Macroeconomic Theory and Stabilization Policy
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Lecture – 1

So, the first different between macroeconomics and microeconomics, is that microeconomics deals with individual economic problems, which you have heard last time when I taught it. The individual, the individual economic problems are like maximizing my satisfaction from buying something, spending my money or how much income I can earn, how I can increase my income level, but when it comes to macroeconomic problems, much more difficult because individuals are different.

So, they all have to be taken into consideration. So, some forms of aggregation is required, they have to be aggregated, and the typical macroeconomic problems that you hear on TV, read in newspapers are the incision problem, why prices are rising so much? Everybody talks about it. The unemployment problem, why there so many people are unemployed? In US for instance, everyday if you open the western news channel you hear that US unemployment rate is one of the highest in last in 80 years. It is like they compare their great depression of the 1930s, they have great depression of the 1930s.

So, they have these are the typical macroeconomic problems and the variables that you hear other than this, are this they talk about exchange rates. They talk about private consumption, they talk about private industry investment, why is the investment enough in the country? Then they also talk about government's expenditure and government's policies, government typical spends in a country to. So, before we can take up any serious discussion, any kind of set up analytical frame work for your macroeconomic issues and this is a course on macroeconomics theory. I need to tell you about the economic system that exist because without the knowing the economic system it is very difficult to understand the macroeconomic issues.

Now the economic systems are typically determined by the political system. So, you have the socialist system, then you have the other extreme the capital system. In the capital system, you typically own capital privately and in the socialist system the word is, the government would tell you that we are doing the best for you, all of you, all are

equal. But it is most undemocratic because in the social system the government would then decide everything for you. So, you do not have any personal freedom.

Now, the typical examples extreme of this extreme political economy systems, typical examples you know the USSR was this socialist system example. Some east European countries were there Czechoslovakia, Hungary, to some extend Poland also, east Germany and the capital system examples you know Japan, west Germany, most western countries Canada, united states, etcetera. But the funny thing is that, these extreme kinds of situations do not exist all over, the economies that exist in most countries are a mix of the two.

If you take India for instance, you had Tata's and Birla's not many of them. Now you have many private sector companies, 50 years back you have Tata's and Birla's. In fact Tata's and Birla's were founded before independence, you have Tata's and Birla's and other private companies along with huge public sector companies. Because, government was following the food steps of socialist countries like soviet Russia, it adopted the economic modeling pattern from them, which is called 5 year plans and they use those 5 years plans to plan for the country.

So, what you doing essentially? Essentially you are talking about socialist system because government is doing a 5 year plan for the entire country including industry, including infrastructure and also government essentials like defense, roads, police services, the bureaucracy we have IAS, IPS officers. So, they had an emphasis, over emphasis you can say on public sector, that start changing from the early 90s, that is call the reform period. I will talk about the reform period later, it is not a course on reform period or reforms in India. But the mix was heavily tilted towards public sector lead development.

So, it is the essential socialist economist system they are trying to adopt, but mixing it with private sector, very interesting public, private sector may unlike socialist, pure socialist countries they had Tata's and Birla's also. So, they what we call, they had a mixed economy and the world had mixed economies many places. I tell you France is the typical case in the western world, which has the most socialist labor. In fact, the socialist prime minister has just voted in, sorry the president has just been voted in and

the other one just left, you can see how it goes on back fort. But do you, would you call France socialist country? No, it is a mixed economic may be, politically it is sometimes getting a line more towards the left and sometimes towards the right.

In fact, if you look at the political systems of most countries, what interestingly you may find, and pre dominantly the economic system may be capitalist system, all right? But the political alignments are basically two types, if you have seen the political parties. US [FL] you have the Democratic Party and the Republican Party, which belongs to which, if you have any association, if you want to classify them, which belongs to which one? The democratic party is it more left or right oriented? Left and the republic party is more right. Now, you listen towards the republican have to say on TV have if an opportunity to listen to them and what the democrats say.

Democrats are typical interest, typically interested with health care system you will hear that, who is trying to care for everybody, the republicans would talk about giving more freedom to the private sector. Democrats will talk about infrastructure development, more emphasis, all right? They will other rather leave many of jobs to the private sector. So, this is been going on even in capitalist systems, pure capitalist system, all right?

Now, the question is before I get in to macroeconomic theory, one thing I want to tell you, which I told that last in the class in the previous lecture that, there are the models if you see, what are models? Models are essential in economist algebraic models, based on certain assumption, you will see them lot of in this course. If you look at the models, what they are been trying to do?

They have been trying to study kinds of three kinds of macroeconomist issues. One is the very long run behavior of a country, the macro economy, this is referring towards the growth economics. It has a typical name growth economics, very long, very long run behavior means, in academic, in terms of calendars years it will be rapidly, it will be something like may be 30, 40, 50 years. Some long run behavior, long run studies have also been on a 100 year period, 100 year some studies have been there [FL].

Now, this very long run behavior often is associated with a area, branch of economics called growth economics and then you have the long run behavior, which is typically a

10 year, 15 year period. So, from the very long you can come 10, 15 year periods and you can study the behavior of economy long year run. Then you have this model which more or less together, the short run and the medium run model, which is like a snap shot of a long run behavior. So, it could be concern with may be a few months, may be a year, may be year and a half.

So, it is like a watching a film and you suddenly stop the film, movie and you have only one picture and focusing on that. So, in the very long run you cut down the period to a one-fourth, one-third, one-tenth of it 10 year period or so. Then you get a long run snap short of the economy, a moving economy then it becomes very static, when you go into, within a long run period focus on a 6 month period, 8 month period, I was giving the example of you joining IIT, starting from high school.

So, from high school to end of IIT education is like a long run period, but if I want to take the high school last year or IIT Kanpur first year and try to know what you have been doing? How you a feeling, how could you corporate with the pressures? What were the problems, how you found the solutions to that, counseling service does this kind of a job. Then you can see you are getting into a medium run, short run model. Now, in terms of analytical frame work it is very interesting too, if you look at the very long run period, the growth models are typically time derivatives of variables are involved. In growths models, typical time derivatives of variables because you are watching a variable move over time, very long time.

So, you have y dot and r dot and m dot, whatever this stands for as variables in the model, growth economics. Now when you go to the long run, which is about 10 years, 12 years, sometimes 8 years period, you typically see a variable moving in a more or less static frame work where, assumptions are constant. Now, if you go into long run you do not see a dynamic variable all the time there, for a 10 year period. You see the variable data plotted, as it moves. So, what a 10 year period is the manageable diagram or even the chat or whatever you have. I am focusing on that and in the long run, the typical assumptions that economist makes are very interesting, they make that the technology is not going to change much.

Because, technology is the key factor to how much a country is producing and in fact some peoples say, the technological difference is most important factor that defines what India is today and what US is today, many people say. You look at your development, Microsoft where is coming from? They did not originate in India. So, if they are getting developed in India, somewhere getting utilized and the second stage or third stage they are coming to you.

So, essentially the technology is very important, determining factor in the modern era. In fact it has been there for a long time now, may be since industrial revolution, 1908, mid 19 century, 1850s. Now, that is when the industrial revolution in the western world started England in particular. Now if you look at the long run behavior, you do not find dynamic variable in that sense with the timing derivative variables, but you do see a variables moving over time. And the typical assumptions are technology is not going to change much, resources are not going to change much, even number of people in this period. You do not take example of India, it jumps by millions a long run periods, number of people, but you take other countries may be.

And therefore, what they typically have is the aggregate supply curves, which are very importantly economist you know that, supply demands curves. The again supply curve is typically vertical means, it not going to change like, supply if you can visualize that the output is the measure of x axis and the corresponding price is measure of y axis. If you have a problem with this basic microeconomics or economics, you can consult them any interactive book in the library. First two chapters will give you that if you have any problem. So, typically we draw a supply demand curve with output on the good that is demand supply on the x axis supply and the price on the y axis.

So, vertical curve means what? You fixing the value on x axis and fixing it essentially is not going to change, why is it not going to change? Because you making this assumptions, the technology is not going to change, and resources not going to change. So, it is going to change output level so much, but the point is you may consider, their output should not move at all, we will come to the discussion later, in the long run. That creates confusion, in the long run output should not change at all. Well, there is some confusion, but typically what they have is the supply curve vertical and then when you come to short run medium run models, with in the long run period from period to period,

like a long run is consisting on many shot runs [FL], 10 month short run, 12 month short run, 15 run short run, whatever.

