What the Depreciation of the Dollar Means for Washington Exporters

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Introduction to Currency Exchange

- Purchases of foreign goods and assets involves two trades
  - Buy foreign good or asset with foreign currency: Foreign goods market
  - Buy foreign currency with domestic currency: Exchange rate market
- *Effective* price can change in two places instead of one
- Theory of exchange rates & international trade
- Data on recent exchange rate trends
- What does this mean for WA and U.S. trade?
Market for Goods

![Graph showing supply and demand](image)

- **Price (pesos/unit):** 12.50
- **Quantity (units):** 20

Supply and Demand Analysis

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Market for Foreign Currency

Price (pesos / unit)
12.50

Supply
Demand

Quantity (units)
20

Price (pesos / $)
12.50

Supply
Demand

Quantity ($)
20

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Understanding Exchange Rates

- Foreign exchange markets are anti-symmetric: 10 pesos for $1 is the same as 1 peso for $0.10

- Historically foreign exchange prices are in terms of $1
  - U.S.–Mexico exchange rate is 12.5 pesos
  - U.S.–Japanese exchange rate is 120 yen
  - British pounds are the exception, $ per 1 £
  - No consistent format for euro

- Very easy to get confused
Foreign Currency Price Changes

Takes more pesos to buy one unit: price increase or each peso buys less units

Takes more pesos to buy one $: price increase or each peso buys less dollars
Appreciation vs. Depreciation

- **Appreciation** is when each unit of domestic currency buys more foreign currency than before
  - This means price of foreign currency decreases
  - Strong currency

- **Depreciation** is when each unit of domestic currency buys less foreign currency than before
  - This means price of foreign currency increases
  - Weak currency

- Widespread belief that currency “strength” associated with nationalism

- In reality, exchange rate changes help some Americans & hurt others
An Example

- A cheeseburger costs 100 pesos in Mexico. Exchange rate is 10 pesos. It costs $10 for an imported cheeseburger (No transportation costs, taxes, or fees)

- Now cheeseburger still costs 100 pesos But exchange rate = 20 pesos.

- What is U.S. price to import a cheeseburger now? $5 Has the peso appreciated? No, depreciated Has the dollar appreciated? Yes

- Conversely, if a hotdog cost $8 in the U.S., Mexicans used to pay 80 pesos, but now they pay 160 pesos!
Exchange Rates and International Trade

- When domestic currency **appreciates** then
  - Imports become **cheaper** for domestic buyers
  - Exports become **more expensive** to foreign buyers
  - Who benefits? U.S. cheeseburger eaters (whether they import or not), Mexican exporters
  - Who loses? U.S. cheeseburger makers, Mexican importers

- When domestic currency **depreciates** then
  - Imports become more expensive for domestic buyers
  - Exports become cheaper to foreign buyers

- Absolute exchange rate does **not** matter
  Only the **change** in exchange rate matters
Exchange Rate Trends: North America

Canadian $ per U.S. $

Mexican pesos per U.S. $

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Exchange Rate Trends: Europe

Graph showing the depreciation of the Euro and British pounds per US dollar from 1990 to 2009.
Exchange Rate Trends: Australia & China

- Australian dollar per U.S. $
- Chinese yuan per U.S. $

Graph showing trends from 1990 to 2009.
Implications for Exporters

- After 10 years of a strong currency (favoring importers, consumers), dollar is in a weakening trend benefiting U.S. firms

- Why? - Beyond scope of this introduction

- Will it last? - Nobody knows (but people paid to predict)

- 2008 appreciation due to worldwide recession
  Investors sold domestic assets to buy U.S. debt (bonds) requiring dollars
Complications

- **Spot vs. forward exchange rates**
  - Spot rate is the price you pay in this instant of time
  - Risk that future exchange rates more costly than now
    You can buy a contract for a future date or insurance
  - Long-term contracts slow down depreciation process

- **Nominal vs. real exchange rates**
  - Previous data was nominal, price in money
  - Real data accounts for inflation, price in value
    \[ \text{Real } XR = \frac{XR_{pesos \ per \$}}{XR_{pesos \ per \$}} \times \left( \frac{CPI_{US}}{CPI_{Mex}} \right) \]
    - Real exchange rate $ depreciation much less
      Thus benefits to U.S. firms less
Floating vs. Fixed Exchange Rates

- Floating: market decides price
  Most currencies

- Fixed: government manipulates market to keep X rate constant
  China pre-2005, mostly post-2005
    - Monetary policy:
      Gov reduces interest rates (inflationary) so people don't want currency for saving
    - Foreign exchange controls:
      Gov limits private exchange transactions
    - Exchange market intervention:
      Gov buys dollars (and removes them from circulation) until price is reached
Conclusion

- Foreign exchange markets work **just** like goods markets
- Necessary to buy foreign goods and assets
- Effective price can change with value of good or foreign currency
- Depreciation is good for domestic firms (exporters) and foreign buyers (importers)
- Strong $ for ten years (and massive US imports)
- Recent depreciation except for Mexico & China
- Theory predicts U.S. exports increase, but complication slow process down