International Finance
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Lecture - 4
Purchasing Power Parity

So, good morning now we will discuss about in monetary standard. So, discuss the last part of this session on monetary system or monetary standard is the paper currency standard, because as I mentioned in our earlier lecture, the after the gold standard many country adopted the monetary paper currency standard. Paper currency standard was neither linked to any gold or any metallic standard.

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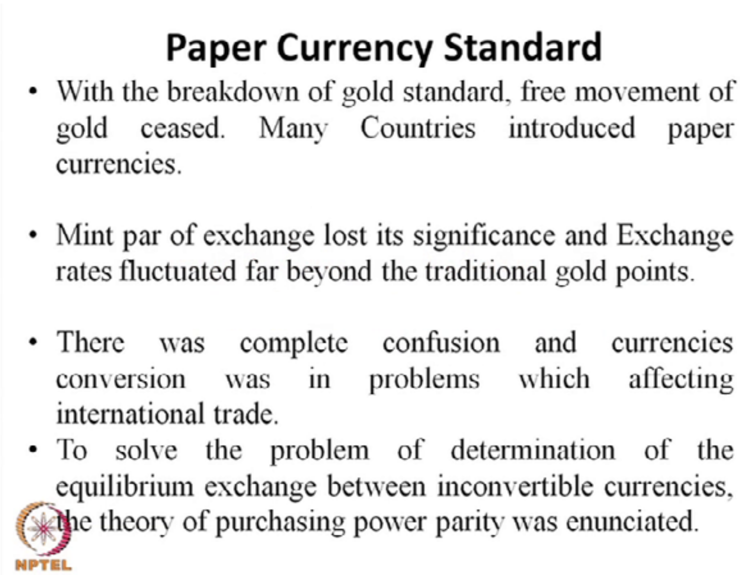

However, there since there is no linked to any kind of monetary value or monetary standard, it was very difficult on the part of the different country to convert the monetary standard exchange rate between inconvertible paper currency standard. And in this process different theories has been developed to articulate the exchange rate between inconvertible paper currency standard.

One of such theory the purchasing power parity theory, the purchasing power parity theory developed in the Second World War, when many countries adopted inconvertible paper currency standard. There are two relating version of monetary purchasing power parity theory; one version is called absolute purchasing power parity, another version is called relative purchasing power parity. While understanding the purchasing power we should understand that the basic requirement of purchasing power parity is purchasing power of currency.

Purchasing power of currency depends upon the many things one of the primary thing is that what is called the inflation. A particular country has goods and services are more demanded or a less demand depends upon the price of the goods and services. Price of the goods and services dependents upon the manufacturing cost, production cost, manufacturing cost, their wages, taxes, inflation many other things. All these things linked, all these requirements linked to what is called purchasing power of currency.

Suppose purchasing power depends upon not only the wages, salary or the manufacturing cost, but also the taxation and inflation of the country. In this context we will discuss about the purchasing power and also discuss why the requirement of purchasing power is essential under the inconvertible paper currency standard.

As I mentioned in my lecture that with the breakdown of the gold standard free movement of gold seized. Many countries introduced what is called paper currency. If I breakdown there is no transportation of gold free transportation of gold from one country to another country, the basic requirement of the, which was the basic requirement of the gold standard this gold standard could not continue and slowly, and many country remove the gold standard linking the gold to the relative their paper currency or the any other metallic standard and introduced what is called the paper currency standard.

The paper currency standard depends upon depends upon how much currency they are circulating the economy, how much what is the inflation, what is the price of the good in that particular country and on that basis the exchanger of exchange of good take place. When a country exports something to another country they receive some kind of international payment, that international payment itself in paper currency standard. So, the conversion of one currency to another currency was very difficult when different countries with different monetary standard and there was no interlinking between one currency to another currency. So, world required that time what is called a conversion rate for different currency. In this context the paper purchasing power parity theory was developed.

So, the mint per exchange rate last its significance because the gold the primary requirement of flow of free flow of gold was abandon. There was complete confusion and currency conversion was in problem, which affect the international trade. Since, international trade depends upon the exchange rate or the conversion of one currency to another currency. Since, there was no conversion the conversion was itself in a problem. So, monetary system monetary system or international trade was affected.

To solve the problem of determination of equilibrium of exchange between inconvertible currency standard, the theory of purchasing power was purchasing power parity was developed. The basic requirement of purchasing power parity theory, the purchasing the power of currency; the power of currency depends upon what the purchasing that demand and how much the country, how much, what is the power of the currency, how much in real goods in the currency can demand. So, on that basis of purchasing power parity developed.

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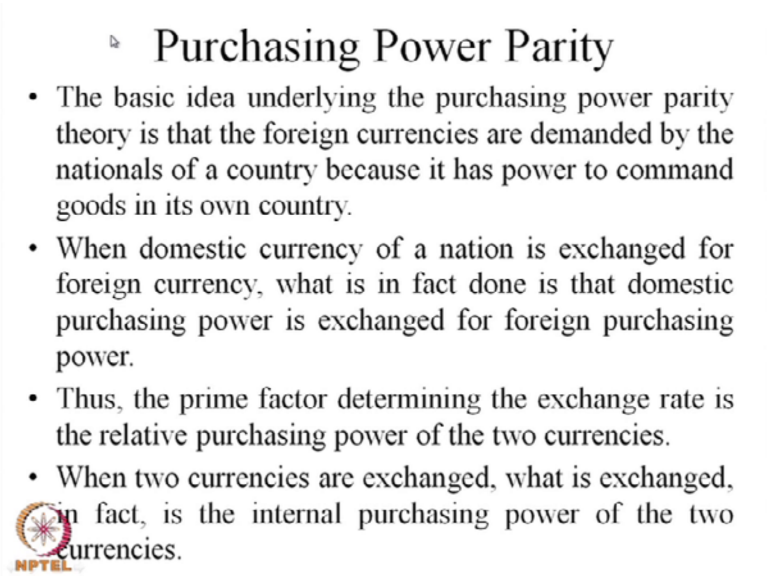

The purchasing power parity basic requirements I have to mention here, the basic idea underlying purchasing power parity theory is that foreign currency are demanded by the nation national of a country, because it has power to command goods in its own country. Why people demand currency because with the currency they will purchase goods and service and how much goods and service they purchase from one unit of currency, that is, the power of the currency. If they are purchasing more goods more with one unit of currency then power of currency is more. So, when you exchange currency US dollar or the Indian rupee were exchanging end of that day, what you are exchanging, we are exchanging the purchasing power of currency, because I demand I accept I am accepting US dollar because US dollar is demanded in the world because US dollar has more purchasing power than Indian currency.

