

Selection Models for Discrete and Other Non-Gaussian Response Variables by A.Azzalini, H.M.Kim and H.J.Kim

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Abstract

Consider observation of a phenomenon of interest subject to selective sampling due to a censoring mechanism regulated by some other variable. In this context, an extensive literature exists linked to the so-called Heckman selection model. Most of this work has been developed under Gaussian assumption of the underlying probability distributions; among the few exceptions, an even smaller number of contributions has dealt with the case of a discrete response variable. We examine a fairly general construction which encompasses a variety of situations, in the continuous and the discrete case, with various options of the selection mechanism. Inferential methods based on the pertaining likelihood function are developed.