The Responsibility of Corporate To Conserve Water Resources in Municipality Of Surakarta

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Abstract

The water is a vital necessity of life. Many of the living beings can’t survive without water. Water demand steadily increased simultaneously with the increasing population, rising purchasing power, urbanization, and development in the Solo city. But, it was not followed by steady ground water supply which has decreased in quality and quantity. Moreover, the improvement of the means and infrastructure to improve the quality and quantity of water is not maximized. The purpose of this study is to determine the role of environmental management system that includes the corporate commitment, corporate orientation, corporate culture, and cost implementation variables on the performance of the company to a green economy. The study also determines the role of corporate social responsibility in mediating the implementation of environmental management systems on corporate performance towards a green economy. The population used in this study is the management staff of small and medium enterprises in Solo city. Primary data was taken with a questionnaire given to 120 respondents using path analysis tools. Results of this study indicate that the corporate commitment, corporate orientation, corporate culture, and cost implementation influence of the corporate social responsibility and corporate commitment, corporate orientation, corporate culture, cost implementation and corporate social responsibility influence of the corporate performance in the prevention of water problems in the Solo city.

Keywords: corporate commitment, corporate orientation, corporate culture, cost implementation, corporate social responsibility, corporate performance
1. Introduction

The water is a vital necessity in life. Humans cannot survive without water. Water is a basic human need to look towards existence. It is cultivated and managed for the survival of future generations. Otherwise, the water availability will decrease over time owing to its limited availability of water source and uneven distribution.

The Water demand steadily increased concurrently with the increasing population, rising purchasing power, urbanization, and development in the Solo city. Unfortunately, it was not followed by adequate water supply that usually came from the use of springs Clark in Klaten Regency region which, over the period of time, experienced decline in quality and quantity. It is sad to note that nothing has been done towards improving the facilities and infrastructure to increase the quality and quantity of water. Exploitation of ground water resources has not only reduced the excessive availability of stored water (water stock) but also various other activities have degraded the quality of ground water as waste disposal (leaching) into the ground and use of hazardous chemicals for crop land through excessive fertilization by being less responsible. This clearly indicates that the chain of the hydrological cycle is lost because of the comparison between the amount of water available to the decision and implementation of ground water resources is no longer in harmony. Thus, the smaller the soil's ability to do the absorption of rain water due to reduced catchments area because the buildings are not environmentally sound that covers the catchments area that would eventually cause flooding in the rainy season and lead to decrease in ground water level and unfamiliar green behavior, making holes and biopori infiltration at the household level. The case of water resources is a matter for Cokro Tulung feud between Solo city and Klaten Regency and it demonstrates the optimal inter regional cooperation in Subosukowonosraten.

National standards covering environmental management aims to provide the elements of an effective environmental management system. It can be integrated with other management requirements and help organizations achieve environmental and economic goals. This standard intended is not to be used as non-tariff barriers to trade or to add or change the legal obligations of the organization (Indonesian National Standards, 2005).

Responsibility for environmental sustainability, economic growth, and social well being are not only the responsibility of big companies, although basically the majority of companies that are socially responsible are usually big companies. In other words, small companies must also be responsible for social responsibility in Indonesia, where, the implementation of corporate responsibility is strongly influenced by the policies and leadership of corporate social responsibility policy that will not automatically fall in accordance with the company's vision and mission. This means that if the leadership of the company have a high sense of
social responsibility, it is likely that social responsibility will be implemented, otherwise if the leadership does not have the awareness about social responsibility but merely symbolic to maintain and boost the image company in the eyes of employees and in the public eye.

The purpose of this activity to analyze the role of corporate social responsibility in the implementation of environmental management systems in terms of aspects of the company’s commitment, company orientation, corporate culture and implementation costs in an effort to prevent water problems in Surakarta views of its impact on corporate performance in environmental management.