Similarly, the when you exchange two currency we are exchanging the purchasing power between the two currency. The primary factor determining the exchange rate is the relative purchasing power of the two currencies. When two currencies are exchanged, what is exchange is the purchasing power of the two currencies and in this on that basis underlying of this the exchange rate under inconvertible paper currency standard determined.

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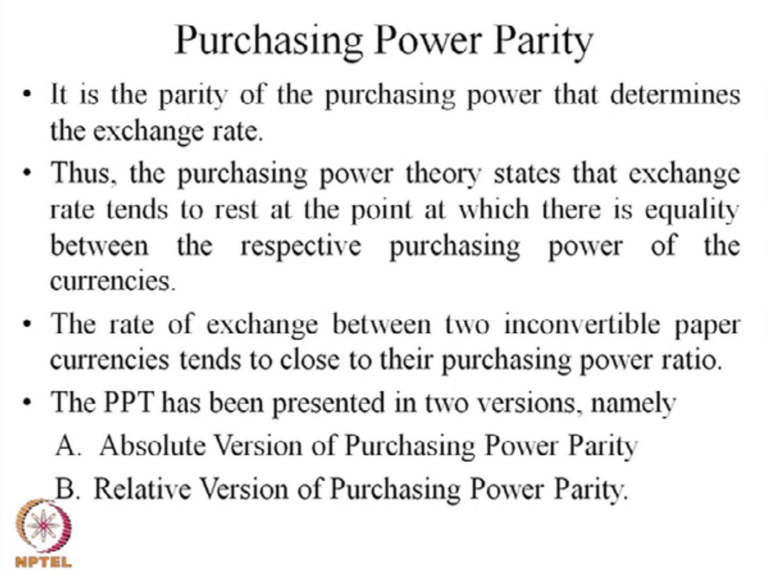

So, purchasing power parity it is the parity of the purchasing power that determine the exchange rate. So, when a one currency is exchanging another currency, we are exchanging the internal power of the currency. Purchasing power parity theory states that, purchasing power purchasing rate tend to rest at a point at which there is equality between the respective purchasing power of the currency, when two currency equalizes what you are equalizing their purchasing power. When US dollar, suppose one basket of goods in US cost twenty dollars and same basket of goods in India cost 200 dollar, 200 rupee then one dollar is 20 rupees. In that way you can determine the exchange rate.

So, the PPT theory because as I mentioned that purchasing power depends upon many things; one not only the inflation amount money circulation in the economy, the inflation, the tax rate, wage rate, salary, many other many other internal requirements are there. So, all these things affect the purchasing power; however, when you exchange the two currency the all the all this what is called the basic requirements of the purchasing power or the basic determinants of purchasing power already there in the currency itself. So, when you decide the PPT theory PPT theory or the purchasing power parity theory has two different version; one is called absolute version of purchasing power another, is relative version of purchasing power parity. What actually absolute version, what is relative version we will be discussing in the same.

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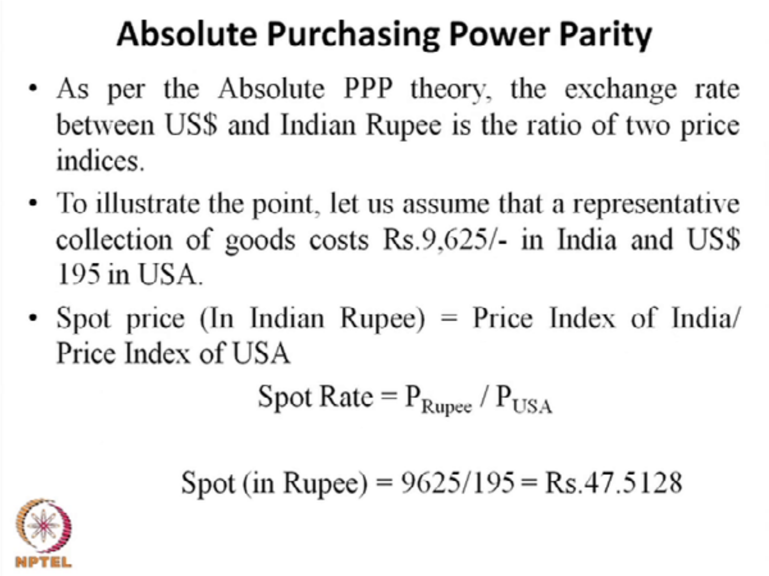

The absolute version of purchasing power parity, as per the purchasing power parity theory the exchange rate between US dollar and Indian rupee is the ratio of two price indices. As we in different country we have price indices, what is price indices, in India we have what is called, what is called the price index. Price index depends upon the price of the goods and multiply with the, (( )) the price index of US also there. When you, one price index and another price index we compare, we compare not only compare their exchange rate, we compare their exchange rate.

So, when you mention that a basket of goods a representative collection of goods in US, in India cost 900 9625 rupees and in US it is called 995 dollar, 195 dollar. Then the spot rate or the spot exchange rate between US dollar and Indian rupee in Indian rupee format price index of India divided by price index of US. The spot rate nothing but price index of rupee and price index of US. So, here the price index of India is 9625 rupees, in price index of US is 195 dollars. So, if you divide 99625 by 195 we are getting 1 dollar in terms of, 1 US dollar in terms of rupee is 47.5128. What it mean; it means that, 1 dollar in international market will cost will have a price 47.5128 rupees.

