Ann. Inst. Statist. Math.
Vol. 55, No. 3, 585–595 (2003)

EMPIRICAL LIKELIHOOD FOR PARTIAL LINEAR MODELS

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(Received December 12, 2001; revised October 15, 2002)

Abstract. In this paper the empirical likelihood method due to Owen (1988, *Biometrika*, **75**, 237–249) is applied to partial linear random models. A nonparametric version of Wilks' theorem is derived. The theorem is then used to construct confidence regions of the parameter vector in the partial linear models, which has correct asymptotic coverage. A simulation study is conducted to compare the empirical likelihood and normal approximation based method.

Key words and phrases: Empirical likelihood, partial linear model, Wilks' theorem.

*Research supported by NNSF of China and a grant to the first author for his excellent Ph.D. dissertation work in China.

**Research supported by Hong Kong RGC CERG No. HKUST6162/97P.