

论文

A TEST FOR SPHERICITY OF ERRORS IN LINEAR MODELS

WANG Songgui (1), YANG Zhenhai (2)

(1)(Institute of Statistics, Beijing Polytechnic University, Beijing 100022, China)(Institute of Applied of Mathematics, Academia Sinica, Beijing 100080, China);(2)Institute of Statistics, Beijing Polytechnic University, Beijing 100022, China

收稿日期 修回日期 网络版发布日期 接受日期

摘要 For a general linear model, spherical distributions are often considered when errors do not have normal distribution. Several authors[1-3] studied the least squares and James-Stein estimations for a linear model whose errors follow multivariate t or more general spherical distributions. In this paper the test problem for sphericity of errors is considered. We propose an exact test for the sphericity by using the conditional probability integral transformation and another transformation. As an important special case, the corresponding test statistics for multivariate t distribution are obtained.

关键词 [Spherical distribution, multivariate t-d](#)

分类号

A TEST FOR SPHERICITY OF ERRORS IN LINEAR MODELS

WANG Songgui(1), YANG Zhenhai(2)

(1)(Institute of Statistics, Beijing Polytechnic University, Beijing 100022, China)(Institute of Applied of Mathematics, Academia Sinica, Beijing 100080, China);(2)Institute of Statistics, Beijing Polytechnic University, Beijing 100022, China

Abstract For a general linear model, spherical distributions are often considered when errors do not have normal distribution. Several authors[1-3] studied the least squares and James-Stein estimations for a linear model whose errors follow multivariate t or more general spherical distributions. In this paper the test problem for sphericity of errors is considered. We propose an exact test for the sphericity by using the conditional probability integral transformation and another transformation. As an important special case, the corresponding test statistics for multivariate t distribution are obtained.

Key words [Spherical distribution](#) [multivariate t-distribution](#) [conditional probability integral transformation](#)

DOI:

通讯作者

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(0KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“Spherical distribution, multivariate t-d”的 相关文章](#)
- ▶ [本文作者相关文章](#)
- [WANG Songgui](#)
- [YANG Zhenhai](#)