Then, you see the output level changing with in the long run, but that is not called a long run study, that is you are focusing now on a particular period within long run. So, it becomes a short run or medium run, no fixed calendar time is involved here, it can be any time, a short run can be 6 months duration, short run can be 8 month duration, short run can be 1 year duration. So, you would ask me sir how would you define them? When it varies and the economist like a doctor, studies the pulse of the patient, check certain parameters and then concludes whether the short run is a 10 month period short run or a 6 month period short run, all right? Neither it is arbitrary, but it can change not like a calendar year [FL] average on 30 days, 1 month [FL].

So, this short long and long run, short run and medium run is something that interest me because this is where the debit is on t v presently going on, the past two years. How to cope with the economic problems? And how to cope with economics problem on the economic problems that typically talking about is, here was like invasion, recession, all right? Sometimes some exchange rate problem talk about, yesterday also it was there on t v. Now these are some, these issues may precise over a long period of time, but they are essentially short run, economics problems.

So, the economist, the most important economist of our country is the finance minister. Because, he announces policies because he has a right hand also who helps him, who does the monetary policy, who is that? The finalist minister as a kind of a cousin brother, very close to him, the central bank governor, who does the monetary policy, and these two people are often on t v talking about economic policy and sometimes they are adviser also there.

Now, the point I am trying to make is these guys are talking about economics problems on t v, are they talking about long run economics problems, very long run economy problems? Because, accordingly I can think about which model to use, to know what they are saying, to understand what they are saying. I think they are usually talking about short run and medium run economic problems.

So, now let me focus on short run and medium run economic problems, the diagram that you, that I drew, are that if you typically watch an economic moving over time, you take one variable, I take the output variable, which is most convenient. In fact that is the focus also because output generates income, is it not? If you are producing something, you are paying the factors production, so when you paying the factors of production, they are earning something. So, output levels goes up, income will also grow up. So, this is all very good news. So, we can focus on output.

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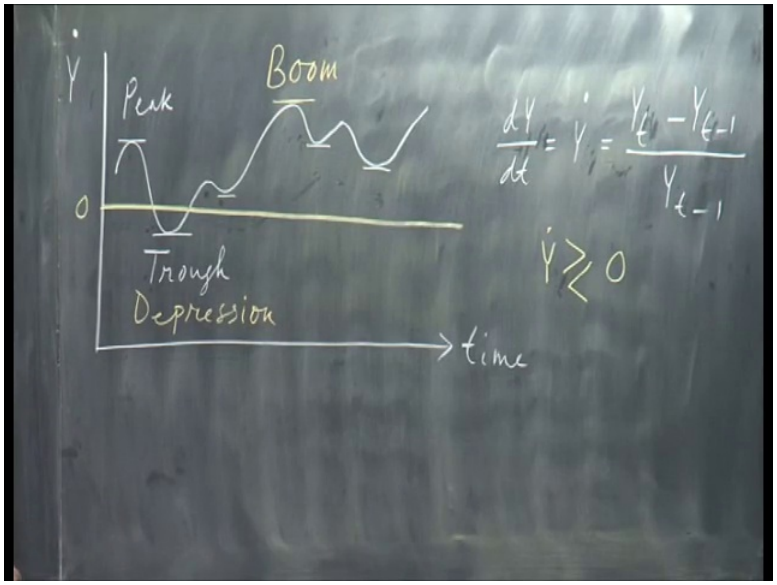

So, what you typically find is that, if I draw a two dimensional diagram like this and I have time here and I have say y dot, y dot is the essentially the time derivative, time derivative of output. This is y dot then what you find, the growth rate in output y dot, which is in calculus dy dt in discrete terms. If you want to actually measure y dot from the data without using calculus, then what you have is y t minus y t minus 1 over 1 y t minus 1. And you can take a percentage number also, you could multiply with that 100 and get the percentage number, that is in discrete terms, that is what I said.

Student: Will there be a Y in the denominator?

No, this is the way we measure, y t y t minus 1 over y t that is an absolute change, time period change will be 1, delta t.

So, y t minus y minus 1 will be 1 absolute change then the rate of change is y t minus y t minus 1 over y t minus 1. What you are talking about is an absolute change because delta t is a 1, 1 period to the next period may be 1 month. And facing it out and watching the variable change every 1 month, 1 year, 2 months, it will not make any sense, all right. Now, this variable y dot, this variable y dot would typically show something like this, movement going up and down, up and down. Now, this is actual data on y dot, suppose it is then these cyclical movements are known as business cycles. And these business cycles occur in the short run and medium run, all right?

Now, what is the short run and a medium run here? Typically what they do, they can start from the top of a cycle, which they call the peak and watch the line go down to the bottom most, which they called the trough. And then it goes up to a shorter peak, very interesting peaks are not of same height, it can go up a short a peak, come back a little bit down, may be a small recessions, a small coming down. Then going up again and reaching a higher peak, again coming down. This is the typical behavior of a growth rate in output, I will bring actual output numbers one day, may be bring a slide and show that to you, that will be fun, in your actual numbers, all right?

And this time period do not ask me because here if you start in June 1990, the trough you may have reached in December 1990, the next one you may have reach in February 1991 [FL]. And it has completed one kind of a cycle complete, one peak to another peak by a trough. Now, if the words, the use of terminologies with business cycles do not end here. The peak and the trough, now can be a very high peak. Let me use a color chalk, can be a very high peak like this, which if the economy reaches then they do not only say the finance ministry's just smiling a little bit and calling news conference on his own.

Otherwise, if it is a recession and the finance minister is usually asked to give a may be conference because it does not talk about the negative things. But, when it reaches like that finance minister may be calling two news conferences every day is such good news and their work we say is the economy is booming. So, this is the boom time for the economy, the peak is so high and in western countries they have seen, I will talk about that later. In boom economy, booming economy, the economy may be achieving over employment, there is no unemployment, over full employment, they may be reaching.

And I will define full employment little bit later, alright, is it all right with you everybody?

So, boom is such a good time like, not only people a jobs they all are happy, but people have extra jobs, extra money they can earn if they want, alright. So, boom is that and another thing is there, this trough which is quite low is not only a trough, well this is also a trough, this is also a trough, this is also a trough. But this trough is a very interesting trough, which has come quite deep. And let me tell you something which may disturb you little bit, this line that I have drawn can have y dot line, which is rate of change in y can very well have a pattern where, you will see the result line that exists, which is the zero value line. So, essentially y dot has become negative here and it is positive somewhere else.

So, this is the zero line you may still find that. So, what you are essential saying therefore, that the y dot, rate of change in output can be greater than or even less than 0. This is what you are saying, growth rate in output is falling and falling and negative, it happen in the western world, it does not happen in India yet, in the current recession. You must hearing about the recessions, world recession, European crisis, and India's recession. So, it has going down the positive growth rate from 10 percent to 8 percent to 6 percent, but still positive, but it may so happen it go into negative access and can become negative.

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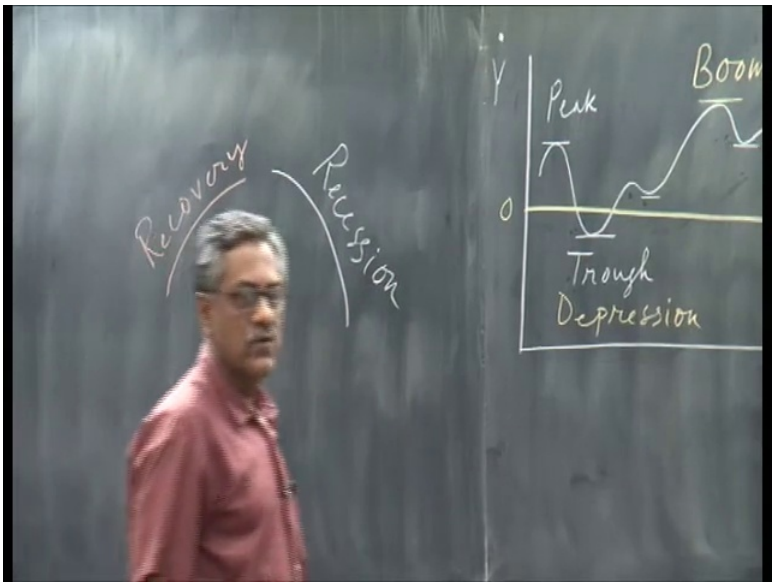

And if it is really negative then this trough has a name, which is very disturbing just the opposite of boom, which is called the economy is a depression, economic gone is to depression [FL]. So, therefore what I am trying to say here is that, if you can get a pick, a very high peak can be boom, it can be a trough, but a very low trough is depression. Like a man, a person is very depressed means he is very unhappy, whereas a man is unhappy, there is a difference, all right.

