Burgernomics: What can your burger tells you about

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Abstract. Being introduced in 1986, Burgernomics was a simply approach to Purchasing Power Parity (PPP) concept. The Economist was the one who invented this method. Today, it becomes even more popular to identify whether currency in one country is undervalued or overvalued against US dollar. The idea behind Burgernomics was coming from identical ingredients of Big Mac all over the world. Big mac itself is the most selling item in McDonald. In addition, this fast food restaurant is spread all over the world. Based on this two reason, the Economist found Burgernomics as a tool to count implied purchasing power parity. The information from Burgernomics can be used to give a big picture whether a currency of one nation is weak or strong so that the government can identify the exchange rate discrepancies and use this information as a guidance to decide their fiscal policy. This journal will expose the using of Burgernomics to measure currencies in the world, especially in South East Asia.

Keywords: Burgernomics, Purchasing Power Parity, South East Asia, The Big Mac Index 2019

1 Introduction

PPP or Purchasing Power Parity hold a concept where people should pay the same amount for the same thing no matter where they are after they convert the price to another common currency [1]. In 1986, The Economist found a way to explain PPP by using burger and it is called as burgernomics. The Economist compares hamburger's price around the world and by doing so, they know when their currencies are overvalued or undervalued.

Until today, the Burgernomics caused controversy. According to [2] there are two big flaws in Burgernomics; first, PPP is usually related to globally traded goods where Big Mac does not fall into this category. Second, local price is distorted by the difference in its costs such as rent and tax. This distortion happens because the parity theory initially aims to determine the equilibrium exchange rate, therefore the relationship might deviate in the short term, however, in the long run, it is widely accepted that this theory is valid although the findings literature is mixed [3].

2 Literature Review

2.1 Burgernomics

The Big Mac Index or Burgernomics was introduced by The Economist in 1986. This index was aimed to test the theory of purchasing power parity (PPP) and determine the disparity in currency values whole over the world. The economist decided to use Big Mac as their indicator because, in most countries, it was easy to find Big Mac. Moreover, the

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ingredients to make one Big Mac were relatively the same everywhere [1].

Besides the ingredients, the profit margin set by Mac Donald is also the same all over the world, therefore it can be concluded that the price for one Big Mac should be the same wherever it is. But apparently, this is not what happens. After being converted, some Big Macs are more expensive and some others are a lot cheaper. By using this calculation, it can be indicated that some currencies against USD, are overvalued while the rest are undervalued. For example, based on The Economist data, in 2019 the price of one Big Mac in The USA is USD 5.58 while in Britain it costs 3.19 Pounds. It implies that the exchange rate between USD and pounds is 0.57. However, the actual exchange rate shows 0.78. This price discrepancy indicates that in 2019 British Pound is 27% undervalued against USD.

Many researchers argue that the Big Mac Index neglect the different compositions for each Big Mac (including goods and services) in each country where these items affect the exchange rate, thus there is an argument that the Big Mac Index against their usefulness for PPP purposes [4].

The Big Mac Index is a simple guide to the exchange rate, but even so, it does not mean that it is not useful. This index is a signal whether one currency is overvalued or undervalued. Once the signal received, the government can use this data as additional information to stepping in the economic decision.

2.2 Purchasing Power Parity (PPP) and The Law of One Price

Purchasing Power Parity theory introduced in 1918 by Gustav Cassel [5]. By 1918 PPP has become central to compare countries' economies [6]. According to [7] the PPP theory will help to express how much foreign company needed to purchase the same volume of goods and services in another country's currency for the basis of comparison. From macroeconomics perspectives, PPP is employed to predict the exchange rate and predict whether a currency is overvalued or undervalued [7]

Due to the factors of tax, subsidies, imperfect competition and transaction cost, PPP might not hold in the short-run [7]. However, since the international goods market arbitrage should be traded away over time, it is expected that PPP holds in the end [7].

The law of One Price is one a law that dragged from PPP theory. It is a strong version of Purchasing Power Parity [1], [6]. This law states that identical goods should be sold for the same price across the country when prices are expressed in a common currency [1], [7]. According to [6] there are 2 assumptions that must be held to apply The Law of One Price, first, goods must be transportable and there should not be any barriers to trade.

However, research done by [6] shows that the law of one price cannot be applied due to several reasons, which are: differences in taxes, price discrimination and the volatility of exchange rates. This law does not apply perfectly in the real economy, because despite it called a law it has been violated any other economic law [8].

3 Research Methodology

Qualitative descriptive is chosen to do this research and choose a case study design to get a deeper understanding regarding phenomenon so that in the end we can conclude by giving theory. In conducting this research we use secondary data. The analysis in this paper is divided into two sections. The first section is the Burgernomics in the world while the analysis on the second section will be focus in South East Asia.

4 Result and Discussion

4.1 Big Mac Index 2019 in The World

Table 1 Big Mac Index 2019 in The World

Country	Local Price	Dollar Exchange	Dollar Price	Dollar PPP	Implied Dollar Valuation
Switzerland	6.5	0.98165	6.6	1.16	18.7
Norway	50	8.53	5.85	8.96	5
Sweden	52	8.90625	5.83	9.31	4.6
China	20.9	6.85	3.05	3.75	-45.3
Turkey	10.75	5.38	1.996	1.93	-64.2
Ukraine	54	27.8	1.94	9.68	-65.2
Russia	110.17	66.685	1.65	19.74	-70.4

The Big Mac Index Report shows that the Russian rouble is one of the most undervalued against USD since 2015. Economic sanctions and depleting oil prices are two main reasons why the Russian rouble is undervalued against USD.

