Macroeconomic Theory and Stabilization Policy

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Lecture – 8

GDP or GNP by definition is the value of all final goods, finish goods produced in the country, I am using the word final and finished interchangeably, is the goods that the consumers use. The problem is, is there are goods which are not finish goods, there are goods which are incomplete goods, semi finished goods, like steel, plants output, some agriculture raw materials, other industrial raw materials, chemicals etcetera.

Say cement which are all intermediary goods and semi finish goods are finish, finished may be from the point of view you have to be on time, the problem is if you say GDP or GNP is the value of finis goods. Then what to do with the un finish goods or semi finish goods, are finish goods may be point of a view of a company which buying a machine which is the finish good. But, it is not the final good, in the sense consumers cannot use it, so this kind of investment goods and semi finish goods, they also contribute to the income generation of the country.

So, if you take the final goods on the, then all these the value of a final goods which are I and you will use includes all the costs, and cost include the follower, if you take the final goods, then it will chose all the cost or all to return to the factor including profit. If you including current market prices, market prices including the income of the government called indirect taxes, sales tax, VAT, excise duty all are included and so on.

So, no problem if the intermediate goes up there, because they have gone as cost and then a final value of a good which is finished, which is complete is going to be used by the consumer includes all the values. But, if you go and collect data from the steel plants and the aluminum plants and the chemical plants and the fertilizer plants which farmers use, to produce crops. And then also you calculate the value of the finish goods which consumers use, then there is double counting problem.

So, you can make sure the double counting problem is not there, when as a data collector have a recession, you are trying to compute the value of GDP and GNP, now he ask me the question what is this CCA, because this is the gross value of output you get in the economy. Now, what is CCA and you get the net value, well CCA accounts for all goods data consume sometimes, this is a time period problem here I will explain that you, this are the consume all produced.

But, they are replacing the old capital stock, so it is not in some sense adding anything new to the country a chair broke down and buying, that new chair does not matter it addition to chairs groups, it is just replacing the broken down chair that is CCA. So, the next domestic product at net GNP considers the output, that is actually new to the country in a during time period. The time period confusion CCA is as follows, when I first read double CCA and I ask people and I read more about it the companies who produce goods.

May be any goods intermediary goods, finished goods whatever who uses machines etcetera intermediary goods, they tell the government the accounts income tax departments. That this is the amount of here and tear of machine that have taken place in past financial years, when they are reporting there profit etcetera total sales, income also such things the end of the financial year. They say in the course of this year 2011, 12 we are incurred this amount of cost, so we need this amount of money to repair them to replace them to etcetera, which they will spend in the next financial year, gradually.

Some of that they may have expanded already, because we are jens, some of that day will take care of like this lecture all is now getting rate of waited service, so this amount of work is getting dull, after the end of the academic year or the something, is getting done for next year. So, CCA is there is the time period confusion some time to be gets in my mind, is that is the CCA that you will planning which is money set aside you say, for the replacement of wear and tear of capacious they have taken place.

So, some able output that are being produce this is a time period problem, which where showed in the next time period, produce already, but that will go into the replacement and maybe service in whatever you called, on the capital stock that has go and out in the last year. So, often in case of CCA or depression allows that we called at the form level, the depreciation allows the language used is, the money that will be kept side or that is kept a side to be use the depreciation.

It may be the money that I keep aside from the current income to be use in the next time period, or money tried for the beginning of the starting period, or may have keep the side

I have use it, but I will use them etcetera. So, the final report income and particularly the propose of income tax, it is often the case that that amount of money government allows, it checks, it verifies.

Whether that amount depreciation announce will be allowed or not, they will allow that to be deducted as the costly item, form you total income. So, the your tax on the income is now will be on something which is less than what the original income was, is like a net income also you get for a company, or which now the tax will be applied. So, the depreciation also is like a cost that companies are allowed, to include in there accounting system.

Ad government is to proves that, like when I pay income tax, I earn money from IT term goods, IP income tax, they allow me certain deductions, deduction for instants provident fund deduction, is a tax saving deduction, they are certain clause, law etcetera. Income tax rolls, which allow me say to buy national saving certificates, to by mutual funds, to put it money to insurance, life insurance they allow all this deduction.

