

Donald Trump and the Mexican Peso

One of the more entertaining aspects of this year's presidential campaign has been the relationship between Donald Trump's poll ratings and the exchange rate between the Mexican peso and the U.S. dollar. The model is straightforward. Mr. Trump doesn't like Mexico or Mexicans. As his chances of being elected rise and fall, the Mexican peso depreciates and appreciates vis-à-vis the U.S. dollar. The null hypothesis is that there is no relationship between Mr. Trump's polling statistics and the exchange rate. Until now, the evidence has been mostly anecdotal. This work is an effort to test this hypothesis as well as determining the overall impact (if any) of polling results on the exchange rate. This is a brief study of Donald Trump and the Mexican peso.

The polling data was the daily Real Clear Politics (RCP) average of various presidential polls. (This data was extracted using the Real Clear Politics Data Extraction Tool from my firm, Tony Lima Associates.) The data begins on July 1, 2015 and runs through October 5, 2015. I was only able to use data through September 30 because that was the end point of the exchange rate data. I had 458 observations from RCP. I used the Federal Reserve Bank of St. Louis's FRED data tool for Microsoft Excel™ to obtain data for the peso-dollar exchange rate. Said data is not available for U.S. holidays and weekends. Therefore I had 316 values for the exchange rate. (Despite the disclaimer in the footnote on the FRED plugin page, I have used the plugin with Excel for OS X for quite a few years. It still works.)

As always, my data and methods are transparent. [Click here](#) to download an Excel workbook with the data and model. (I used SPSS to do the actual statistical work. The SPSS files are available on request.

A simple Pearson correlation between the two variables yielded a value of and was significant on the order of 10^{-12} . This is important because it indicates an increase in Mr. Trump's poll ratings is positively related to the peso-dollar exchange rate. (The exchange rate is measured as pesos per U.S. dollar. An increase in this exchange rate means it takes more pesos to buy one dollar. Therefore a higher exchange rate means the peso has depreciated vis-à-vis the dollar.)



A quick-and-dirty linear regression of the exchange rate on Mr. Trump's poll ratings had a coefficient of . That means for every percentage point increase in Mr. Trump's polling, the exchange rate depreciates by pesos per dollar. The t-statistic of that coefficient was , well above the five percent significance threshold. Not surprisingly, the adjusted R-squared was , meaning there is quite a lot of variance in the exchange rate that is not explained by this model. And that is not surprising given the myriad economic factors that affect the exchange rate. For what it's worth, the elasticity of the exchange rate with respect to Mr. Trump's polling numbers is +. (This elasticity is calculated at the mean of each variable. Only observations with data on both variables were included.)



Regression Coefficients (click for larger image)



However, the null hypothesis that there is no relationship between Mr. Trump's polling and the Mexican peso exchange rate is rejected. As a footnote, ten different nonlinear models were estimated. While a few fit the data a bit better, none was good enough to report. Anyone interested in the data is welcome to contact me.