It means that there is an exchange rate between dollar and rupee, and the dollar and rupee exchange rate depends upon a basket of commodity. The basket of commodity, what is their price in India divided by what is the price in US determine the exchange rate between India and US. It is called absolute because we are not linking any other things here. It is depends upon the only the price index; however, it may happens that in US, in India inflation is more the price will be more in US inflation is less price is less. Generally in India we have inflation at present something around 9 to 10 percent, US at present around three to four percent. So, US dollar have more price, more purchasing power than Indian rupee, when inflation increases the purchasing power, purchasing power of currency decline.

So, then definitely the purchasing power affect is affected because of inflation; however, in absolute purchasing power parity theory we are not considering this entire relative concept. When you factor the relative concept particularly the inflation we have relating purchasing power parity. As in absolute purchasing power parity we are only taking into account the price index of two countries. In place of US suppose, you are considering any other country, suppose you are considering pounds sterling here, then price index of India divided by price index of pounds sterling will decide the exchange between India and pound sterling. Similarly, suppose you are taking euro, so price index of India divided by price index of euro will decide the price of the spot rate or the exchange rate between Indian rupee and euro.

Here, the we are since we are not considering any kind of other parameter this called absolute price index or absolute exchange rate or absolute purchasing power parity theory.

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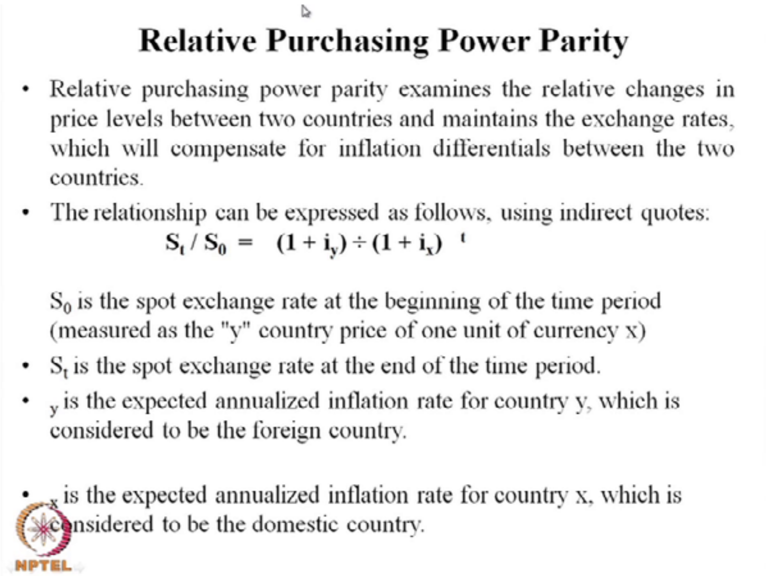

Now, suppose we are, now we are going to relative the purchasing power parity theory. Relative purchasing power parity theory examine the relative exchanges in prices level between two country and maintain the exchange rate which will compensate for inflation, difference between two country. Here what you are factoring here inflation, as I mentioned inflation also effects the purchasing power parity of a currency. High inflation the purchasing power purchasing power of the currency decline, low inflation purchasing power purchasing power increases.

So, when you exchange between two currency we also exchange the inflation between two currency. The high inflation country have less purchasing power and low inflation country have more purchasing power, because of this high inflation country have the currency exchange rate will be not favourable; however, low inflation country the exchange is favourable to that country. The relationship between, the relationship of exchange rate between two country can also be a factor in place of the absolute purchasing power parity.

Now, we have to go for beyond the absolute purchasing power parity theory and factor the inflation of that two country. Now suppose we know that spot rate will determine on the basis of spot; spot rate mean the absolute purchasing power parity the absolute purchasing power parity.

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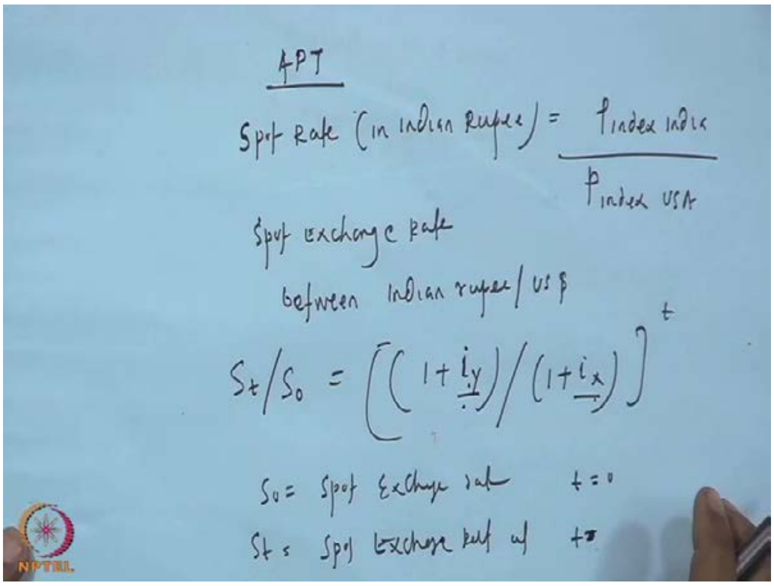

We are discussing we are taking into account the price index of two country, absolute purchasing power parity ABC absolute purchasing power parity APT theory. Here we are taking into account the spot price index. So, I mentioned here price index, spot rate or spot exchange rate between Indian rupee, I mentioned here Indian rupee is equal to price index in India divided by the price index of US. This will give us spot exchange rate between Indian rupee and US dollar. So, once you got the spot exchange rate, you have to convert this spot exchange rate into relative price theory, the APT theory, APT theory factor the inflation rate.