And then they calculate the net income or which is the taxes is applied, but in more case this payments are already done in this year, in case of depreciation allows what bodies mean, is they say the money that will be kept a side to take care of the width. So, it said like a in current year I allow a depreciation allowed to be use in the next time period, and this goes on and on and on. So, the output that will be produced, part of the that will be knew and part of this replacing the old, hence NDP, NNP deserves this are the things emerge.

Because, the net national products, the net domestic product also that completely new output that has been added, this comes this CCA is I am going to talk about that later in a topic, is actually associated with the consider investment. In investment we have a gross investment and net investment, and essential difference is this, now investment is part of GDP, a GDP, DNP you have seen that through the expenditure, private invest expenditure.

So, the investment if that is the gross value income included there, then you can see why I deducts CCA to get the value, is a same thing, am I answer your question to some extent. Now, remember one think, a house or a building is not consider to be consumer good, although live in that house flat or house or parents house, they all are there residents, they all come under capital goods. And I will explain that later, the service is that we get from that, are enjoyed by the consumers you and me, in economics certain things are very difficult to understand sometimes, something confusing.

So, when I come to investment I will expandable to all that, capital goods are just not machines, even buildings a part of capital goods and once upon a time in, I think in a text book I saw a data on the US economic, the difference between gross and net investment is a enormous. I tell you something with gross investment is both the, new net investment new buildings and also the replacement investment taking care of the old buildings. Now, in a country in give you near like US, in India it is also true, capital is built over time centuries, there are 100's of olds building are also there, in our country.

Now, this capital the amount you spent on replacing and servicing or whatever maintenance expenditures, is about over 85 percent, so lastly was 10 percent is only new investment in any given year, that is the magnitude difference. So, when you go down or road or a lane or a city or anything, really you will come across this a lot of new buildings coming up, in a open area sometimes it happens, some extensions going on. What you see usually may be I come across here, some building is getting an extended, another one some new is constructed, but usual this are old buildings.

If you can imagine if expensive associated with the old buildings we survey the new one, this are the enormous difference, the gross investment and net investment number is a big big difference remember that, in periodical terms, in actual data. So, CCA is the big number I tell you, CCA is a big number is not insignificant number, it is a big number any next question you had.

Student: ((Refer Time: 11:55))

Sells

Student: Steel ((Refer Time: 12:05))

This is the very good point it came up, what happens to export or import values are a export and import you are talking about only finish goods, if you look at the actual data it is not. Export or import data consist able large amount of unfinished goods, they say very good point, so there is some manipulation going on there, in that case they break the convention of GNP, GDP. Because, you may be export in goods and earning dollar and India is happy you are earning dollar, does not matter how you earn it.

By exporting only finish goods like shirts, pants, whatever or just raw materials, you still earning, so somebody will you have to reach you something one day, I hope it is not very painful when you learn it finally. Any question that is the good question, I really do not have a good answer, I tell you the violate the GNP rules international rules, by the way GDP, GNP whatever I thought you is just a brief guide to how this value measured.

If you go to actual an country like an India for instance, in another course I teach India national income accounting methods, they develop their own method every country. If there once that I thought you is from modern text books, which were written in the western world. So, you can assume if you wish that these are the practices western countries following, which are international practices accepted.

But, when comes to India or Egypt or Japan or Thailand or Pakistan or Sri Lanka and Bangladesh and you try to find out how the compute the value national income GDP, GNP in their country, you will find my goodness, what sir has thought us is very far away from that. So, every country finally, adopts their own convention, next question is a very important class to do it, we are revising topic 1, 2 and 3, ask me question whatever you have may.

Student: ((Refer Time: 14:25))

I have could not here you

Student: ((Refer Time: 14:28))

Compare you can compare they would specific proposes, GDP is about all that is produce with a geographical boundary of India, by anybody foreign company, domestic company GNP is whatever is produce, final goods by the Indians, whenever they may be either in India or outside and NDP, NNP basically what is the new that has been produce, because it deducts CCA.

