How does Climate Policy Uncertainty predict the BSE 100 ESG? An Application of Artificial Neural Network

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Abstract

This study uses monthly data on the climate policy uncertainty (CPU) index along with BSE 100 ESG to study the prediction of CPU on BSE 100 ESG in the light of ESG reporting under sustainability. The multilayer perceptron (MLP) model under Artificial Neural Network (ANN) is used to study the prediction. The period of the study begins in December 2017 and continues up to August 2023 with 68 observations. The descriptive test indicates that the data are non-normal in nature with high kurtosis values indicating non-linear features. The model is found to be valid. The accuracy in training is 80.9% and the accuracy in testing is 19.1%. The model's training accuracy is typically greater than its testing accuracy. The study also provides the predicted values of the multilayer perceptron (MLP) model.

Keywords: climate policy uncertainty, BSE 100 ESG, Artificial Neural Network, multilayer perceptron, prediction

JEL Classifications: B22, C45, C87, D53, E37, E44

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