Case Study #6
Order # 2551834

The Big Mac Index

As you have already learned, the PPP theory predicts that in the long run the exchange rate between two currencies should move toward equalizing the cost in each country of an identical basket of internationally traded goods. A lighthearted test of the theory has been developed by *The Economist* magazine, which compares prices around the world for a "market basket" consisting simply of one McDonald's Big Mac—a product that, though not internationally traded, is essentially the same in more than 100 countries. *The Economist* begins with the price of a Big Mac in the local currency and then converts that price into dollars based on the exchange rate prevailing at the time. A comparison of the dollar price of Big Macs across countries offers a crude test of the PPP theory, which predicts that prices should be roughly equal in the long run.

PowerPoint Slide 29 in chapter 19 lists the dollar price of a Big Mac in March 2010, in 22 surveyed countries plus the euro zone average. By comparing the price of a Big Mac in the United States (shown as the green bar) with prices in other countries, we can derive a crude measure of whether particular currencies, relative to the dollar, are overvalued (red bars) or undervalued (blue bars). For example, because the price of a Big Mac in Norway, at $6.87, was 92 percent higher than the U.S. price of $3.58, the Norwegian krone was the most overvalued relative to the dollar of the countries listed. But Big Macs were cheaper in most of the countries surveyed. The cheapest was in China, where $1.83 was 49 percent below the U.S. price. Hence, the Chinese yuan was the most undervalued relative to the dollar.

Thus, Big Mac prices in March 2010 ranged from 92 percent above to 49 percent below the U.S. price. The euro was 29 percent overvalued. The price range lends little support to the PPP theory, but that theory relates only to traded goods. The Big Mac is not traded internationally. Part of the price of a Big Mac must cover rent, which can vary substantially across countries. Taxes and trade barriers, such as tariffs and quotas on beef, may also distort local prices. And wages differ across countries, with a McDonald's worker averaging about $8 an hour in the United States versus more like $1 an hour in China. So there are understandable reasons why Big Mac prices differ across countries.

The Big Mac Index computed by *The Economist* magazine has consistently found the U.S. dollar to be undervalued against some currencies and overvalued against others. This finding seems to call for a rejection of the purchasing power parity theory. Explain why the index may not be a valid test of the theory.

The purchasing power parity theory claims that the exchange rates between two currencies should equalize the prices in each country for the same internationally traded goods. Big Macs are not traded; they are produced in the country in which they are consumed. The cost of the Big Mac is affected by different local prices (such as rent) in each country, different local taxes, and different trade barriers that may affect the price of imported supplies (such as beef). In addition, PowerPoint Slide 29 indicates that the U.S. dollar appears undervalued in some countries (those with Big Mac prices above the U.S. price) and overvalued in other countries. A weighted average of the different prices may indicate that the dollar is neither overvalued nor undervalued.

Sources: "The Big Mac Index: Exchanging Blows," *The Economist*, 17 March 2010; David Parsley and Shang-Jin Wei, "In Search of a Euro Effect: Big Lessons from a Big Mac Meal?" *Journal of International Money and Finance*, 27 (March 2008): 260—276; Ali Kutan et al., "Toward Solving the PPP Puzzle: Evidence from 113 Countries," *Applied Economics*, 41 (Issue 24, 2009): 3057—3066; and the McDonald's Corporation international Web site at http://www.mcdonalds.com.

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project

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Chapters 17 18 + 19

General Goal is to learn about Int'l. Trade + Finance with a final debate on Macro Policy Active or Passive.

Learner will examine the workings of the foreign exchange market, starting with a discussion of the balance of pymts. mechanism. After covering the various trade balance concepts on current + financial account flows as well as their implications for measurement of trade surpluses or deficits + the determination of foreign exchange rates in a flexible rate system.

task list:

Concept of purchasing power is discussed + then the adjustment process under fixed exchange rates is examined.