1 The Circular Flow of Income

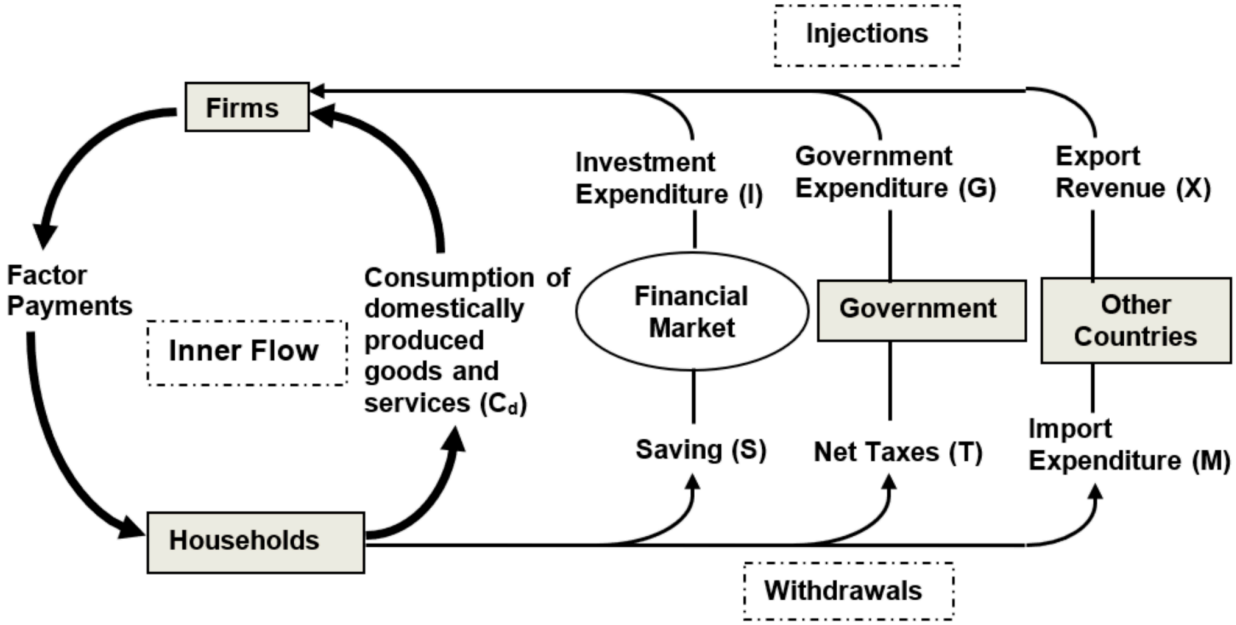

Fig 1: 4-Sector Circular flow of Income

Step 1: Explain Injections and Withdrawals to set up key terms

In a 4-sector economy, injections are additions of spending to the circular flow of income which increase the income-spending stream, consisting of investment expenditure (I), government expenditure (G) and export revenue (X). On the other hand, withdrawals are a leakage of potential spending from the circular flow of income which contracts the income-expenditure stream., consisting of savings (S), taxes (T) and import expenditure (M).

Step 2: Explain the Circular Flow of Income

Fig 1 shows that when firms produce goods and services, they hire factors of production — labour, land, capital, and enterprise — from households, and pay respective factor payments for them — wages, rent, interest, and profits. Households in turn spend their factor income on the consumption of goods and services. Households may also decide to save part of their income in the financial market as savings (S), which in turn loans out funds to firms to make productive investments. In addition, households also pay taxes (T) to the government, which spends the tax revenue on, for example, provision of public goods and merit goods. Simultaneously, incomes are injected into the circular flow from the foreign sector via exports (X) and incomes are withdrawn into the foreign sector and thus leak out of the circular flow via imports (M).

Step 3: Explain Disequilibrium and Equilibrium

How much firms invest may differ from how much households save, how much governments spend may differ from what they receive in taxes, and export revenue can exceed import expenditure or vice versa. Thus, planned injections may not equal planned withdrawals. A net withdrawal contracts the income-expenditure stream, reducing national income while a net injection increases the level of income. When net injections are not equal to net withdrawals, the circular flow of income is in disequilibrium and fluctuations in the level of economic activities will arise. The economy will be at equilibrium when the total injections equal the total withdrawals.

2 Purchasing Power Parity

Let's estimate that a Big Mac costs 6 SGD in Singapore, and 20 MR in Malaysia. Clearly, the same goods and services may cost different amounts of currency in different countries. Hence, if we were to measure the GDP of each country, it would be very confusing to compare which countries have a higher material SOL. Hence, we need a common currency, like the USD.

After conversion to USD, now a Big Mac costs 4.44 USD in Singapore, and 4.27 USD in Malaysia. Indeed, such a phenomenon exists in the real world, but the explanation as to why this happens is not important for now. It is only important to know that the same amount of income in US$ buys different amounts of goods and services in different countries. This is a problem because one country can buy more goods and services than the other. Consequently, one country has a higher material SOL than that of the other country even though GDP figures would show that the SOL of both countries is the same.

To overcome this problem, Economists use ***Purchasing Power Parity (PPP)***. PPP, in essence, is the exchange rate that allows the same amount of income in USD to buy the same quantity of products in each country. In this case, the PPP rate between Singapore and Malaysia would be 0.3 SGD : 1 MR. This means that the purchasing power of 1 MR is equal to the purchasing power of 0.3 SGD. Hence, 20 MR has the same purchasing power as 6 SGD . If we use PPP-adjusted GDP, we can more accurately calculate the differences in SOL between 2 countries.

Having considered the essence of PPP, the formal definition of PPP is "The rate of currency conversion that equalises the purchasing power of different currencies by eliminating the differences in price levels between countries." I think this is a very confusing way to express it, but there is a need to remember it.

Limitations in Theory of PPP

1. PPP compares prices of a similar basket of goods between countries. In doing so, it assumes that goods in the basket of goods selected in each country are perfect substitutes. However, that is not a fair assumption. A Toyota is not the same as a Mercedes.
2. PPP also assumes that the needs and wants of people are the same. However, this is not true. In the same way that the movies you like may not be the movies your friend likes, the goods and services that the people of one country like may not be the goods and services that the people of another country likes. For example, even if we now use an exchange rate that allows people to buy the same amount of Big Macs in both countries with the same amount of US$, if the people in country A are vegans, they wouldn't be as happy as people in country B who are McDonald's lovers.
3. PPP data also varies over time and across different sources. International organisations such as the World Bank and the International Monetary Fund (IMF) regularly publish PPP estimates based on comprehensive surveys and data collection efforts. These estimates provide a basis for comparing living standards and making meaningful cross-country analyses.

Why do we not just use Real GDP per capita?

Real GDP per capita is not used because the price levels between countries do not differ only because of differences in inflation. They may differ also because of other factors like exchange rates changing due to speculative activity, government intervention in the FOREX market, etc. Hence, PPP accounts for **both** differences in inflation rates **and** other factors that may cause differences in price levels of the same basket of goods and services.

3 Foreign Direct Investment

Foreign Direct Investment (FDI) refers to an acquisition of a controlling ownership of an enterprise in a country by a foreign firm or investor. It can refer to:

(1) Establishing a new firm in the country that is wholly owned by the foreign investor (setting up an office or a factory in the country by a foreign firm). This **is** considered to be investment expenditure as there would be an increase in fixed capital goods like plant and machinery.

(2) A foreign investor buying/ funding an existing firm in the country. This is **not** considered to be investment expenditure as it does not entail any fixed capital formation.