

Submit a single electronic file containing the answers to all questions through canvas. As usual, include your do and log files as appendices.

Work with the same dataset you have used for previous problem sets. Delete January 2020 through December 2020 if they are in your data. Then, add them as blank observations to forecast. I suggest delete them before doing anything else, and add the blank observations right after you tsset your data to a monthly date and before creating the monthly dummy variables. If you do it that way, the relevant part of your do file will look something like:

```
tsset date  
tsappend, add(12)  
generate month=month(dofm(date))
```

Depending on just what you have named things and just how you have handled dates, your code may vary a bit here. Drop data from before 1990, so we are all dealing with just the last 30 years of data. Reference to problem sets 4 and 5 may provide a good starting place, but this is about forecasting more than one period ahead, so they are just a starting point.

1. One at a time forecasts multiple periods ahead. Prepare forecasts of Florida non-farm employment for February, April, and June of 2020 using a multi-step autoregressive distributed lag model. (Ignore that we know about the impact of Covid-19 and imagine you are making these forecasts in January of 2020, not March of 2021.) You need to identify reasonable set of candidate models and identify a best model for each step using a best model for each step using the rolling window approach. But, don't worry about running rolling window for a large number of models for each step. For example, you might use GSREG to pick three candidates for each step to compare using rolling window estimation, then pick the best model and window for each step out you wish to forecast. Provide a fanchart.

2. Dynamic Autoregressive Forecast. Prepare a forecast of Florida non-farm employment for each month of 2020 using a dynamic forecast with a purely autoregressive model. Defend the choice of model you select. You can use GSREG for that, but need not go to that extent for this forecast. Provide a fanchart.

3. Compare and Discuss. Are the results of 1 and 2 different from one another? What are the advantages disadvantages of each approach?