Financial Institutions and Markets
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Lecture – 05
Financial Development and Economic Growth

So, in the previous class we discussed about that how the financial development can be measured and what those different indicators of the financial development are. So, today I will be discussing certain issues or certain things which are related to or makes the relationship between the financial development and economic growth. Because, the basic objective is to know that what kind of relationship can exist or can be established between the financial development and economic growth as a whole.

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So, in this context if you see that there are certain issues related to the importance of the financial development for economic growth. Already we have discussed to some extent about this I am just going to summarize this thing. As you know that with money, with other materials, other instruments, money is also crucial input in production activities, money is very important for all type of production activities in the economy. And, if you ask that how the financial development is affecting growth process the basic notion or basic question is the financial development can affect the growth process through the changes in the savings behavior.

Once the savings and investment behavior changes, once the development process change it will have the impact on the savings, it will have the impact on the investments. And finally, if the savings and investment behavior gets changed then it will have the impact on the growth process or economic development process. So, what basically here we are trying to see, the financial development who provides the savings and that savings is automatically invested in the market either the investment is done in the financial assets or the investment is done in the physical assets or any kind of assets which are used by the consumer for different reasons. So, for everything the money basically flows from financial sector and money flows through the financial sector.

So, here what we are trying to say that once the savings and investment gets affected then automatically it will have the impact on the different investment process and automatically that will have the impact on the growth process. And, financial system or financial development also enhances the efficiency of the function of the medium of exchange. How fast your money can be transacted, you already know nowadays we are using credit card, we are using debit card, we have online banking system and all kinds of things which are happening that is basically increasing the efficiency of the function of the medium of exchange. So, once the efficiency of the medium of exchange changes then the trading activities gets affected then; obviously, the transaction activities gets affected, then automatically it will have the impact upon the growth process.

So therefore, we should know that how the efficiency level in terms of the medium of exchange is has been enhanced. And, you know that enhancement can be possible through a developed financial system as a whole. So, because of that we can have a link between the financial development and economic growth.

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So, here we are discussing certain theories which relates the financial development with economic development through savings and investment. How the savings and investments play the central role? Saving and investment are basically considered as the central factors which contributes to economic growth process. And, financial development is basically the responsible sector who affects the savings and investment behavior in that particular system.

So, overall we have five theories: we have classical theory which is called it prior voluntary saving theory, we have a credit creation theory, we have a forced saving theory or inflationary financing theory. Then we have the financial repression theory, then we have the financial liberalization theory. So, you remember these five theories tries to establish the link between the financial sector or financial development with savings and investment. And finally, once the savings and investment gets affected the economic growth process gets affected.

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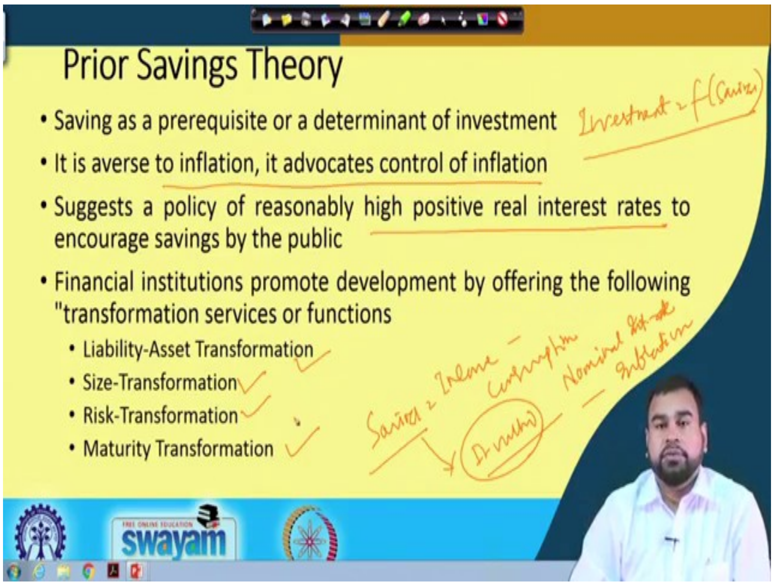

So, one by one we can discuss that what these theories basically talks about and what this theory tells. You know if you talk about the prior savings theory which is given by the classical economists, the prior saving theory tells that saving is a prerequisite or determinants of investment. That means, here what basically I am trying to say that whenever you talk about the prior saving theory here the investment is a function of the savings.