And also you should know a two more things which are important, when the, you have the upswing, when you have the upswing of a cycle, when you have the upswing of cycle like this, it is called the recovery of the economy, from a trough it is recovering, recovery of the economy. And when you have a down swing of the economy, all right this is called the recession, when the down session of economy, the economy is that in recession.

So, recession [FL] have you understood these words, you hear often on TV, newspapers economy is sliding into a recession that means, output growth rate is falling, industry growth rate last quarter [FL], quarter means 3 months, it has come out to be negative, recession depending in India now. Earlier, we were boosting the world has recession, India has a mile recession, world has depression, India has no depression. For the industrial growth rate of output, the data that has come out recently, the last quarter data it has become negative IIP growth rate.

So, we need to talk about that, why it can happen, how to cure that? Because, after all we would study cyclical models, short run models and you know what this short run can also be shown as the long run, what is the long run period? Essentially they would have taken average, this long run essentially they would take an average of this. And they will fix statistically a linear trend line, statistics students understand, linear trend line and they would typically show the secular trade like this, a liner train line. And they will say, the path on this if you follow and you cancel out these fluctuations and average them out, you get a long run part of the economy. That is the long run part of the economy, this is what they are saying, there is some areas confusion here, but we will take that off if I can later.

Now, the cyclical movement essentially we would talk about and one more point I mentioned, I am repeating my insurance, sorry, but tomorrow and then these fellows came late. From the next class onwards it will be much more consist, but you have to come early, you have registered and made a huge number here, very big number, you have to be on time here. Now what you have here is that, we will talk about the business cycle models may be or whatever it is. And short run medium run models, but what we need to do is, watch the assumptions, make them clear and essentially we will talk about, these are called stabilization policies.

Stabilization policies in the sense, you notice here that the actual data has gone up and down, sometimes go down sometimes more up. Now suppose, you find that in India what is happening presently, the output growth rate is following shortly may be, little bit faster than before. We are in the recession state still, we were in a recession, we are in a recession, but deeper recession may be forecasted, they are forecasting statistical models also. Suppose, somebody is forecasting and the recession is going to deepen.

Now, the job of the economist of the finance minister etcetera is, how to check the rapid decline so that we make it slow, even if it is going down. We would be not able to stop it from going down, but how to check the speed, the velocity and lengthen the period so that, goes down to the longer periods, not so shortly. Like, somebody falling while playing on the slip, you know the slip had this children, they ride, suppose it is a very steep one. Then you can fall very with the high velocity and can have a measure injury, as oppose to a less inclined slope there. So, how we can check that?

Similarly, when it is climbing up, if it is climbing up too quickly, it is like, it is like very over whelming and the fear may be there in some peoples mind, that is going up so quickly well, watch out it will reach the peak and then service start are coming downwards quickly. So, how can we slow it down so that, it reaches peak slowly stays there for a while, instead of going up hit the ceiling and fall on the floor, that will be very painful. So, you slowly ride you go up and move, alright like a swing so that, you check the speed, the velocity going up and then it rest there or stage there for a while and then starts climbing down because that is inevitable in a capitalist economy.

These kind of issue are essentially what we call stabilization policies, how to stabilize the path? How to make more stable? And the typical stabilization policies that we talk about, that the fiscal and the monetary policies, that the government has typically, so this traditional stabilization policies we talk about and the context which stabilization policies are discussed essentially short run, medium run models, when the cycles are active, not about a very long run period. So, the real macroeconomic policies or the problems that we often talk about or we are concerned with are short run and medium run. So, we will talk about that alright.

Before I conclude this section and in the, in this, in the connection, in this connection of short run, medium run, long run, very long run models the typical diagrammatic very quick explanation or understanding may be, it helps to understand these models are as follows. Let me see if you understand this. If I can erase this board, this particular diagram. As I said that a long run period usually assumes that output has stabilized, all right.

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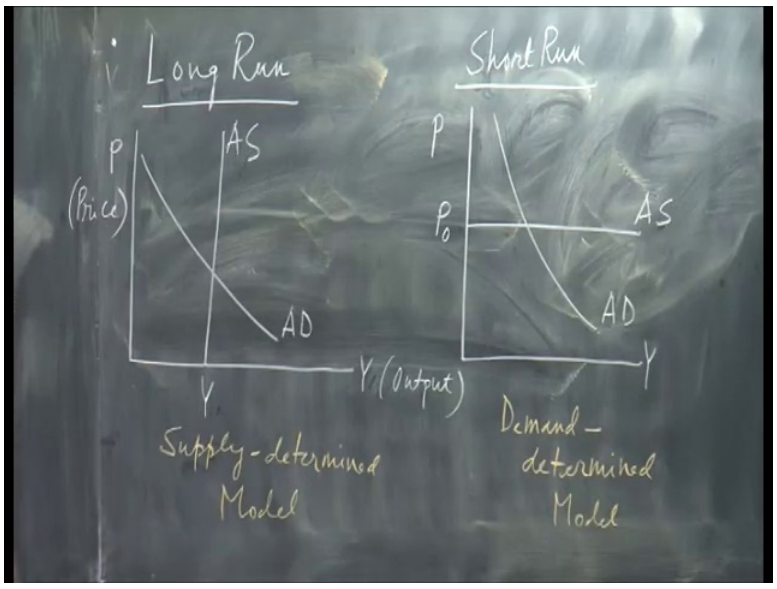

So, in a static frame work long run models typically have this, output on this axis and price axis and this aggregate demand curve Ad, which is aggregate demand like this and aggregate supply which is vertical. Typically they have models based on this kind of a assumption, that the model economics looks like this. The aggregate market, the economy essentially, aggregate market is economy, y is nothing but output and p is nothing but price. Now when you go to short run and medium run models, typically you

will see in the short run sometimes they call that in microeconomics very short run, but in macroeconomics we call that short run.

In short run we typically have a situation where, y and p if they are measured and then the supply curve is perfectly elastic. So, this is aggression supply curve and the demand curve is like this. Typically you have the short run, perfectly lasting means what? So, perfectly elastic basically means, perfectly elastic, this is horizontal curve, perfectly elastic you can open a microeconomics book and find out the definition of elasticity. Essentially for small change in price, quantity changes are enormous amount, so very elastic situation, very responsive, and essentially means companies have unutilized capacity.

So, if you place a demand output will be given to you immediately, supplied to you, there is no constraint on the output that you need, in the short run. The market is so kind of access, full of access capacity that if you place a demand, you will get the output [FL], no scarcity. Whereas long run, you have reached the saturation point, if your company to produce more, they will not be able to produce. This is the assumption of aggression supply being vertical, you cannot produce more than that, it is kind of fix here and this is the very interesting point, I am talking about that.

This is called the full employment point, but let me talk about later full employment. And in a short run model, what you have is a supply curve is just opposite horizontal means, [FL], if you pay the price, some price p naught. Then you can have any much, any amount that you demand. So, this model essentially therefore becomes, if I use the different color this is essentially a demand determined model. This is the demand determined situation, alright this kind of a theory or model and this one is essentially supply determined model, alright?

Supply determine means what? Supply would tell you how much output can be produced, the supply curve, you cannot change it. Here, the demand curve tell you how much will be produced, if the demand curve shift more can be produced. The demands shifts backwards lesser amounts will be produced, it is a demand determined model. Demand has the most power here, demand decides how much company would produce essentially, demand determine model. Now a medium role model that we also talk about,

we are in fact, later I will not use medium run, I will call all of them short run, but for the timing I am calling it medium run model.

