

应用数学, 统计学

## 一般线性模型中参数的平衡广义LS估计

邱红兵<sup>1</sup>, 罗季<sup>2,3</sup>

1. 广东工业大学应用数学系, 广州510006; 2. 华东师范大学金融与统计学院, 上海 200062; 3. 浙江财经学院数学与统计学院, 杭州310018

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**摘要** 基于平衡损失的思想, 对一般线性模型提出了一种全面地度量估计优良性的标准, 给出了在此标准下回归系数的平衡广义最小二乘估计, 并讨论了其优良性. 得到了该估计为无偏估计的充分必要条件, 以及在一定条件下, 在均方误差损失的准则下平衡广义最小二乘估计优于最佳线性无偏估计的充分必要条件.

**关键词** [线性模型](#) [参数估计](#) [平衡LS估计](#) [均方误差矩阵](#) [最佳线性无偏估计](#)

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## Balanced generalized LS estimation of the regressive coefficient

QIU Hong-bing<sup>1</sup>, LUO Ji<sup>2,3</sup>

1. Faculty of Applied Mathematics, Guangdong University of Technology, Guangzhou 510006, China; 2. School of Finance and Statistics, East China Normal University, Shanghai 200062, China; 3. School of Mathematics and Statistics, Zhejiang University of Finance and Economics, Hangzhou 310018, China

### Abstract

Based on the idea of balanced loss function, a new measuring standard for the estimations of uperiorities was proposed for general linear models. Under the new standard, the balanced generalized LS estimation of the regressive coefficient was derived. The necessary and sufficient condition for its unbiasedness was discussed and its superiority over BLUE in terms of the mean square error matrix criterion was studied.

**Key words** [linear model](#) [parameter estimation](#) [mean square error matrix criterion](#) [balanced LS estimation](#) [best linear unbiased estimation](#)

DOI:

通讯作者 罗季 [luoji0409@126.com](mailto:luoji0409@126.com).

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