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Applying wrapper-based variable selection techniques to predict MFIs profitability: evidence from Peru

(Article in press ⓘ)

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Abstract

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In this paper, we analyse the main factors explaining the profitability (ROA) of Microfinance Institutions (MFIs) in Peru from 2011 to 2107. We apply three wrapper techniques to a sample of 168 Peruvians MFIs and 69 attributes obtained from MIX Market database. After running the algorithms M5', knearest neighbours (KNN) and Random Forest, we find that the M5' algorithm provides the best fit for predicting ROA. Particularly, the key variable of the regression tree is the percentage of expenses over assets and, depending on its value, it is followed by net income after taxes and before donations, or profit margins. © 2021 Informa UK Limited, trading as Taylor & Francis Group.

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