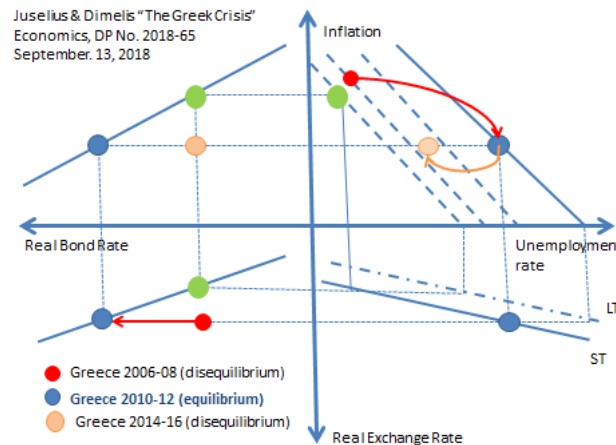


Comments on Juselius and Dimelis “The Greek crisis: A story of self-reinforcing feedback mechanisms” submitted to *Economics: The Open-Access, Open-Assessment E-Journal*

Juselius and Dimelis estimate a model that can be summarized in the following chart (NW/NE SW/SE quadrants):




### Comments

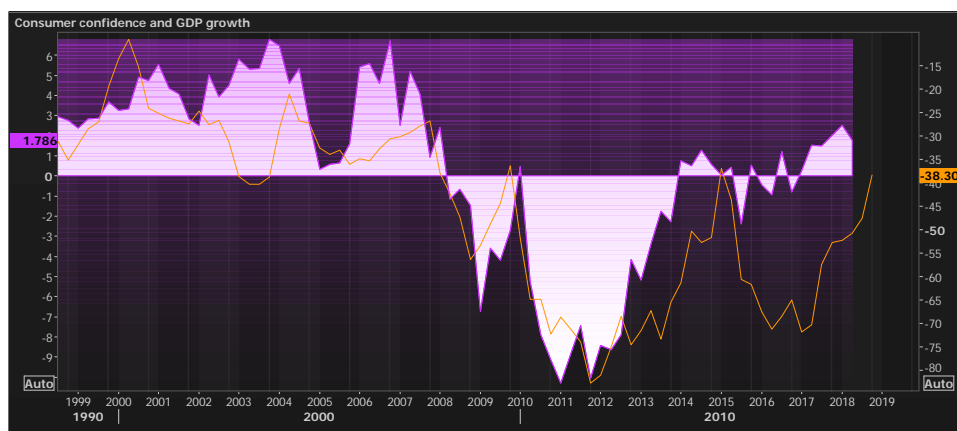
- It is unclear whether Phelps 1994 “structural slumps” is the most relevant framework for understanding the Greek depression of 2008-2018
- Nevertheless, the econometric tests in Juselius & Dimelis do not clearly specify what are the hypothesis to be tested allowing a rejection of the “structural slumps” theory and/or how to distinguish empirically the “structural slumps” theory from many other approaches that lead to equivalent results, as for example:
  - ✓ an increase in unemployment leads to a decline in inflation (NE quadrant in the chart)
  - ✓ an exchange rate overvaluation leads to (a loss of output and) an increase in unemployment (SE quadrant in the chart)
  - ✓ an exchange rate overvaluation leads to an increase in the real interest rate (and vice-versa) (SW quadrant in the chart)
  - ✓ financial variables (e.g. bond rate) adjust much faster than non-financial variables (e.g. prices of goods and wages) (SW quadrant in the chart)
- The estimated relationship between unemployment rate and REER has the wrong sign (-) as, according to the model, an increase in the REER (loss in competitiveness) should lead to higher unemployment (+ sign)
- The relative costs variable (Greece/Germany) moves in the opposite direction of the Greek real exchange rate based on unit labour costs, which is counterintuitive



(Source:Reuters Eikon)


Greece: Real exchange rate (the yellow line is based on unit labour costs)

- The consumer confidence variable is highly correlated with GDP growth rate: the collapse in confidence after 2008, and its ups and downs thereafter, are highly correlated with Greek GDP growth rate; thus a positive correlation between consumer confidence and the REER is counterintuitive given the model assumption that a loss in competitiveness leads to an increase in unemployment 



(Source:Reuters Eikon)

Greece: Real GDP growth (area; left hand scale) and consumer confidence index (yellow line; right hand scale)

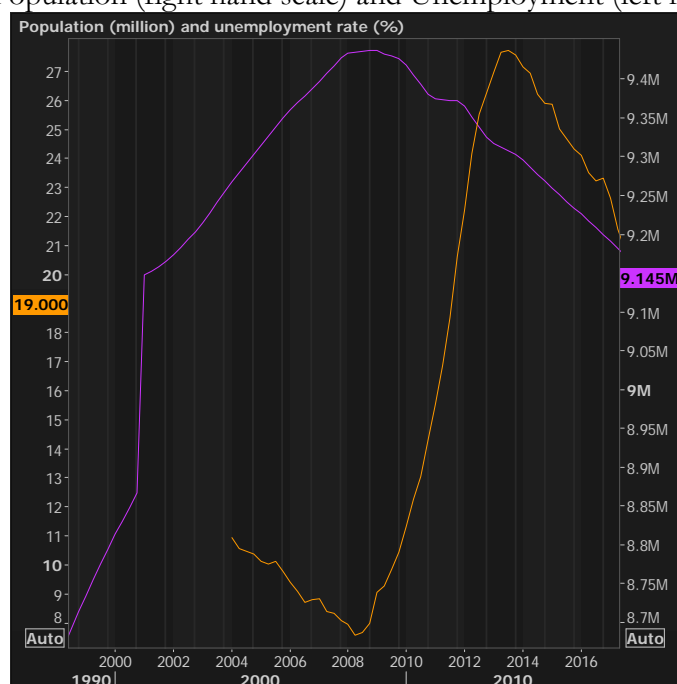
- The extremely high bond rate observed in 2011-2012 was not transmitted to the Greek economy because the Greek government was receiving international financial assistance at much lower interest costs and Greek banks were receiving liquidity support from the central bank and the ECB at much lower rates; so it is not clear what is being estimated. Is it really the relationship between the bond rate and the unemployment rate? 

Other things to look at:

- **A credit boom in Greece led to massive internal and external debt accumulation (public and private)** and thus to very high public debt/gdp ratio and persistent current account deficits; however gdp growth was relatively high
- **The correction of imbalances occurred through strong deleveraging:** contraction in credit to households and firms; sharp decrease in government expenditures; tax hikes; cuts in nominal wages; bankruptcies of firms and erosion of bank solvency; feed-back loops reinforcing each other; asset prices declining; collapse of investment and production
- **The depression ended when the flow disequilibrium was closed:** the current account was balanced and the government run a surplus
- **The legacy is a depressed economy:** 30% lower than 10 years ago, with massive unemployment in a country that lost at least 300,000 people (emigration); the government debt/gdp ratio remains at a very high level and the banking system suffers from high level of non-performing loans
- **An analysis of the transmission mechanisms including or focusing on quantities** (flows and stocks) rather than may provide alternative and easier to test hypothesis. The Cointegrated VAR approach I(1) or I(2) can be used for that purpose.

### The Greek depression in 3 pictures (data from Reuters Eikon):

1. Population (right hand scale) and Unemployment (left hand scale)



## 2. Credit (left hand scale) and Unemployment (right hand scale)



## 3. Government Debt/GDP ratio (%)