2. Literature Review

2.1 Environmental Management

Environmental management is the overall aspect of management functions that determines and carries on the implementation of environmental policy (in ISO 140001 by Sturm, 1998). Stoner and Wankil (1986) stated that management is a process of planning, organizing, directing, controlling member businesses outlined, and the process of using organizational resources to achieve organizational objectives that have been defined. Meanwhile, according to Terry (1982), management is specific process that consists of following activities: planning, organizing, moving human resources, and other resources to achieve the stated goals. Environmental Management System (EMS) according ISO 14001 is defined as a part of overall management system which includes organizational structure, planning activities, responsibilities, implementation (practices), procedures, processes, and resources for the development, implementation achievements, reviewing and maintaining or determining environmental policy (Dalem, 2005).

According to ISO 14001, EMS is a part of overall management system that functioned to maintain and achieve environmental policy objectives. Morrison (1999), stated in the EMS that out of 100% EMS, 80% arrange / organize the issue of non-regulated environmental aspects such as energy and raw material consumption of raw material consumption, green house gas emissions, waste in solid waste, and non-point sources of pollution point sources of pollution, and 20% were aspects of the regulations or policies.

According to Sunu (2001) ISO 14001, EMS provide a process that is applied consistently and properly allocating resources according to the study / review of the existence of its environment.

2.2 Performance and Corporate Culture

According to Armstrong and Baron in Wibowo (2008), performance is the result of work that has a relationship with organization's strategic objectives, customer satisfaction, and
gives a contribution to economic resource. At the same time, Venkatraman and Ramanujam (1986) indicate that company's performance is a multidimensional construct.

Corporate culture according to Susanto, AB. (1997): “The values that guide human resources to deal with the external problems and adjustments integrate into the company, so that each member of the organization understands the values that exist and are aware as to how they should act or behave.”

Corporate culture according to Schein, H. (1992):

Corporate culture is a basic assumption device that help group’s member to solve basic problem(s) and deal with viability, both in the internal and external environment. This assists group members in preventing uncertainties. A solution to the problem that has been found which can be transferred to the next generation so that it will have a continuity.

According to Koentjoroningrat (1994), a culture itself has three levels, which is interconnected with one another. The first level of culture is in the form of objects and creations of human intelligence results (artifacts and creation). The second level is the values and ideologies in the forms of rules, principles, norms, values, and morals that guide the organization and is an asset that they want to fulfill. The third level is the basic assumption which is not realized; the state of truth and reality, humanity, human relationships with nature, human relationships, and the circumstances of time and the universe.

According to Hofstade, Geerst (1990), corporate culture is defined as a collective programming of mind, which distinguishes the members of a community with a group of other cultures. This mindset exists only in the minds of individuals, which then crystallizes and forms a shape. In turn, this shared mindset will improve mental attitude among the members of the group.

According to Schiffman and Kanuk (1997) culture is a sum total of learned beliefs, values, and customs that serve to direct consumer behavior of members of a particular society.

According to Denison, Daniel R (1990:2), corporate culture is a term that is used to interpret behavior variables that attracted a lot of research. Culture itself refers to the beliefs, values, and existing principles, which serve as the basis for managing a company.

The basic principles mentioned above supported by the management practices and behaviors that pre-exist. Corporate culture according to Denison has an influence on the effectiveness of an organization. Corporate culture can be understood from the aspect of sense of Involvement, Consistency, Adaptability, and Mission of the Company.

Marvin Bowers (1982:4) defined corporate culture with statement, “The way we doing things around here”. Corporate culture is something that is typical of a company.
2.3 Environmental Roles of CSR (CSR Role to Environment)

CSR can be understood as the commitment and effort to act ethically, operating legally, and give a contribution to economic development along with improving the quality of employees' life and their families, local communities, and broader society (Sankat, Clement K, 2002). The form of company's CSR can be varied from a charity to the activities of community development, ranging from activities with abstract nuances to the concrete forms, namely public relations, defensive strategies, and activities that are sincere, the vision of the company.

CSR debuts in Indonesia are intensified, especially after being declared firmly in the Corporate Law Number 40 of 2007, which was passed by Indonesian Parliament. It mentions that PT (Perseroan Terbatas-Limited Liability Company), which carries on business in the field and / or concerned with natural resources, shall carry out social and environmental responsibility (Article 74, paragraph 1) (Edi Suharto, 2008). Results that have been achieved and preliminary studies is shown at Table II.1.

