

**Küchenhoff, H.**

**The identification of logistic regression models with errors in the variables.** (English)

Zbl 0817.62058

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Summary: The single logistic regression model with normal measurement error and normal regressor is shown to be identifiable without any extra information about the measurement error. The multiple logistic regression model, with more than one regressor variable measured with error is not identifiable. If the covariance matrix of the measurement error is known up to a scalar factor, the model is identified. Further we discuss why in spite of the identifiability the models cannot be estimated in a reasonable way without extra information about the measurement error.

**MSC:**

62J12 Generalized linear models (logistic models)

Cited in 4 Documents

**Keywords:**

errors in variables; single logistic regression model; normal measurement error; normal regressor; multiple logistic regression model; identifiability

**Full Text:** [DOI](#)

**References:**

- [1] R.J. Carroll, C.H. Spiegelman, K.K.G. Lan, K.T. Bailey, and R.D. Abbott. On errors in variables in binary regression models. *Biometrika*, 71:19–26, 1984. · [Zbl 0566.62093](#) · [doi:10.1093/biomet/71.1.19](#)
- [2] H. Küchenhoff. *Logit- und Probitregression mit Fehlern in den Variablen*. Volume 117 of *Mathematical Systems in Economics*. Verl. A. Hain, Frankfurt am Main, 1989.

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