

ABSTRACT

Lots of damage has occurred due to company activities that cause disadvantages to both the community, the government, and the company itself. So that, the company is not only concerned with profit but also the environment and social for the company sustainability in the future. Information about this company is obtained from the annual report, but there is also a sustainability report which contains deeper information about Corporate Social Responsibility (CSR) activities. Disclosures made by the company in the sustainability report can be used to assess the company's sustainability performance. While the annual report issued by the company can illustrate the diversity of the board and the characteristics of the company. The diversity of the board can be described with several variables, two of which are board tenure and board age. In addition, company characteristics can be described by several variables such as company size, profitability, leverage, and liquidity.

This study aims to find out how to predict company sustainability using Artificial Neural Networks (ANN). In addition, this study also looks at the relationship of board tenure, board age, company size, profitability, leverage, and liquidity in predicting sustainability of Asia Sustainability Reporting Rating (ASRR) participats in Indonesia period 2009-2018.

Previous studies state that ANN is considered to provide accurate results in predictions. Therefore, this study uses ANN modeling for predicting sustainability. Company sustainability is assessed by analyzing sustainability performance in the Company's Sustainability Report based on the Global Reporting Initiatives (GRI) G4 guidelines.

The results of predictions using ANN indicate that company size, liquidity, and leverage contribute more than 50% in predicting company sustainability. Meanwhile, profitability, board age, and board tenure contribute less than 50%.

Based on the results of the study, the company should maintain the size of the company because it has the highest contribution in predicting the company's sustainability performance.. However, stakeholders can consider existing company size, liquidity, and leverage because the contributions of the three are quite high in predicting the sustainability of the company.

Keywords: sustainability, ASRR, artificial neural network