統計科學研究所

INSTITUTE OF STATISTICAL SCIENCE

博 士 後 演 講

講　題：Statistical inference for failure time data from a two-phase probability-dependent sampling scheme

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時　間：2023年5月10日(星期三)，14:00-15:00

地　點：中央研究院統計科學研究所 B1F 演講廳

Abstract

Some large cohort studies could cost hundreds of millions of dollars. Due to the limited budget, researchers are seeking for cost-effective designs. In this paper, we consider a two-phase probability dependent sampling scheme for failure time data, where one selects a simple random sample at the first phase and targets more informative subjects based on a certain probability at the second phase. Simulation studies show that the proposed estimator outperformed two competitive estimators, one from a simple random sample of the same sample size and the other from the outcome-dependent sampling design. We also develop the optimal allocation of the subsamples for the two-phase probability dependent sampling scheme under the fixed sample size. We then apply our proposed design and estimator to the Busseltion Health Study.

Keywords：two-phase probability dependent sampling; failure time data; accelerated failure time model; optimal design

※ 茶 會：15：00開始　　　　　　※ 中文演講，實體與線上視訊同步進行。