Savings which is the most important factor which affected the investment; that means, whatever surplus amount we have; that means, savings is nothing, but

$$\text{Saving} = \text{Total income} - \text{Consumption}$$

Then whatever money is basically saved that is going to be invested in the market. So, that is what basically the concept of prior saving theory and prior saving theory does not advocate the inflation. He said that inflation is not required, it is not a desired concept, desired phenomena in the system, more the inflation it will have the adverse impact on everything. So therefore, there should not be any inflation in the system. It advocate the control of inflation any kind of policies should be taken by that the inflation can be controlled.

And another very interesting feature what the prior saving theory tells the real interest rate should be always high, high and positive real interest rate to encourage savings by the public. You remember that if interest rate will be more it will have the impact upon the supply side in a positive way, because more people will be interested to deposit their money in the banks because they will be getting more interest. But, in other sense the banks will charge very high interest rate on the borrowers or the lending rate will be higher. So, because of that the demand for money will go down.

So, because of that the investment gets affected, but still the prior saving theory advocates that the real interest rate should be higher, real interest rate means we are basically defining in this way your nominal interest rate minus the inflation that is basically your real interest rate. So, the nominal and real concept will be extensively discussed in the coming sessions, but remember

Real Interest Rate= Nominal Interest Rate- Inflation Rate.

So, it says that high positive real interest rate affects the savings behavior and once the savings comes to the market or comes to the banks it goes to the market, then this investment will automatically takes place. So therefore, saving is most important factor which affects the investment.

So, here if you see this theory basically tries to analyze what kind of services these financial development or financial institutions offer in terms of the different aspects. What are those aspect if you see, we will discuss one by one. How they have really contributes in terms of the growth process through savings and investment behavior and as well as the other aspects also, which is basically the services side. What kind of services the financial development of the financial institutions provide by that those services increases the efficiency. And finally, this there is an investment takes place in the system and the growth can be possible. Then what are those, if you see that first one is liability asset transformation.

I will give you example: how this basically liability asset transformation takes place. Whenever we give the money in the bank this is an asset for me, but this is a liability for the bank. Whenever I am depositing the money in the bank this is an asset for me, because I am getting some return out of this. But whenever bank provides that interest to us by keeping that money with them that become the liability for the bank, but still bank takes that why. Bank can creates the asset out of that, but how the bank creates asset out of that, from that deposit base only the bank can provide the loans. If the bank will provide the loan now that particular liability whatever the bank has that has been converted into assets for them.

Because once they have given the loan they get some return out of these and out of that return they provide certain interest to us, because we are depositing the money with them. So finally, what is happening the assets and liability are transformed. There is a transformation which is happening with one stakeholder it considered as an asset with another stakeholder it becomes a liability. And in the next period those things can be converted into liability and the reverse basically asset and liability from liability to asset from asset to liability. So, what organization can do? That can only be done by the financial institutions. So, in that process it contributes to growth process.

Second one size transformation, how the money comes to the market unless the financial system is not there it is not possible for the circulation of the money to a larger extent in the financial system as a whole. Now you can observe that the banking sector has developed like anything. We have there is so many bank branches and that is why because of the accessibility the people can save their money. Once the money is saved then what is happening that transformation can takes place and the small savings can be accumulated and that small savings can be converted into the long loans or large loans. So, in that context the whole system works and those things can be only given by can be contributed by financial system.

