A new model in achieving Green Accounting at hotels in Bali

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Abstract. The concept of green accounting becomes a debate in terms of its implementation in a company. The result of previous studies indicates that there are no standard model regarding its implementation to support performance. The research aims to create a different green accounting model to other models by using local cultural elements as the variables in building it. The research is conducted in two steps. The first step is designing the model based on theoretical studies by considering the main and supporting elements in building the concept of green accounting. The second step is conducting a model test at 60 five stars hotels started with data collection through questionnaire and followed by data processing using descriptive statistic. The result indicates that the hotels’ owner has implemented green accounting attributes and it supports previous studies. Another result, which is a new finding, shows that the presence of local culture, government regulation, and the awareness of hotels’ owner has important role in the development of green accounting concept. The results of the research give contribution to accounting science in terms of green reporting. The hotel management should adopt local culture in building the character of accountant hired in the accounting department.

1. Introduction
Studies on financial reports had been widely conducted previously. Moreover, it is a need to calculate the performance of a company that consists of financial and non-financial reports. However, there are not many studies on green accounting model that related to sustainable development that consisted of sustainability reporting, environmental, and socio-economic indicators and plays important role in providing information to all parties related to the awareness of a company in sustainable development [10,15,16].

The sustainability report of a company is prepared by accounting department that represents the holistic illustration of the company’s sustainability activities and indicates how and to what extent the company gives contribution to sustainable development [14]. A company is expected to exceed the traditional financial reporting reflecting past activities and decisions as well as historical data of the company by reporting future risks, opportunities, and strategies related to sustainability [1]. The accounting department might effective in configuration and it must prepare a sustainability report and offers opinion on the need of new reporting due to the change in the level and characteristic of the company’s activities as well as in law [1]. Thus, it creates long term value needed to evaluate future risks and modification based on the decision [11].

It allows the creation of a balance between the economic goals of an organization and social and environmental needs. Since the future impacts of today’s decision are basically a sustainability issue, sustainability reporting involves the economic, social, and environmental impacts of business activities and provides information of their commitment on the responsible use of the environmental resources
as well as their future environmental and social strategies [2,18,19]. However, information obtained would depend on the content of the report and accounting professionals are in the possible position for accurate measurement, verification, and financial and non-financial information reporting. The contribution would be very valuable in the context where there are no legal frames of specific institution for reporting or there are problems in collecting relevant social and environmental information and to integrate them in the information process [1,14,15].

A report prepared by accounting information system gives data about pollution, global warming, and natural resources conservation produced by company’s activities and it is useful in determining the activity cost in the area and their influence on financial performance. When it is used as internal purpose, the report will help the manager in business planning and operation as well as acts as a tool to motivate the employees to become responsible citizens. Also, when it is presented to the external stakeholders, the report that contains financial information could function as a tool to develop social and environmental awareness among the stakeholders [18,19]. Sustainability reporting gives opportunity for professional development to the professional accounting since it needs a deep understanding on the complexity of social, economic, and environmental issues [9]. The opportunity is also required a long term and future-oriented accounting implementation, and due to its multidiscipline character, it will need cooperation with other professional groups, such as economists, and social and environmental scientists as well as the development of new qualitative and quantitative skills [1,14,15].

An accountant, except for sustainability reporting, could help in budgeting and development strategy, audit, production, measurement, monitoring and control of performance, accountability and governance, and standard development [1,14,15]. In the level of national government, the development and monitoring of sustainability index has been done mostly by statisticians and economists. However, accounting professionals will give a significant contribution for the development and monitoring of the substantial of sustainability standard. One of value added field for accountant is the standardization of indicators used both in business units and between countries. They also contribute in a monetary-equivalent method, risk management, and in balancing the issues of governance standard ethics in political environment. In addition, the skill of the accountant in finance and budgeting will be useful in the data of sustainability monitoring that provide monetary indicators as part of sustainability reporting of the state institutions [1,14,15].

In conducting their duties, accountants are attached to the culture they understand in every country. Schein [17] considered that organizational culture can be formed from local culture that consisted of three components: artefacts, espouse values, and basic assumptions. Culture is a behaviour that continuously conducted and becomes the characteristic that strengthen company name. Culture developed in each country has implication to the existing companies; therefore, various opinion occur that culture is able to increase performance [6,5,3,4].

The role of culture is needed in developing character of each individual so that a view of a company that has environmental awareness is occurred since it has succeeded in developing green culture in the company. One form of environmental-awareness culture is *tri hita karana* that has significant influence on companies in Bali [5]. The cultural concept gives emphasize on maintaining harmony with God as the creator of nature and contents, with fellow human being, and with the nature. The cultural concept has been recognized by the world in the tourism industry by aligning the three concepts in running a hospitality business.

