Infrastructure Economics
Department of Social Sciences
Prof. Nalin Bharati
Indian Institute of Technology, Madras

Module – 06
Lecture - 22
Infrastructure in an Open Economy

Let me begin the new discussion on the topic Infrastructure in an Open Economy. We will discuss today, what is basically the open economy and how in an open economy infrastructure development is one of the more challenging, as well as more easy job compared to a closed economic model.

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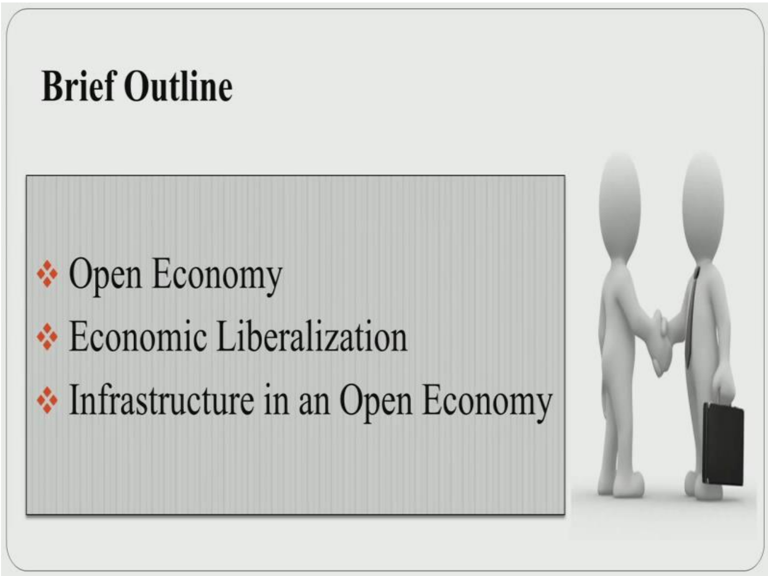

Let me begin with what is basically the difference between the open economy and a closed economy. So, the brief outline of this presentation is basically the discussion on open economy, economic liberalization and how this particular economic liberalization process gives us an opportunity to have the infrastructure development, particularly in an open frame work of the economic development. So, what is basically the difference between the open and closed economies or in terms of the theory of economic openness and the closed economic aspect?

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A closed economy is one that does not interact with other economies in the world, there are no exports, no import and no capital flows. So, a closed economy is not really looking for any external linkages of the domestic economy and in such a situation, most of the resources which an economy is having they are basically consumed, resources are basically exploited within the domestic framework. They are not really, closed economies not really looking for the resources outside, the economy.

At the same time their production, consumption are subject to the domestic demand and domestic supply. They are not really looking for the consumption outside the domestic economy or the supply of resources, supply of product, supply of raw materials from other than the domestic economy. So, there are no exports, no import and no capital flows, that is basically the major structure of the economy, where economies not really looking for any export and import business and capitals are not flowing from each part to other part of the economy. A capital can flow within the economy, but capital cannot flow outside the economy.

The open economy, an open economy is completely different from the closed economic model and we can see that by 1990 or majority of the countries before 1990, they were generally the restricted economy or one can say that they were working on a very closed economic frame work. But, with 1991 we are finding after 1990, we are finding that majority of the economy of the world has realized that government is not really going to continue all the responsibilities in the production. But, government has to come out from the production and government has to become facilitator, not the producer in the production process.

So, in open economic framework that interacts freely with other economies of the world, around the world interacts with other countries in two ways, first it purchase and sales goods and services involved in product market and at the same time, it also purchases and sales capital assets in world financial market. So, not only open economy deals with the goods market, but open economy do deals with the capital market.

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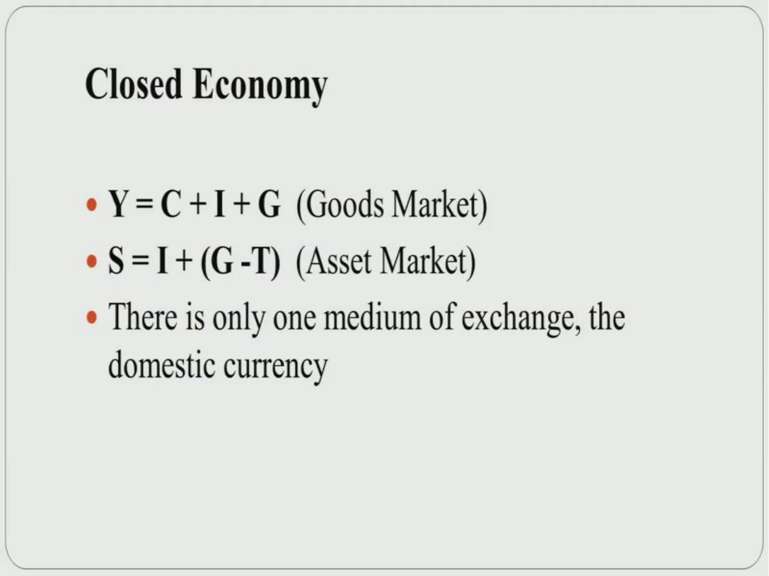

