

The Comparison of Sampling Precision under the Cost Fixed Condition

Pang Zhiqiang^{1,3}, Wang Lixia²

¹School of statistics Lanzhou University of Finance and Economics, Lanzhou, Gansu, China

²School of statistics Lanzhou University of Finance and Economics, Lanzhou, Gansu, China

³Corresponding author: Pang Zhiqiang, e-mail: pangzhq@lzcc.edu.cn

The basic criterion of determine optimum sampling scheme should be that achieving the highest precision in the approved cost range, or achieving the required accuracy by the lowest cost. However in practices, we expect for maximum accuracy through the sampling design under the costs fixed condition commonly. This paper researches the sampling accuracy of probability sampling when the costs fixed. At the same time, this paper gives the conditions which some complex sampling designs are more effective than simple random sampling.

Key words: cost function; covariance function; probability sampling; sampling precision