

Semiparametric Model Averaging by Mallows C_p criterion

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Abstract

This paper proposes a method of averaging linear estimators for semiparametric models. The averaging weights are chosen to minimize Mallows C_p -type criterion. We derive Mallows criterion by calculating the estimates of the mean of the squared errors of the fitted value from the averaged linear estimators. Following Liu, Okui and Yoshimura (2013), we show that this method achieves asymptotic optimality for forecasting nonparametric part of the model, although our method combines estimators involving nonparametric estimators.

JEL classification: C51, C52

Keywords: model averaging, semiparametric models, asymptotic optimality, Mallows C_p .

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