<table>
<thead>
<tr>
<th>No</th>
<th>Title, Researcher, Year</th>
<th>Variable Analysis Method</th>
<th>Result/Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Corporate Social Responsibility and Economic Performance in The Top British Companies: are they linked?, Balabanis et al. (1998)</td>
<td>Multiple Linear Regression Analysis</td>
<td>Corporate responsibility has a positive effect on economic performance in the UK.</td>
</tr>
<tr>
<td>2</td>
<td>Using Environmental Management Systems to Increase Firms Competitiveness, Leal et al. (2003)</td>
<td>Descriptive Statistic Analysis</td>
<td>EMS affects company's competitiveness enhancement in Spain with supported voluntarily implement corporate social responsibility in compliance with applicable laws</td>
</tr>
<tr>
<td>3</td>
<td>Development and Validation of Critical Factors of Environmental Management, Yeo &amp; Quazi (2005)</td>
<td>Multiple Linear Regression Analysis and Factor Analysis</td>
<td>Commitment of top management for environmental management, total employee involvement, training, green product, supplier management, and information management are the critical factors of environmental management that affect company's environmental performance</td>
</tr>
<tr>
<td>4</td>
<td>A Study on The Impact of Environmental Management System (EMS) Certification Towards Firms’ Performance in Malaysia, Goh et al. (2006)</td>
<td>Multiple Linear Regression Analysis</td>
<td>Company’s commitment, company’s orientations, corporate culture, and costs implementation positively affects a firm’s performance</td>
</tr>
</tbody>
</table>

www.globalbizresearch.org
   - Multiple Linear Regression Analysis  
   - CSR can affect financial and non-financial performance of companies in India

   - Multiple Linear Regression Analysis  
   - There is a relationship between social environmental responsibility with the performance of the hotel industry in Spain

Source: Previous Research Studies, 2012

**Hypothesis**

1. EMS approach that includes company's commitment, company's orientation, corporate culture, and costs implementation can improve company's performance to prevent water problems in Surakarta.

2. The role of CSR can mediate the implementation of EMS to improve the integrated performance of a company, in an effort to prevent water problems in Surakarta.

**3. Research Framework**

![Research Framework](image)

**3.1 Research Methods**

The type of research is correlation by using primary data through surveys using interview techniques (direct interview or depth interview) to the respondents with the help of a structured questionnaire that contains the corporate commitment, corporate orientation,
corporate culture, cost implementation, corporate social responsibility, and corporate performance.

The population is small and medium enterprises in Surakarta. This study uses cluster-sampling method. Cluster sampling is a sampling probability of uptake by certain groups with similar characteristics. The sampling method used for this study will take a sample based on specific goals quickly (Norton, 2003). The sample used in this study is 120 respondents. The analysis technique uses path analysis model and systematically follows the equation:

\[ Y_1 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \epsilon_1 \ldots \ldots \ldots (1) \]
\[ Y_2 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 Y_1 + \epsilon_2 \ldots \ldots (2) \]

Where

- \( Y_1 \) = Corporate social responsibility
- \( Y_2 \) = Corporate performance
- \( \beta_1, \ldots, \beta_5 \) = regression coefficient
- \( X_1 \) = Corporate commitment
- \( X_2 \) = Corporate orientation
- \( X_3 \) = Corporate culture
- \( X_4 \) = Cost implementation
- \( \epsilon \) = Error

4. Results and Discussion

4.1 Testing Instrument Research & Feasibility Model

Research Instrument test model uses the tests of validity and reliability, while the feasibility test model uses tests of normality and linearity. Research instrument test results and feasibility of this model can be observed in Table 2 below:

<table>
<thead>
<tr>
<th>Testing</th>
<th>Test</th>
<th>Variable</th>
<th>Tools</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Research instrument</td>
<td>Validity</td>
<td>Corporate commitment</td>
<td>Product moment</td>
<td>Valid</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corporate orientation</td>
<td></td>
<td>Valid</td>
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<td></td>
<td>Corporate culture</td>
<td></td>
<td>Valid</td>
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<td></td>
<td></td>
<td>Cost implementation</td>
<td></td>
<td>Valid</td>
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<td></td>
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<td>Corporate social responsibility</td>
<td></td>
<td>Valid</td>
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<td></td>
<td></td>
<td>Corporate performance</td>
<td></td>
<td>Valid</td>
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<tr>
<td></td>
<td>Reliability</td>
<td>Corporate commitment</td>
<td>Cronbach Alpha</td>
<td>Reliabel</td>
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<tr>
<td></td>
<td></td>
<td>Corporate orientation</td>
<td></td>
<td>Reliabel</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Corporate culture</td>
<td></td>
<td>Reliabel</td>
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<td></td>
<td></td>
<td>Cost implementation</td>
<td></td>
<td>Reliabel</td>
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<td></td>
<td></td>
<td>Corporate social responsibility</td>
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<td>Reliabel</td>
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<tr>
<td></td>
<td></td>
<td>Corporate performance</td>
<td></td>
<td>Reliabel</td>
</tr>
<tr>
<td>Model Feasibility</td>
<td>Normality</td>
<td>Corporate commitment, corporate orientation, corporate culture, cost implementation and corporate social responsibility</td>
<td>Kolmogorov smirnov test</td>
<td>Normal</td>
</tr>
<tr>
<td></td>
<td>Linerity test</td>
<td>Corporate commitment, corporate orientation, corporate culture, cost</td>
<td>Langrange Multiplier</td>
<td>Model linear</td>
</tr>
</tbody>
</table>
Sources: data analysis, 2012

The test results by using test instrument validity study shows that all the variables in the research status are valid and reliable, while testing the feasibility of the model shows that the research data are in the normal state and the linear model.

4.2 Hypothesis Test

Hypothesis testing is performed by using regression 2 stages namely first and second regression. The results of testing:

1. $H_1$ indicates that corporate commitment influenced on corporate social responsibility;
2. $H_2$ shows the corporate orientation effect on the corporate social responsibility;
3. $H_3$ suggests the corporate culture effect on corporate social responsibility;
4. $H_4$ suggests the cost implementation effect on corporate social responsibility;
5. $H_5$ indicates the corporate commitment influenced on the corporate performance;
6. $H_6$ suggests the corporate orientation influenced on the corporate performance;
7. $H_7$ points that corporate culture influenced on the corporate performance;
8. $H_8$ represents that the cost implementation influenced on the corporate performance;
9. $H_9$ indicates that corporate social responsibility influenced on the corporate performance.

4.3 Discussion

4.3.1 The corporate commitment influenced toward corporate social responsibility

The test results demonstrates that the corporate commitment influenced corporate social responsibility with standardized values .235 and significance value of .036 < .05. Results of this study indicate that the corporate commitment to the prevention water problems in Surakarta is required with the active participation of the company in a sustainable manner through awareness biopori make a hole, make infiltration wells and planting trees around the area of corporate peacock. The corporate is expected to help develop a community committed to helping people to encourage more measures that are preventive and early detected to prevent water problems in the Solo city.

4.3.2 The corporate orientation influenced toward corporate social responsibility

The test results indicate the corporate orientation effect on the corporate social responsibility with standardized values .269 and significance value of .027 < .05. Results of this study indicate the orientation of companies in difficulty precautionary preventive measures in Surakarta clean water is needed through cleaner production company, focuses on the efficient use of resources such as savings and increasing productivity, and reduced waste and emissions exploitation increasing productivity, decrease the amount of garbage, waste and emissions and water use reduction exploitation. Efforts by the company are expected to maintain the water quality in the area around the company.
4.3.3 The corporate culture influenced toward corporate social responsibility

The test results showed an effect on corporate culture corporate social responsibility with standardized values .244 and significance value of .046 < .05. Results of this study indicate that the corporate culture in the prevention preventive water problems in Solo city desperately needed a way to help change employee behavior campaigning movement to focus more on improving high concern on the environment, provide a strong motivation to implement environmental management systems employees. Efforts are made each company is expected to be more creative and innovative as improved recycling processes, maximizing the use of renewable materials and improving product life cycle and increase the intensity of services.

