



Environmental Cost Accounting in the Hotel Industry “ A Case Study”

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Abstract— *The competitive environment forces the hotel to run its operations with the principles of sustainable development, especially in the area of environmental responsibility. Meeting environmental objectives requires hotels to develop and implement environmentally friendly business practices, as well as implement such tools and to assess environmental impact, where environmental accounting and reporting is highly emphasized. The research method used is case study research. This study aims to obtain information about the application of environmental cost accounting in the hospitality industry. Data analysis was carried out using the Miles and Huberman model. The results show that the environmental costs recognized by the hotel industry in the Indonesia Tourism Development Corporation (ITDC) area located in the Nusa Dua area, Bali are all environmental costs that are charged directly or indirectly in each hotel department. Environmental costs under consideration are submitted to external parties through cooperation contracts. Environmental cost control in the hotel industry uses the concept of Activity Based Costing. The size of the environmental costs are determined by the level of activity in each department.*

Keywords- *Environmental Cost Accounting, , Activity Based Costing, Hotel Industry,*

I. INTRODUCTION

Many hotels incorporate the principles and objectives of environmental responsibility in their business policies and strategies. The reasons for such behavior are contained in efforts to reduce their impact on the environment and to comply with environmental laws and regulations, reduce costs, enhance reputation and ensure competitiveness and business continuity. There are a number of environmental issues that interfere with the hotel industry including water usage, energy usage, food waste, pollution, garage/waste. All of these issues have become important in all aspects of the hospitality industry. In collecting data on environmental costs, it is important for hotels to develop environmental accounting. From the aspect of business systems, environmental accounting develops in financial accounting and management accounting. The object of environmental financial accounting is to prepare and report environmental information for external purposes. The report includes information on the environmental costs arising from the environmental responsibility of an organization. Meanwhile, environmental management accounting involves the process of identifying, measuring, and reporting environmental costs for internal purposes. A number of non-profit organizations and academics have produced research in this area. One of the best-known researchers is the World Resource Institute, which published Green Ledgers: Case Studies in Corporate Environmental Accounting (1995). This study supports that environmental cost accounting is important for companies depending on the industry.

The application of environmental cost accounting has attracted many researchers in recent years, especially in the hotel business sector with mixed results. Several studies suggest that it is important to develop a relevant cost management system that supports environmental strategy and management. The focus is on environmental cost categories and classifications as well as potential approaches for decision making and hotel management control purposes [7]. 5-star hotels in Konya are quite sensitive in considering environmental costs. Some 4-star hotels apply the environmental cost factor but are unable to make the necessary investment due to insufficient capital. Meanwhile, 3-star hotels do not have sensitivity related to environmental costs [3]. Company management's understanding of the concept of Environmental Management Accounting has been shown to lead to hotel concern for the environment [13]. Business actors in the hotel accommodation sector in the city of Surakarta have concern for the environment, awareness of environmental costs, know the knowledge of cost components as well as the charging of hotel business costs, have the ability to charge environmental costs in business costs [14]. There is a good level of environmental awareness among hotel business sector companies listed on the Amman Stock Exchange. However, there is a fear of applying environmental accounting disclosures due to the lack of appropriate accountant qualifications in its application [11].

Previous research has shown various arguments about measuring the quantity of environmental information disclosed. However, some of these studies are still few that explain the environmental cost accounting system and the recording of environmental costs in the hotel environment. Thus, this research was conducted on the hospitality service industry in Badung Regency. The area that will be used in the research is the ITDC (Indonesia Tourism Development Corporation) area which is located in the Nusa Dua area. This area is a tourism destination development area that is managed with an environmentally friendly concept and has received various awards related to the environment. Currently, ITDC has 19 star hotels with international standard facilities.