So, here if you see the see the rate here expression is there S t. S t is the spot exchange rate at time period t, S o the spot exchange rate at initial time, that is, starting time initial spot exchange rate. These two are linked to what is called the one plus inflation rate y divided by one plus inflation rate of x and this two to the power of t time, t is the time here it was the S o if S o is the spot rate, spot exchange rate and S t is the spot exchange rate spot exchange rate at t is equal to at t and here spot exchange rate at t is equal to 0 here spot exchange rate at t and here i and y. I mentioned here two concept here i and i x, i y and i x, i x and i y is the expected annualized inflation rate of country y that is i and i y. I mentioned here this i y is inflation rate of country y and here expected inflation rate of country x and t is the time period for us.

Using the absolute exchange rate you can convert into a relative exchange rate, exchange rate purchasing power parity theory. So, when x is expected inflation of country x, similarly y is the expected inflation of country y and S t and S o exchange rate at spot time where using the absolute purchasing power parity theory.

Now, if you go beyond that why, because here we are considering, we are addressing the inflation because I mentioned that inflation affect the purchasing power parity. I mentioned earlier also high inflation country have low purchasing power parity, similarly low inflation country have high purchasing power parity. You have to address the inflation in absolute, when you address this inflation in absolute purchasing power parity theory we get the relative purchasing power parity.

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Relative Purchasing Power Parity

- The annual inflation rate is expected to be 8% in the India and that for the US is 3%. The current exchange rate is Rs.46.5500/- per US $. What would the expected spot exchange rate be in six months for Indian Rupee relative to US$.

Answer:

So the relevant equation is: $S_t / S_0 = (1 + i_y) \div (1 + i_x)$

$= S_{6month} \div Rs.46.5500 = (1.08 \div 1.03)^{0.5}$

Which implies $S_{6month} = (1.023984) \times Rs.46.550 = Rs.47.6665.$

So the expected spot exchange rate at the end of six months would be Rs.47.6665 per US$.

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So, while discussing these suppose we have a example here, the annual inflation rate is expected to be 8 percent in India and that of US is 3 percent. The current exchange rate is 46.550 per dollar; 1 US dollar is 46.550 Indian rupees, what would be the expected spot rate in six month from Indian rupee relative to US dollar. So, here we have given the annualized inflation in India and US and also we have the spot exchange rate between Indian rupee and US dollar, 1 US dollar is 46.550 Indian rupees. Now, we have to estimate after 6 month what should be the exchange rate between Indian rupee and US dollar.

So, if you use our formula, that is our spot rate S o is, S o is here US dollar 1 is equal to Indian rupee 46.550. So, we got S o, we have to estimate the what will be the S t when US, in US inflation is 3 percent and India inflation 8 percent and time period for us 6 month.

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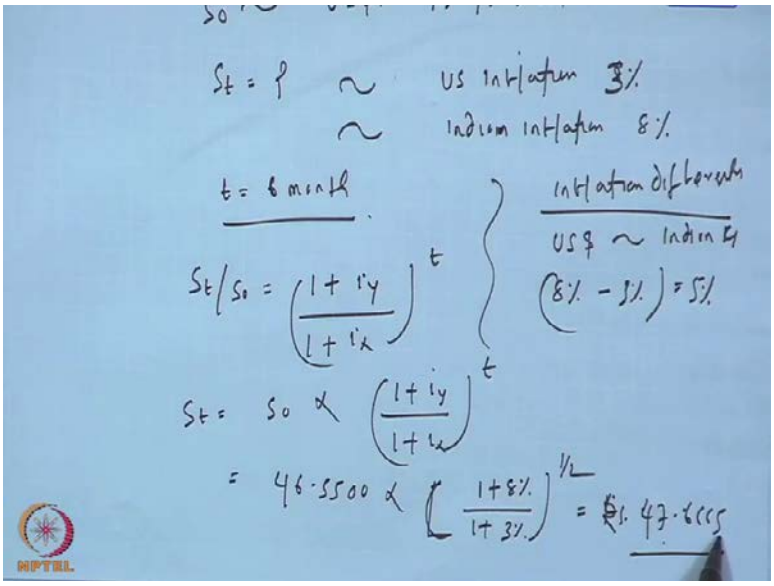

So, we got our formula is suppose if you remember our formula that is S t by S o is equal to one plus our formula, one plus i y divided by one plus i x to the power t. Now, we have to estimate that S t, our S t is equal to S o into S o into 1 plus i y divided by 1 plus i x to the power t. So, here S o already we got how much 46.5500 into we got i plus, here our inflation rate is y, inflation rate is x. So, so 6 month we got the inflation rate 1.08. So, 1.08 in case of India that is, 8 percent and 1.03 in case of US that is, 3 percent inflation and if you multiply these you will get the exchange rate between India and US. So, what is that i here one plus 8 percent divided by 1 plus 3 percent and our time period is half 6 month that is, half year, 1 by 2 and you will get what is called the Indian (( )) we will get 47.6665.

This is means after 6 month, with the current rate of 46.5550 and inflation between US and India the differential inflation is 5 percent, that US and India inflation differential. We call inflation differential within US and US dollar and Indian rupee, that is India 8 percent, US is 3 percent. So, inflation differential is 5 percent, the 5 percent inflation differential lead to increase in exchange rate between Indian rupee and foreign US dollar.

Say, India has a high inflation India, the Indian currency need to be depreciated and Indian currency when S o is at current spot it was 46.550 after 6 month it is 47.665. This is only because India have a high inflation compared to US, in Indian currency is depreciated because of that reason and since Indian high inflation lead to purchasing power decline in purchasing power Indian goods and services will be less and price will be more and there will be less demand and because of that reason the Indian rupee depreciated further to 46.55.

Now, realizing this purchasing power parity as I mentioned here there are many factor which affect the purchasing power parity. If you understand form that the beginning that the purchasing power parity is a price index between two country, the price index is here, so price index depends upon the price of goods and services. Price of goods and services depends upon inputs; that is there your supply materials input cost it depends upon wages, salary, taxation, the tariff barriers, many other thing along with the inflation. This lead to what is called change in the purchasing power and purchasing power primarily affected because of inflation also and on the basis of that we have two different theory what is called absolute purchasing power parity theory. You determine the spot rate and when the input price is particular the inflation cost inflation changes we have relative purchasing power parity theory, where we factor that inflation rate differential between two countries.

