Modi?ed Stringer Bound For Monetary-Unit Sampling in Financial Auditing

Y. Bimpeh and J. M. Horgan
School of Computer Applications, Dublin City University.

24th. April 2002

Abstract

Estimating the error bound in highly skewed accounting populations is non-trivial. Several statistical methods proposed so far are less than satisfactory in terms of achieving tightness or reliability or both. The Stringer bound, the most widely used non-parametric bound for the total error amount in an accounting population, achieves reliable coverage at the expense of tightness. This may incur extra auditing costs by causing unnecessary follow up investigations for populations with immaterial error. In this paper we seek to address this problem of balance between tightness and reliability by proposing a modification of the Stringer bound for estimating the error bound in financial auditing. A simulation study, using a real accounting population, incorporating a variety of taint distributions was carried out to compare the performance of modi?ed Stringer bound and the Stringer bound. The results show that the modi?ed Stringer bound is reliable and is substantially less conservative than the Stringer bound for populations with small or moderate error rate. Furthermore, the modi?ed Stringer bound has less variability. For larger sample, the Stringer bound has similar variability to modi?ed Stringer bound.