Based on the description above, the application of environmental cost accounting in hotels in the ITDC (Indonesia Tourism Development Corporation) area is an interesting thing to do research. In accordance with the problems studied, the strategy used in this research is to use a single case study strategy. A study is called a single case study if the research is focused on one characteristic, whether carried out on one or more objects. This study took a location in 1 hotel in the ITDC area as a sample. This research is expected to be useful for hotels and other tourism areas in classifying environmental costs and compiling environmental cost accounting reporting models in the hotel industry.

II. RESEARCH METHODS

A. Design Research

This data source is divided into two, namely primary data sources and secondary data sources. In this study, researchers

used primary data to complete the necessary research data in the form of in-depth interviews and observations. This study used participatory observation. Researchers are directly involved in observing what the data source/informant is doing. The atmosphere in the interview data collection is natural and the researcher does not appear to be doing research. This study uses an in-depth interview method with three stages. The first stage, interviews with informants related to positions in the company, aims to get a deeper understanding and answers, so that the results of the informants' answers are obtained for subsequent analysis. The second stage, interviews were conducted with introductory questions to informants aimed at obtaining explanations and information on the whole process of providing credit to customers provided by the company. The third stage, the results of interviews with informants were then recorded and compiled into the form of interview transcripts. highest iteration value has a very strong trend of influence value.

B. Miles and Huberman's interactive data analysis model

Interview transcripts were analyzed using Miles and Huberman's interactive data analysis model. This model is carried out in three steps of analysis, including: data reduction, data presentation, and drawing conclusions. Data reduction is assisted by data coding. The first stage, open coding, each response response as well as expressions and behaviors shown by the informants are grouped into several categories. The second stage of axial coding, categories are grouped based on four components of environmental cost analysis including: recognition, measurement, presentation and disclosure of environmental costs. The third step is the selective coding stage, looking for relationships between themes. Several themes may be excluded at this stage, if they do not fit the structure established in the study or have a weak evidence base. Themes that have the same relationship are grouped based on the conceptual similarities of the components.

C. Access

There are three levels of research access, namely: physical access (physical access), continuous access (continuing access), and cognitive access (cognitive access) [11]. At the level of physical access, this research is quite difficult because the presence of the researcher is only as an independent observer. At the sustainable access level, researchers see access as an ongoing process. This process is the process of gaining access from the person to be interviewed. This researcher uses an approach through company employee information that can assist researchers in determining who is eligible to be an informant. At the cognitive access level, self-negotiation is carried out to a position where the researcher can collect data and which reveals the real reality that occurs in relation to the research questions and objectives. It aims to gain access to the right data, so as to be able to answer the research questions and objectives.

D. Research Ethics

Research ethics relates to the question of how researchers formulate and clarify research topics, design research and gain access, collect data, process and store data, analyze data, and write research findings in an appropriate way. moral and responsible [11]. Data collection is carried out by taking into account ethical aspects, including: Informed Consent, Anonymity, Confidentiality, Protection from recorder.

IV RESULT AND DISCUSSION

A. Environmental Cost Accounting in hotel industry

In this study, the identification of hotel environmental costs uses IFAC (International Federation of Accountants) and Hansen Mowen standards. Based on the International Guidance Document-Environmental Management Accounting compiled by the International Federation of Accountants [6], it consists of Materials Costs of Product Outputs, Materials Costs of Non-Product Outputs, Waste and Emission Control Costs, Prevention and other Environmental Management Costs, Research and Development Costs, Less Tangible Costs. In theory, the hotel has applied the concept of Environmental cost accounting as indicated by the per departmental reporting of environmental costs. However, the application of environmental cost accounting in hotels still does not fully meet the guidelines and recommendations regarding environmental accounting practices in accordance with the International Federation of Accountants [6]. Based on observations, environmental costs are hidden in overhead costs. This makes it difficult to identify environmental costs in hotels. Identifying environmental costs is important if they can be managed and optimized. This will have an impact on business profits in the future [8].

