

Syllabus Reference 3.1(+4.5): Purchasing Power Parity theory

<http://economics.isdedu.de>

WHEN DO THE FLOATING RATES STOP FLOATING?

In practice, the above question has a simple answer - **never**. However, in theory, they would stop floating when supply of a particular currency came to equal demand for it. This would occur if the greatest cause of supply and demand were in equilibrium, i.e. the balance of trade. A Swedish economist, Gustav Cassels, brought forward a theory in 1916 suggesting how exchange rates might reach equilibrium.

This is known as the purchasing power parity theory. The best way to explain this theory is to give an illustration of how it might work.

Exam focus:

Explain how allowing for differences in purchasing power may give a more realistic value of the average GDP per head in India. (4 marks, from HP3, Nov 06 q5 part b)

Definition :

Exports would equal imports if the amount which can be bought inside and outside the country with one dollar were identical- equal buying power inside and outside the country = Purchasing power parity

Big Mac Index

Burgernomics is based on the theory of purchasing-power parity, the notion that a dollar should buy the same amount in all countries. Thus in the long run, the exchange rate between two countries should move towards the rate that equalises the prices of an identical basket of goods and services in each country. Our "basket" is a McDonald's Big Mac, which is produced in about 120 countries. The Big Mac PPP is the exchange rate that would mean hamburgers cost the same in America as abroad. Comparing actual exchange rates with PPPs indicates whether a currency is under- or overvalued.

WEBLINK

- 1.5 mins- definition

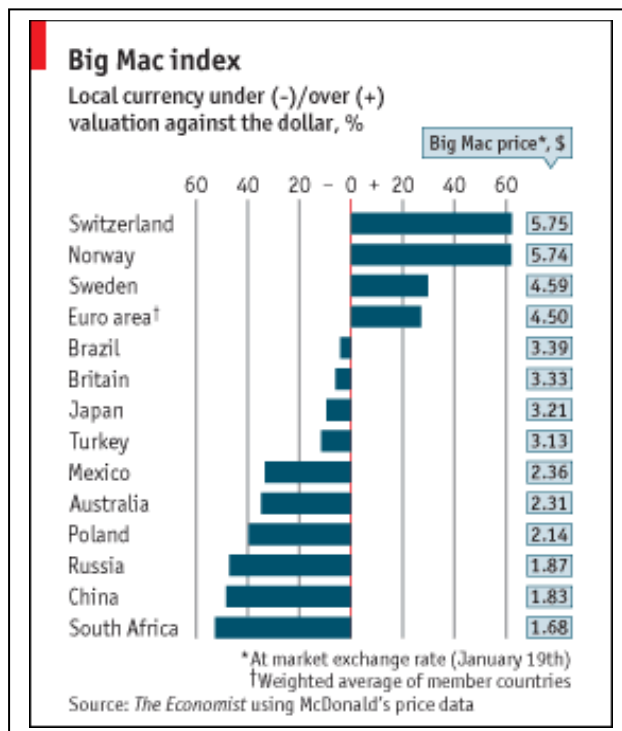
<http://www.economist.com/markets/Bigmac/Index.cfm>

- 8 mins- some examples and analysis

<http://www.youtube.com/watch?v=6F9xIj1YDxo>

Big Mac index

Jan 22nd 2009



The dollar's recent revival has made fewer currencies look dear against the Big Mac index, our lighthearted guide to exchange rates. The index is based on the idea of purchasing-power parity, which says currencies should trade at the rate that makes the price of goods the same in each country. So if the price of a Big Mac translated into dollars is above \$3.54, its cost in America, the currency is dear; if it is below that benchmark, it is cheap. There are three noteworthy shifts since the summer. The yen, which had looked very cheap, is now close to fair value. So is the pound, which had looked dear the last time we compared burger prices in July. The euro is still overvalued on the burger gauge, but far less so than last summer.

Critical point (for further detail see example on page 3 of this webnote)

Task 1

1. **Swiss Franc:** Overvalued currency: imports should rise and exports fall if floating exchange rates apply.
2. **Chinese Yuan:** Undervalued currency: exports should rise and imports fall if floating exchange rates apply.

Draw a diagram for the exchange rate for each currency to show each of the above situations. Use US\$ as the trading currency. Draw diagrams expertly.

Answer to Task 1.1

Answer to Task 1.2

The Purchasing Power Parity Theory –an example

We will take as example the US and Ireland, with the only Theory commodity at issue being butter. This has the following price in each country.

**Butter in Ireland costs IRL 1 .00 per kilo.
Butter in USA costs \$2-40 per kilo.**

In this simple model the exchange rate is £1 = \$2.40. However, if butter in the USA cost \$2.00 per kilo, then 1 £ would buy 1.2 kilos of butter in the USA, and 1 £ would be changed into dollars, so that US butter could be purchased and imported into Ireland. This would cause the price of the 1 £ to fall due to lack of demand, and also the price of Irish butter to drop for the same reason. Meanwhile, the opposite would occur in the USA, with the dollar and American butter both being in demand.

We assume the following price changes for butter **In Ireland Price of butter falls to 95p** **In USA Price of butter rises to \$2.20**

The exchange rate now becomes IRE1 = \$2.3157, the reason for this being that the £ now buys 1.05 kilos of butter and \$2.3157 purchases 1.05 kilos in the USA. So the rates are again in equilibrium. However, this is a simplified theory and assumes that VAT and transport costs might change without changing exchange rates. The theory does imply that different rates of inflation make it difficult for countries to have fixed rates at an agreed par value. However, the theory appears to ignore the major effects which foreign trade and speculation have on exchange rates.

Task 2 Exam Focus

SL1 2009 May

3a Explain three factors which may cause changes to occur in a country’s exchange rate under a floating exchange rate system. (10/25 marks)

b Evaluate the likely impact on a country’s economic performance of a substantial depreciation of its exchange rate. (15/25 marks)



Answer to Task 2-3b: downsize box