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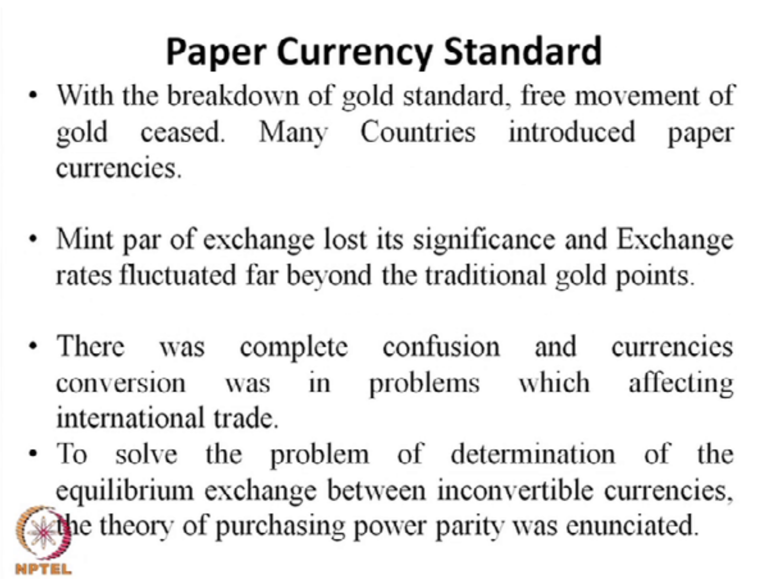

On the basis of purchasing power parity theory since now, since then the world currency system depends, because all currency at present is inconvertible paper currency standard

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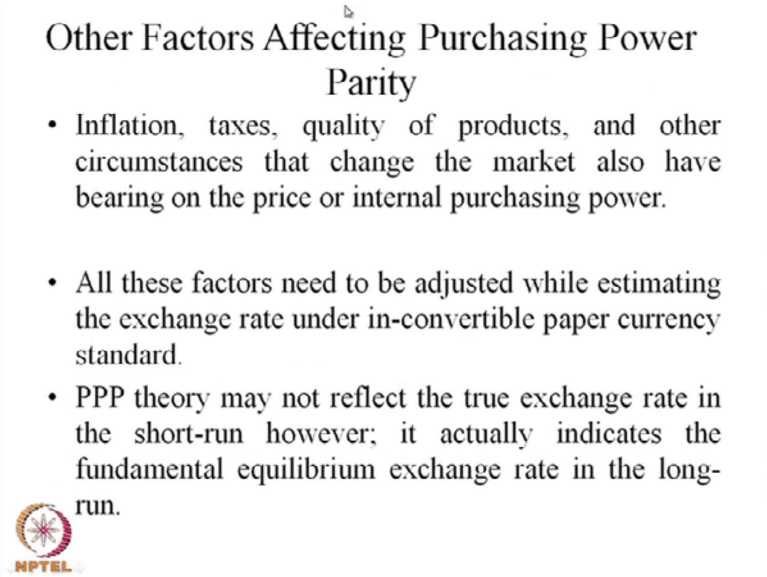

And under in-convertible paper currency standard since there is no underlying asset on the basis of with that purchasing power parity depends. So, very difficult to go for deciding the exchange rate and on to solve this problem or to estimate the what is call the exchange rate between two countries under inconvertible paper currency standard, the purchasing power parity theory develop and purchasing power parity theory try to address, the issue of address, the issue of exchange rate on that basis of internal purchasing power of the currency, internal purchasing power or domestic purchasing power of the currency; however, there are many factor which affect the purchasing power parity theory.

The primarily the inflation, taxes, quality of product and other circumstances that change the market and also bearing on the price of internal, or price of the goods or internal purchasing power. Here, when you decides the absolute purchasing power parity theory we assume that a basket of commodity which in two different country, their price determine the exchange rate. It may affect that the basket of commodity which we decide may not have, may not be of similar what is called similar quality in different country. It may happen that the goods which is available in India the quality may differ when you compare in US also. Similarly, the taxes may also affect U S in India the internal taxes what is called the goods and services taxes are very high.

So, purchasing power parity, purchasing power of currency is very less. It may happen India inflation is very high the purchasing power is very less. It may happen the US quality, quality of goods in India are not good as compared to compared to US. So, that also affect the price of the good in US will be very high, because of quality is good. So, quality of goods inflation taxes also affect the purchasing power parity theory; however, inflation taxes can be adjusted is very difficult to adjust the quality of product.

So, while deciding the basket of commodity which should be comparable in across the, across different country that is we have to design the goods and services in such a way, because nowadays if you see all internationally tradable goods are consider for designing the purchasing power parity theory. Then international tradable goods generally have common quality. Similarly, suppose some goods are there which all across the world consume and there quality remain, the almost remain the similar that kind of goods and services consider for the purchasing power parity theory.

Another factor of consider points is here, all this factor need to be adjusted while estimating the exchange rate under inconvertible paper currency standard. Some exchange we can adjust the inflation, some exchange we can adjust the taxes, some exchange you can adjust the international what is called custom duty other thing and deciding the purchasing power parity theory; however, it is very difficult to address the issue of quality of product. So, quality of product, same product same Colgate toothpaste in India cost very less as compared to same in US because US the quality is different, in India it is different. Same domino pizza burger may cost in India different price as compared to cost in it is there in US because the quality are different. Very difficult to decide the basket of commodity which should be tradable across the country, across world have the same quality. So, it is not possible for the, for to address this kind of issue of quality.

