Purchasing Power Parity

**Key Concepts:**

- **Purchasing power parity** is the idea that exchange rates and prices adjust to equalize the cost of living across international boundaries.
- Purchasing power parity is based on the **law of one price** or the idea that the same good should sell for the same price anywhere it is sold.
- **Absolute purchasing power parity** is the law of one price applied to an entire bundle of goods and services to cover the cost of living. Because of imperfections in the market, absolute purchasing power parity never holds.
- **Relative purchasing power parity** explains how prices change in two countries by showing the rate of change in the exchange rate as the difference in rates of inflation between two countries. Relative purchasing power parity explains the data well.
- The **Big Mac Index** is a measurement from *The Economist* that explains purchasing power parity by using the law of one price as applied to Big Macs.

### The law of one price

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The law of one price says that a specific good, such as an orange, should have the same price whether it is imported or bought locally. Several market imperfections could prevent the law of one price from functioning:

1. Trade barriers such as tariffs
2. Differences in quality
3. Transportation costs
4. Taxes

### Absolute purchasing power parity

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If the law of one price is applied to all goods in an economy, then the cost of living would be the same in the U.S. as in Mexico. The example on the left demonstrates this principle, called absolute purchasing power parity. If the exchange rate between pesos and dollars is 10 pesos per dollar, and the cost of living is $1000 per month in the U.S., and if absolute purchasing power held, it would cost 10,000 pesos per month in Mexico to live. Absolute purchasing power parity almost never holds because of market imperfections.
Relative purchasing power parity is a better indicator of the costs of living between two countries because it measures the change in inflation across economic boundaries.

Examine the example on the left. It says that the rate of change in the exchange rate plus the rate of change in prices in the home country (Mexico) equals the rate of change in the prices in the foreign country (U.S.). By rearranging the equation, you can see that the rate at which the domestic currency changes in value equals the domestic inflation rate minus the foreign inflation rate. Real world data support this calculation.

One example of the law of one price is the Big Mac Index published by The Economist. The Big Mac is sold all over the world by McDonald's restaurant and if absolute purchasing power parity held the sandwich would cost the same everywhere. For example, if a Big Mac costs $2.50 in the U.S., and the exchange rate with Mexico is 10 pesos/$1.00, it should cost 25 pesos in Mexico.

The Big Mac Index can give an indication of relative purchasing power parity and allow us to predict the change in the value of foreign currency. For example, on the left, in those countries where the Big Mac sells for more than the equivalent U.S. price, the local currency is overvalued and may depreciate. For those countries where the Big Mac costs less than the U.S. equivalent, the currency is undervalued and may appreciate.