J-STAGE

My J-STAGE
Sign In

JOURNAL OF THE JAPAN STATISTICAL SOCIETY

JAPAN STATISTICAL SOCIETY

Available Issues | Japanese   >> Publisher Site

Author: [____]   Keyword: [____]   Search   ADVANCED

Add to Favorite/Citation Articles Alerts   Add to Favorite Publications   Register Alerts   My J-STAGE HELP

TOP > Available Issues > Table of Contents > Abstract

[PDF (254K)] [References]

A KNOWLEDGE-BASED VARIABLE SELECTION METHOD FOR BOX-COX TRANSFORMATION

Haruo Onishi[1]

1) Institude of Policy and Planning Sciences, University of Tsukuba

Abstract: In actual applications of regression analysis, users face two difficult problems. One is to find the most appropriate functional form, while the other is to search for the best subset derivable from a given set of all possible explanatory variables. Variable selection for the Box-Cox transformation may be useful to concurrently solve both problems. The purpose of this paper is to (1) concretely formulate the j-th OLS-best subset problem for the Box-Cox transformation, (2) introduce a knowledge-based computational method to solve it and (3) propose a solution to the (first) OLS-best subset problem (j=1) or one selected by a user among solutions to the first j OLS-best subset problems (j>1) solved in a run of a computer as a solution to a variable selection problem for the Box-Cox transformation. The integer j, specified by the user, depends on his scientific knowledge, criteria for statistical and data-analytic tests and model-building experience.

Key words: Regression analysis, Box-Cox transformation, variable selection, j-th best subset problem, variable classification, meaningful subset, practically best regression equation, intellectual statistical system OEPP

[PDF (254K)] [References]

Download Meta of Article[Help]
RIS
BibTeX

To cite this article:

Japan Science and Technology Information Aggregator, Electronic