So, in two different equation you can see here how closed economy works, closed economies output Y is equal to consumption plus investment plus government expenditures C plus I plus G, while the asset markets in the closed economy is saving equal to investment plus government expenditure minus the taxes. So, there is only one medium of exchange and that is basically the domestic currency in the closed economy framework, where the assets are being sold and purchased.

There is not any foreign exchange involve in that and even in the goods market when the currencies, when the goods are traded within the economy, there is not any role of any foreign currencies to be involved in that particular economy. Compared to the previous equation, the open economic model here is little different from the closed economic framework, because here the Y or the gross domestic product is the combination of consumption plus investment plus government plus net export, which is the export minus import NX.

So, here we are finding that a new component, two new components are added in this equation and that is basically the export and import and the balance between the export and import is basically the net export, which is also the part of which is the prime part of the, this open economic equation. So, before dealing with this circular flow, I would like to draw a diagram here to explain, what is basically the difference between the closed economy and the open economy.

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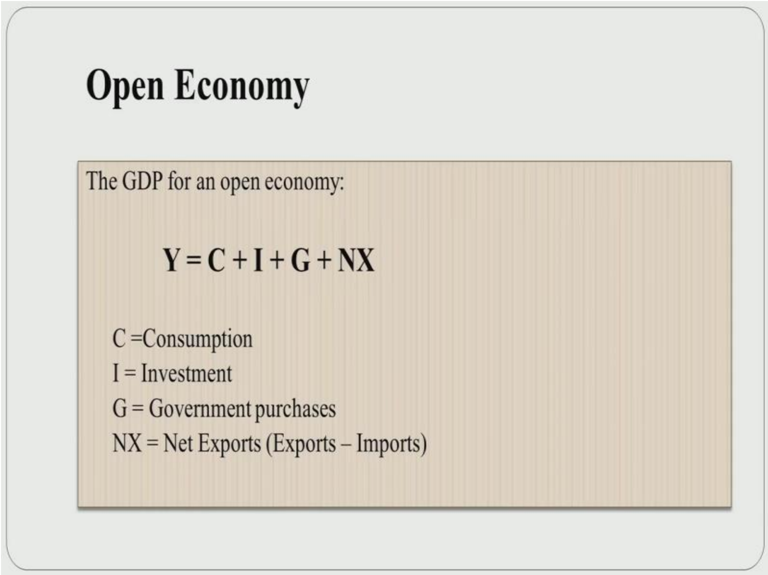

And, how this is going to really give us more output in the economy.

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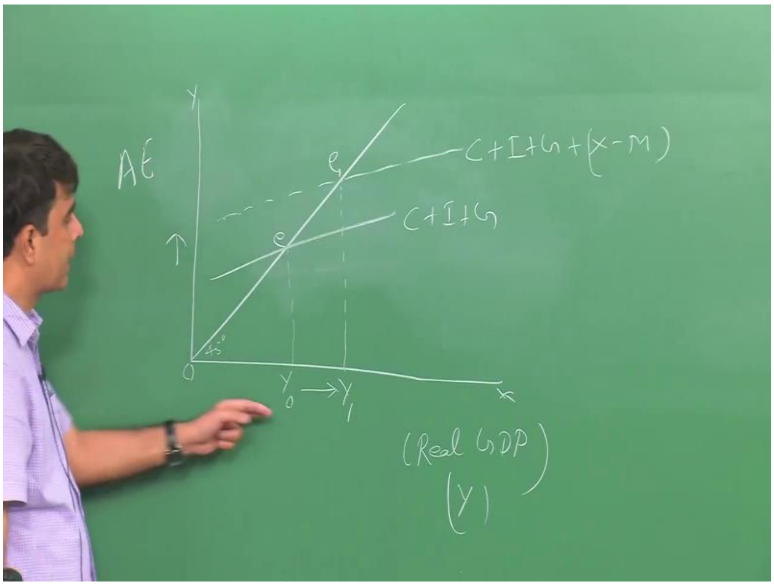

So, in this diagram which is the equilibrium line 45 degree and we can see here on O X axis and O Y axis, we can put in on O X axis, we can put here the real GDP and on this axis we can put the Aggregate Expenditure AE of the economy. So, let we first discus, what is basically the closed economic equation C plus I plus G. So, when this type of condition occurs, this is basically equal to Y in the closed economy and if we move from closed economic model to the open economic model, the new income level is generated and that is basically the C plus I plus and G plus export minus import.

