List 08. Serial Correlation

Nikita V. Artamonov

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For each test calculate related critical values.

#**1**. For the dataset `Mishkin` (monthly observations from 1950-2 to 1990-12) consider a regression

$$\Delta \texttt{pai3} \text{ on } \Delta \texttt{tb3}, \ \Delta \texttt{log(cpi)}.$$

1. Test the model for first order serial correlation

2. Test the model for second order serial correlation

3. perform robust and non-robust t-test and discuss results

4. perform robust and non-robust F-test for overall significance and discuss results

#**2**. For the dataset `Consumption` (quarterly observations from 1947-1 to 1996-4) consider a regression

$$\Delta \texttt{log(ce)} \text{ on } \Delta \texttt{log(yd)}.$$

1. Test the model for first order serial correlation

2. Test the model for second order serial correlation

3. perform robust and non-robust t-test and discuss results

4. perform robust and non-robust F-test for overall significance and discuss results

#**3**. For the dataset `Tbrate` (quarterly observations from 1950-1 to 1996-4) consider a regression

$$\Delta\texttt{pi on } \Delta\texttt{y}, \ \Delta\texttt{r}.$$

1. Test the model for first order serial correlation

2. Test the model for second order serial correlation

3. perform robust and non-robust t-test and discuss results

4. perform robust and non-robust F-test for overall significance and discuss results

#**4**. For the dataset `MoneyUS` (quarterly observations from 1954–01 to 1994–12) consider a regression

$$\texttt{infl on } \Delta\texttt{y}, \ \Delta\texttt{tbr}, \ \Delta\texttt{cpr}, \ \Delta\texttt{m}.$$

1. Test the model for first order serial correlation

2. Test the model for second order serial correlation

3. perform robust and non-robust t-test and discuss results

4. perform robust and non-robust F-test for overall significance and discuss results

#**5**. For the dataset `Macrodat` (quarterly observations from 1959-1 to 2000-4) consider a regression

$$\texttt{lhur on } \Delta\log(\texttt{punew}), \ \Delta\texttt{fyff}, \ \Delta\texttt{fygm3}, \ \Delta\texttt{fygt1}, \ \Delta\log(\texttt{gdpjp}).$$

1. Test the model for first order serial correlation

2. Test the model for second order serial correlation

3. perform robust and non-robust t-test and discuss results

4. perform robust and non-robust F-test for overall significance and discuss results