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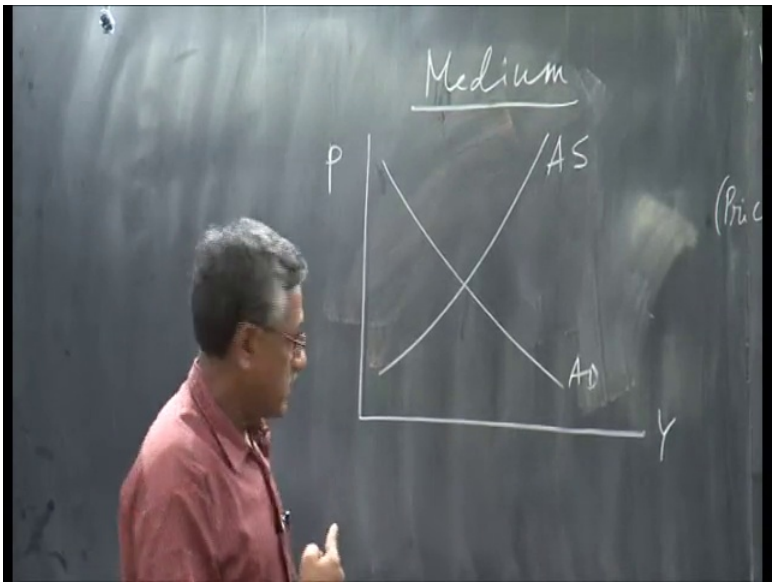

Now the medium run model, that we often deal with in this course is that, here you allow is the reasonable model, you allow both the supply curve and the demand curve to play a role. So, it is neither supply determined nor purely demand determined. So, essentially what you have here is that if you have a y here and p here, you have an aggregate demand curve like this and you have an aggregate supply curve like this, both. In this case, this is in mathematical terms simultaneously equation model, there are two equations they are together required to solve the two unknowns x and y.

This is the simultaneous equation model essentially, there are two equations, they together solve x and y value. Note any one particular equation determines the value y or p as a matter of fact. So, together even this is typically what you find in microeconomics text books, the supply curve is upward sloping, the demand curve is downward sloping, together it is a complete model. Two unknowns p and y like x and y, two equation, two equations, two unknowns is a determined system, but these are exceptions. So, this is how diagrammatically using microeconomic tools, I can have a first visual representation of these macroeconomic models, not a very long run, the long run and short and the medium run, is it alright? [FL].

Now there are some interesting issues here, we would like to talk about that little bit of the council of employment. Because, they do come up in this discussion when we talk about cyclical models and growth rate in output because growth rate in output is connected with the employment, unemployment rate in the economy, this very common sense, even if you do not have an exact relationship, statically estimated or something. It is very common sense that the growth rate in output is income, as well as the employment, we saw unemployment in the economy.

If the growth is four in discussion, what you expect? You ((Refer Time: 40:01)) unemployment, it is very common sense, it does not require economics to understand this. But there are certain words, certain terminologies used, in connection with this and there is a famous, a very interesting thing given by an American economist long time back. So, I want to mention that before I go into the structural features of a macro model and more or less conclude this topic, this is the introductory topic.

Having known the three areas of macroeconomics and that we would focus on the short run and medium run economic problems, which is fascinating to me. And this is the most topical also, you open TV, you hear macroeconomic discussions, there are hardly any discussions on growth economics, hardly any on long run economics. Most of the time they are talk about recession problem, incision problem, unemployment problem, which are all short run medium run situations that they want to deal with or they discuss.

Now, having done that therefore, you would understand, if I say that, these macroeconomists are typically trying to watch the output growth rate of course, and with the output growth rate is achieving something or not. How would they know output growth it is good or bad? The thing what they do, the western economist in particular, in India we have so much of unutilized resources and so much of unemployment. So many people are under employed means, not having a proper job, have a job, not a proper job what they want, under employed. And so many people have these no employment at all, but we really do not talk about them much.

Here we talk about output growth rate and that is good enough, if output growth increases we all happy because more people will get jobs, more income will be generated. But western countries situations are different in develop countries. So, what

they look for is just not the output rate, look at something called a variable, a situation called full employment.

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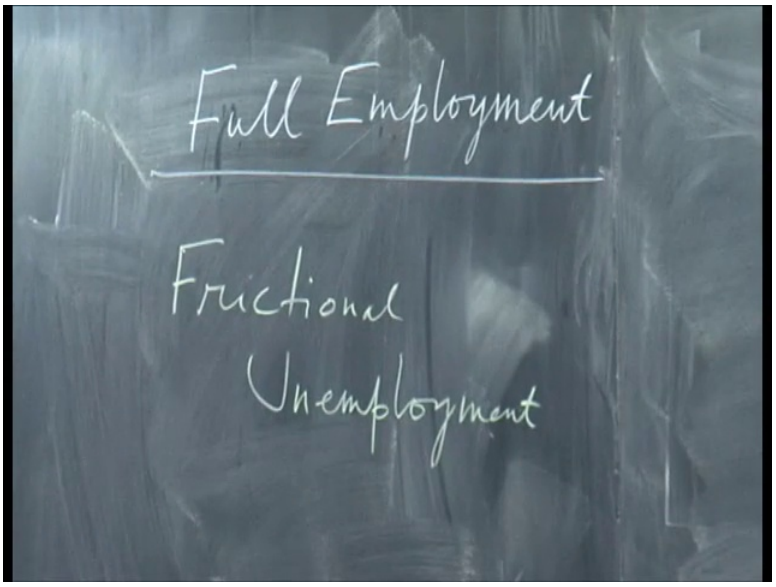

So, I want to explain full employment to you, this very important. Now this issue about full employment is essentially a statistical issue. Because, you have to find the number for you can reach output level or in terms of employment level to conclude whether the economy is at full employment. Under full employment or over full employment, it is essentially a statistical issue to find out what the number of full employment is for a country. In a country like India, the following we do not have registered unemployment. We do not have a proper accounting of how many people are employed, how many people are underemployed, how many people under employed etcetera, we do not.

How many people are there we do not know properly, but in other countries where population pressure is less, they can count and they have a practice, that if you are unemployed you go and register, most unemployed people do. So, let me talk about this unemployment, full unemployment situation because that is essentially connected with these models. So, if I say full employment is the bliss, is the goal that economies want to reach where in simple words, it means all people are employed.

So, given what the present situation is we can say how much growth rate in output is required to reach that, very simple, and output level which would employ sufficient

people so that, you can say the economy as full employment. Because, output employment are connected through in microeconomics we reach that production function, production function teaches why output depends upon factors of production where, one is capital, one is labors and another things. So, the question is how you compute that number, where you say the economy is fully employed and to be honest with you, resources are just not labor in a country, there are many other resources.

Capital is there, non-labor resource issues like land is there so when you say an economy is fully employed you must be saying that labor and all other resources are properly employed. Now beyond on this point I am not going to say much about employment because in India we do not calculate full employment. It is not possible, we do not have a estimate, we do not have estimate even how many people are there, we do not know of course, of estimate how many people are un employed, it is impossible to do that. But suppose you can do that then the funny thing is that, even at full employment level of employment, common sense would tell you 100 percent person people are employed and that is not the case.

Because, the measurement says that full employment also takes into consideration some amount of unemployment, you would wonder sir what kind of full employment is this. You use the word fully employed, but the economist actually not fully employed, there is some amount of unemployment still there. The reason is, at full employment amount of unemployment that you get is known as frictional unemployment. Now, what these economists are saying when they compute the umber for full employment, they say there can be frictional unemployment.

And what is frictional unemployment? Well it is full employment of course, economy is doing very well, may be booming, all right. Quite possible is booming, it is doing very well still you allow for employment because some people are not totally happy with the jobs they have, they quite the jobs and they are totally confident they can wait out 1 month 15 days, 2 months to get a better job. So, this transition period a one person who is a skilled labor or whatever, he is fully confident that he can give up job x wait out 2 months and will get job y where, the space scale, benefits whatever are much better.