So, we cannot really compare and say which is better, everything has a purpose and set of assumptions, depends upon which you need in some suppose you are doing a research word do, you realize that GNP would be that variable than an GDP, then you GNP is the variable. If you think that NDP would be better than able GDP, for that purpose that you search work out that you are doing, you use NDP, there is no value gentlemen you have use to one is better than the one, this no value judgment here.

Student: ((Refer Time: 15:44))

I have not really understood your question, if I have understood what you saying, if a foreign company is producing something in India, at end of the financial year that value of output should be part of Indian GDP. Now, if you moves it income, whole income or part of the income to their mother country, that is not all question at all, it may have some relevance in the different context. It may have relevance in the context of why do we invite of foreign company, when they produce something here, but they take the profit back home, instead of reinvesting.

Because, they are exporting local resources, we are not getting benefited, they may be other issues perform the point of g GNP, GDP does not matter, if it is GNP that you want to calculate then that foreign companies is producing something in India would not be counted it. So, it does not matter whether he keeps the money here or take it own, because GNP has to do with Indian only, so the question is in some sense not very important, weather it moves the money or not.

It may be important from the point of view of the development of the country, that is the much important question in a different context, if that company is not allow to move the money, when they come and start producing here, instead they are told that 80 percent, 70 percent of that income you will have to reinvested India, for local development. Some of that 10 percent will have to be charity work, you have to develops schools here, because you do not have, you have to develop health center here, hospitals, roads something else.

If you want to come and make money here and then you can take whatever system upper limit 30 percent or something back home, that is different issue all together, partly political, partly in the prospective of overall development of the country. But, from the point of the GNP, GDP it does not matter they are convention in GNP GDP, if you are talking about GDP you take anybody, whether they keep money here or not or take them back to US or great between Germany does not matter to me, next question.

Student: ((Refer Time: 18:29))

In GDP it is still part of it, if it is in India, if it remains in India is business remains in India, but the ownership changes and from an Indian person like say Ambani’s is and then it goes to say some the sum the oil company. Ambani’s are Mukesh Ambani has some gas field etcetera, suppose tomorrow it sells it, so longs they has been are operated it is part of Indian GDP, but no longer part of engine GNP in that sense.

And if Indians take over foreign companies, which is happening for instance in recent times, they have been famous take over, they have been by Indian companies and abroad, Indian companies went to abroad to Kowhai. Or instance Tata is takings rovers, land rovers, Tata taking over techniques famous take over, called Airtel they have taking over companies in Africa. Now, if Indians companies take over it is part of Indian GDP and as well as GNP, now Indians own by Indians.

You go by the ownership of factor, this are statistical issues you are going into the integrated you did not worry about it, so long the produce in India, whether they bringing for an capital, not does not the output is part of Indian GDP.

Student: ((Refer Time: 20:21))

GNP you has to be careful, only the amount that Indian's are contributing there would be part of GNP, the rest will not be, there is the statistical issues the guys who clean data, collect data and then finally, tells you number is there headache, you need not worry. You will getting in to the headache of the demand, the what will happens it this happens, what will happens if that happens not so much of it, this is the conceptual stage I am telling you, simple thing to remember you who amongst the factor of production, the companies basically.

Is a Indian owning period, it will part of Indian GDP as well as GNP, the foreigners own it the part of Indian GDP naught GNP that is it, do not get in integrate, tomorrow you join organization, then you can tell me sir the way you thought in class is very simple. In actual practice collecting to the data and finding the actual data, out of the data of the data extracting information is a hell of a job life is not that simple at all, I agree not simple at all. To computer numbers that why 100's and 1000's of peoples are employed in a country today, to do this statically work, data collection and all that, any other question.

Student: ((Refer Time: 21:50))

Incorporated

Student: ((Refer Time: 21:57))

[FL] Go over all the computation of national income to personal income, national income is if you look at the definition of economic, economics is based on a study have the location of sources essentially, among various alternative uses you can have. Now, question is what are resources are, well traditionally there are four groups of factor of production called discourses. The four groups of factor or production a land, labor, capital and organization, and all these factors groups also has a written or income, if there used.

If I has the labor work for you would give me a written, that why I have work for you that is called wage, so labor earns wage, land earns rent, organization earns profit, capital earns interest, But, there are also some semi finish products raw materials, which are also used in the process of production, which are not in the pure category like this, either land, labor, capital, organization. The category raw materials which are like semi finish goods, which are produce with this factor and then finally, used again the produce something else.