So, through that the savings is increasing finally, it is helping in the investment process of the particular system. Therefore, the size transformation is done by the financial sector only. Risk transformation, you know how this risk is transformed by the financial sector or financial develop; the financial sector is developed then what is happening some people are the risk takers, some people are the risk averse. So, if you are taking some positions or you are trying to invest your money in the market you are taking some risk and that risk can be diversified. The risk can be transferred by the financial institutions only, you know the risk can be managed by various ways. Risk can be diversified, risk can be hedged and risk can be transferred.

So, whenever we talk about the hedging we are taking the help of derivatives instrument, we have different positions. If one market does well another market may fall, if one market basically falls another market may go up. So, whatever loss you are making in one market that can be a gain in another market, because you are taking a reverse position. One market you are buying position to another market or selling position and buying selling position can be depending upon the market fluctuations you can hedge your risk. Diversification means the assets what you are holding can be invested in various available alternative through the financial sector. You have the bonds, you have the stocks, you have the derivatives instrument, you have the bank deposits, there are different instruments which are available.

So, in that context what you can do, if you can have the positions in the different markets then, if there is problem in one market maybe another market can take care of your problem and the risk can be diversified, risk can be reduced. Transformation by the insurance policies maybe everybody is paying the insurance premium, but everybody may not be using it. So, what is happening to your money? It can be utilized to provide the insurance to somebody else. So, in that context basically you are also transforming the risk. So, overall if you see that financial organizations or financial institutions provide the risk management services or risk transformation is happening through the different financial instruments. Maturity transformation, why basically what do you mean by the maturity transformation.

The maturity transformation is what? The maturity transformation is that we are depositing the money for maybe 20 days or there is no maturity period. Because, those moneys can be converted into the long term loans. Now, whenever you are taking a house loan that is 20 years, but nobody have a fixed deposit of 20 years. The maximum fixed deposit can be 3 years or 4 years or a kinds of thing, but the banks are able to provide that long term loans out of the short term deposits; that is the beauty of that particular system. By that what we can say that the instrument which are kept that basically that instrument with the different maturity can be transferred or transformation can be possible by the financial system. And, which is helping to all the different market participants on the basis of their requirements.

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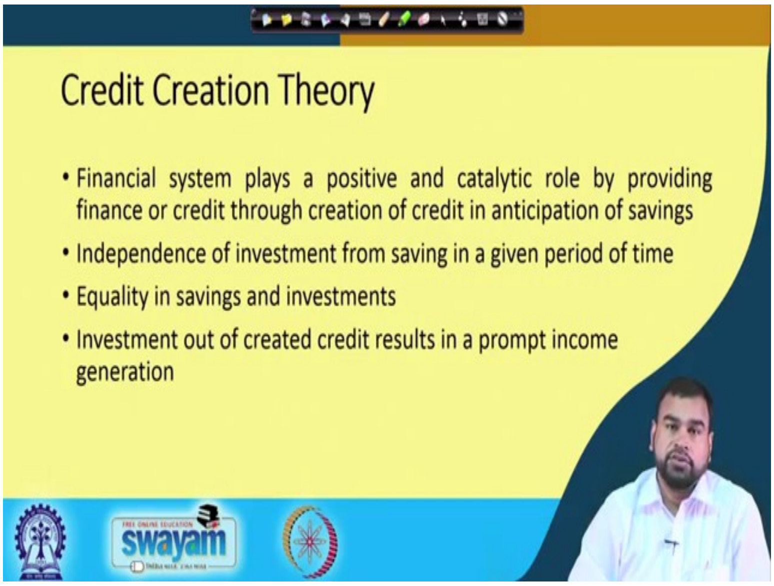

Then what we can do, we can move into another theory that is credit creation theory. What do you mean by credit creation theory? Here in the previous discussion we have said that investment is a function of the savings, savings affects the investment. But, here according to credit creation theory financial system can also create the credit in anticipation of the savings. You might have known, you might have the idea that the bank's credit can be more than their deposits that is possible. Because why the bank can do, because bank has the ability to create the deposits of the savings because of their economies of scale and economies of scope. Economies of scale means in the larger scale this particular organization is existing and economies of scope means they are providing the different kind of services by that somewhere they can manage the risk in such a way that the total risk of that particular system can be minimized.