So, the economy always allows for some amount of unemployment even at full employment level. So, full employment does not mean literally speaking although it means fully employed, does not mean everybody has a job. Some people are deliberately not in the job market, in the job market looking for other job, they did not be unemployed, what I am saying.

Student: An unemployed person will accept any wage. Why will there be an unemployed person at full employment?

Depends upon the rules upon a country, if there is one minimum rage, wage, legal minimum wage, if an unemployed person is there, they will get minimum wage. He has no choice, he will not be frictionally unemployed, but it usually happens with skill labor, it usually happens with skill labor, skill labor.

Student: ((Refer time: 47:56))

I am coming to that. Now the question is, are you really not talking about all people employed of course, not. There has to be a minimum age when you can work otherwise, you have the child labor case, which is rampant in India. Western countries often goods buy from us, because of child labor because their law says children cannot be employed. Have you see the notice that Norway case happened? A very funny situation happened with the couples kids Bengali couples, two kids, Norway literally like confiscated property took it away from the parents, kept them in foster homes, they are very funny countries. So, it is not like us the children [FL].

Either the maid servant's son or the daughter or somebody who is underage working along with mother, these are important issues. So, labor laws tell you who can be employed of course, the question at you raising. And most importantly coming to a question, if I am of the age to work I will be counted part of unemployed, if I do not have job only if I report that I am looking for a job, I am fit to get the job, I am active looking for the job, but I could not find job. But if I say I have seen some people in my neighborhood in Calcutta and other places, they are that of age where, they are not properly skilled, properly literate, they did not go to school properly.

They are looking for a job, they now have giving up looking for a job because they do not find one, given there and educational back ground or training or whatever skill level, that they have now become discouraged workers. So, discourage workers will not go and register an employment registration place that I am looking for job, anybody is discouraged, he does not look for a job any more. So, he will not be counted. So, when you count the labor force of a country, they have to be out of which are unemployment comes. Labor force of the country is an arithmetic identity, labor force of country is equal to total number of people employed plus total people unemployed, very simple.

There is a labor force and total number people employed and the total number people un employed required to meet certain criteria like, you have to have a working age, you have to some skills to work or whatever. And you should be actively looking for a job and when you find the job you are employed, if you do not find the job you are non-unemployed, period. I am not looking for a job, why should I part of the total pool of unemployed people in the country, I do not look for a job, may be my father is so rich, I do not care [FL], alright?

Student: How is seasonal employment/ unemployment dealt with in the unemployment measure?

Yeah, very good point. She is talking about seasonal unemployment, this is employment, this is also very a difficult situation in Indian national income I teach that, but I would not teach it in the macro theory course. I can refer to you a book, often in India you are seasonal, some farmer is employed for 3 months producing a crop 4 months, does not work. Now, there is another case where somebody has a part time job. So, I am not totally satisfied I work for 4 hours in the evening I do not have morning to night job or morning to evening job like 9 to 5 or something. I work for 2 or 3 or 4 hours part time job, unfortunately if you have a part time job, you would not be counted as unemployed. According to the rules that, every country has the different rules.

But probably according to international standard you still counted as the employed, although you have a part time job which is not you making happy, that is not giving you enough income. Second, seasonal unemployment is a much more difficult situation, seasonal unemployment is basically do not have anything to do for a very long month.

So, if you have your unemployment data adjusted for seasonal variations, you have to do that then you have to go up and down. In some seasons the number is high, in some seasons number is low, you have to adjust that continuously across month that is what it is.

So, it is a data problem that you are now talking actual economics, alright from theory you are now going towards actual economics, alright. Now, this in US you know the frictional unemployment number is how much? It is something around 5 percent, can you believe that, 5 percent of the labor force they allow to be counted towards frictional unemployment. So, even you are full employment 5 percent or 5.5 percent of you labor force of the US labor force may not be employed because they are looking for the job. 5 percent is very big number, when you come to millions to people, it is a huge number. So, frictional unemployment is very important issue.

Now what I want to tell you, now if you look at the actual growth rate output going up and down therefore it means, the actual level is going up and down. Now I will tell you how output is measured, that is coming later in a topic, how actual output is going up and down. So, sometimes output may go very close to full employment, alright. Now imagine, if the output level crosses full employment, can it happen? Yes it can because 5 percent you are analysis from frictional unemployment.

If any time frictional unemployment goes down much because there are so many goods jobs it becomes a two person, three person your actual output and the unemployment number is so low. And the employment number is so high that, you can say you are actual output has crossed full employment level of output and gone above it, it can happen. Because, at full employment you a keeping a margin of 5.5 percent, people still not employed, but if that margin shrinks because there are so many good jobs in a booming economy. Your actual employment may be much higher than the full employment level of employment, and actual output may be higher than full employment output level.

Similarly, it may be at full employment level, may be below full employment level which can always happen. That means, unemployment rising is just not friction unemployment, but what we called is in economics involuntary unemployment. You can

have involuntary unemployment means I do not want to be a unemployed, I am not moving for a better job, I just do not have any job, not even in a part time, imagine a situation, that is the seriousness of unemployment. Therefore, the output level growth rate would tell you a business cycle, but now you have to come down to actual output levels.

Through some measure, you try to find out the actual and employment levels and can therefore, conclude, if you have a mark for the full employment level whether that number is above it or below it. So, you can have a over full situation, you can have a under full employment situation, alright. Next point, next point I want to mention this was the confusion in ((Refer Time: 56:11)) I had earlier, but I do not have it any more. They talk about full employment and they also talk about potential output, potential output full employment and potential output, to me both are the same things.

What the economy is capable of producing is more or less, what the full employment is talking about, that is the maximum you can produce. Giving a margin of 5.5 percent for all frictional unemployment, not used people who can work was skill labor may be not used. So, keeping that margin potential output and full employment output to me are the same things. But this used to be a confusion from Dawn bushes, dawn bush and Fischer's earlier book, early edition I do not in the new edition whether still problem, that problem still exists or not.

So, they will hear two words potential output, full employment output and both are to me the same thing, what is the potential of a country, how much it is capable producing? That is essentially the full employment level you are talking about, alright. Now tell me one thing, given the resources availability and the people, particularly the skill labor etcetera. You take the case of India, more IIT's are opening, more people will get skill labor, becomes skill labor tomorrow, 5 years later, have not gone through the IIT's, more IIT's [FL]. 5 IIT's there, I have forgotten 7 more IIT's are there. So, what do you expect, the skill labor will go up, there will be and hopefully there will be more jobs also, in the country as the economy grows.

So, do you think the full employment number and the potential output, potential output of a country would remain same over the years, definitely, not. So, this itself is not a

fixed value, this itself is a moving number changes. So, when you talk about full employment in a particular year, you have to make reference to which number you are talking about, full employment of which year. Unless, it is understood that it is a full employment number for that particular year. So, the full employment line itself is can be a line that, not so much of fluctuations, but with some movements may be. May be continuous up ward increase line or whatever, alright what you call the convex curve may be, going up. Now when you have the full employment and ((Refer Time: 59:05)) the actual output levels then what you find?

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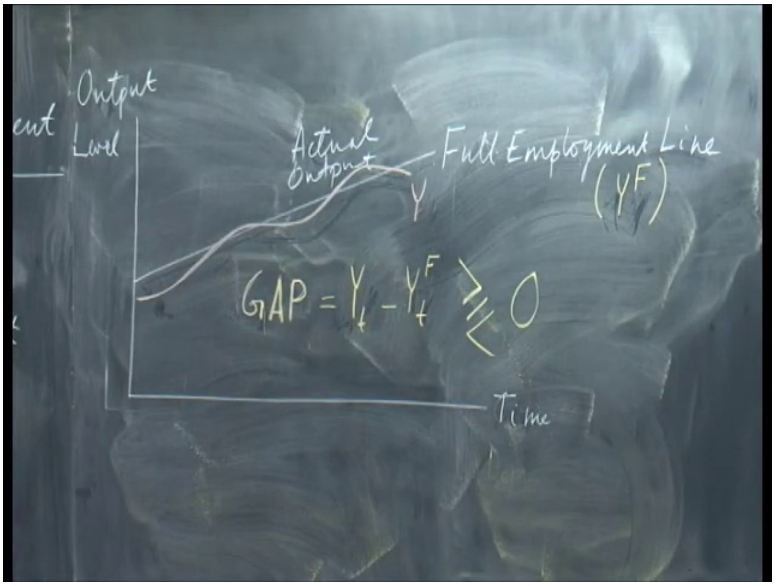

Suppose the full employment line is a straight line, suppose the full employment the potential output line. Now I am going to have here output not any more growth rate, no sorry, I am going to have here time, I am going to have here time and I am going to have here output now, not growth rate. So, it is essential output level I am going to have [FL], output level. Suppose this is I am going to draw, this is the full employment line [FL], this is the full employment line. And the actual output line like the growth rate may be going up and up, but sometimes if there is a deep recession, it may be going down, negative growth rate.