Like you take the bakery, bakery uses bread for us, but it require raw materials called wheat, now wheat is just not to any land, labor, capital organization, wheat is produce using land, labor, capital organization. And then wheat is the raw material which is used by the baker to produce the bread for us, now national income is the macro level at the countries level, what is the sum total of all this income, that is national income. So, you have first written labors income wages and salary, then you have the organizations income corporate profits.

But, there are non corporate sector also in the country, corporate sector are companies or business units which are called private limited or public limited, who shall shares, they share a list in stock exchanges. There is a secondary market buying and selling going on, in the stock market, it is a very different thing, and the share holders of a company also owners of the company. [FL] does not it mean every share holders, if I buy share of the Reliance or the Tata tomorrow, I became a owner legally you are a owner, but you may not have much power, voting power regarding the decision making of the company.

Because, you are not a majority share holder, if you owned a lot of share, then you have the influencing power, then you can sit the board of directors, can become a directors, can have a share in the matters of the company. But, normally share holders have one voting right, they need the country, in the country like India we all as democratic country citizens have a voting right, does it means I alone can influence the decision of the country no, together a majority is created.

Who decide the decision of that there is the majority political party which comes to forward, now how this is it works, so in case of a company, a private limited or corporate company, a public limited company. Private limited essential means have few share holders, public limited means 100's of share holders, public ownership as we learn millions of share holders. Now, all of share holders are owners of company, but all are not equally effective owners, now if you look at the Reliance, Tata, you will see the Tata and the friends and the family owns about 35, 35 percent share.

Or now they are majority shareholders 35 percent share, 30 percent share of a Tata company means huge amount of money, which once in a payroll they cannot have. So, although 65 percent of the share are with other people, but they are in fragmented form somebody as 0.001 percent share, somebody as 0.1 percent share, a big one they had a guy may have 2 percent share, where as the Tata themselves the family owns 25, 30 percent of share.

So, although all of legal owners, but they are the majority share holders who have the say, now there are companies before the corporate world was born, they are being companies which are owner ship companies, are you me and my friend own it partnership company etcetera. Now, this companies are income is also part of the return to organization, they also managing the company’s, it may be some all shop, a retail shop. In retail shop you will see owners name of written there, owner column some bodies name be attention you will see that, these are not private limited, public limited company, they do not sell share to collect funds.

If they need money they will go to the bank, go to a friend, go to his wife and ask for funds or relatives, they do not sells shares and get money. So, income of that group of our organization of business is under proprietor’s income, or is calls income from un incorporated business. Unincorporated business this is basically means non corporate business, so one is the corporate sector, one is the non corporate sector, all this [FL] the restaurant, shop owners in shop see, these are all ownership units.

You are not corporate sector companies, then you have the other factor income, other factor income in a national income, wages [FL], organization return [FL], proprietors income and corporate profits. They are all gross numbers remember, they are not after taxes that is my gross salary from IIT, it is part of Indian's national income, my gross salary from IIT, is part of India national income, not my after tax salary.

Then you have this I think what you have is the rental income and the interesting income, that what you have, so this five has constitute national income. Now, if you want to go personally income all national income is not personal income, all bulk of the national income is owned by for instance, the corporate world income it is a entire income is a part of peruse income no. When you start deducting and adding things, for instant let me tell you which I have already done, what are the things which you deduct from national income to go to personal income.

You deduct three things first, one corporate profits are entirely deducted, then the interest income is entirely deducted, then contribution to social insurance is deducted. Because, contribution to social insurance is not part of personal income, you may use the money later, not in the current period, like unemployment insurance, come contribution, provident funds contribution, other insurance contribution you cannot use them, they are compulsory deducted.

But, is all corporate profit part of non possible income no, there is a part of corporate profit which is very much part of personal income, is the income of part of the corporate profits, which are distributed to the share holders like you and me and anybody else. Who can come home with that income wife and children and can say I have earn something let us go and spend it, so what you do is that, when you go into this you deduct corporate, but you definitely add back the dividends, that what you do.

