Homework 6:

Authors:
Athanasios Kolokythas
Alberto Orts Torres

Introduction

For this exercise we chose to capture the non-linear dynamics of regime change in the GDP growth of Greece, using a Markov-Switching model. In order to accomplish that we used the following data:

Quarterly Hard indicators:

- Greek real GDP per capita from 1995 Q1 to 2023 Q4.

The data were downloaded from the FRED website and the Greek statistics authority website.

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In this section we have included two graphs. The first one presents the probability of recessions in Greece. The second one is a series of histograms that show the marginal posterior distributions.
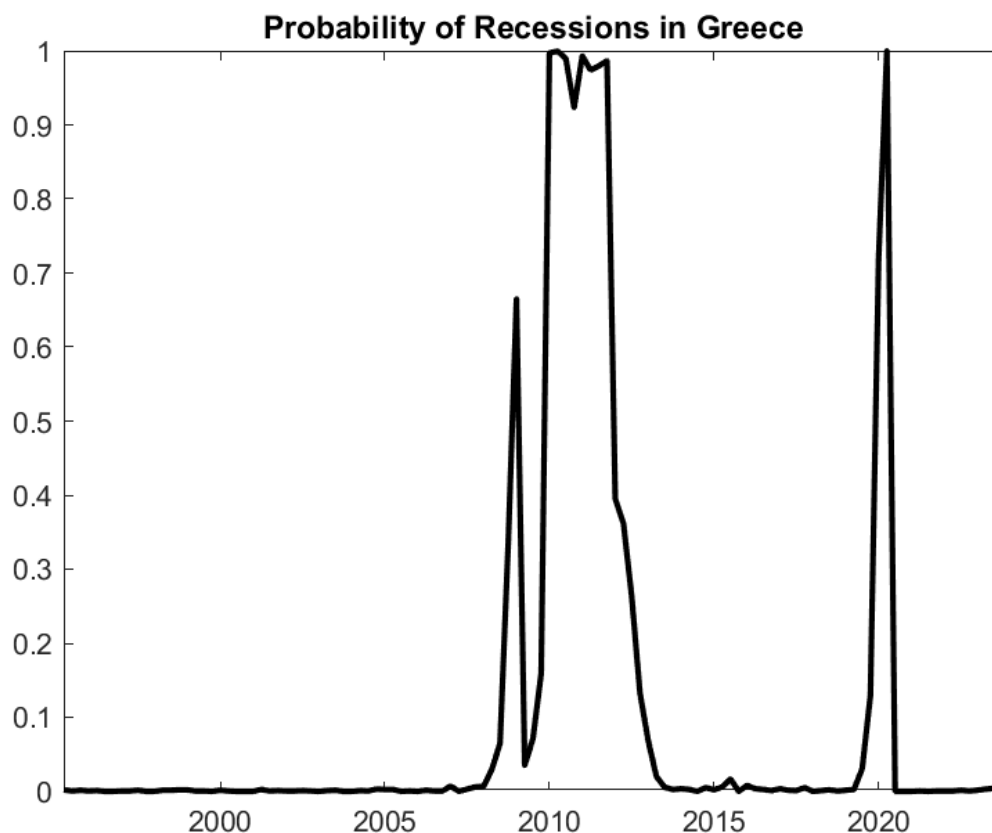
We observe that the Markov-Switching model captures quite successfully the transition to another state. In particular the increase in probability during 2008, coincides with the

Great Financial Crisis. In addition the close to unit probabilities of recession during the 2010-2015 period are consistent with the reality, given the increased levels of economic and political instability of Greece at that period in combination with a lack of trust for the Greek economy. Finally, by observing the spike in recession probability around 2020 we can suggest that the model captures successfully the Covid-19 health crisis.