

Asymptotic distributions of BJE in linear regression models with mixed interval–censored data *

CUIXIAN CHEN †

Abstract

We consider the estimation problem with mixed interval–censored (MIC) data under the multiple linear regression model. The Buckley–James(1979) type of estimator (BJE) has been extended from right–censored data to interval–censored data by Rabinowitz *et. al.* (1995). We establish that the BJE has an asymptotic normal distribution under certain discrete regularity conditions. The real data examples of discrete data are given and various non-normal asymptotic distributions of the BJE are also presented when the regularity conditions are violated.

**Received:* May 5, 2006; *Accepted:* September 26, 2006.

Key words and phrases: Linear regression, mixed interval censorship, consistency, asymptotic normality.

AMS 2000 subject classifications. Primary 62J05; secondary 62N01.

†*Mailing Address:* Department of Mathematical Sciences, SUNY, Binghamton, NY 13902, USA