

[Available Issues](#) | [Japanese](#)

>> [Publisher Site](#)

Author:

Keyword:

Search

[ADVANCED](#)



[TOP](#) > [Available Issues](#) > [Table of Contents](#) > [Abstract](#)

ONLINE ISSN : 1348-6365

PRINT ISSN : 1882-2754

JOURNAL OF THE JAPAN STATISTICAL SOCIETY

Vol. 34 (2004) , No. 2 pp.153-172

[\[PDF \(214K\)\]](#) [\[References\]](#)

Unbiased Estimation of Functionals Under Random Censorship

Akio Suzukawa¹⁾

1) Graduate School of Economics and Business Administration, Hokkaido University

Abstract: This paper is intended as an investigation of estimating functionals of a lifetime distribution F under right censorship. Functionals given by $\int \varphi dF$, where φ 's are known F -integrable functions, are considered. The nonparametric maximum likelihood estimator of F is given by the Kaplan-Meier (KM) estimator F_n , where n is sample size. A natural estimator of $\int \varphi dF$ is a KM integral, $\int \varphi dF_n$. However, it is known that KM integrals have serious biases for unbounded φ 's. A representation of the KM integral in terms of the KM estimator of a censoring distribution is obtained. The representation may be useful not only to calculate the KM integral but also to characterize the KM integral from a point view of the censoring distribution and the biasedness. A class of unbiased estimators under the condition that the censoring distribution is known is considered, and the estimators are compared.

Key words: Censored data, Kaplan-Meier estimator, mean lifetime, product-limit estimator, survival data

[\[PDF \(214K\)\]](#) [\[References\]](#)

Download Meta of Article [\[Help\]](#)

[RIS](#)

[BibTeX](#)

To cite this article:

Akio Suzukawa; "Unbiased Estimation of Functionals Under Random Censorship",
JOURNAL OF THE JAPAN STATISTICAL SOCIETY, Vol. **34**, pp.153-172 (2004) .



[Japan Science and Technology Information Aggregator, Electronic](#)