4.3.4 The cost implementation influenced toward corporate social responsibility

The test results indicate the cost implementation influenced the corporate social responsibility with standardized values .331 and significance value of .014 < .05. Results of this study indicate that the cost of implementation of preventive measures in the prevention of water problems Solo city is necessary through joint fundraising activities undertaken by associations of enterprises in Solo city to support a variety of activities aimed at conservation of water resources in Solo city.

4.3.5 The corporate commitment influenced toward corporate performance

The corporate commitment influenced the corporate performance. The test results demonstrate the corporate commitment which influenced the corporate performance of the standardized value of .374 and a significance value of .000 < .05. Results of this study indicate that the corporate commitment for the prevention water problems in Solo city is needed through implementation of environmental conservation, environmental governance by implementing efforts to reduce water pollution through environmental management systems and facilitate water conservation activities in Solo Raya.

4.3.6 The corporate orientation influenced toward corporate performance

The test results indicate the corporate orientation influenced toward the corporate performance with the standardized value of .162 and significance value of .030 < .05. Results of this study indicate that the orientation of companies in difficulty, precautionary and preventive measures of water in Solo city needs to be done through capacity building of human resources in the field of EMS and pollution prevention principles environments. It has to be done emphasizing on industrial activities in each company, making the program much more cleaner production as a best alternative in improving the competitiveness of the company because it will lower the cost of production so that the resulting product will be competitive.
4.3.7 The corporate culture influenced toward corporate performance

The test results indicate that corporate culture influenced the corporate performance with standardized values .481 and significance value of .000 < .05. Results of this study indicate that the corporate culture in the prevention of water problems in Solo city needs to be done through changing the behavior of employees and improving employee ethics and morals to make savings in the use of water. It also aids to minimize the use of water not only to recycle it but by exchanging by product among the companies that are in the industrial area. This approach is an important factor. Examples of waste water management that has been recycled and then used for washing or toilet sanitation in the region.

4.3.8 The cost implementation influenced toward corporate performance

The test results indicate the cost implementation influenced the corporate performance with standardized values of .234 and significance value of .039 < .05. Results of this study indicate that the cost of implementation of preventive measures in the prevention of water problems in Solo city needs to be done by improving the allocation of water resources. Conservation of water and environmental costs are sourced from the net profit of the company. Therefore, the company is expected to be more efficient with the required knowledge to integrate with natural systems that minimize the impact-impact on the environment through reduced operating costs that include the use of certain raw materials, water, and energy efficiently. This would help the company benefit from an economic standpoint.

4.3.9 The corporate social responsibility influenced the corporate performance

The test results demonstrates that corporate social responsibility influenced the corporate performance with standardized values of .476 and significance value of .000 < .05. Results of this study indicate that corporate social responsibility in the prevention of water problems in Surakarta needs to be accomplished through increased integration with the surrounding community. Good inter-personal relationships within the communities should provide many benefits to the region through better government services, the development of educational systems and others. This activity should be able to provide a return value to the surrounding community through things like the institution as a business incubator for new businesses or things that can encourage surrounding communities to participate in community building or expanding their own to be more concerned about water.

5. Conclusion

Based on the analysis and discussion, it can be concluded that the corporate commitment, corporate orientation, corporate culture, and cost implementation influenced the corporate social responsibility and corporate commitment. Corporate orientation, corporate culture, cost
implementation, and corporate social responsibility influenced the corporate performance in the prevention of water shortages net in Solo city.

Notices and awareness can be generated to prevent water problems in Solo city by providing strict punishment to companies that do not conserve water resources. And that which does not implement a transparent tax ground water especially for malls and five-star hotels. City government can immediately facilitate to bring together all its stakeholders in Solo city in particular and in general to find the best solution in early detection and prevention of water problems in the Solo city. The corporate must work towards conservation of water resources by making a hole biopori, planting Ficus Benyamina, and Caesalpinia pulcherrima.

Acknowledgement

Thank you Prof. Indah Susilowati for the advises address to this paper. This research is funded by Sebelas Maret University on 2013.

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