Example 4: Estimations of the panel logit models explaining women’s labor supply using a fictitious dataset

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

**Dataset**

: wls1986 - wls1993 (woman’s labor supply: 1=supply; 0=no supply, from 1986 to 1993)

(Number of individuals)

We can estimate the same model, using both programs “dfelrtna.tsp” and “dfelrtnb.tsp” described later. Accordingly, the results obtained using both programs will be identical. This model is appropriate for this dataset. True values of parameters generating this dataset are



















and accordingly,







.

Specifying the following commands in the file “prma.tsp” to run the file “dfelrtna.tsp”, we can obtain the same estimation result as that obtained from running the file “dfelrtnb.tsp”:

list exv wls ;

list lead\_wls 0 ; list ctmp\_wls 0 ; list lag\_wls 0 ;

and

set d\_wls\_sg = -99 ; set d\_wls\_eg = -99 ;

where with the last commands, all  variables are relegated from the instruments.

Since , we must read the “csv” files instead of “xls” files to carry out the estimations using the files “dfelrtna.tsp” and “dfelrtnb.tsp”. Therefore, we must write the statements in the files “datra.tsp” and “datrb.tsp”.

For the purpose of reading the big dataset with , we must increase the allocated memory size, by writing the statement such as “memory = 512” in the file “login.tsp”.

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 ; .

Used moment conditions based on h-form

, for ,

, for ; .

**Parameters to be estimated**

: g\_wls\_lag1

: dtd1988

: dtd1989

: dtd1990

: dtd1991

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\_wls\_lag1

: dtd1988

: dtd1989

: dtd1990

: dtd1991