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The Big Mac index, developed by the *Economist* magazine in 1986, is based on the theory of the purchasing power parity (PPP), *the notion that a dollar should buy the same amount in all countries*. As such, the Big Mac PPP is the exchange rate that would leave the *identical* hamburger costing the same in the US and abroad, or that ensures the 'law of one price'. Not only the Big Mac index is simple and easily digestible, but it has also proven to be quite robust in terms of its predictions and implications -- almost just as good as more sophisticated methods¹. Of these implications, two are very important: first, the extent of *undervaluation or overvaluation* of the exchange and the direction that it will take to reach its PPP rate in the long-run; second, the *cost and exchange rate differences* that underlie the undervaluation/overvaluation and how they are ultimately corrected for.

We want to apply the simple Big Mac index model to Lebanon, specifically as it relates to the two important implications cited above. We will do that by comparing the Big Mac index between July 2021 and July 2024 and check what that means in terms of exchange rate and cost changes².

Table 1: July 18, 2021

Price of Big Mac Sandwich in US*	5.6 USD
Price of Big Mac Sandwich in Lebanon	37,000 LBP
PPP exchange rate	6,610 LBP
Market exchange rate	22,000 LBP
Undervaluation	69.9%

*Average in major US cities

¹ Ashenfelter, O.C and Jurajda, J. "Wages, Minimum Wages, and Price Pass-Through: The Case of McDonald's Restaurants", *National Bureau of Economic Research*, 2021.

² The author would like to thank Ms Shireen Safwan and Dr Jad Bobloul for the data sources.

In its July 23, 2021 issue, the *Economist*, based on the previous week's data, stated that, at \$1.68³, Lebanon enjoys the cheapest Big Mac in the world, a 'small consolation' for the triple crises it was going through – exchange rate, banking, and foreign debt. Table 1 above can show us why: the Big Mac was selling in Lebanon for 37,000 LBP at a time when it was selling in the US for \$5.6, implying a PPP rate of 6,610 LBP; but the market exchange rate stood at 22,000 LBP, or an *undervaluation* of the LBP by 69.9%. No wonder the Lebanese Big Mac cost \$1.68 (the price of 37,000 converted to USD at the 22,000 rate)! And the reason behind this low price is the relatively lower cost of production, *made even cheaper by the subsidies enjoyed on the imported Big Mac ingredients at the time*.

Of course, with such tremendous undervaluation, economies will have to adjust over time towards an equilibrium PPP rate. If we look at the same figures three years later, at July 18, 2024, as shown in Table 2 below, we observe the following:

Table 2: July 18, 2024

Price of Big Mac Sandwich in US*	6.5 USD
Price of Big Mac Sandwich in Lebanon	480,000 LBP
PPP exchange rate	73,800
Market exchange rate	89,500
Undervaluation	17.5%

*Average in major US cities

First, with the PPP rate at 73,800 LBP, compared to a market rate of 89,500 LBP, the undervaluation in the exchange rate has fallen to only 17.5%. So talk that the 'official' market exchange rate of 89,500 LBP per USD can afford *a bit of appreciation* is valid on PPP grounds. Second, the Lebanese Big Mac now costs \$5.4 – 83% of the US price of \$6.5 – not as 'digestible' as it was three years earlier but closer to the 'law of one price'. Third, and most important, what underlies the fall of undervaluation is the rise in production costs. Anecdotal evidence is replete with stories about costs rising to where they were at before the crisis. But the thing to keep in mind is that it is not labor cost: for instance, the minimum wage was equal to \$450 in the summer of 2019 but it is only \$200 now!. So it is non-labor costs that are rising such as rent, energy (electricity included), ingredients or raw materials, and perhaps most interesting the rising opportunity costs of self-financing in the absence of banks or financial

³ "What the Big Mac Index Says About the Dollar and the Dong", *Economist*, July 23, 2021

intermediation⁴. So calls to reform public utilities and to restructure the banking sector make a lot of sense at least from a cost of business point of view.

To conclude, the Big Mac index is not hard-core science but it is simple and simplicity, in the words of the late Steve Jobs, is sometimes the 'ultimate sophistication'. Applied to Lebanon, it shows that the LBP is undervalued but less so than before. But the crucial thing to remember here is that undervaluation can fall because of two mechanisms: through a higher cost of production, as reflected in a higher price of Big Mac in Lebanon; and/or through an appreciation of the LBP exchange rate, as reflected in a lower market exchange rate. Unfortunately in Lebanon, most of the adjustment in undervaluation happened the wrong way, through higher cost as the price of Big Mac rose by 13 times over three years (from 37,000 LBP to 480,000 LBP). The right way would have been through appreciation of the exchange rate, not just via the short-run accumulation of foreign reserve assets and the restriction on money supply growth, but more importantly via strengthening medium-to-long term fundamentals, such as enhancing productivity, competitiveness, and stable capital inflows, that can have a profound effect on income and welfare, in addition of course to their benign effect on PPP. But, sadly and perhaps madly, that is yet to happen, because the country is still in a crisis and 'resistance' mode, not in a genuine reform and restructuring mode – how irrational and irresponsible can that be!

⁴ That is in addition to some non-competitive pricing on the part of producers/importers, especially the big ones.

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