So, it will usually be a line like this, going up and going up and going up, but then it may fall a little bit and it may be down a little bit and it may be fall, it was also show a cyclical pattern. What I am trying to point out, this is the actual output level, actual

output is going up. What I am trying to tell you is that, this gap, this gap which you may find is something which, this gap is something which economists watch, what is this gap? The gap is between actual output called y t minus full employment output at that time period t, okay.

Y t is actual output and full employment output line, this is the Y F line and the actual output line that you have here is going up and down, up and down is the actual output line, y. Now the gap any time period can be which I guess you would understand this much better than me, this actual output can be less than full employment output or can be above. It can be greater than equal to less than 0, the gap can be alright. When you have a negative number y t, actual output is less than full employment output typically you say the economy is under full employed or under employed.

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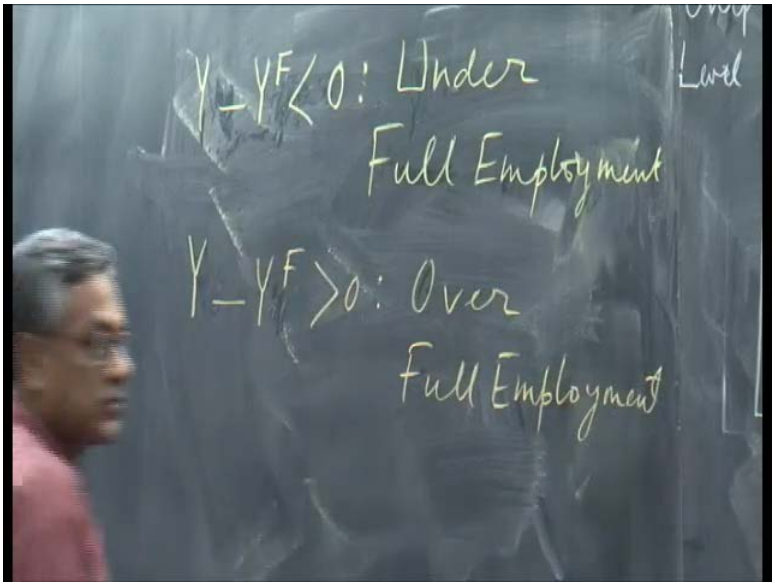

Y minus y f negative, you typically say under full employed or under full employment, whatever the economy is under full employed or under full employment. And when you have y minus y f greater than 0, you have over full employment here over full employment. The problem is to me, to my mind, one can say that if it is a negative gap the economic is not doing well, maybe people can say we are in kind of recession. But recession to me means, for a successive quarters three month is a quarter in a year, it is a cyclic model I am talking about.

So, successive quarters the output growth has been following, not necessarily if it is a negative gap we have a recession, it can be recovery, because we vary the recession, but we are still under full employment and we are raising a recovery actual output levels. So, it is becoming positive the wide dot line earlier, a white dot line is becoming positive. So, remember some books may have a tendency to confuse you that this actual output line of a country, for any country if it is under below the full employment line, the economy is necessarily in recession may not be.

Recession is for successive quarters to me, that the output growth rate is following may not have become negative, but following as in India for instance this is the happening the past few years, alright. But suppose it has been falling, we are under full employment line that line, but we do not have a full employment line in India, I am seeing that number. I think we do not have good network of information systems where we collect data so well and have the numbers in front of us. So, all we talk about is growth rate, growth rate [FL] the feeling is if it is high growth rate, it is good thing may not be full employed, but [FL] lot more people have lot more income in country more Mc Donald's shop may be [FL] so why worry?

So, I guess I am not confusing you with this gap year which is not growth rate, it is actual output level. And now if you have above full employment of course, nobody would say it is recession about full employment. So, you have to make the judgment when you call it a recession and when you call it a recovery. Recession is that line you remember going down the growth rate, recession for a successive quarters and recovery is for a successive quarter we are going up, unless you are not called recovery. Recovery the same thing, for what one quarter to the growth improved, the next quarter if fell back, we do not call that recovery, the health is still not good.

Today I am well, tomorrow I will not well again, day after tomorrow again I am well, well my health is not good I am recovered, alright. The some text books would confuse you a little bit because they try to talk about too many things, which then becomes confusing, [FL]. Now very interesting, I am going to come to the last section nearly, any question, do you have any question? Yeah you have a question.

Student: Why cannot there be any recession above full employment?

Why cannot there be any recession above full employment, do you think it makes any sense to call a recession over full employment?

Student: ((Refer time: 1:06:41))

I was overtime, working overtime suppose I give you this example, now I am working full time. So, overtime I was doing 4 hours and I am doing 2 hours over time, but still I am fully employed I have a full time job and I was doing earlier 4 extra hours, I am doing 2 extra hours does not mean, I am in a recession, not at all. If my working hours say now drops from full time hours and the company is laying of work, there is not enough demand which happens in capitalist countries.

And I mean said, told from tomorrow onwards you will come here only for 6 hours, you are talking about recession not from above full employment, where I was doing kind of overtime and the economy is extra hot [FL]. Economy has become cold, when it is a not hot anymore and it is cooling off, cooling down, all right and you have to make a judgment, is it cold enough now to call it a recession.

Student: ((Refer Time: 1:07:53))

Because of the death of soldiers?

Student: ((Refer time: 1:08:05))

[FL] Some high hypothetical situation [FL], taking all countries including acts of terrorism, acts of crime, malnutrition, hunger, accidents, quite a few people die. I do not think that is dense the line so easily, but one think about post war situation I want to mention, in a world life economy of course, the recourses are not diverted to use civilian products, they are all diverted to use a military goods. Because, you are at war and particularly in the serious war, spread over quite a few months, a year like second world war for instance. We, it went on for 6 years, in that kind of a situation the economy moulds itself, it does not produce your luxury goods all the time.

Sources are to used to produce military goods to protect the country and when you are trying to produce military goods to protect the country, the extra demand for steel, extra demand for other things, certain material go up so much, that you do have a sometimes booming economy. People have job, they are given overnight training to work in a rifle factory, tank factory, animation factory or whatever, even housewives gets involved in all kinds of jobs. In India they would not be, even if it is a long war they would not be any death of people, do not worry, unemployment figure will not go down a lot, India [FL], other countries I am talking about.

So, what type problem has seen and post war periods have seen a lot of booming economies. So, your point is not counted I mean if people die, they are less so the economies are naturally very high, because there is a dent in the full employment line. So, the actually economy is about it automatically so it is a booming economy. Your point is not counted, what I am trying to say the economy, the way it functions and over itself to produce the goods that are required to save the country, during a war normally does not happen in a peaceful, peace time, in the civilian society, like.

Suppose you do not have exam, how do you perform work? You do not work like you have an exam tomorrow, you do not, you take it easy, you spend time with friends, stay up night, late night have more chais, more cold drinks. Then cannot get up the following morning, then you say who cares, I am not going to go to class. But suppose you have an exam following morning, even if you are up previous night, you will get up to go to the exam room, it is a different story what time.

So, when the economy is in war time mood for a long number of years, often the economy becomes a remains a booming economy, in some very funny, very ironic, you see ironical situation, it is not a common sense thing. But it does happen, not a normal thing, but it does happen. Yes, common sense can make you understand that. Next thing I want to talk about, a few relationship between which have become important in macroeconomics etcetera, between the prices output and employment, which have been talking about throughout. But let me tell you what the literature has done, they have models surroundings these issues and models are essentially reflecting a theory.

