FIML estimation of an endogenous switching model for count data

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Abstract. This paper presents code for fitting a FIML endogenous switching Poisson count model for cross-sectional data in Stata 7: the `espoisson` command. The Poisson process depends on an unobserved heterogeneity term, $\xi$; a set of explanatory variables, $x$; and an endogenous dummy, $d$. The endogenous dummy depends on an unobserved random term, $\nu$. Correlation between $\xi$ and $\nu$ is allowed. If a model with exogenous $d$ is fitted instead, correlation between $\xi$ and $\nu$ will result in simultaneous equation bias. The endogenous switching model corrects this problem. After describing the underlying econometric theory behind the command, an example is discussed.

Keywords: st0057, count models, endogenous switch, sample selection