

论文

## ASYMPTOTICS OF THE “MINIMUM L<sub>1</sub>-NORM” ESTIMATES IN A PARTLY LINEAR MODEL

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**摘要** This paper is concerned with the L<sub>1</sub>-norm estimators for the partly linear model where  $(T_1, X_1, Y_1), \dots, (T_n, X_n, Y_n)$  are independent random  $(d+2)$ -vectors such that  $K_i$  is real-valued,  $X_i$  is a  $d$ -vector of explanatory variables, and  $T_i$  is another explanatory variable ranging over a nondegenerate compact interval;  $u_i$  is a random error;  $\beta_0$  is a  $d$ -vector of parameters; and  $g_0(\cdot)$  is an unknown function, which is  $m(\geq 0)$  times continuously differentiable and its  $m$ th derivative satisfies a Holder condition with exponent  $\gamma \in (0, 1]$ . A piecewise polynomial is used to approximate  $g_0(\cdot)$ . The considered estimators of  $\beta_0$  and  $g_0(t)$  are respectively and satisfying where is a class of piecewise polynomials of degree  $m$ . Under some mild conditions, it is shown that the underlying estimators attain the convergence rate where being a constant in Condition A4.

**关键词** [Partly linear model](#), [global rate of conv](#)

分类号

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**Key words** [Partly linear model](#) [global rate of convergence](#) [piecewise polynomial](#) [L<sub>1</sub>-norm estimates](#)

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