So, only organization so if you ensure that the financial system is the only system which can create the credit in anticipation of the savings that basically what we can ensure in this particular context. So, then if you see that in that context this theory does not argue that always the saving is affecting investments only; unless that theory tells even if there is no savings to some extent the investment can take place because the financial sector can create the credit. So, that is another argument that is why in this theory argues that there is a independence of saving from saving the independence of investment from saving in a given period of time; that is may not be possible always that always saving affects unless there is savings investment cannot be possible.

The equality in savings and investment is a question mark that always savings may not be equal to investment, that is basically savings may be lesser than investments and that is possible because the credit creation is possible in this case, because the bank can create money. The investment out of created credit results in a prompt income generation. Once the credit is created and that goes to the market for investment and obviously, the production increases and if the production increases that leads to the more income of the economy at a large.

So, credit creation overall if you summarize that credit creation does not subscribe the concept that savings is the only factor which affects the investment. And, without savings also investment can be possible by the creation of the credit and once the credit is created then it can generate certain kind of income because, of the productive uses of that particular credit in the system as a whole.

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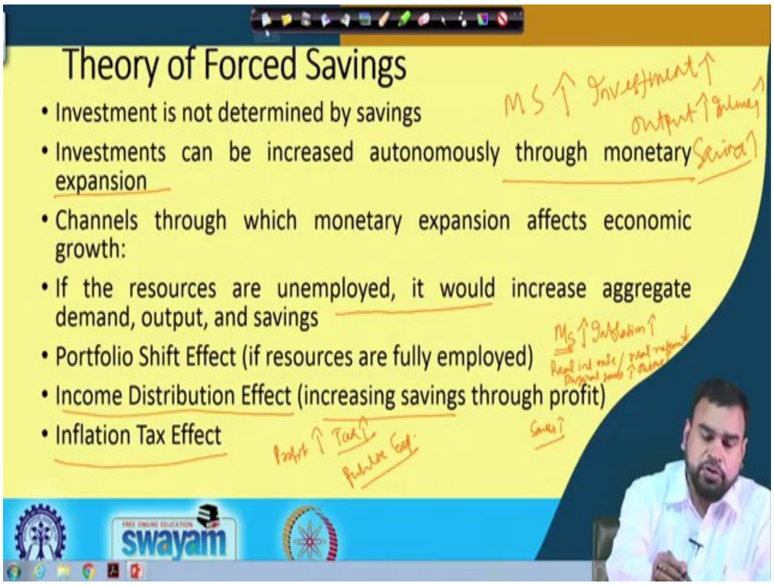

Then we can come to the next one the theory of forced saving which believes that inflation is required for the development. Some amount of inflation is very much desired whenever you talk about the growth or the development in a particular system. So therefore, it is little bit interesting in the sense it is says that investment is not determined by the savings. Savings may be determined by the investments. So, the policymakers can take certain policies by that the investment can grow up, the investment can go up or can be grown then finally, what will happen the total profit in the system will grow up. And, if the total profit will go up then it will leads to the more savings. The corporate sector can generate more revenue whenever the total productivity or the production of the system base increases.

So, in this sense what we can say that this theory does not subscribe that investment is always determined by the savings. Otherwise it says also saving can be determined by the investment itself, saving can be changed once the investment in the system changes. So, how the investment can change? The investment can change autonomously through monetary expansion; that means, because this theory was given by Keynes and Tobin. And, they believe that the money supply can be exogenous, money supply can be determined by the regulators or by the monetary authority exogenously outside the system.

So, if you expand the money, if money supply increases then it will have the positive impact on investment. So, the investment will go up, then the output will go up, if the output will go up then the income will go up, if income will go up then; obviously, the savings will go up. So, that is the argument what it gives; that means, we can exogenously change the money supply. Then if you exogenously change the money supply, then what will happen. It will have the impact on the investment behavior at large and finally, the savings also gets affected that is what basically this saving in this particular theory argues.