Furthermore, Hansen and Mowen classify environmental costs into four categories, namely: environmental prevention costs, environmental detection costs, internal failure costs, and external failure costs. Environmental prevention costs are costs of activities to prevent environmental pollution that causes environmental damage. Environmental detection costs are activity costs aimed at determining whether products, processes, and other activities meet environmental standards. Internal failure costs are the costs of activities to pollute the waste but not discharge it into the external environment. These costs are aimed at reducing and managing existing pollution and waste. The cost of external environmental failure is the cost of activities carried out by the company after the company pollutes the external environment. The cost classification of the hotel does not match the Hansen and Mowen environmental cost report classification. The company only focuses on the cost of managing liquid waste, solid waste and B3 waste. Meanwhile, Hansen and Mowen are more specific in each classification, not only discussing waste.

In addition, hotel environmental costs are identified as procurement activities related to environmental costs, which consist of procurement activities through a contract

system and procurement activities through a non-contract system (daily/petty cash). So these costs are categorized as direct costs and indirect costs. The analysis can be seen from the results of interviews with WS informants:

“The company presents all costs that are used to deal with waste in the income statement presented in departmental expense items. The basis for presenting environmental costs is whether these costs include the procurement of goods or services and whether these costs are contractual or non-contractual. These are categorized as direct costs and indirect costs. For waste management, it will be included in the engineering cost post and is contractual in nature.”

Disclosure of environmental information is very important for hotels because such disclosure represents their environmental responsibility, increasing their transparency to stakeholders and the public. Practice has shown that the establishment of environmental accounting and environmental reporting at the organizational level, as well as hotels, is largely voluntary, that is, not regulated by law. However, the hotel does not have special treatment in reporting it. The analysis can be seen from the results of interviews with WS informants:

“Why do we make a special environmental cost report? Especially now in the digital world. many reports don't always give us the information we need. Especially with a hotel of this size to manage costs with a value of 100 million with special treatment in my opinion is too much. It just needs to be grouped properly. As long as each department can manage these costs, I don't think this reporting is necessary.”

The results of the interview have the meaning that the preparation of environmental cost reporting in hotels in particular requires a high effort. The advantage in making environmental cost reporting is felt under the effort expended by the company. This means that if the benefits of preparing environmental cost reports are greater than the costs incurred, the company will voluntarily detail the environmental costs in a special report. In addition, the hotel management system has an effect on management's refusal to detail environmental costs in a special report. This is due to the lack of investment of time, money and resources required to meet standards and procedures leading to additional barriers to implementation. Changes in managerial behavior are a major issue in implementing environmental cost accounting [2]. This is based on the results of interviews with WS as financial control who said that:

" when compared to the environmental program that was followed, as a form of brand awareness or promotion. We do not get direct income from environmental programs. The requirements for joining the program also do not require the creation of a special environmental cost report. In participating in the environmental program, we will form a special team consisting of several hotel departments.”

This answer implicitly means that environmental costs do not have a significant impact on hotel revenues. The potential revenue and environmental costs generated by the hotel generate revenues and expenses for each selected alternative. Environmental management activities have benefits in the form of social benefits received by the hotel, because the hotel participates in environmental programs. This shows that environmental certification has a positive effect on the market value of the hotel (reducing the effect of negative publicity) [1]

B. Activity Based Costing for environmental cost in the hotel industry

According to [11], the concept of ABC can not only be applied to manufacturing companies, but can also be applied to service companies. Most costs in service firms are fixed and direct, while manufacturing firms can trace critical components (such as direct materials and direct labor) from costs to individual products. The difference between a service company and a manufacturing company has similar issues. The problem is like the difficulty of allocating costs to activities. Activity Based Costing can really be used in service companies, at least in some companies. Several researchers demonstrated the use of traditional costing systems (order costing and process costing) in the hospitality service industry [4]. Other studies show that theoretical knowledge of the ABC concept in its application in hotels is still low [14]. However, one study proposes that ABC is the most effective and accurate costing method for customer profitability analysis in hotels [13].