Similarly, another concept is here PPT theory is there, PPT theory may not reflect the true exchange rate in the short run; however, in the long run it indicate the fundamental equilibrium exchange rate. PPT theory because short run the exchange rate not affected because of taxes quality of goods quality of product or inflation, in the long run short run there are many other factor which affect the exchange rate and in short run it is may be because of expectation of the participating exchange rate market, it may be short term interest rate differential, it short run inflation, expectation of people that affect the exchange rate between two currency. However, in the long run this expectation may not be there that true value exchange rate because of the quality of, true value of exchange rate because of the purchasing power itself.

Generally, we consider purchasing power parity for establishing what is called a fundamental equilibrium exchange rate in the long run; however, in the short run we take into account a demand and supply of foreign currency. The demand for US dollar in India is very high, so the Indian rupee will depreciate. Similarly, if India demand of euro is very high, so Indian rupee will depreciate against euro. However, in the long run it is the fundamental internal purchasing power of the currency that determines the long run exchange rate. Generally, the purchasing power parity theory may not give us the may not give the true value of the exchange rate; however, it indicates what should be the exchange rate under inconvertible paper currency standard because under inconvertible paper currency standard it is very difficult to establish the exchange rate.

However, purchasing power parity theory indicates some extent what should be the exchange rate. People or the traders in the market generally consider the exchange rate between two currency on the basis of purchasing power parity to understand its fundamental values of currency on the, in the in the for the for the long run. In the short run they consider the various other factor particularly the inflation, taxes, interest rate, demand and supply, demand and supply and also expectations of participants in the market which affect the short run fluctuation in the exchange rate. It may happen that the long run exchange rate or the fundamental exchange rate gives some kind of indication and; however, the fundamental exchange rate fluctuate in the short run because of this other parameter which are primarily monetary may be, primarily monetary sector some may be some extent may be the market that is, what is called the monetary phenomenon some extent may be real sector phenomenon some extent may be the expectation of the participant in the foreign exchange market.

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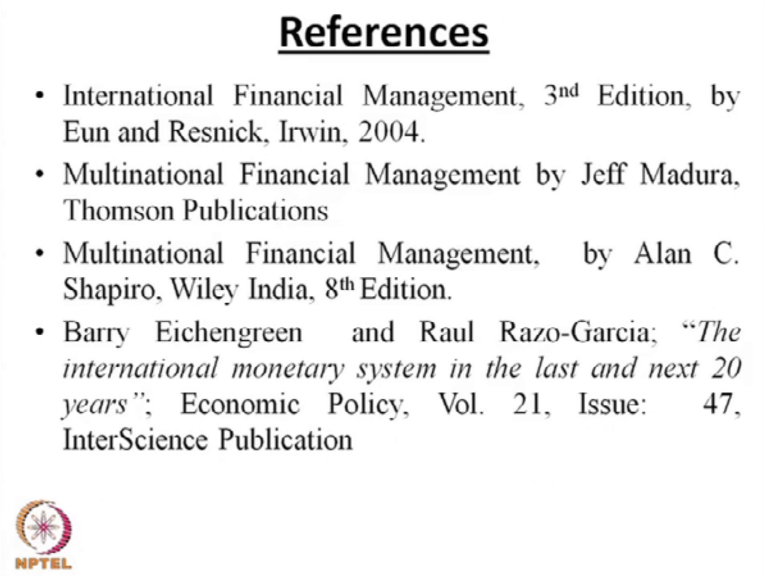

So while understanding the PPT theory, we can determine the exchange rate under inconvertible paper currency standard. Now, come to the references side, references here you can go through the international financial management Eun and Resnick, you may also go through the multinational financial management by Madura, you can also go through the multinational financial management by Alan C. Shapiro, Barry Eichengreen and Raul Razo-Garcia. International monetary system in the last and next 20 the economic policy volume 21 issue 47 InterScience Publication. These are the some references that are available and there are many other things are available also we can go through that. I have design my slide on the basis of these references and we can discuss some problems also.

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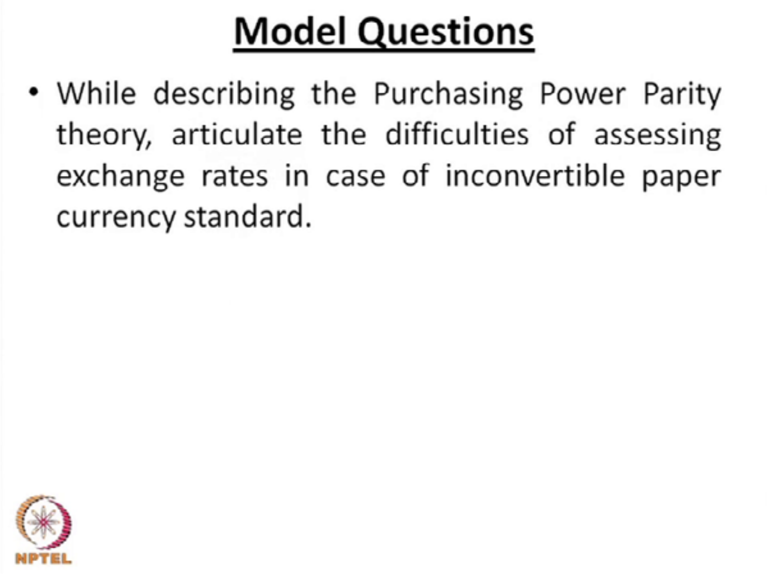

So, the model question is here while describing the purchasing power parity theory articulate the difficulties of assessing exchange rates in case of inconvertible paper currency standard. So, purchasing power parity theory we have to describe and also what are the problems are there in inconvertible paper currency standard. First, we identify the problems in convertible paper currency standard.

There are many problems under inconvertible paper currency standard. First is that since the paper currency circulates under circulate in different country without having any underlying asset because there is no underlying asset like gold or any other currency or the other metal on that basis of paper currency are printed and circulated. When different countries circulate different paper currency, it is very difficult to decide that purchase decide that exchange rate. Since, the exchange rate can be decide if there is a common points there is no common reference on which that the paper currencies are of different countries are circulated. So, it is very difficult to assess the exchange rate under inconvertible paper currency standard.