And, how the monetary expansion affect the economy growth they have given certain channels. There are certain ways, certain concepts has been given by this economist by which if there is a monetary expansion then how it affects the economy growth process. If you see that according to Keynes the particular economy is not always in the full employment level, there is some kind of resources which are available which are unemployed. So, if the resources are unemployed then what will happen? If you increase the money supply already there is a capacity the economy has; all the capacity has not been utilized. If the still there are some resources which should be utilized then what will happen whenever you increase the money supply it will increase the demand, because still the resources are unutilized. If it will increase the aggregate demand then; obviously, it will increase the investment; because the demand is there then people over your producer will be ready to produce the product.

Then by default the output will increase, if the output will increase then already I told you that; obviously, your total income or corporate income corporate sector or producer only will produce the thing, because they are investing the money. If they are investing the money, the money which is flow to the market can be utilized by the producers and they create this output. Because, why they can create the output because there is aggregate demand, the demand is there in the system. Then what will happen their income will increase, if their income will increase then automatically the profit will increase. If the profit will increase then that will be coming into the corporate savings form and the savings also can increase.

So, in that context if that happen and that also does not lead to inflation and it will not lead to inflation because there are some resources which are unemployed. But, you assume that the resources are fully employed in the system, there is another condition. The first condition here we have discussed that the resources are unemployed. But let me take another condition, the resources are not fully employed. Now, the capacity is not there whatever resources are existing in the system that is completely employed. And, now if it is completely employed then how the growth can take place because then the argument was what Tobin has given this concept of portfolio shift effect. What Tobin said, Tobin has given this concept that if there is a full employment then still we are going to increase the money supply.

Then let whenever there is if you increase the money supply, the money supply has increased so; obviously, it will creates the inflation. So, if it will create the inflation then what will happen that the real interest rate or real return or real return from the financial sector will go down. So, the real return in the financial sector will go down, but people have the money because money is available in the system. Then what they will do, they will shift to spend their money in the physical sector or physical goods. Why they will spend their money on the physical good? They will spend their money on the physical good, the reason is in anticipation that the expected inflation may go up.

So, now already the inflation is high, if they have any kind of requirements they try to put their money in that particular asset. Because, if the inflation has already increased to some extent they will expect that inflation may further go up. If the inflation may further go up then again it will be more expensive for them to buy the product in the next period. So, because of that they will go for more physical goods. Then if they go for more physical goods then the consumption will increase. The consumption will increase then; obviously, the producer will go for more output or produce more. If the output will increase then automatically what will happen that, that will have the impact upon the growth process. And finally, your savings gets affected; that means, in the second point if you see that this is called the income distribution effect.

Now, what this income distribution effect; the income is basically coming from the financial sector to the physical sector and the physical sector basically increases the savings or the producer basically increases the profit. If the profit increases then automatically saving increases and the once the corporates have been increases the money again comes to the market for the investment. Then finally, again the output or the growth process can take place. So, that is what that is why it is called the portfolio shift effect mean the shifting the money or investment from the financial sector to the real sector or the physical goods sector. And, once the physical goods sector goes up or the development of the physical sector goes up then the profit of that sector goes up, that is why there is an income distribution between these two sectors.

And finally, this total profit leads to the total savings then finally, the output can be enhanced. So, that is there is another that is the way basically this thing basically comes. Then another thing also can happen there, if their profit increases; obviously, they will pay more tax. If they will pay more tax then the tax revenue can be used for the public expenditure. The government can use their tax as a public expenditure so, which is called the inflation tax.

Why profit will increase, because already inflation is a little bit higher, the price of the product is a little bit higher then the profit level of the producer will be more. Then once the profit is more they will pay more tax and the once the tax is coming to the government, the government can use it for the public expenditure. Then automatically their total growth process, it also contributes the growth process at a larger extent. So, in this process there are different channels through which the monetary expansion can affect the growth process at a large.

