

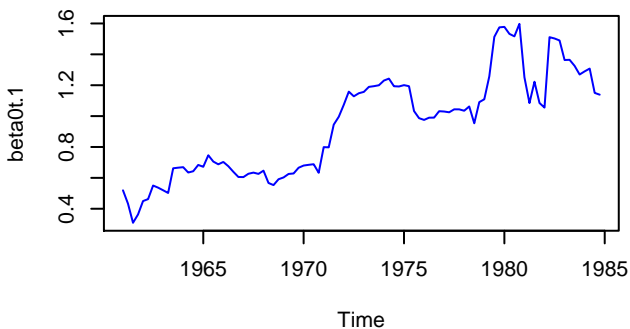
Suggested Solution to the Empirical Part of Assignment 5

1 Empirical Part

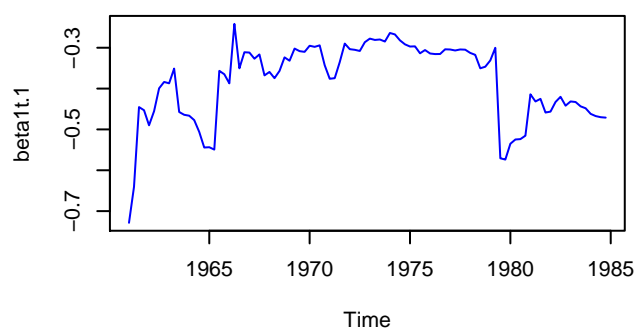
Note: Please take a look at the R script for this solution. The results and the figures are appended at the end of this document.

1. The plot of the filtered and the smoothed estimates are shown in the graphs. The results are similar to what has been reported in Kim and Nelson. Note that I throw off first 10 estimated filtered TVP coefficients to get around the problem of high uncertainty at the beginning of the sample. If we don't throw these initial estimated observations, then too much variability at the beginning of the sample may mask the variation for the overall sample.
2. The estimated GDP cycle from this model seems to capture the NBER business cycles as reflected by negative cycles during recessions.

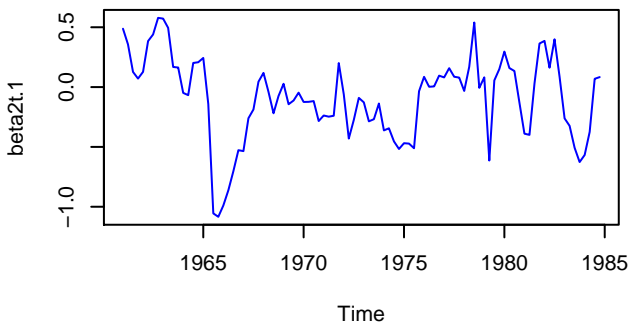
beta0t(filtered)



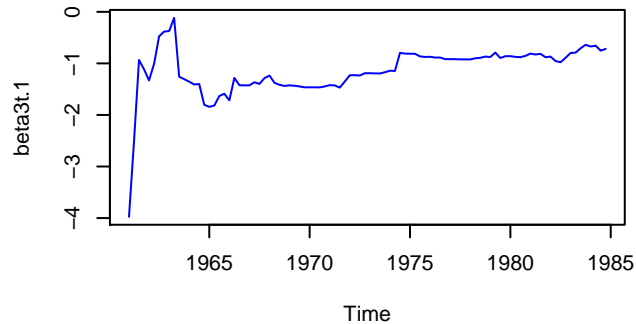
beta1t(filtered)



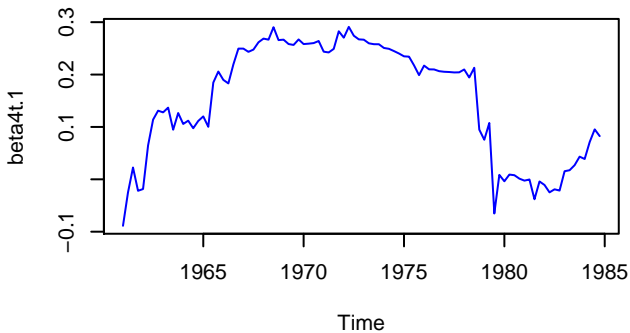
beta2t(filtered)



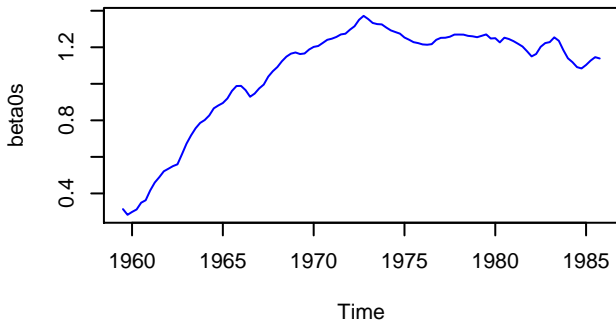
beta3t(filtered)



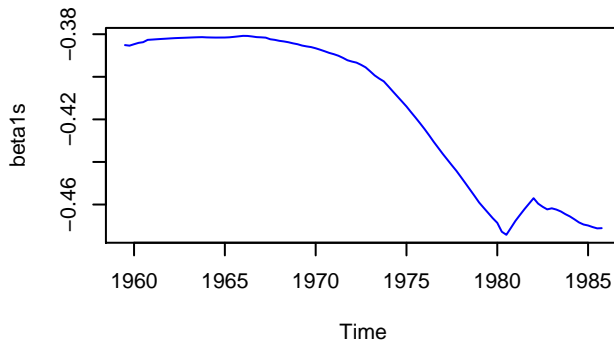
beta4t(filtered)



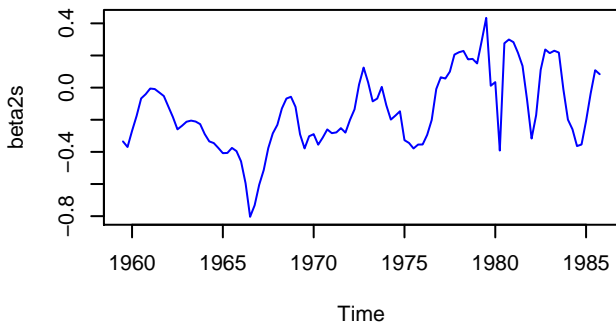
beta0s(smoothed)



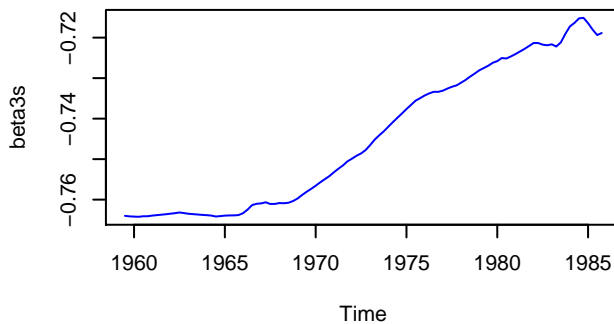
beta1s(smoothed)



beta2s(smoothed)



beta3s(smoothed)



beta4s(smoothed)