This issue can be solved or some extent can be addressed through the purchasing power parity theory. The purchasing power parity theory, the fundamentals of the purchasing power parity theory is that each currency has a purchasing power because currency of purchasing power would demand the currency; when you demand the currency or keep the currency with ourselves in banks or with our locker or with us only to purchase something because we consider currency as a asset and there is a demand on the basis of using the currency you can demand in the market.

So, the internal power of the currency whether it is a paper or gold already there. When we exchange two currency that is inconvertible paper currency what we exchange nothing but, the internal purchasing power. When we accept dollar we are accepting the purchasing power of the dollar. Similarly, when we accept Indian rupee we are accepting the purchasing power of Indian rupee. So, when you two currencies are exchanged nothing but we are exchanging the purchasing power of the two currency. So, under paper currency inconvertible paper currency standard the basic the fundamentals values are there that we are exchanging purchasing power, rather than we are exchanging papers or currency.

So, there are two version of purchasing power also, we discussed one is absolute purchasing power theory. Here, absolute purchasing power parity theory, the purchasing power exchange take place by dividing the price index of two country. Each country has a price index, the price index indicate the purchasing power of the currency, purchasing power in the country or the inflation or any other parameter in the country. When you divide the purchasing power price index of two country what we are what we come to an exchange or the ratio, we decide the ratio at which the currency can be exchanged.

So, absolute purchasing power parity theory the ratio between two purchasing power or the two price index decide the exchange rate; however, in absolute purchasing power parity theory you neglect what is called the inflation, the interest rate, quality of goods, taxes, many other parameter which affects or which influence the purchasing power. In absolute purchasing, in relative purchasing power parity theory we address the issue of inflation. The inflation differential is added another parameter in relative purchasing power parity theory and we and we assuming we are, we assume that higher inflation reduces the purchasing power, lower inflation increases the purchasing power.

On the basis of that we correct the absolute currency absolute purchasing power parity or absolute purchasing power parity rate through the inflation differential and in this process we address the issue of inflation and we correct the absolute currency purchasing power parity theory because of inflation differential. However, it is very difficult to address the issue of taxes, it is very difficult to address the issue of what is call quality of goods, interest rate which affect the purchasing power parity theory.

Purchasing power parity theory though provides some extent what is called some indicative rate of against which the inconvertible paper currency can be exchanged; however, the true value of exchange rate not only depends upon the purchasing power, but also many other factors. The long run it is a purchasing power to decide the exchange rate, in the short run it is a expectation of market participant interested, short run interested differential, inflation differential, taxes, many other parameter which influence the exchange rate.

However purchasing power parity theory gives us some kind of indicative rate at which we can exchange the inconvertible paper currency. We have to discuss all these issue in the model question.

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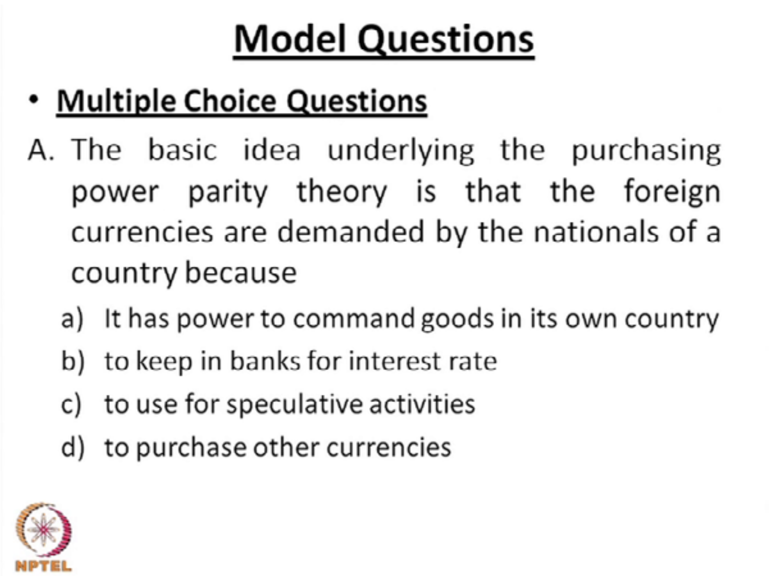

Some multiple questions are there multiple questions. Here, one of the one such question I mentioned here is the basic idea underlying the purchasing power parity theory is that foreign currencies are reminded by the national of a country, because why the foreign currency are demanded by different country, different people. Here, it has power to command goods in its own country, second has second is that to keep the banks for interest rate to use for speculative activity, to purchase other currency. Why you demand currency, to keep on the there are four alternatives are there, here it has power to command goods in its own country, to keep in banks for interest rate, use for speculative activity to purchase other currency.

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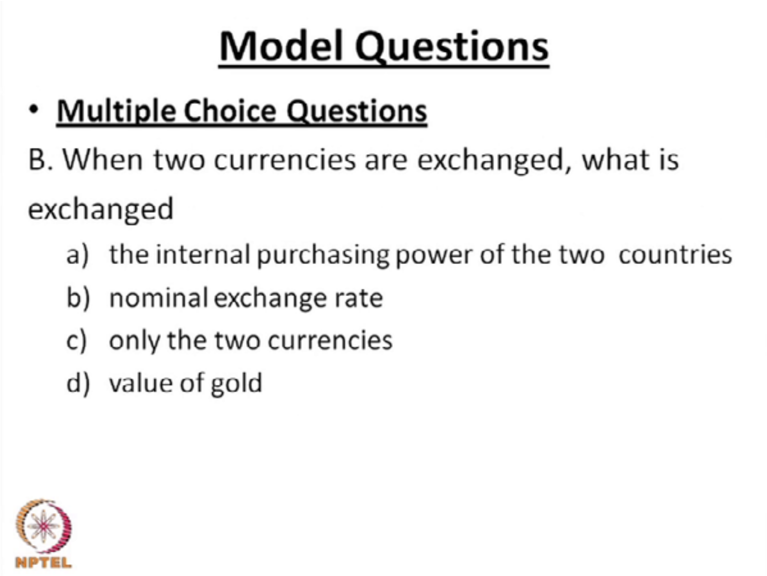

Second multiple question is that when two currencies are exchanged, what is exchanged actually? The internal purchasing power of the two currency two countries, the nominal exchange rate only the two currencies or value of gold, what you exchange?