2. Literature review

Studies on financial reports had been widely conducted previously. Moreover, it is a need to calculate the performance of a company that consists of financial and non-financial reports. However, there are not many studies on green accounting model that related to sustainable development that consisted of sustainability reporting, environmental, and socio-economic indicators and plays important role in providing information to all parties related to the awareness of a company in sustainable development [10,14,15].

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company gives contribution to sustainable development [13]. A company is expected to exceed the traditional financial reporting reflecting past activities and decisions as well as historical data of the company by reporting future risks, opportunities, and strategies related to sustainability [1]. The accounting department might be effective in configuration and it must prepare a sustainability report and offers opinion on the need of new reporting due to the change in the level and characteristic of the company’s activities as well as in law [1]. Thus, it creates long term value needed to evaluate future risks and modification based on the decision [10].

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3. Methodology
The research sample is 65 five star hotel with stratified random sampling method [8]. This is done because most five-star hotel chain hotels and have run green accounting. This condition is very suitable to perform model testing because the model that was built sourced from western countries. Data were collected through questionnaires and analyzed descriptive statistics with SPSS 16.0 student version for windows. The research would be conducted using theoretical study and field survey at the five stars hotels [8]. Theoretically, the designed model would be analyzed using green accounting references [20,14,15]. The main and supporting elements were local culture, government regulation, and owner based on the previous research [6,5,3,4]. The analysis stressed on the main and supporting aspects to achieve the desired green accounting model through a descriptive statistical analysis. The initial stage of the analysis was data collection through a 1 to 5 scale questionnaire, where 1 = bad, 2 = less good, 3 = fair, 4 = good, and 5 = very good. There were 8 research indicators consisted of five main elements and three supporting elements and they were developed into seventeen question items. The developed research model is explained in the following Figure 1.

4. Result
4.1 Description of Respondents Characteristics
The research was started with data collection from the research instruments distributed directly to the 65 respondents. All instruments were collected; however, a questionnaire examination resulted in 5 incomplete instruments. Therefore, the viable research instruments were 60 or 92.31%. In the initial stage, a descriptive statistical analysis was conducted to find out the psychographic characteristics of the hotel managers as the research respondents. Based on the gender, respondents were dominated by male, of 96.67%, and the remaining 3.33% were female. It indicates that the pace and role of women as hotel manager is low. Therefore, in the future, women need to be encouraged to have a position in hospitality field.
The most age level of the respondents was 45-50 years, which was 46.67% of the total respondents. It followed by the age level of 40-44 years of 33.33% and 35-39 years of 20%. The level of education of the hotel managers indicates the ability and skill in running the business. Most of the hotel managers had level of education of bachelor’s degree of 53.33% and 46.67% held a Diploma III degree. The characteristic of respondents based on the establishment period of the hotel indicate that 2 hotel units or 3.33% had been operating for more than 20 years; 40 units were for 16-20 years; 16 units were for 11-15 years, and 2 units were for 5-10 years. The condition reflected that hotel in Bali was a business that had been conducted in a long time thus they were in the maturity stage.

4.2 Descriptive Analysis of Green Accounting
Descriptive statistics aims to give description about the characteristics of research data. The research used variable of green accounting that measured by: risk identification and management, management of independent audit and review processes, development of a framework for the production of reliable financial and non-financial information; promotion of policies for determining, preparation and implementation of sustainability implication plans, Regulation, government support, culture, local genius (behaviour), owner. The measurement of descriptive statistics in the research was the minimum and maximum values, the average value, and standard deviation. Table 1 presents the descriptive statistics for researched variable.

| Indicators | Minimum | Maximum | Average | Std. Dev |
|------------|---------|---------|---------|----------|
| risk identification and management (RM) | 55 | 84 | 70.33 | 6.537 |
| management of independent audit and review processes (MIR) | 51 | 85 | 67.26 | 7.234 |
| development of a framework for the production of reliable financial and non-financial information (DPF) | 59 | 85 | 69.22 | 5.331 |
| promotion of policies for determining (PD) | 51 | 85 | 67.26 | 7.234 |
| preparation and implementation of sustainability implication plans (PISI) | 55 | 84 | 70.33 | 6.537 |
| Regulation, government support (RGS) | 59 | 85 | 69.22 | 5.331 |
| culture, local genius (behaviour) (CL) | 55 | 84 | 70.33 | 6.537 |
| Owner (OW) | 51 | 85 | 69.22 | 7.234 |

