difference of Selling price by Wisata Bahari Restaurant using a Job Costing. The difference is caused by the calculation of activity-based costing system and Job Order Costing using the total consumption overall boarding. While job costing is applied Wisata Bahari Job Costing calculated per unit.

Table 9. Comparison of Selling Price Between Smokie Crab and Grilled Squid Using Job Costing and Job Order Costing

Product	Wisata Bahari Job Costing	Job Order Costing
Smokie Crab	Rp 16.900,00	**Rp 18.247,55**
Grilled Squid	Rp 29.835,00	**Rp 45.175,95**

Table 10. Comparison of Selling Price Between Smokie Crab and Grilled Squid Using Job Costing and Activity-Based Costing

Product	Wisata Bahari Job Costing	Activity-Based Costing
Smokie Crab	Rp16. 900,00	**Rp 21.068,00**
Grilled Squid	Rp 29.835	**Rp 39.389,00**

Table 11. Comparison of Selling Price Between Smokie Crab and Grilled Squid Using Activity-Based Costing and Job Order Costing

Product	Activity-Based Costing	Job Order Costing
Smokie Crab	**Rp 21.068,98**	Rp 18.247,55
Grilled Squid	Rp 39.389,49	**Rp 45.175,95**

Selling price can be calculate with traditional system and Activity Based Costing system (ABC). Information from Wisata Bahari, we can find out if this restaurant has not implemented ABC to calculate the selling price. At this time, Wisata Bahari Restaurant is still using Job Order Costing as selling price calculation. Table 9 is showing about selling price if we compare between Job Costing and Job Order Costing at Wisata Bahari restaurant. We can see that the calculation for smokie crab and grilled squid, Job Order Costing offering

better selling price than Job Costing. Table 10 is showing about Wisata Bahari Job Costing and Activity-Based Costing calculation for smokie crab and grilled squid. Between this comparation, Activity-Based Costing offering better selling price than Wisata Bahari Job Costing. Table 11 is showing about Activity-Based Costing and Job Order Costing calculation for Smokie Crab and Grilled Squid, there are differences between the selling price. For smokie crab, better if Wisata Bahari Restaurant using Activity-Based Costing calculation. But for grilled squid, Job Order Costing calculation give better selling price. Based on that result, we can see the comparasion between Activity-Based Costing and Job Order Costing price should be used for any kind of menu, as both system make more profit for restaurant.

CONCLUSION AND RECOMMENDATION

Conclusion

We can get conclusion from the different of result when we calculate the selling price using Actvity Based Costing and Job Order Costing for Smokie Crab and Grilled Squid. The conclusions are Activity Based Costing system can be applied and used to calculate the cost of goods sold in Wisata Bahari Restaurant Manado. Job Ordering Costing system can be applied and used to calculate the cost of goods sold in Wisata Bahari Restaurant Manado.

Recommendation

Some recommendations for Wisata Bahari Restaurant that found from this research to get more profit and good price for sell are company should care about Activity Based Costing and Job Ordering Costing to determine the company profit to make company financial welter than before, and future replications of other model to calculate the Cost of Good. Price of selling for get better profit using should be different system for Smokie Crab and Grilled Squid. Smokie crab will get better price using activity based costing system, and for Grilled Squid, manager will be better using Job Order Costing system. Wisata Bahari Restaurant's manager better using both system and comparing which price is better for all menu.

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