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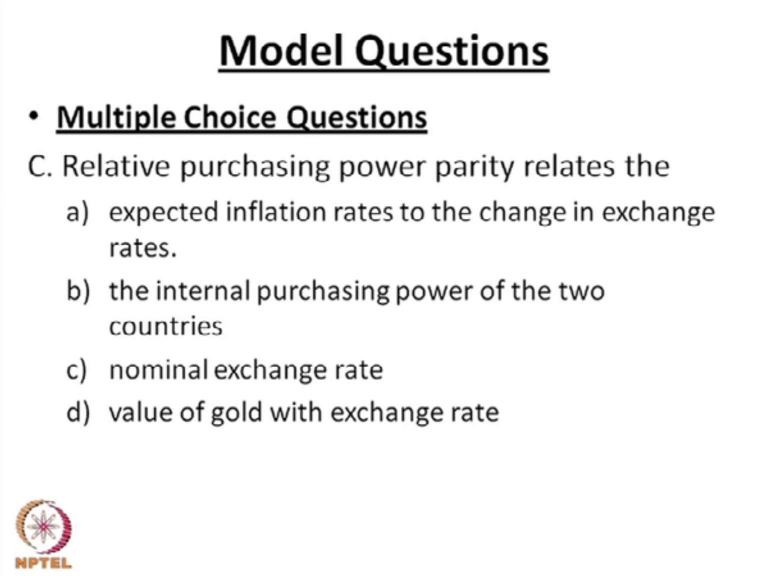

Third question is here relative purchasing power parity relates expected inflation rate to the change in exchange rate, the internal purchasing power of the two different countries, nominal exchange rate, value of gold with exchange rate. The answer is here, question A is answer is first one; that is the basic idea underlying the purchasing power parity theory is that the foreign currencies are demanded by the national of a country, because it has power to command goods in its own country. On since, as we discussed in the purchasing power parity, the purchasing power inconvertible paper currency standard the purchasing power of country decided the exchange rate. And it is the because the purchasing power currency have the power or command over goods and services. When country have a command the currency have power command over goods and services, we have we generally demand currency, because of that reason.

And second question, second question when two currencies are exchanged what is exchanged here also we exchange the internal purchasing purchasing power of two countries, nominal exchange rate only the two currency or value of gold. So, here when two currencies are exchanged, what is exchange the internal purchasing power of the two countries. As I mentioned in our in our discussion I mentioned in purchasing power theory we exchange the internal power of currency, internal power of currency is the internal money or the money or the monetary unit the country circulate the paper currency, the country circulate in the economy that is actually we exchange because each country each money, each currency or each countries money has own purchasing power and that purchasing power we actually exchange.

And in this context when two currencies are exchanged actually we are exchanging internal purchasing power of the two countries because each country has a purchasing power because each country has a circulation of money or domestic currency. The currency they circulate and people hold the currency because the currency has value, that value internal value of the currency is the purchasing power. When the purchasing power two currencies are exchanged we are exchanging the purchasing power of two currency.

Third one relative purchasing power parity relates the expected inflation rate to the exchange, to the change in exchange rate because when we discussed the relative purchasing power parity what we address here, correct the inflation differential between two country because when inflation differentials are there its influence the spot rate or absolute currency, absolute purchasing power parity. In absolute purchasing power parity the ratio of price index of the two countries indicate the conversion rate between two country. The conversion rate between two countries currency conversion, the two country currency conversion depends upon two country price index.

The ratio of price index of two country decide the currency conversion of the two country, but the ratio of price index, the price index itself influence by inflation; high inflation have low price index, low and low inflation have high price index. So, the country, which have more inflation the price index is very high, the country which have low high in low inflation the price index is less. So, when you take the ratio of two price index the country having high inflation that the purchasing power will be low and for that reason they have to surrender more internal money, the country having low inflation purchasing power is high they have to surrender less amount of their own currency.

So, when relative purchasing power parity relates the expected inflation rate to the exchange in exchange rate. The three question, three multiple question we have discussed and also we discussed about the a model question all on purchasing power parity theory.

Before coming to end I have to mention here the what at present entire world, all countries in the world are inconvertible paper currency standard and paper currency standard the basic requirement of exchange rate, under paper currency standard at present is the purchasing power parity and for this reason the purchasing power parity try to address the issues of inflation, they try to trace the issue of tax, custom duty, taxes, internal tax, external tax and also the minute level of what is called that the inflation side. So, all country try to address the inflation to increase the increase their own purchasing power of their own currency and at present under inconvertible paper currency standard the fundamental equilibrium exchange rate is the purchasing power parity.

However, the fundamental equilibrium exchange rate depends upon many other factors are too we discussed about the inflation, interest rate, taxes, many other quality of goods quality of goods and services all these things, and fundamental equilibrium exchange rate or the purchasing power decide some kind of long run exchange rate within the short run exchange rate fluctuate. And this fluctuation, because of many other factor other than the short term interest rate and inflation. The expectations of people or market participant they are also affect the short run exchange rate.

In the next class, we will be discussing about the exchange rate determination, where we will address how the exchange rate between among country decides, and what are the factor, which affect the exchange rate beyond that inflation taxation and other thing. And that session we will start our calculation process of exchange rate what is the, what is call the arithmetic exchange rate calculation. And also we will discuss the various component of exchange rate what is called spot exchange rate, foreign exchange rate, interbank exchange rate, we will discuss about exchange rate for exporter, importer, exchange rate for bills payment, exchange rate for interbank transaction side and also we will discussing about the... We will be using the purchasing power parity theory to determine the fundamental equilibrium exchange rate.

Thank you.