**PLS 900 Mini Project 2**

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**Question**: does joining the WTO of China have any effect on China’s trade volume and the world trading structure?

**Data**: COW trade dataset

We are interested in the trading patterns before and after China joining the WTO, so we subset the COW trade dataset into two parts. The first part includes all the countries in the year 2000, one year before China joined the WTO. The second part includes all the countries in the year 2008, when the international financial crisis happened. Because we are only interested in the major players, so we subset the data again to only include those cases with smooth trade of more than 50,000 million dollars. We ended up having 22 major trading partners in 2000 and 59 major trading partners in 2008. We do not take inflation into consideration because the dataset smoothed the trading data.

**Centrality Analysis**: we conducted four centrality analyses for each of the two datasets. In all four measures in 2000, US is the most important one in world trading system. While in 2008, the situation is more complicated. Judging by degree, betweenness, and closeness, China is the most important one, while US is second. But by eigenvector, U.S is first, China is second.

Because we are interested in the influence of WTO on China’s trade, and the world trade structure, degree and betweenness might be a best measure compared with others. Degree can capture the trade volume, betweenness measures whether one actor can be act as a bridge between other actors, in this case it can capture whether China has become interconnected with other nodes, therefore capturing the international trade pattern. Closeness only captures the distance, that is not relevant here. Eigenvector only measures whether one node is connected to other more central actors.

Moreover, by simply comparing the trading relationship in the year 2000 when China was not a member of the WTO with that of the year 2008 when China had been a member of WTO for seven years and the international financial crisis happened, we can clearly see that joining WTO has made China a major trading player in the international trading system. In 2000, China has low centrality by all four measures, in 2008, China has high centrality by all four measures.

