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有重复观测的变系数EV模型的参数估计

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On Parameter Estimation for Varying-coefficients EV Model with Replicated Observations

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摘要 构造了有重复观测的变系数EV模型中的诸多参数估计, 包括系数函数、测量误差方差以及测量误差与回归误差 的协方差等估计, 去除了有关测量误差方差已知或可靠比已知的假定. 在一些较弱的条件下, 证明了所有的这些估计都是强相合的, 同时 获得了系数函数估计的渐近正态性以及收敛速度.

关键词: 变系数EV模型 测量误差 重复观测

Abstract: Removing the assumption that measurement error variance or reliability ratio is known, we propose the adjust weighted LS estimators (AWLSE) for the estimated parameters of varying-coefficients EV model with replicated observations as well as the variance of model error. Under some mild conditions, we conclude that all of these estimators are strongly consistence and coefficient function estimators are asymptotically normal.

Key words: varying-coefficient EV model measurement error replicated observations

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