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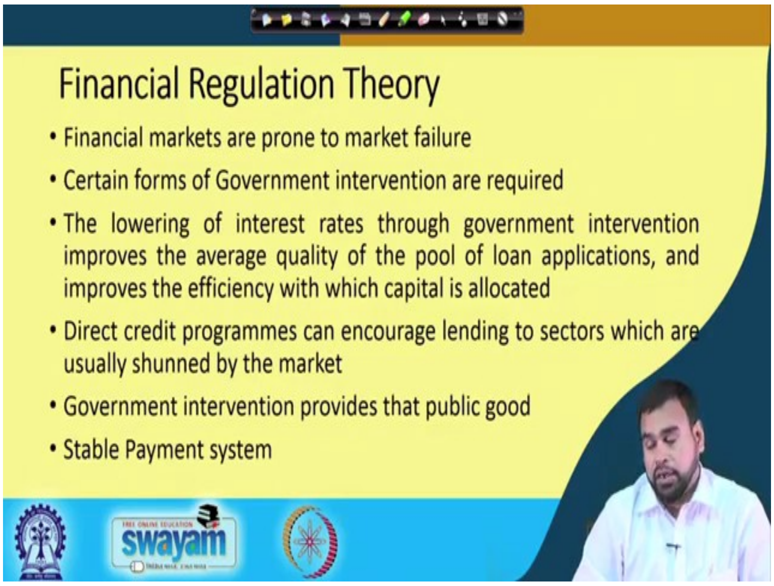

Then we have the financial regulation theory which does not subscribe the everything should be market determined; that means, government intervention is very much required. Why the government intervention is important? Some economists have argued the financial markets are prone to market failure, there is a problem may happen in the market. So, only government can so government intervention is very much required to control that. And, the lowering of interest rates through government intervention improve the average quality of the pool of the loan applications and improve the efficiency with which the capital is allotted. Direct credit programs can encourage lending to sectors which are usually shown by the market.

You see there are some times if the government does not intervene then the private sector lending will not be there. The agricultural sector or small scale industries they may not get the loans by the commercial banks and others and finally, the wholesome development of the system may not be possible. So, because of that some kind of regulations in the financial sector is required for the welfare of the society at a large which ultimately also can affect the growth process in the economy. So therefore, that direct credit programs can encourage the lending to the sectors which are usually done by the market.

When government intervention provides that everything is a public good so, therefore the public good in the sense any instrument which is coming to the market that money that can be utilized by everybody. And, everybody has the right on that particular thing, that particular signal can be given by the government only. If everything is market determined so those kind of things may not be possible whenever we talk about that particular system. And, government also in the responsible to create a stable payment system because government can get into that. So, that is another kind of argument we can see which in the believer of the financial regulation theory.

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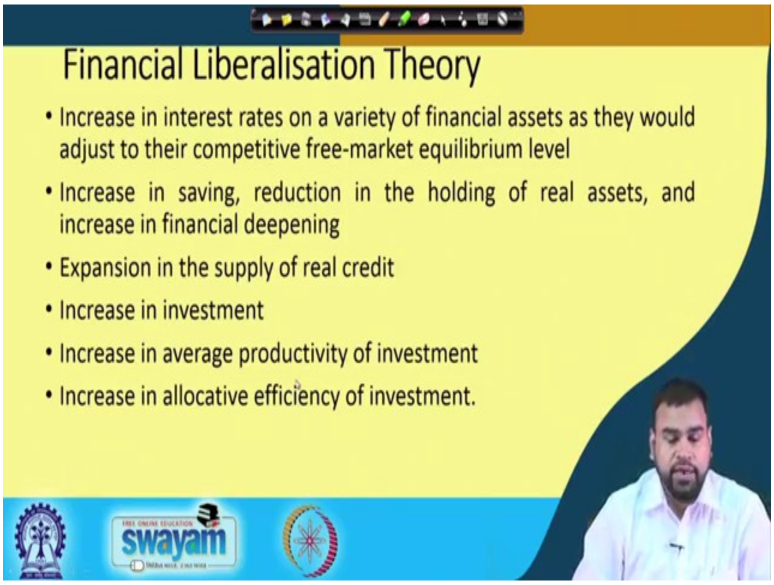