So, what you have essentially, you have a theory which is the broad hypothesis. Then models are built to test the hypothesis of the theory empirically, alright. So, certain relationships when theories are built, certain relationships are obtained from, the theoretical assumptions are obtained from the relationship that you are observe in the real life. So, prices output and unemployment is something I want to talk about, I wonder how much it has change now. This is slightly old this concept, it is about 20 years old, but still very relevant 20, 30 years old. Now, you remember the short run and the medium run macroeconomic models.

In the short run you do not have any price fluctuation because the aggregate supply line is horizontal, it fixes the price of on the y axis, fixes the point on the y axis, y axis measures prices. So, it cannot change any more horizontal line, but if you have a normal demand and normal supply, your simultaneous equation model then the two equations would determine the two unknowns price and output, now you have both changing, alright. Now you look up situations that, they have been historical changes, revolutionary changes in thinking in macroeconomic over the years. This change first took place in the 1930s, after the 1930s depression, 1929 to 33, I think this 4 year period was a, the time period for great depression in the western world.

So, started in US I think it spread to Europe and it was major depression, many people committed suicide, many people lost all their wealth, stock market crashed. Because, stock market is the speculative market so you are expecting that now I buy the share the low price I will sell them at a high price and I put my money in it. But then high price does not come, what will happen? You will lose all your money, now you are selling off your shares at a low price, making capital loss as opposed to capital gain. So, stock market is crashed all that happen, that is when the first important change in economic thinking to place.

Now the thinking that took place or the change, what changed was the change what we say in economic, macroeconomic theory. It changed from the classical macroeconomics setup that we have frame worked to a post classical macroeconomic frame work, which we called the Keynesians frame work. So, there this he was not a Nobel audit, I do not think there was a novel price for economist those days. So, John Vender Canes, this

person from Cambridge University in England, essentially the first life, in his first life made money in the stock market, get huge amount of money.

And people say many economist says stock markets are the pulse of the country, stop markets tell you how the economy is doing, many people say that. The having made money in the stock market, he probably knew all the ins and outs of a macro economy. Then he was a very bright man, he was very educated so he started writing this book, which we in short we call the general theory. So, general theory of employment invested money which he published in 1936. So, you must be writing that during the depression period, sitting in England, revolutionized thinking in macroeconomics.

Essentially what he did was this, in the classical macroeconomic there is a long run model, where the supply curve was fixed, assumed. So, the demand curve cannot do anything with output only it can change prices. Let me go back to the supply curve the long run and the short run models.

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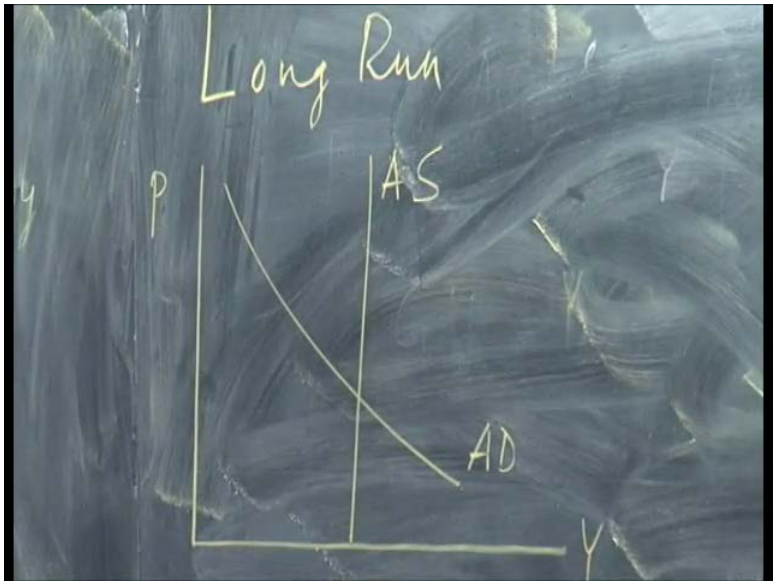

Now, if you remember the long run was a situation where I said analytically speaking in a two dimensional diagram, I can have a output level y and price here. And the aggregate supply curve I assumed to be, aggregate supply curve is assumed to be vertical and the aggregated demand curve is a normal aggregate demand curve. Now what you see from this using your simple you know this diagram is that, no demand curve shift can change

supply output in the economy. Supply output can only change if aggregate supply curve shifts, which is usually not considered to be a situation in the classical macro-economic theory.

I have not taught you classical macro-economic theory, I am telling you a history right now. I will teach you classical macroeconomic theory later, it is not possible what canes said, well you have to come out of these models, the depression years, the solution to the economic problems, unemployment and falling prices. Prices also falls a lot, people does not have income they do not buy goods, goods prices would going down, you can see from this model, if the demand shifts to the right, prices will go up. If demands curve shifts to the left, prices will go down, but even if this model explains kind of falling prices etcetera. But the solution to an economic situation like that, this model does not suggest anything because it has fixed the supply curve vertically.

So, now the question is, canes when he wrote the book essentially the message that came out in his books is that change the model, I will tell you how he changed the model. He changed enormously, unbelievable one individual contributed so much to macroeconomics, who never got a noble price. Because, there was no noble price in economics, those day well Nobel price was not invented for economics. It became economics noble price much later when economists became very influence in the world probably and very glamorous figures. So, now you have to send noble from India also as a noble price you have you know, many other people receiving noble price.

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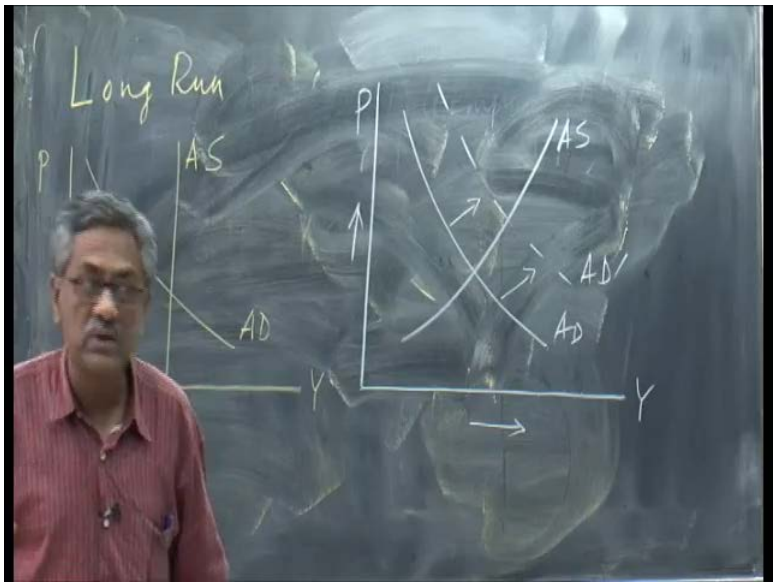

Now the point is, what I am trying to say is, he went to essentially short run or medium run models where, he said now, it is note that the supply curve is vertical. The supply is very much up ward sloping in the very short run it is horizontal, aggregate supply and you have a demand curve. So, now if you have a recession, if you have a recession in the economy, severe recession, depression that means people are not buying goods, output level is very low, growth rate of output is negative. You can have a medicine for the economy from outside, by shifting the aggregate demand curve to the right because if you can shift the aggression demand to the right.

If it can be shifted to the right, if it can be shifted to the right the aggregate demand curve then you can see this falling price problem can be countered by now prices going up a little bit and if prices is go up it is good for the companies. Because, companies do not like prices falling, companies like in fact not too much inflation, but they like a little bit price rise because ever time prices go up the cost at which they brought the inputs, the factor services to produce the goods and there is the timeline. Now if the price are higher, compared to the pricier at which they brought the resources, they almost make an extra profit.

So, they like a price rise always so they never like prices falling, but too much of prices is not good, why? Because, demand curve is downwards sloping, too much of price that would shrink demand, people will not buy goods, that they do not like. Now, the question is counter the price rise, counter the output level, these things, these movements

can start taking place to cure the economy. What is the economy, in great depression the economy was tied up with something called depression where, prices were also falling with output. So, you have deflation, price falling is defalcation opposite of inflation, the prices were falling, output also falling.

