

## THE NONSTATIONARY INAR(1) PROCESS WITH MOVING AVERAGE COMPONENTS

Kaizhi Yu<sup>1</sup>, Hong Zou<sup>2</sup> and Daimin Shi<sup>1</sup>

<sup>1</sup>Statistics School, Southwestern University of Finance  
and Economics, Chengdu, 611130, China

<sup>2</sup>School of Economics, Southwestern University of Finance  
and Economics, Chengdu, 611130, China

Corresponding author email: kaizhiyu.swufe@gmail.com

**Abstract.** A new nonstationary INAR(1) process which innovation follows a first order moving average process is investigated, where the autoregressive coefficient is one. It is shown that the limit distribution of CLS estimators about the autoregressive coefficient of auxiliary regression process is no longer the functional of Weiner process, but convergence to the true value in distribution. Monte Carlo simulation is also used to verify the reasonableness of the conclusions.

**Keywords.** Integer-valued time series; Nonstationary; Conditional least squares; limit distribution.

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