

Some Approaches to Estimation Under Bivariate Random Censoring

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Abstract

We consider efficient estimation of linear functionals of a bivariate distribution function when each component variable is subject to random censoring. This problem has a long history, and a few well-known efforts are the estimators proposed by Dabrowska (1988), van der Laan (1996), Prentice et al (2004) etc. We propose three plug-in approaches here, the first of which is similar in spirit to the Dabrowska (1988) estimator and the second is related to self-consistency. The third is a modification of the Prentice et al (2004) method. All lead to explicit and monotonic estimators. We also present some results on their linearisation under complete independence of all the variables.

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