

# Decomposition of the linear feedback model for count panel data

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**Abstract:** This paper proposes a new estimator for the linear feedback model (LFM), which is one kind of dynamic count data models, in the case of large number of individuals and fixed number of time periods. The new estimator is a GMM estimator, based on two types of the moment restrictions generated after decomposing the LFM; those used for estimating the simple standard dynamic panel data model and those used for estimating the panel data model with multiplicative fixed effects. Although the new estimator requires (for the consistent estimation) the stationary and strict-exogenous explanatory variables composed of the fixed effects and the serially independent disturbances, a requisite and some assumptions necessary for the PSM estimator (which is an efficient estimator in small samples) are not required. Some Monte Carlo experiments exhibit that the new estimator performs well in the small samples.

**Keywords:** count panel data; linear feedback model; stationary and strict-exogenous explanatory variables composed of the fixed effects and the serially independent disturbances; decomposition of regression equations; generalized method of moments

**JEL classification:** C23

**Link to the paper:**

<http://www.ip.kyusan-u.ac.jp/keizai/staff/kitazawa/UPB/lfm20060508.pdf>

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