

产品、研发、测试

成本估算模型的数据诊断与处理

姚珊珊, 魏法杰

北京航空航天大学 经济管理学院,北京 100083

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摘要 提高产品成本估算模型精确度的关键技术是如何进行原始数据的预处理和诊断。对成本原始数据进行了时间价值和 Learning Curve 效应的修正,并采用矩阵的奇异值分解和方差分解比诊断法进行数据的多重共线性诊断,分别采用帽子矩阵法和剔除后的 t 化残差进行自变量、因变量异常值诊断,用库克距离进行强影响值的诊断,保证了模型所用数据满足要求,提高了模型的精度。

关键词 [成本估算](#) [数据诊断](#) [多重共线性](#) [异常值](#) [强影响值](#)

分类号

Data diagnosis and processing for cost estimate model

YAO Shan-shan, WEI Fa-jie

School of Economics and Management, Beijing University of Aeronautics and Astronautics, Beijing 100083, China

Abstract

The key technology to improve the precision of the cost estimate model is how to pre-process and diagnose the raw cost data. The raw cost data were modified with the value of time and learning curve effect, and then diagnosed with singular value decomposition and variance decomposition ratio for multicollinearity. Hat matrix and eliminated t-variance were adopted to distinguish the value out of the ordinary from independent variable and dependent variable respectively. The influential cases were discriminated with Cook's distance. The data were guaranteed to fit the demand of the model, and the precision of this model was improved.

Key words [cost estimate](#) [data diagnosis](#) [multicollinearity](#) [value out of the ordinary](#) [influential cases](#)

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通讯作者 姚珊珊 [E-mail: ivyao@163.com](mailto:ivyao@163.com)

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