

**Arickx, Frans; Broeckhove, Jan; Dejonghe, Muriel; van den Broeck, Julien**

**BSFM: a computer program for Bayesian stochastic frontier models.** (English) Zbl 0885.62073

Comput. Stat. 12, No. 3, 403-421 (1997).

The model  $y_i = h(x_i, \beta) + v_i - z_i$  is considered, where  $y_i \in \mathbb{R}$ ,  $x_i \in \mathbb{R}^d$ , are known (observations),  $\beta \in \mathbb{R}^k$  is an unknown vector parameter,  $v_i$  are normally  $(0, \sigma^2)$  distributed,  $z_i$  are gamma distributed with the shape parameter  $j$  ( $j = 1, 2, 3$ ) and the unknown scale parameter  $\lambda$ ,  $h$  is a known function (frontier). A C++ program is described which performs Monte-Carlo iterative calculations of the a posterior distribution of  $\beta$ . Results of empirical data analysis are presented for a linear model of the frontier.

Reviewer: R.E.Maiboroda (Kyiv)

**MSC:**

62J02 General nonlinear regression

62-04 Software, source code, etc. for problems pertaining to statistics

65C99 Probabilistic methods, stochastic differential equations

62F15 Bayesian inference

Cited in 1 Document

**Keywords:**

Bayesian estimation; Monte-Carlo methods

**Software:**

BSFM