Not entire amount of corporate profit deducted, what are the other components of corporate profits, what is dividends there are two more components, what are they I told you in class, what are the two more or two other components of corporate profit, louder. One is what are the two other components profit, what is dividend two more components.

Student: ((Refer Time: 31:06))

Taxes and savings are called what

Student: ((Refer Time: 31:10))

No, savings are called, very good retained earnings.

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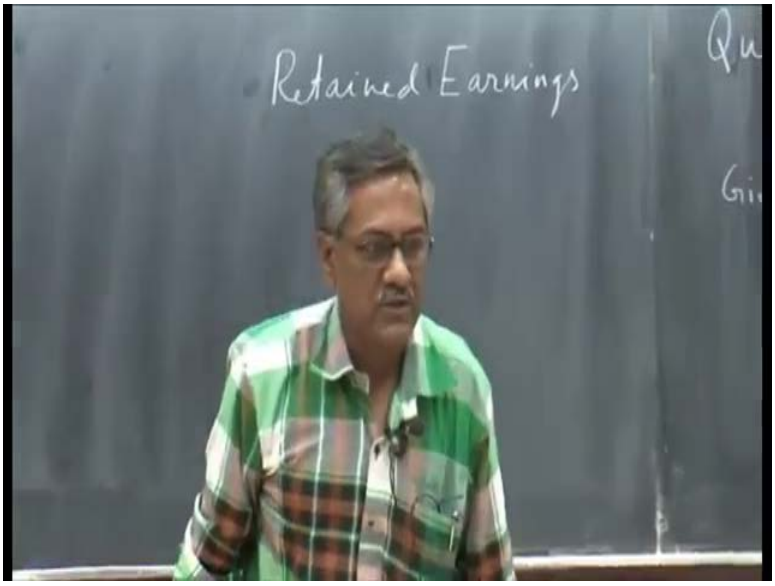

Corporate profits are three parts, so corporate profit called retained earnings, so retained earnings is part of they are the part of corporate profit three parts. So, deduct corporate profit, but add back dividends, because dividends are very much personal income, and you being following me what is your name?

Student: Sulekha

Have you followed me, [FL] now one more thing is added retained earnings, then use added personally interested income, because all interested income is not personal, companies can keep money banks and earns interested income, that is the personal interest income, that companies interest income. So, some interest income is personal, some is not, your account interest income is personal, you can use that interest money, my parents can use it, my family can use, my personal interest income I can use, so personal interest income is added.

A third item is added, what is the that very important I told you, what is that personal income open the definition, third item is added, louder

Student: ((Refer Time: 32:40))

A government transform payments very important, that is the contribution to social insurance which is deducted, now is added a some other period in my personal income in future, as government transfer payments. They come back from the government to me, along with the contribution from the governments sides, just not my income with some interest that are prove over a period of time, that 20 years I did not have a money a 30 years.

But, along with that often a contribution from the government etcetera, that return to me and that become very much person income, because we charge people person income [FL]. Then are working retire people what is the personal income yes, this is the personal income some bank interest income, some it loose in the lose sense investments they may have and this pension etcetera.

So, this government transfer payments, but so business payments would also become important, earlier in text books in the early 90's when I started teaching this course, late 80's early 90's, I remember there is to be term business transform payments also, which make sense to me. But, you may open man queue and find out if it is there, it is probably not there it use to be in some other macro text books, those day I forgot.

Government transfer payment plus business transfer payments, they also use to be there, if you join a company tomorrow you will be compulsory ask to contribute toward CPF, contribute privative fund, which is an insurance payment essentially. CPF you will put in some money from your pay check monthly wise, every month you will put attend and from the company side, they will also put in money and that goes into kitty, the remains that. When you leave that company you get that money, same thing is an insurance for your bad days when you are not earning, is in insurance for your bad days.

So, business transform payment use to a variable by no longer there I do not mention that either, but I am mentioning in class, because I can open the talk about things with you whatever I have learnt or came to know, any more question next.

Student: ((Refer Time: 35:22))

I have not understood your question, you are saying every content practice their own are you saying in terms of comparing...

