Exercise 1

Durbin Watson

If you have not yet downloaded and installed GRETL, you can find it here

<http://gretl.sourceforge.net/>

Name:

This exercise focuses on the Durbin Watson test. Answer the following short answer questions.

1. What is the issue using multiple regression on a data set that is ordered by time? What bad thing happens?

* Multiple regression assumes that standard error is not correlated.

1. Pick one of the data sets provided (retail 1 to retail 6). Open the data in GRETL. Plot the time series data set. Does your examination by Mark I eyeball suggest that the problem that you mention in answer #1 above is present? Why or why not?
2. Using the Durbin Watson tables for alpha = .05 and tell me what the DL and DU boundaries are.
3. Run OLS regression on the data set and obtain the Durbin Watson statistic. What is the value?
4. Compare the Durbin Watson statistic to the boundaries in question #3. What is your conclusion?
5. Randomly pick another retail data set from retail1 to retail6. Repeat steps 2 through 5 for that data set.