Source: Primary data (processed), 2017

The above Table 1 explains that the variable of green accounting consisted of eight indicators with 17 items of 1 – 5 scale. Therefore, theoretically, scores for each indicator would be in the range of 17-85 with median value of (17+85)/2 = 51. The result of descriptive analysis for green accounting indicators resulted in that all indicators had the minimum value of equal to or above the median value;
therefore, descriptively, the implementation of green accounting of the hotels in Bali was tended to be good. Sharpening the result of the descriptive analysis value for green accounting, a frequency distribution in three class categories (low, medium, and high) was created based on actual values and empirical data. The lowest score of the indicator was 51 and the highest was 85; therefore, the value range was 85-51 = 34. If the score was divided into three categories, it resulted in class interval value of 34/3 = 11.33. The score of 51-62 is within the low category, 63-73 is medium, and 74-85 is high. Therefore, the category distribution of green accounting indicators can be explained in Table 2.

| Category | RM Frequency | Percent | MR Frequency | Percent | DPF Frequency | Percent |
|----------|--------------|---------|--------------|---------|---------------|---------|
| Low      | 7            | 11.0    | 11           | 19.0    | 7             | 11.0    |
| Medium   | 36           | 60.0    | 37           | 61.0    | 42            | 70.0    |
| High     | 17           | 29.0    | 12           | 20.0    | 11            | 19.0    |
| Total    | 60           | 100.0   | 60           | 100.0   | 60            | 100.0   |

Source: Primary data (processed), 2017

The presentation of frequency distribution result for the three indicators of green accounting in Table 2 indicates that most hotels were within the category of medium to high on the implementation of risk identification and management (RM), management of independent audit and review processes (MIR), development of a framework for the production of reliable financial and non-financial information (DPF).

| Category | PD Frequency | Percent | PISI Frequency | Percent | RGS Frequency | Percent |
|----------|--------------|---------|----------------|---------|---------------|---------|
| Low      | 8            | 13.0    | 10             | 17.0    | 10            | 17.0    |
| Medium   | 32           | 54.0    | 38             | 63.0    | 40            | 66.0    |
| High     | 20           | 33.0    | 12             | 20.0    | 10            | 17.0    |
| Total    | 60           | 100.0   | 60             | 100.0   | 60            | 100.0   |

Source: Primary Data (processed), 2017

The presentation of frequency distribution result for the three indicators of green accounting in Table 3 indicates that most hotels were within the category of medium to high on the implementation of promotion of policies for determining (PD), preparation and implementation of sustainability implication plans (PISI), Regulation, government support (RGS).

| Category | CL Frequency | Percent | OWN Frequency | Percent |
|----------|--------------|---------|---------------|---------|
| Low      | 8            | 13.0    | 10            | 17.0    |
| Medium   | 32           | 54.0    | 38            | 63.0    |
| High     | 20           | 33.0    | 12            | 20.0    |
| Total    | 60           | 100.0   | 60            | 100.0   |

Source: Primary data (processed), 2017
The presentation of frequency distribution result for the three indicators of green accounting in Table 4 indicates that most hotels were within the category of medium to high on the implementation of culture, local genius (behaviour) (CL), Owner (OW).

5. Discussion
The result of analysis indicates that the hotels had implemented the main elements of green accounting and it was within the category of medium to high. The condition illustrated that the hotel management was aware of the importance of the following elements: risk identification and management, management of independent audit and review processes, development of a framework for the production of reliable financial and non-financial information; promotion of policies for determining, and preparation and implementation of sustainability implication plans. The result support the opinion of Ballou, Jones, and AICPA [22,14,15,21]. The surprising finding was that hotels implementing modern management with high economic orientation had adopted local culture and government regulation, and the owners’ awareness to implement sustainable development as the main elements instead of supporting elements. It was proven by the implementation level of 80%. Local culture (tri hita karana) had strong influence in shaping the behavior of the company, the owners, as well as the government. Thus, they became a unit to support sustainable development through accounting behaviour in accounting department. The study validate the previous research such as Astawa and Sukawati, PutuAstawa, Astawa and Sudika, Astawa [6,5,3,4] that tri hita karana that promotes harmony between the company and God, the company and the customers or human being, and the company and the nature or its surrounding environment gave impact on the increase in performance and sustainability of the company. Therefore, the elements of local culture, government regulation, and the awareness of hotels’ owner, became the main elements in achieving green accounting. The result also gave update in accounting science in terms of green accounting reporting. The new green accounting model can be explained in Figure 2, as follow.

6. Conclusion
The understanding on the importance of sustainable development has been the culture in hospitality industry, especially in five stars hotels in Bali. It gave strong signal of natural conservation through
green reporting movement. The condition was built in accounting department where most people view it as a strict and no-negotiation department. The concept of green accounting gave deep lesson in the formation of characters of the accountants that have awareness on the environment and give legitimation on the existence of hotels in the society. The result of the study gave new way of view in appraising and developing green accounting concept and to strengthen it, a wider test is needed on the culture of tri hita karana in various levels of hotel. The values of modern management have been combined with local values to create a new power in running the concept of green accounting in hospitality world.

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