Student: ((Refer Time: 35:37))

There are two kinds of numbers that are available in the world today, one kind of numbers in terms of growth rates 5 percent, 2 percent are very much countries specific. So, they are dependent upon the methods that the countries are using, if you use Indian method to the US GDP, you can get a different growth get number quite possible. So, they are independent of any one international standard, they are very country specific if you like it or not, you leave it or not is the up to you.

You can take it or leave it even US for mention practices there GDP value gives you growth rate number, even Indian practices GDP values gives me and we simply look at the growth rate numbers. You may say sir, there a very in a prophet, because how can you compare is US GDP with our reveal, there are so many things with US that I cannot compare just know the growth rate numbers, which is base on particular convention practice in a particular country.

Say for instant the unit they have US dollar, our is a Indian rupee, how can be they internationally compare, so one thing one can suggest first convert the Indian GDP into and international currency like US dollar and then find out the growth rate numbers, one can say that you may get the very different number for comparison purpose. There are some now international organization, particularly like world bank or united nations, they are develop methods which they use to compute the value of GDP of all country. So, that is very uniform method apply all countries, those GDP values if there growth rates are computed out much better comparable.

Because, one unify method has been applied to all this countries to compute the numbers, so it is not country specific, they are ((Refer Time: 37:567)) available and most important thing is those methods is that, they express all countries GDP in terms of US dollar. But, it danger of doing it of course, US dollar may disturb the picture of India's grows, because we do not use US dollars, in USA they use us dollars, but if you want to convert Indian income into US dollar, you make sure you accommodate for the exchange rate distortion that may come in.

In terms of local prizes etcetera many things, so there are methods now which I teach in another course, which I in fact talked the pervious semester, called GNI gross national income, very different variable not GNP, not GDP. But, world bank uses a variable cost GNI which they compute now use that method, to compute the value of GNI of all countries, and they are very comparable. Just because of the reason you are saying, that how do you just compare a percentage number say something.

But, normally in television discussion, general articles even when we study particular country we look into the per particular countries method. And even we have a table where every individual country using their own methods, we still can list it has can become very common practice say the growth rates. Not the actual numbers, actual numbers in year and the actual number in rupee, may not be put in the table you should saw what does it mean.

Student: ((Refer Time: 39:45))

Land is not part of capital, house is part of capital, land is part of land property, you can say land property

Student: ((Refer Time: 40:01))

Richer day by day by, because of what

Student: ((Refer Time: 40:27))

Richer is indirectly you are property values are appreciating, you are saying

Student: ((Refer Time: 40:33))

Well appreciation of property value is there part of appreciation of property value, which you can realize through capital gains by selling it off, it is never part of national income. Only if some services are render is a trading activities, the trading can be stock markets similar, trading the trading can be with can gold, trading can be properties of various kinds, land, slake, houses, they appreciation values that you get capital gains is never part of the national income.

Only the service is render in that transactions, say I borrowed the service of our company property dealer or something, who I pay one percent of my capital gain of 5 percent of the profit that I make will be part of national income, because he has retender you service which is in the current year. This is the part of current activates and that will be parts of the share, capital gain I make is I put money in the bank, I may have to pay tax still to the government, but it is not part of national income.

So, governments earn tax incomes just not from current activates, government of tax income also from non economic activities, what is asking is trading activity, in manques it can read about trading activates. Any trading activity is not part of national income, I have my problem property today brought 10 lakhs I sell it at 1 corer 10 years later I make 90 lakhs and then it is part of my natural income, part of my income of course, my money, but not part of national income.

Only if I hire the services of some company, a property dealer somebody or in the stock market what happen or the services broker or a dealer to sell of my shares, I pay him a commission whatever, that is the part of national income. Because, he has rendered you a service and you are paying him a fee, but my capital gain that I mad, which is loose the term as profit sometimes is never part of national.

Now, the classical macro model also have another name which forgot, I came to me last night that my goodness, we did not know it is classical macro model when we were a student.

