WHEN our economics editor invented the Big Mac index in 1986 as a light-hearted introduction to exchange-rate theory, little did she think that 20 years later she would still be munching her way, a little less sylph-like, around the world. As burgernomics enters its third decade, the Big Mac index is widely used and abused around the globe. It is time to take stock of what burgers do and do not tell you about exchange rates.

THE ECONOMIST's Big Mac index is based on one of the oldest concepts in international economics: the theory of purchasing-power parity (PPP), which argues that in the long run, exchange rates should move towards levels that would equalise the prices of an identical basket of goods and services in any two countries. Our "basket" is a McDonald's Big Mac, produced in around 120 countries. The Big Mac PPP is the exchange rate that would leave burgers costing the same in America as elsewhere. Thus a Big Mac in China costs 10.5 yuan, against an average price in four American cities of $3.10 (see the first column of the table). To make the two prices equal would require an exchange rate of 3.39 yuan to the dollar, compared with a market rate of 8.03. In other words, the yuan is 58% "undervalued" against the dollar. To put it another way, converted into dollars at market rates the Chinese burger is the cheapest in the table.

In contrast, using the same method, the euro and sterling are overvalued against the dollar, by 22% and 18% respectively; the Swiss and Swedish currencies are even more overvalued. On the other hand, despite its recent climb, the yen appears to be 28% undervalued, with a PPP of only YEN81 to the dollar. Note that all emerging-market currencies also look too cheap.

The index was never intended to be a precise predictor of currency movements, simply a take-away guide to whether currencies are at their "correct" long-run level. Curiously, however, burgernomics has an impressive record in predicting exchange rates: currencies that show up as overvalued often tend to weaken in later years. But you must always remember the Big Mac's limitations. Burgers cannot sensibly be traded across borders and prices are distorted by differences in taxes and the cost of non-tradable inputs, such as rents.

Despite our frequent health warnings, some American politicians are fond of citing the Big Mac index rather too freely when it suits their cause--most notably in their demands for a big appreciation of the Chinese currency in order to reduce America's huge trade deficit. But the cheapness of a Big Mac in China does not really prove that the yuan is being held far below its fair-market value. Purchasing-power parity is a long-run concept. It signals where exchange rates are eventually heading, but it says little about today's market-equilibrium exchange rate that would make the prices of tradable goods equal. A burger is a product of both traded and non-traded inputs.

AN IDEA TO RELISH It is quite natural for average prices to be lower in poorer countries than in developed ones.
Although the prices of tradable things should be similar, non-tradable services will be cheaper because of lower wages. PPPs are therefore a more reliable way to convert GDP per head into dollars than market exchange rates, because cheaper prices mean that money goes further. This is also why every poor country has an implied PPP exchange rate that is higher than today's market rate, making them all appear undervalued. Both theory and practice show that as countries get richer and their productivity rises, their real exchange rates appreciate. But this does not mean that a currency needs to rise massively today. Jonathan Anderson, chief economist at UBS in Hong Kong, reckons that the yuan is now only 10-15% below its fair-market value.

Even over the long run, adjustment towards PPP need not come from a shift in exchange rates; relative prices can change instead. For example, since 1995, when the yen was overvalued by 100% according to the Big Mac index, the local price of Japanese burgers has dropped by one-third. In the same period, American burgers have become one-third dearer. Similarly, the yuan's future real appreciation could come through faster inflation in China than in the United States.

The Big Mac index is most useful for assessing the exchange rates of countries with similar incomes per head. Thus, among emerging markets, the yuan does indeed look undervalued, while the currencies of Brazil, Turkey, Hungary and the Czech Republic look overvalued. Economists would be unwise to exclude Big Macs from their diet, but Super Size servings would equally be a mistake.

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