Now, you can see you can have a demand curve shift and prices can stop falling. In fact can start rising and output can increase provided, you do not make a supply curve vertical. So, this is where analytically and also thinking wise different static coming and the new macroeconomics develop, which is known as Keynesians macroeconomic. This is known as the demand management policy, demand management policy is what? Demand, government can have demand management policies where it can manipulate the demand function in a way, control it in a way so that, it can counter recession and deflation, alright [FL], no problem?

Great deflation time in the 1930s you are two symptoms, here is the deep recession which is got deflation and also deflation, the demand management you can counter that, you have seen in the diagram. So, Keynesians economics became very popular. Now for about 20, 30 years it rules the western world, Keynesians economics what type economy, again government is putting in a lot of effort. Now how you do that demand management artificial policy? Well, if it is a government policy, how can government manage demand, increase demand, you tell me, how can government enforce the demand?

If the economy is having a low demand situation, how can government increase the demand? By spending extra, created demand for goods, they can build highways, bridges, roads. Now in what type economy government does extra, to produce the military goods, who produces the military goods? People of the country. So, it generates extra demands, they earned income, what they do with that income? They go and buy more goods for themselves. So, demand is automatically generated and can be artificially increased by government spending on infrastructure projects, etcetera which we called government expenditure.

So, government can control that like a medicine, you are not well, your body is not creating enough humidity to protect you, you are having a fever or whatever you are not well. I from outside can inject something on your system or give you a medicine, which

will counter that and you will start feeling better. So, government expenditure is like a medicine that was suggested by Keynesians. Now, this was not the thinking before canes even the teacher who thought canes very probably got shock, may be tomorrow one of you will be become a macroeconomic, who shock me.

Because, what I thought you would prove it absolutely wrong, it does not work and you come up with the hypothesis, that what happened with Keynesians teachers at Cambridge, alright. Now demand managing policy works fine [FL] from the 60s and the mid 60s in particular, problem started the rising after the kinetic years, problem started increasing in the western world, in US in particular. You know people used to say when I was studying, doing PhD there, they used to describe US and Europe relationship as like this, if US sneezes Europe catches a cold.

[FL], immediately effects Europe, I think it is vice versa now, with European crises, if Europe has a problem it also affects Europe's, USA, anyway. Now the problem started Keynesians policies are no longer working and in the 80s, I remember after the 70s there was severe recession in US, when I was doing my PhD there. So much of recession I could not believe whether I am in India or in the US once I were travelling there. By bus, when the bus reached Pittsburgh in the morning and it was going through Pittsburgh deeply it, recession areas or other places in Chicago and Buffalo and all that New York. You do not believe me when I looked out and saw the numbers of beggars of the streets and all that and all the factories are shut, I could not believe I was back in India.

In Bengal I have seen that, when industry shut down after the left party came into power, slowly they shutdown I remember I was working in a government establishment and I was asked to go out in to the country, into the municipalities, mile after mile by local train when I used to travel I could see industries goes by shutdown. So, I felt that I am back home when I was in US in fact, imagine the thing about impression we have about US, the glamour and the glitter and all that.

It is unbelievable recessions now, they found Keynesians policy are no longer working, to lift the countries economies of the western world out of the deep recessions, it is not working anymore. Then when again macroeconomic thinking started changing and new

macroeconomics came into existence. More of the phenomenon's that they found what happen there, was none as the phenomenon of stagflation, what is stagflation?

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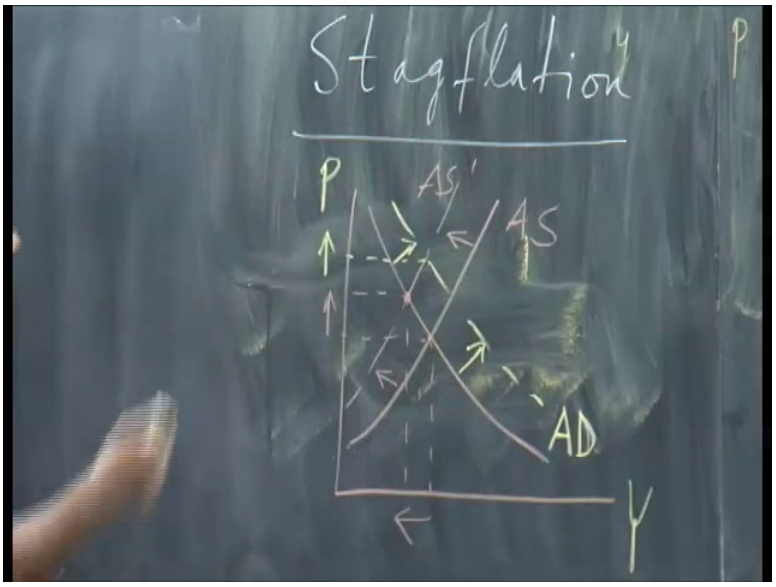

This required different kind of economics policies, this required different kind of economics policies called stagflation. What is stagflation? You can see two words are influenced, yes stagnation which is like a recession and inflation [FL]. Can you explain stagflation in this model, demand supply model, can anybody explain demand supply model and this stagflation, can anybody explain stagflation in this model? Use your mind look at it, how stagflation can occur, how can stagflation occur when you have inflation and you have recession, what kind of shock to the economy can start creating stagflation, any answer? Well it is simple, you start shifting the supply curve left wards.

You keep the supply curve shifting left wards, what you have. In the static frame work the diagram that I have, what do you have? Prices going up output falling. Now when prices going up output falling, if you have a demand management policy, what will it do? It will try to would try to increase output little bit, but what will it do to prices? Beg your pardon, it will increase prices further, it will accentuate the inflataion problem. If you have a stagflation here, where I am saying the supply curve is now shifting backwards. When supply curves shifts backwards, prices are going up output is falling [FL].

Now, you want the demand management policy, what will happen? Depending upon the slope of the supply curve out, how steep it is, how flat it is. Suppose it is very steep, if

the demand curve shifts it will not happen much influence on output, but it will have tremendous influence prices [FL]. If the supply curve is very steep and there is a demand curve now when the supply shifting, when the supply is shifting, alright from here to here it goes output falls, prices increase. Now, government says we are going to Keynesians policy, this is aggregate demand, this is aggregate demand.

Now we are going to use demand management policy to counter that, will we be able to counter that? Stagflation, demand management policy which shift the demand curve outwards, output increase would be some depending upon what the slope of supply curve is. But prices would increase further, if you have a price and output here, prices would increase further. You see that, you see that. So, it is not solving the problem, inflation is a big hill, who likes inflation? Nobody likes inflation, you have some money, and tomorrow when you go and buy goods in the market you see the money is worthless. You can buy a fewer goods because the price is grown up.

So, nobody likes inflation alright. So, stagflation when started occurring particularly in 70s and 80s then the Keynesians policy were completely declared bankrupt. Because, they are not curing the problem it was fine for a while, but then you have the new macro economist coming up and then and they came and knew models I did not go into that. Because, I do not want to teach you in this course, I am not go into going the details. So, fundamental change is therefore, if there is the stagflation situation, what is the answer, how would you solve, resolve? Is demand mange possible to work?

No, it cannot be very effective anymore, if there stagflation then what kind of policy you require? Any answer, what kind of policy do you require? Supply, Supply side policies are required, the supply curve has to shift out, prices will come down, employment would increase, and output would increase. You need supply management policies, not demand management policies. So, the question is which kind of macro-economic models you require have some require management policies, which is more difficult for government. Government is very smart in using demand management policies, government is completely the opposite when it comes to having supply management policies, because the supply side in the capitalist society is hands of whom?

Private sector and they do not directly influence them, they can influence them indirectly, they do not control them. So, it becomes more difficult for government to have an effective supply management policy. Government, demand management imposes very easy [FL] central bank say they borrowed more money, spend it more on expenditure projects. More people will get the employment [FL] in India, the big thing, government thing [FL] what is it demand management policy, trying to provide some income, minimum income, minimum food requirement for some very poor people.

It is government expenditure, demand management policy, it includes employment, and it increases income, but temporarily only, not on a permanent basis, alright. Therefore, what you see here when stagflation Keynesians policies are not working because Keynesians policies were demand management policies. So, the macroeconomics changed quite a bit after that, they went on more on supply based models then demand base models.