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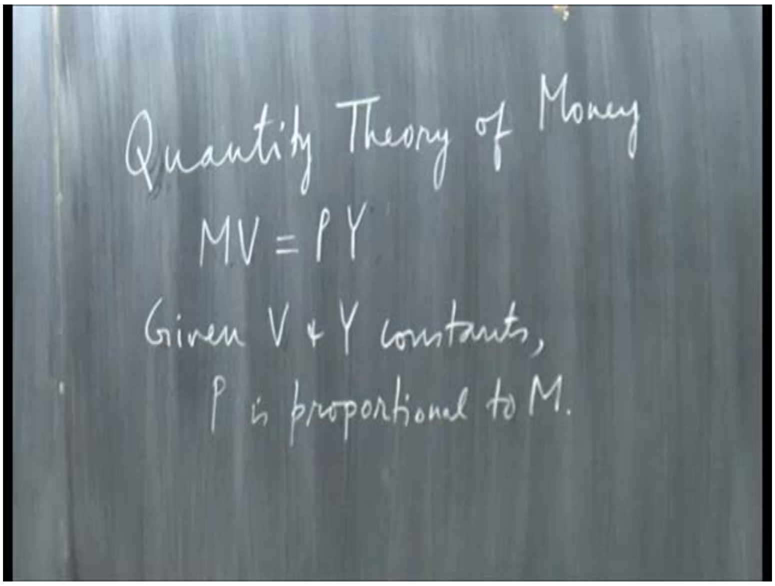

We used to call the classical macro model, the classical macro model name is called the quantity theory of money, essentially the quantity theory of money, wrote only the money market equation. And that they use to expend entire classical model which is very funny, a bridged version there is a big book, which is now reduce in length a short version is available sometimes, called bridge version.

Like classical models a bridge version was the quantity theory of money, so one which we learn first when we are students, and all it says was the money market equation MV is equal to PY that is all it have quantity theory money. And the message it is give out is the following given V and Y constant P is proportional to M, so if M doubles P would double. And that was the classical theory of money or macro model, in fact macro classical theory, the classical macro model the classical macro theory.

And you can see they did not tell you how Y is the constant, which I told you that it is resolve in a labor market given the assumption of flexibility of wages and prices, W over P means flexible. The labor demand is labor supplies gives you one value over employment, and one value of real wages, given that you get the real output Y and therefore, Y becomes constant it cannot change anymore.

So, prices become proportional to money supply from the money market equation, so quantity theory of money, if you go back to the notes that you have is nothing but the money market equation. And it also says given V and Y constant P will be proportional to M which I told you yesterday, but why is V constant I told you, V is the constant, because the transition demand from money coefficient is constant h.

And in inverse of h is V, and why is Y constant, because the labor market always clear it always equilibrium in the labor market and therefore, there is nothing that can disturbed the equilibrium, unless they were exposition as change. So, Y is the constant and W and P are perfectly flexible variables, which allow Y to because it P was not successively variable. Then you go out this equilibrium in the labor market, if there is any change inP, but W does not change. So, W and P becomes the different value which may give you either labor market demand more, a labor market supply more.

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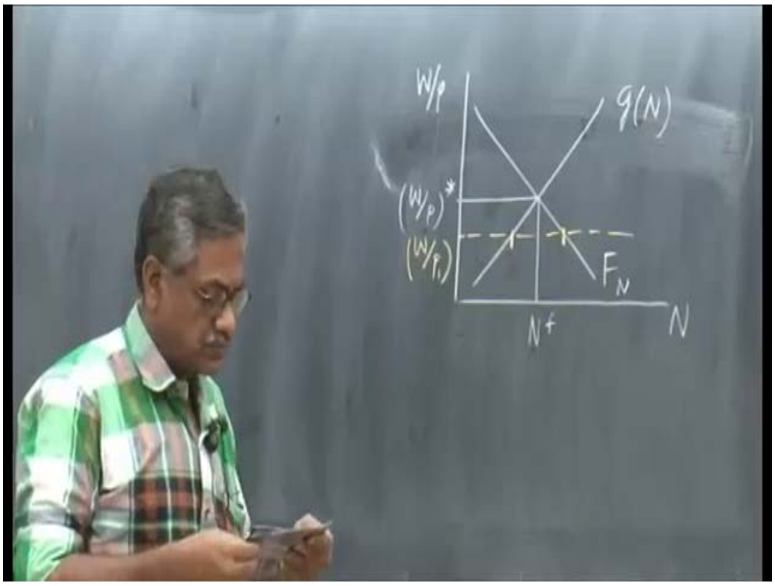

