Assignment 4

Due: Start of Class, Monday, December 7th

Instructions:

Group Work: I encourage all of you to work on the problem set in groups, but each member of the group must write up his or her own solutions and perform his or her own analysis. Problem sets that are verbatim copies will receive a zero.

To submit your solutions, include your answers to these questions and your log file (or other supporting documentation) and submit it to the Assignment on Canvas.

Assignment:

This assignment examines actual bilateral trade data from the World Trade Organization. The dataset includes origin and destination countries, value of total trade for Iron/Steel, Cars and several other goods, the physical distance between the origin and destination, and other variables capturing legal, cultural and economic similarities between the two countries.All values are reported in US dollars.

Variable Name (for a subset of the variables)	Description
Value*	Value of shipments ($)
Gdp_o, gdp_d	GDP for origin and destination countries
Distw	Distance between origin and dest. (km)
Comlang_off	Dummy for shared common language
Contig	Dummy for shared border
Comcur	Dummy for common currency
Comrelig	Dummy for common religion
fta_wto	Dummy for free trade agreement between countries

1. Open a log file to keep a record of your analysis. Click "File → Log → Begin" and give it a name that will be easy to remember.
2. Open the dataset and summarize the data..
3. Which countries are the largest collective exporters / importers of steel/iron and cars respectively.
4. Create a table calculating the correlation coefficients between the Value of all the different products tracked. Which products are the most strongly positively correlated. Which are the most strongly negatively correlated? Do these correlations make sense?
5. Create a scatterplot of the value of Iron and Steel exports from China as a function of distance to the destination. What would a gravity model suggest for the relationship between exports and distance? Is that what you observe?
6. Calculated the log of the value variables, the log of GDP and the log of distance.
    a. Run a gravity regression, predicting log(value) for Iron and Steel shipments as a function of logged origin and destination GDP and log distance. Interpret the coefficients.
    b. Now add the legal, cultural and economic similarity variables described above. Are the signs as you expect?
7. Finally, run a similar regression to that in part 6b for Cars shipments. Are the coefficients the same or different than in part 6b? If they are different, do the differences make sense?