We can find out that there is a change in the… If it is O X and O Y and if this is the real GDP, Y in the economy, we can find out that this is the first level of output, while this is the second level of output, the difference from Y 0 to Y 1 is happening. Because, the economy has moved from the previous level of equilibrium to the new level of equilibrium and the economy is generating more income here due to the rise in the aggregate expenditure and this rise in the aggregate expenditure is happening, because of the change in the export minus import.

So, the difference which one can see here between Y 0 to Y 1 is basically the change in the real GDP of that particular economy. So, the change in this real GDP of a particular economy is happening due to the openness and that openness is going to lead us more output. It means that openness is going to lead us in the direction of more consumption, more investment and more capital flow and net earnings outside the domestic economy.

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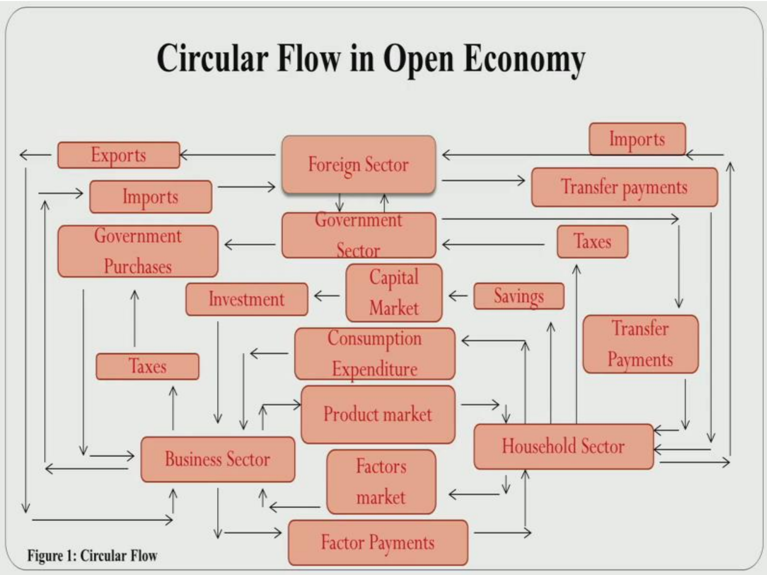

So, one can also see here the circular flow in the open economy in this particular diagram, there are so many components which works together, there are imports, there are exports, consumption, investment, government expenditure and export and import, all these components are working together in a circular flow in the economy. So, when the moment we are restricting the inflow of the capital, the moment we are restricting the inflow of the goods, the moment we are restricting the outflow of the goods, we are not really having the circular flow of the factors of production, because we are basically restricting some of the factors not to move out and some of the factors of other economy not to come in.

So, in that case open economic framework provides us an opportunity to get different factors of production from outside, at the same time if our factors of production has the productivity. And if it is ready to reduce the cost of production, then they are also in the position to sell the products in the international market.

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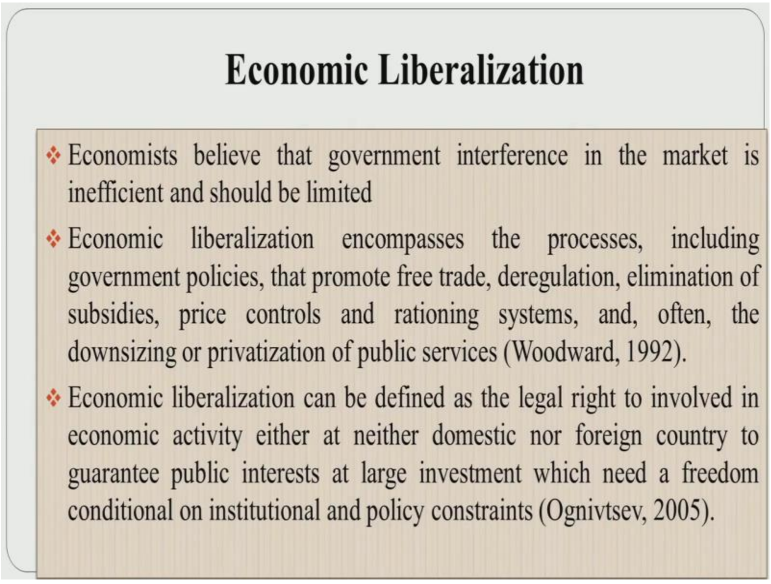