Same with Russia, Chinese Yuan is also undervalued against USD. But unlike Russia, Yuan value is depleting due to Chinese government strategy. Based on Big Mac Index 2019 on Table 1, Yuan is 45.3% undervalued against USD. Chinese government intend to lower Yuan’s value so that China can take advantage in the export market. It enables China to sell their products in a very competitive price. The Chinese government commit to buy US Dollar and treasury notes in the open market so that the demand of USD increase and at the same time it keeps Yuan weak. By applying economics concepts of supply and demand, Chinese government knows that, holding all other factors remain equal, when the supplies of USD remain the same and the demand goes up, the value of US Dollar will increase.

On the other hand, based on The Big Mac Index 2019, the Swiss Franc is 18.7% overvalued against USD. Some reasons behind this are European debt crisis and loose monetary policy from the US Federal reserve [9].

The European debt crisis started in 2009, when some of Eurozone member such as Greece, Spain and Portugal states that they are unable to repay their debt. As a result, investors were seeking safe haven in the Swiss Franc. In addition, The US loose its monetary policy in order to promote economic growth that placed USD in unfavourable option, thus many investors switch their investment to the Swiss Franc. This condition caused the Swiss Franc overvalued compare to USD.

Another currency that overvalued against USD is Norwegian Krone. According to [10], Krone was overvalued due to price differential between Norway and The US. Another things that also have an impact to Krone were international financial turbulence and the interest rate differential [10].

From the examples above, it can be seen that some countries choose to undervalue their currency in order to boost export and eliminate competitors through irrationally cheap goods and services. However, another countries do not choose to undervalue their currency but those currency are undervalued due to oil price, macro economy condition and economic condition or politic sanction.

On the other hand, some countries such as Norway and Swiss are overvalue due to varied reasons. It can be concluded that those countries with overvalued currencies take benefit from the loose monetary policy set by the US Federal Reserve.

4.2 Big Mac Index 2019 in South East Asia

Table 2. Big Mac Index in South East Asia 2019

Country	Local Price	Dollar Exchange	Dollar Price	Dollar PPP	Implied Dollar Valuation
Malaysia	9.05	4.12	2.2	1.62	-60.6
Indonesia	33,000	14,090	2.34	5,913.98	-58
Vietnam	65,000	23.199	2.8	11,648.75	-49.8
Thailand	119	32.0075	3.72	21.33	-33.4
Singapore	5.8	1.36	4.3	1.03	-23.3
Philippines	140	52.4	2.67	25.1	-52.1

Source: [11]

According to [12] ASEAN is the fifth largest economy in the world. In general, Asia's economic is stronger than Europe's economic. However, Burgernomics indicates that currencies are expensive in Europe but cheap in Asia [13]. It can be seen from the table below that all of the countries in South East Asia are undervalued against USD. However according to Damocles Index, this condition would not put ASEAN member states to face immediate risk on exchange rate crisis [12].

The cause of this weaknesses are varied among those countries. In 2019, Malaysia and Indonesia become Asia's worst performing in exchange rate. This happen because most of overseas funds are leaving the emerging countries due to higher interest rates. On the other hand, countries in South East Asia also threaten by cheap product form China and the US-China trade friction making this condition even worse. Similar to Malaysia, Indonesian Rupiah is undervalued. Sitting in the second-worst performing in exchange rate, Indonesia depreciates around 58% against USD even though Indonesian government believe that Indonesia has strong economic fundamental. The rupiah hit the lowest level in more than 20 years [12]. There are some reasons why Indonesian Rupiah perform really bad in exchange rate. First. Indonesia has significant external debt that standing at 34% of its GDP and at the same time, it also hit by several huge natural disaster. Moreover, Indonesia will face election on April 2019 that creates negatives sentiment from overseas investors.

This condition reminds investors and government to the Asian financial crisis in 1997. However, today's condition is different with what happen during 1997-1998, nevertheless, this signs cannot be neglected. ASEAN member supposed to cooperate and take preventive action to make sure that the similar crisis happen again for the second time.

5 Implication and Conclusion

By using The Big Mac Index, each country might get a big picture whether their currency overvalued or undervalued against USD. Therefore each government can set strategy regarding to this. When the currency is overvalue it can be said that the currency is expensive so that export is expensive. Most likely, the country with this condition cannot compete with competitor from other country. On the contrary import is cheap, therefore they can take benefit from importing cheap raw material to reduce the cost. Government can set their fiscal policy based on this condition. For example, decrease or eliminate tax on export activity.

On the other hand, undervalued currency makes currency cheap and as a result export is cheap as well. Government can take advantage from it by boosting export and suppress import. If it combine with a loose monetary policy, the interest rate will be decrease. Thus it gives an advantage for companies. With low interest, company is in a good position to expand their businesses and as an impact it will hire workers and boost production to meet local and export demand. In addition, the low interest will also attract household to buy goods and services. This policy expectations would influence economic expectations in a near future including expectation for production cost, wages and prices that will directly influence current inflation. With this mechanism, government can set their strategy to achieve their goal.

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