Then we have the financial liberalization theory which believes that government intervention is not required, because everything should be adjusted in terms of the market forces both demand and supply. So, increase in interest rate on a variety of financial asset as they would adjust to their competitive free market equilibrium. Increase in savings financial liberalization leads to increase in savings, reduction in the holding of the real assets and increase in the financial deepening; that means, the financial growth financial development growth. It more be, more it is expansive and as well as the development in terms of the instrument development in terms of operations that can grow up.

So therefore, liberalization can bring all kind of efficiency to the market as a larger extent that is everybody believes that the market should be fully liberalized. Expansion in the supply of the credit, because it is integrated and market mechanism takes care of everything there is a possibility that supply of credit can grow up from the different sources.

It helps in increase in investment, the once then if the investment get grows up because of the more participation, more number of instruments, more types of instruments and more different type of investors like FII foreign institutional investor, Foreign Institutional Investors, this FDI FII. All kinds of investors are there in the system then it will increase the efficiency of the market. And finally, the investment grows up and increase in average productivity of that is why the average productivity of investment can go up. Then finally, what will happen because of more participation as they are there and more people are involved in the production process then it can also increase the efficiency, the allocation or the marginal efficiency of the capital which is spent on that particular market can go up which we call it the allocative efficiency.

By that the more number of participation and more, market participants make the market more competitive and all those things can be captured through the market dynamics. By that the possibility of the equilibrium always the exists in the market and if market takes care of everything then there is no possibility that any kind of disturbances can happen in that particular system that is the argument what the financial liberalization theory tells. So, here these are the different five theories which highlights about how the financial development affects the savings and investment. And finally, the savings and investment changes or behavior of the change in the behavior of the savings and investment finally, affects the economic growth.

So, in directly or indirectly what we can say that development in the financial sector, financial development always lead to the growth process in the larger extent. Therefore, the importance of the financial sector is very much important. And, then in the next sessions will be discussing certain concepts a certain kind of we can say that major issues which are used in the financial system at a large and then we can move ahead to the specific institutions and the markets.

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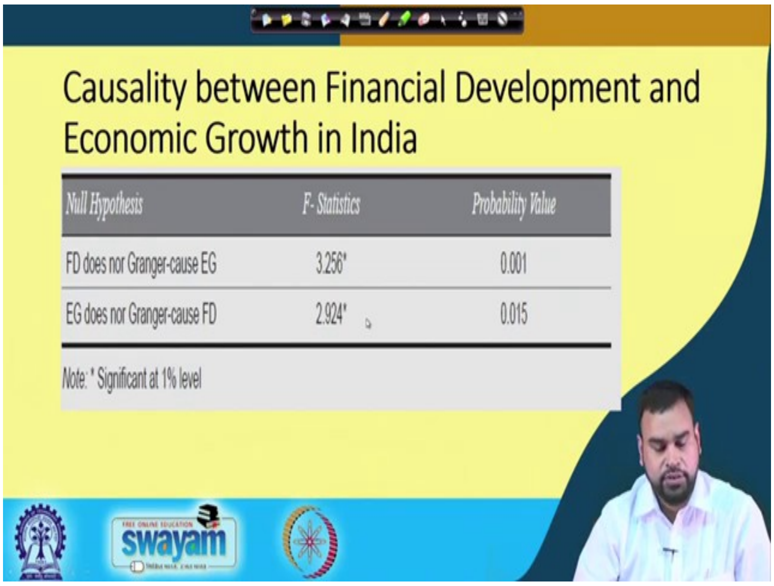

So, here I can show you the result that this is the way the financial development affects the economic growth that is the result for India. We say that the financial development affects the economic growth largely. This is the empirical result, I will explain more on whenever we talk about the empirical validation of this in the coming sessions.

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Please go through these particular references for this particular session.

Thank you very much.