

# Homework

Econ 5243

12 February 2013

## Due 21 February

Feel free to collaborate with your classmates.

1. Consider the model.

$$y = X_1\beta_1 + X_2\beta_2 + u \quad (1)$$

Using gretl and the mroz87 data set, do the following exercises in ETM. Although there are algebraic solutions to these, I want you to use the matrix language in gretl to find the solutions or to demonstrate the results. Once that is done, you may provide the theoretical rationale for the result.

Define  $X_1$  and  $X_2$  according to the gretl script:

```
open mroz87
list x1 = const WE HE KL6
list x2 = FAMINC LFP
list x = x1 x2
```

(a) Exercise 2.15 in ETM

(b) Exercise 2.16 in ETM

2. Do exercise 2.23 and 2.24 in ETM, which uses the **tbrate.dta** data on our website. Note, you can open Stata datasets in gretl. Save the dataset to your drive and drag it onto the main gretl window. It will prompt you for information on the time period for these time-series. (quarterly observations beginning in 1950:1 to 1996:4)