

## Theory Correlation

### Correlation of Balance of Trade to Exchange Rate Variations vs. Population Density Disparity

| Country        | Ratio to U.S.<br>Pop. Density | Exchange Rate<br>Correlation(1) | Exchange Rate<br>Correlation (2) | Pop. Density<br>Correlation (3) |
|----------------|-------------------------------|---------------------------------|----------------------------------|---------------------------------|
| Australia      | 0.08                          | 0.81                            | ++                               | X                               |
| Brazil         | 0.67                          | 0.64                            | +                                | X                               |
| Canada         | 0.09                          | 0.63                            | +                                | X                               |
| China          | 4.22                          | 0.13                            | --                               | X                               |
| Colombia       | 1.21                          | 0.79                            | ++                               |                                 |
| Germany        | 7.06                          | 0.5                             |                                  | X                               |
| Japan          | 10.33                         | 0.42                            | -                                | X                               |
| Mexico         | 1.66                          | 0.5                             |                                  | X                               |
| United Kingdom | 7.45                          | 0.39                            | -                                | X                               |

**Notes:**

1. This is the percentage of years in which the balance of trade in manufactured goods (or in total trade, for those years for which the balance of trade in manufactured goods alone wasn't available) responded as exchange rate theory would predict. That is, did the U.S. Balance of trade improve when the dollar weakened, fall when the dollar strengthened or remain about the same when the exchange rate remained stable?
2. If the U.S. Balance of trade responded as exchange rate theory would predict more than 75% of the time (as indicated by a score of .75 or higher in the previous column), then that's considered a "strong positive" and is represented with a "++." A score of .51-.74 in the previous column is considered a "positive" correlation, and is represented as "+." A weak negative correlation (.25-.49) is represented by "-" and a strongly negative correlation (0-.24) is represented By "--." A score of exactly 0.50 is considered no correlation at all.
3. A positive balance of trade in manufactured goods for the U.S. In trade with nations less densely populated and a negative balance of trade in manufactured goods for the U.S. In trade with nations more densely populated are considered to be in correlation with the population density theory, as represented by an "X".

## Exchange Rate Correlation vs. Population Density Ratio for Trade Between U.S. & Others