If W and P are not variables, then you may not have labor market equilibrium on the time, let me tell you how it is possible, suppose this is the classical labor market which I drew N, and W over P and this is labor demand and this is labor supply. And this is the equilibrium real wage, some W over P call that star and this is the full employment N f. Now, if there is any P change, but W does not change, suppose P has gone up, but W has not gone up, then what will happen W over P, fall if P increase W does not increase, then W over P would fall. Suppose it has fallen to a new height like this, some W over P 1 W remains W, now what happens there is no labor market clearance, clearly the labor supply is less than labor demand at that wage, labor supply is here and labor demand is here, so here this is the disequilibrium.

So, labor market is not clearing, therefore in the economy cannot be N f, because labor supply is only up to this labor demand is here employment can be only up to this. So, employment how much is supplied, so employment would be less output would be less, the supply cannot be vertical any more it will have a slope, so Y is not fixed. So, the fixity of Y which dependent on the fixity of N at N f, and also fixity of W over P and W over P star requires W and P to be perfectly flexible variables.

If P increases W should increase, if P fall W should fall, then you ensure that market always, clearing of the market means equilibrium, then if N f does not sift Y f from the production function cannot shift, the diagram I had yesterday. And therefore, the classical supply curve is vertical and what you think of money essentially they are saying, they are telling all this. All it says the first time when I heard about the classical macro model is this through this expression, this expression quantity of money.

And here you see that Y is constant I say V is constant, because I told you the transaction demand from money coefficient using the Cambridge version. So, therefore, this very important result they get P is rational to M and it also says classical model result is very important, because it clearly says that real variable are independent nominal variable classical decode army first of all. Nominal variable depends upon usually, they are only effect the nominal variable P is proportional to M, if P is proportional to M there is no Y change that also conclude that the government has no role in economy.

Because, M is the monetary policy variable, any policy variable is government related, either directly or to the central bank, they are all part of the government umbrella, so if P is proportional to M, that means M cannot change anything else. That is M is in effect, this is called monetary policy being an effective, the classical micro model in a very similar version, sometime existed in text book, in the name of quantity theory of money. Were they did not explain why is Y constant, but they assumed it they did not explain why V is constant, but they assumed it.

They did not say those things, and they concluded M and P are proportion is relationship they have, P is proportional to M, which means there is no change, no impact of M increase or decrease are Y from which they conclude again I am repeating. That monetary policy totally ineffective, if money supply effect the nominal variable like P, but cannot effect Y, you cannot say my supply is effective. It is partly effective in controlling P and N that is all, that is not a big deal, effectiveness or ineffectiveness of a policy is judged from it roll in influencing the real variable like output, employment.

If a government can adopt a policy were by more people have jobs, that what is important, if governor adopt policy by through which prices are control without effecting output, is part of a result it is not really therefore, judge has been very effective. So, quantity theory money essential this, quantity theory money is actually a bridge version of the classical micro model, the quickly describe the classical micro model in some text books, not using the word classical model.

But, using the expression called quantity theory of money, and economist name that often appear in connection with this or various economist, are being Fishers name come Cambridge economist, ((Refer Time: 52:56)) various classical economies names are associated.

Student: ((Refer Time: 53:00))

[FL]

No, idea these are static model they give you indication as to whether insertion and come or not, if price is increased, there is no inflation variable in this model, inflation is rate of changing price, we have only price. So, insertion is not model clear...

Student: ((Refer Time: 53:30))

The inflation various reasons look at the demand and supply model, from a static model even the central model pump in money, the supply keeps on reducing, shifting backward they can be inflation. Prices can be keep on rising, harvest failure, monsoon failure other calamity is oil price shock big thing going on, an input cost going up, inflation can be their mark of inflation, there can be various reasons.

The central bank money supply, the use that as the public policy tool to control insertion, and if they miss manage it yes, monetary is would say that if you increase money supply, too much ((Refer Time: 54:22)) using quantity theory money. If increasing too much, then prizing go up too much will create insertion, so it indicate inflation may come, but acutely insertion variable here, per prices rising inflation, so you require a dynamic variable at time period variable.