As we have discussed that majority of the economists have argued and the government and policy makers had started thinking in 1980's that government interference in the market is inefficient and inference should be limited in especially in case of production. Wherever government was directly involved in the production, it was found out that government instead of having a much better efficiency in the production, they were really inefficient in the production, cost of production were very high, over staffing were done in the public enterprises and many firms.

And at the same time, government was on the back foot to have really contributing the production process, because there was huge investment in. But, in terms of the return, the return was not really conducive, return was not really supportive to the government agenda of having the production with an efficient manner. So, there was back track in the government policies started in 1980's and economic liberalization processes started and this process encompasses through the process of including government policies that promotes free trade, deregulation, elimination of subsidies, price control, rationing system and often the downsizing or privatization of the public services as we have discussed in our previous lecture also.

So, these attempts were basically to have the economic liberalization process on the right track, the moment you are having more restricted policy in terms of trade, more import tariff on the product entry of the product, more you are worried for your own local producer, you are protecting the local producer with few subsidiary. And at the same time you do have the price control mechanism, rationing system when you do support the through the subsidiary, you do support the producers in a way, so that they are in the position to supply the product on a very cheap price.

In such a protective environment, in such a protecting list approach of the government we found that there were many economic inefficiencies also gathered in the economy and in return, it was very difficult for many government to run the so especially the public enterprises and public activities. Because, there was a question and there was an issue of who will support and how it will be supported in terms of having the financial expenditure on running those public enterprises.

So, economic liberalization in brief it can be defined as the legal right to involve in economic activity either at domestic, either at neither domestic nor foreign country to guarantee public interest at large investment which needs a freedom conditional or institutional and policy constraints. Economic liberalization provides an opportunity to the investors having a legal right to invest.

Because, whenever government is liberalizing the policy, government is also having the legal support to have such, to have the sustainability of that policy and that is named as the first generation reforms to the second generation reforms. When we have the policy change, it is the policy change is treated as the first generation of reform, when you have the change in the legal rights, when you have the change in the legal structure of the economy. You have the second generation of reforms and when you have both the reforms together, then you have really the economic liberalization processes smooth in the economy.

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So, there are benefits of economic liberalization and those benefits are completely different from the problems which we were facing at the time of complete government interference in the production process. So, these benefits are basically the increase in the trade and commerce as we have discussed that liberalization reduces the barriers. It provides an opportunity to the producers to really compete, local domestic producers to compete with the world producers.

World producers are also having an opportunity to compete with the local producers and it increase the investment capacity of the economy, because investment is in the more economic frame work when we say investment is not only the domestic investment, but it is also the private investment from outside the world. So, this type of economic liberalization, openness does provides us an opportunity to get the new technology and the transport of technology is possible through such economic liberalization.

At the same time, we have enhance competition level, where more we are having the protectionist environment our industrialist are and our producers are more in a very safe and very lethargic condition, they do not want to really invest in the R and D, they do not want to know the new innovations of the world, they are not only worried for the production, but they are also worried for sustaining that production without any real change in the production system.

So, innovations are suffering in that case, but when economic liberalization process starts it is also the innovation which really get boost from the investment and then we are really getting the economies of scale. Because, the producers from one country if we they are also allow to sell the products in other country they are in the position to really have the economies of a scale at larger level and to reduce the cost of production.

And finally, this type of process is giving us the benefits in consumption, more consumer circulars one can read the consumer surplus in any micro economic books, where we can see that how a product which is supposed to be available in a different price is now available in at a lower price. And that consumer surplus is through the involvement of varieties of other producers of the world together in any liberalized market. So, these are the benefits which we have discussed today.