ABC is an approach that has special relevance to the environment. According to [3] by entering environmental costs into the ABC system, companies can more accurately identify activities that drive environmental costs. In manufacturing companies, the integration of activity-based costing (ABC) and environmental cost accounting systems (ECA) provides accurate information [19]. Unlike the case of hotels which are companies engaged in services. The application of the ABC system is still questionable, because the resulting information has high uncertainty.

Based on the results of observations, Hotel X has collected, understood information and collected data related to the environmental cost accounting system. However, the company cannot understand the situation in depth, especially for the costs related to environmental protection incurred by the department because these costs cannot be categorized by carrying out statistical analysis. However, there are indications of the application of the Activity Based Costing method in controlling environmental costs. This is based on interviews with SS informants:

"Please distinguish that the engineering section specifically handles large-scale environmental activities, while housekeeping is on a small scale. Housekeeping is responsible for the procurement of cleaning equipment, gardens, rooms per department outside the food & beverage department, while

engineering is responsible for managing hotel activity waste."

The above expression shows that indirectly environmental costs are identified according to the level of activity based on cost drivers. In determining indirect environmental costs, the company has identified the resources consumed, environmental activities and the relationship between environmental activities and resources used. Furthermore, in calculating environmental costs, all costs will be assigned to products according to activities for each service product in each department. Figure 1 below illustrates an activity-based costing system for environmental costs in the hospitality industry.

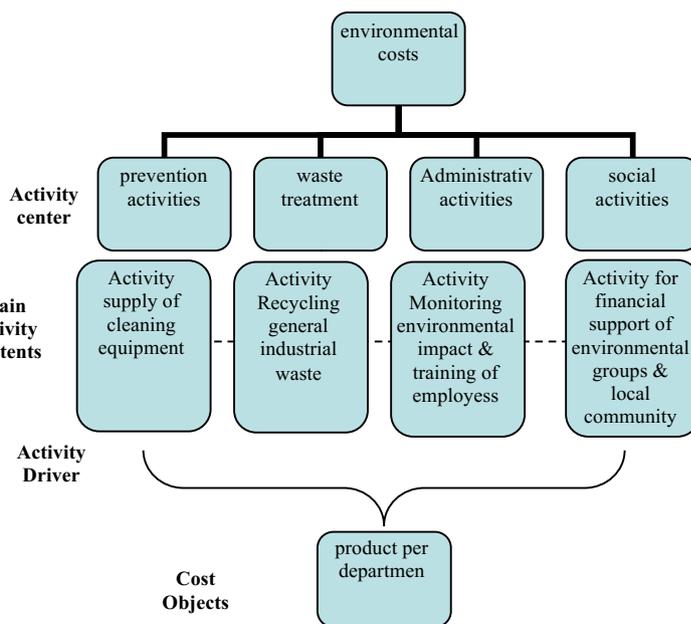


Figure 1 activity-based costing for environmental costs in the hotel industry.

III. CONCLUSION

Environmental cost accounting is considered an integral part of hotel operations. Environmental costs have been treated as additional direct operating costs. However, the application of environmental cost accounting in the hotel environment still does not fully meet the guidelines and recommendations regarding environmental accounting practices in accordance with Hansen and Mowen and the International Federation of Accountants (2005). The hotel has spent money to address environmental damage, but the recognition of these costs has not been grouped by category. It is very complicated to identify environmental costs. This is because environmental costs are hidden in overhead costs. Activity-based costing makes it difficult to track the accuracy and completeness of accounting information related to environmental costs in financial statements. This implies that

environmental cost reporting is important for companies depending on the cost accounting system used.

Regarding the limitations of this research, which are related to the methodology and the substance of the study, it is recommended for further researchers to use a research design that combines quantitative and qualitative research (mix methods) so that researchers can obtain objective research results. In addition, further research should use hotel samples and be categorized based on stars and locations so that they can be used as comparison materials, especially with regard to waste management. It is important to know Physical information relates to how much energy, water and matter is brought in that becomes a physical product and becomes waste or emissions.

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