

Small sample properties of a ridge regression estimator when there exist omitted variables

Ryo Uemukai*

Abstract

In this paper, we derive the exact formulae for moments of the ridge regression estimator proposed by Huang (1999), when there exist omitted variables. We show the conditions under which the ridge regression estimator has smaller MSE than the ordinary least squares estimator. Based on the exact formulae for moments, we compare the bias and MSE performances of both estimators by numerical evaluations.

Keywords: Ridge regression; Omitted variables; Mean squared error (MSE)

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*Graduate School of Economics, Kobe University, Rokkodai, Nada-ku, Kobe 657-8501, Japan