Example 3: Estimations of the panel logit models explaining female labor participation using a fictitious dataset

The definitions of variables are inherited from those in the manuals “dfelrtna.pdf” and “dfelrtnb.pdf”.

**Dataset**

: fls1986 - fls1993 (female labor supply: 1=supply; 0=no supply, from 1986 to 1993)

: hdbt1986 - hdbt1993 (log of husband’s debt, from 1986 to 1993)

: hinc1986 - hinc1993 (log of husband’s income, from 1986 to 1993)

(Number of individuals )

The model when using the program “dfelrtna.tsp” described later is appropriate for this dataset. True values of parameters generating this dataset are





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In the file “prma.tsp”, the command

set tds = 0 ;

is used in order to rule out the time dummies from the model and further the statements of setting the starting values are commented out using “?” to avoid any misunderstanding, as follows:

?set dtd1988\_min = -2 ; set dtd1988\_max = 2 ;

?set dtd1989\_min = -2 ; set dtd1989\_max = 2 ;

?set dtd1990\_min = -2 ; set dtd1990\_max = 2 ;

It should be noted that the Wald test statistics are not calculated after running “dfelrtna.tsp” and “dfelrtnb.tsp”, because the time dummies are ruled out. Outputs of the Wald test statistics, their degree of freedom, and their p-values are all “-99999”.

In both files “prma.tsp” and “prmb.tsp”, the command

set ig2 = 0 ;

is used for the purpose of using the randomly generated starting values in the optimization for obtaining the 2-step GMM estimates.

Model, Moment conditions, and Parameters to be estimated when using the program “dfelrtna.tsp”

**Model**

, for .







**Moment conditions**

Used moment conditions based on g-form

, for ,

, for ; ,

, for ;,

, for ;,

where  is defined as  with  and .

Used moment conditions based on h-form

, for ,

, for ; ,

, for ;,

, for ;,

where  is defined as  with  and .

**Parameters to be estimated**

: g\_fls\_lag1

: b\_hdbt

: b\_hinc

Model, Moment conditions, and Parameters to be estimated when using the program “dfelrtnb.tsp”

**Model**

, for .



**Moment conditions**

Used moment conditions based on g-form

, for ,

, for ; .

Used moment conditions based on h-form

, for ,

, for ; .

**Parameters to be estimated**

: g\_fls\_lag1

: dtd1988

: dtd1989

: dtd1990