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Global Economic Liberalization

Economic Liberalization in the World	Year
Economic Reforms in India	1991
Economic Reforms in China	1978
Perestroika and Glasnost in Soviet Union	1986
Estonia, Latvia and Lithuania	2000
Economic history of Brazil	1980-90
Miracle of Chile	1980s
Vietnam: Doi Moi	1986
Economy of Cuba	1994
Microeconomic Reforms in Australia	1980s

And one can also see here that how global economic liberalization started in different part of the world. If it was started in 1991 then there are many other economies which has started economic level liberalization process little for before the 1991, such as economic reforms in China 1978 also in Soviet Union 1986 as a part of Perestroika and Glasnost, you can also see Estonia and other countries which were started in 2000, Brazil 1980 to 90, Chile 1980's, Vietnam 1986 again Cuba 1994 and Australia 1980's.

So, it is not the one country, but there are many countries in the world which has really seen that protectionist environment or protecting the local industrialist at the same time. The involvement of the government in the production is not going to have more better efficient results. So, it is better to come out from the government interference in the production, but to concentrate more on the regulatory part as a new role of the government is established, which was discussed by Joseph Stiglitz as the third way consensus apart from the World Bank and ((Refer Time: 17:49)) consensus.

And since this third way consensus is basically the mix of the government and the private body, because it is not only the government alone which has to do all the infrastructure development or other economic and social development. But, it is also the private party which has to really concentrate on providing better opportunities for the production and consumption with new innovations and infrastructure developed through the new technology. So, with this background we can see here that how various economies had also developed their infrastructure with the help of new policy and new innovations it the credit goes to the economic liberalization process.

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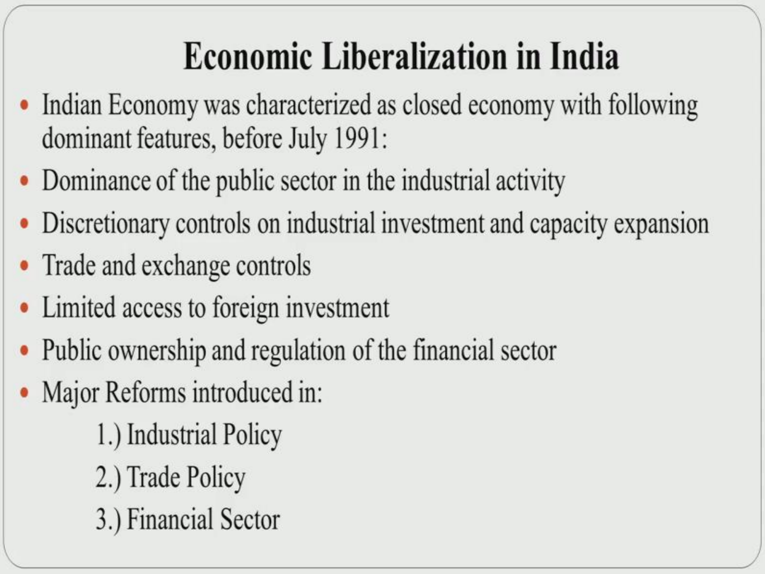

Let me also briefly discuss the Indian case, because India as Arvind Panagariya and many other economist Jagdish Bhagwati has also considered that before 1991 India was one of the most restricted economy of the world. And even Pascal Lamy in 2009 after the financial crisis has made this is as a statement that India is the most restricted economy in the world today even in the current frame work of economic liberalization.

So, Indian economy was considered as one of the closed economy with following dominant features before July 1991 and these dominant features were the dominance of public sector in industrial activity. These discretionary controls on industrial investment and capacity expansion trade and exchange were controlled limited access to the foreign investment, public owner ship and regulation of the financial sector. So, in this getting this type of background was very much controversial for India, because majority of the international organizations and economist have pointed out that how long India is going to continue with such economic restriction and control.

So, major reforms introduced in industrial policy, trade policy and financial sector and as we noticed that on 24'th July 1991 India came out with the new industrial policy. And after that we are finding that there is a new U- turn in the trade policy also, instead of trade restrictions a huge tariff reduction was also implemented in India.

The average tariff which was before 1991 there were several economies such as Brazil, India and Pakistan which has the average tariff rate very high around 3 percent average nominal tariff rate, which has now come down to 10 percent today, especially in India. And we were also having a very strict financial sector, very controlled financial sector, but today we realized that economic liberalization in India has also given freedom in the financial sector.

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So, in industrial policy reforms we can see here that abolition of licensing and other restrictions import of the foreign technology, public sector disinvestment, entry to the foreign investment and the removal of the Monopolistic and Restrictive Trade Practice that is called as the MRTP act, in terms of trade we can see here that import duties were reduced. So, also the simplification in export and imports process were done and current account convertibility were also achieved, same time we found that physical policy reforms were practice.

