

Project Guidelines:
Macroeconometrics

Degree: Licenciatura en Economía (7 credits)
Second Term (2006/07 Academic Year)

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A. General

These guidelines describes the steps, content and evaluation criteria of the study project part of the Macroeconometrics exam. The project consists of undertaking an empirical study of quarterly nominal private consumption, and the study should be summarised or reported in the form of an essay with an introduction, argument and a conclusion. Choose a country and make sure that the consumption series is sufficiently long (minimum 70 observations), and then notify the Teaching Assistant about your chosen country so that students do not choose the same country. The essay can be written in Spanish or English and is to be handed in – preferably by mail - to the Teaching Assistant at the day of the exam at the latest, together with a copy of the file containing the untransformed data. Also, if a program (see C.3.i below) that runs the data-transformations, estimates and test have been made, then this program should be submitted too.

B. Steps

In brief the project consists of the following steps:

1. Choose a country and obtain a quarterly series of nominal private consumption containing a minimum of $T = 70$ observations.
2. Obtain an explanatory variable whose impact you would like to study, for example disposable income, wealth, real interest rates, population structure, or other relevant variables. As a source of inspiration, you may have a look at http://folk.uio.no/rnymoen/fincage_afterproofs.pdf (in particular table 3 on page 23), which is going to be published in Journal of Population Economics in 2007.
3. Divide your data set in two. The last 8 observations should be used for an out-of-sample forecast evaluation (step 7), whereas the preceeding $T-8$ observations should be used for estimation and model-design (steps 4-6).
4. Determine the order of integration of the variables, and if it makes sense undertake a cointegration analysis.
5. Formulate a general unrestricted model (GUM).
6. Simplify and test the economic hypotheses contained in the GUM by means of general-to-specific (GETS) specification search.
7. Undertake a 1-step out-of-sample forecast evaluation of the specific model against a simple alternative model of your choice. Use only the last 8 observations for this purpose.

C. Content and Evaluation

The maximum number of points is 30 and the study is evaluated according to the following criteria:

1. *Essay* [1 point]. Whether the study is summarised/reported in the form of an essay containing a frontpage (with title, name and date), bibliography (if the essay contains references), and relevant tables and graphs. Typically an essay is divided into four parts (introduction, data description and theoretical motivation, empirical results, conclusions), but the most appropriate solution may depend on the study and the investigator's personal taste. As an example you may have a look at http://www.eco.uc3m.es/sucarrat/macroeconometria/proyecto_ejemplo.doc
2. *Conciseness and clarity* [4 points]. Whether the essay is written in a concise and clear manner, and whether the essay does not exceed 10 pages (everything included).
3. *Content* [15 points]. Whether the study contains:
 - a) an introduction that contains a brief outline of the essay and a conclusion that summarises the main findings of the study [1 point]
 - b) an economic motivation for the explanatory variable(s) [1 point]
 - c) a description of the data, including their source(s) [1 point]
 - d) an analysis of the order of integration of the variables [2 points]
 - e) cointegration analysis, for example using the Engle-Granger methodology [2 points]
 - f) a general unrestricted single equation model (GUM) with residual and parameter stability diagnostics, possibly containing Equilibrium Correction Terms (EqCT) if the cointegration analysis suggests the existence of cointegration relations [2 points]
 - g) a specific single equation model obtained through general-to-specific modelling and hypothesis testing, together with associated residual and parameter stability diagnostics [3 points]
 - h) an out-of-sample forecast evaluation of the specific model against a “simple” model of your choice [2 points]
 - i) a program that runs the estimates and tests [1 points]
4. *Overall quality statistical and economic quality* [10 points]. Whether the data and statistical analysis is appropriate, whether the interpretations of the statistical results are adequate, and whether the economic interpretations and implications are sensible.