

[Available Issues](#) | [Japanese](#)>> [Publisher Site](#)Author: Keyword:

Search

[ADVANCED](#)[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1348-6365

PRINT ISSN : 1882-2754

JOURNAL OF THE JAPAN STATISTICAL SOCIETY

Vol. 38 (2008) , No. 1 Special Issue Celebration Volume for Akaike pp.131-143

[\[PDF \(150K\)\]](#) [\[References\]](#)**Efficient Estimation and Model Selection for Grouped Data with Local Moments**Kohtaro Hitomi¹⁾, Qing-Feng Liu²⁾, Yoshihiko Nishiyama²⁾ and Naoya Sueishi³⁾1) *Kyoto Institute of Technology*2) *Kyoto University*3) *University of Wisconsin-Madison*

Abstract: This paper proposes efficient estimation methods of unknown parameters when frequencies as well as local moments are available in grouped data. Assuming the original data is an i.i.d. sample from a parametric density with unknown parameters, we obtain the joint density of frequencies and local moments, and propose a maximum likelihood (ML) estimator. We further compare it with the generalized method of moments (GMM) estimator and prove these two estimators are asymptotically equivalent in the first order. Based on the ML method, we propose to use the Akaike information criterion (AIC) for model selection. Monte Carlo experiments show that the estimators perform remarkably well, and AIC selects the right model with high frequency.

Key words: AIC, GMM, grouped data, local moments, MLE, model selection

[\[PDF \(150K\)\]](#) [\[References\]](#)Download Meta of Article [\[Help\]](#)[RIS](#)[BibTeX](#)

To cite this article:

Kohtaro Hitomi, Qing-Feng Liu, Yoshihiko Nishiyama and Naoya Sueishi; "Efficient Estimation and Model Selection for Grouped Data with Local Moments", *JOURNAL OF THE JAPAN STATISTICAL SOCIETY*, Vol. **38**, pp.131-143 (2008) .



[Japan Science and Technology Information Aggregator, Electronic](#)