Capital market reforms were initiated and the monitory reforms were also practiced in India and this is all because of the India's connection with the international economy and India's openers with other international partners. Infrastructure in an open economy after the discussion on India win one can find out that how infrastructure is one of the major item which is being developed in the open economy more faster than the closed economy. At the same time how the principals of open economy cannot survive without having the proper infrastructure.

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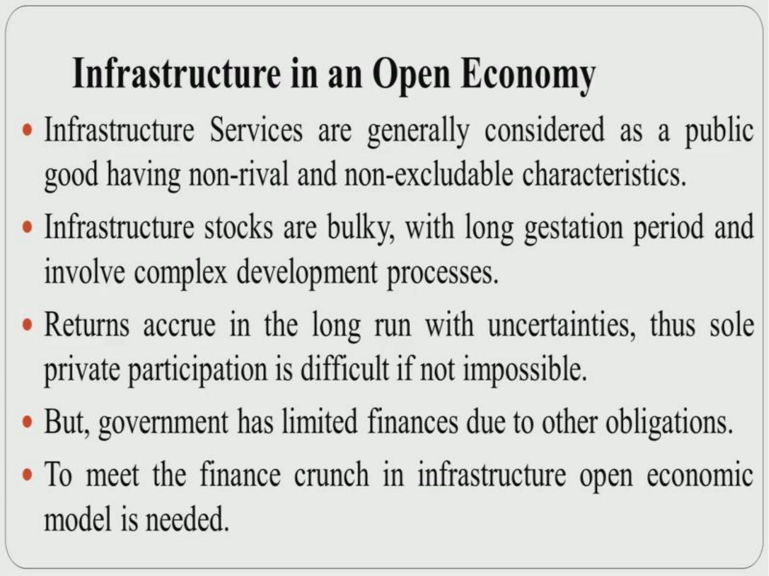

Infrastructure services are generally considered as a public goods as we have discussed that non rival and non excludability in consumption is available with this infrastructure. So, a infrastructure stocks are bulky with long period of gestation at same time it involves complex development process as we have also discussed. So, returns accrue in the long run with uncertainties the sole private participation is difficult if not possible, but government has limited finance due to the other obligation in the most of the country of the world today.

So, in this condition when government has the limited resources, but at the same time private partners are not really more certain about what returns they are going to get. And when they have the sole private participation in many of the models which we have discussed as a part of public private partnership. In previous lecture, where some time government is just alloying the part private party to build and transfer the project, sometimes government is allowing them to build lease and transfers, sometimes government is allowing them to build own and transfer.

So, ultimately a major participation from the private parties are involved in the infrastructure development in any case of the public private partnership. So, to meet the financial crunch in infrastructure open economic model is needed, because when we say open economic model we do allow the investors from many part of the world to join our hand. And when do allow such investments to join our hand we do not really stop the processes of infrastructure development, because we do involve the enhancement in the infrastructure development process.

In case of closed economic model even if we required some flyovers we required some infrastructure such as ports or airports or any other things, we do have to depend only one our own sources. Because, the model itself the economic model does not allow us to look for the foreign capital, because closed economic model is completely against those for in participations and involvement.

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So, it looks like that infrastructure development in the liberalized model is more appropriate. Because, there are huge financial assistance, investments which is received in the form of foreign direct investment and foreign institutional investment, we will have a separate discussion on FDI and FII in infrastructure in our next lecture. But, we can just see here that reforms and liberalization policies is more augment to have the foreign investment on track and this is one of the major achievement of getting the infrastructure ready through the open economic model.

To summarize the entire discussion, we can say that when we move from the e to e 1 level or the Y 0 1 to y 1 level in terms of production it is not possible without the help of the open economic model. Because, when we are only controlled with our own resources, when we are not really considering the factors which is available outside the country, outside the domestic periphery then we are basically restricting our production process. And when we are in the position of really developing countries, especially populated country like India or Pakistan or Brazil or China. These countries are really in need of having much better infrastructure today compared to this smaller economies, which we have discussed as the newly industrialized countries example in our previous lecture, which is very small in terms of population compare to India or compared to China.

So, when we have big population to serve we cannot really work on the old model of the economic development and we have to look for the new opportunities, we have to look for the new equilibrium, we have to look for the new investment and that is not possible without opening of the economy. So, infrastructure development in an open economy is not only the need of the hour, but it is indeed important to have such policy going on; otherwise, it will be really difficult in challenging to serve the infrastructure for the majority of the population in India and in other developing country, and least developing country.

Thank you.