5.PURCHASING POWER PARITY THEORY:

Unit Structure:

5.1 LEARNING OBJECTIVES:

After studying this lesson you are able to: Understand the law of one piece

- Understand the PPP theory
- Understand the absolute version of the PPP theory.
- Understand relative version of the PPP
- Understand criticism against PPP

5.2. INTRODUION:

Gustav Cassel a Swedish economist, in 1918, put forth the principle of purchasing power parity (PPP).

According to purchasing power parity (PPP) principle, the price levels along with the changes in the price levels in various countries determine the exchange rates of these countries' currencies.

Purchase power Parity Theory is an economic theory that evaluates the amount of adjustment needed on the exchange rate between countries in order for the exchange to be equivalent to each other’s currency's purchasing power. The basic objective of this principle is that the exchange rates between various countries’ currencies reflect the purchasing power of these currencies. This objective is based on the Law of one Price

5.3. THE LAW OF ONE PRICE:

The Law of One Price explains that identical goods should be sold for the same price in two separate markets.

The assumptions of Law of One Price are:

-Movement of Goods: The law of one price assumes that there is no restriction on the movement of goods between countries i.e. it is possible to buy goods in one market and sell them in another. This implies that there is no ban on exports or imports or in the form of quotas in international trade.

-No Transportation Costs: Law of One Price would hold perfectly if there were no transportation costs involved.

-No Transaction Costs: This law assumes that there are no transaction costs involved in the buying and selling of goods.

-No tariffs: The existence of tariffs does not hold good for the law of One Price, which requires their absence to hold perfectly.

The law of one price is just another way of stating Purchase Power Parity (PPP). However PPP explicitly mentions about exchange rates whereas the law of one price is applicable even within two markets of the same country.

5.4. PURCHASING POWER PARITY THEORY:

As per to PPP theory, when exchange rates are of a fluctuating nature, the rate of exchange between two currencies in the long run will be fixed by their respective purchasing powers in their own nations.

There is a demand for foreign currency by the people because of its purchasing power ability in its own nation. Also domestic currency has a certain purchasing power, because it can buy some amount of goods/services in the domestic economy. Thus, when domestic currency is exchanged for any foreign currency, one can say that domestic purchasing is being exchanged for the purchasing power, as it can buy some amount of goods and services in the domestic country. This exchange of the purchasing power takes place when the purchasing power of two currencies nations gets equalized. Thus, the purchasing power of the two currencies determines the exchange rate. The exchange rate under this theory is in equilibrium when their domestic purchasing powers at that rate of exchanges are equivalent e.g, Suppose certain bundle of goods and services in U.S.A. costs U.S. $ 20 and the same bundle in India costs, Rs. 900/- then the exchange rate between U.S. Dollar and Indian Rupee is $1 = Rs. 45. Because this is the rate of exchange at which the parity between the purchasing power of two different nations is maintained. A change in the purchasing power of any currency will also reflect in the exchange rates. Hence under this theory, domestic purchasing power determines the external value of its currency to that of another currency.

- ABSOLUTE VERSION OF THE PPP THEORY:

The absolute version of the purchasing power parity (PPP) theory states that the exchange rates between two countries' currencies should reflect the relation between the international purchasing powers of various currencies. In other words the exchange rate would be determined, at the point where there is equilibrium in the internal purchasing power of the respective currencies. Let us take an example to understand the above mentioned point. Suppose particular basket of goods cost Rs. 2000/- in India and $ 200 in the U.S.A. That means the exchanges rate would be Rs. 10 = $1.

The exchange rate can be determined with the following equation.

$$R = \frac{P_b \times Q_o}{P_a \times Q_o}$$

Where,

R=Exchange Rate

P_a =Prices in nation a

P_b= Prices in nation b

Q_o= Corresponding weights

In this equation prices are related to the respective bundle of goods with same weights assigned in both the countries. Thus, the above equation explains that the equilibrium exchange rate is determined by the ratio of the internal purchasing power of domestic currency and foreign currency in their own countries. Thus, to sum it up the absolute version of this theory shows that the absolute purchasing power of respective currencies does play an important role in determining the equilibrium exchange rate.

- RELATIVE VERSION OF THE PPP THEORY:

The relative version was put forward to find the relative strength of the changes in the equilibrium foreign exchange rate. Any withdrawal from the equilibrium will lead to the disequilibrium. It can occur due to changes in the internal purchasing power of a particular currency. The changes in the purchasing power are measured by domestic price indices in the respective nation. In order to calculate we need to keep a Base Exchange rate by assuming any past rate of exchange in order to know the percentage change in the exchange rate. If we compare the price indices of the past i.e. base period with that of the present period, the new equilibrium exchange rate could be found out.

It can be simplified with the following equation.

$$Rn = Rn - 1 \times \frac{P_{b1} \times \frac{\square}{\square} P_{bo}}{P_{a1} \times \frac{\square}{\square} P_{ao}}$$

Where,

Rn= New equilibrium exchange rate

Rn-1= Base period exchange rate

Pbo= Price index of nation b in base period

Pb1= Price index of nation b in current period

Pao= Price index of nation a in base period

Pa1= Price index of nation a in current period

Thus, according to the equation when the price level in the concerned nation is changed, the internal purchasing power of the currency of that nation also goes on changing automatically. This leads to the change in the equilibrium exchange rate.

Thus, under this theory there has been a linkage between the purchasing power of two currencies in determining the equilibrium exchange rate. However, it has been criticized on the following grounds.

5.5. CRITICISM OF PURCHASING POWER PARITY (PPP) THEORY:

1. **Limitations of the Price Index**: As per the relative version the PPP theory, it uses the price index in order to measure the changes in the equilibrium rate of exchange. However, price indices suffer from numerous limitations and thus theory too.
2. **Neglect of the demand -supply approach**: The theory fails to take into consideration the demand for as well as the supply of foreign exchange. Due to such negligence the PPP theory proves to be unsatisfactory, because practically exchange rate is determined according to the market forces such as the demand for and supply of foreign currency.
3. **Unrealistic Approach**: Use of price indices for the PPP theory proves to be unrealistic. The reason for this is that the quality of services and goods included in the indices varies from nation to nation. Thus, any comparison without taking into consideration the quality proves to be unrealistic.
4. **Unrealistic Assumptions**: this is yet another important criticism that the PPP theory is based on the unrealistic assumptions such as absence of transport cost. Also it wrongly assumes that there is an absence of any barriers to the international trade which is practically impossible.
5. **Neglects Impact of International Capital Flow**: The PPP theory neglects the impact of movements of the international capital on the foreign exchange market. Fluctuations may be caused by International capital flows in the existing exchange rate.
6. **Occurrence rare in nature**: The PPP theory is in too different to the Practical approach. Because, the rate of exchange between any two currencies based on the domestic price ratios is a very rare occurrence. Thus, the PPP theory is criticized on the above grounds.

5.6. CONCLUSION:

Despite these criticisms the theory focuses on the following major points.

1. It tries to establish relationship between domestic price level and the exchange rates.
2. The theory explains the nature of trade as well as considers the BOP (Balance of Payments) of a nation.

Thus, Gustav cassell's attempt to explain the exchange rate determination based on domestic price indices was very unique attempt.