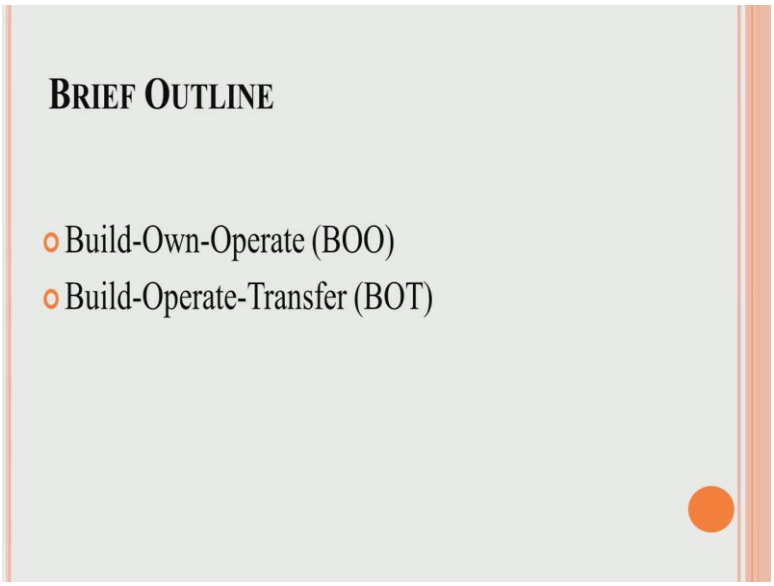
Infrastructure Economics
Department of Social Sciences
Prof. Nalin Bharti
Indian Institute of Technology Madras

Module – 05
Lecture - 19
BOO AND BOT

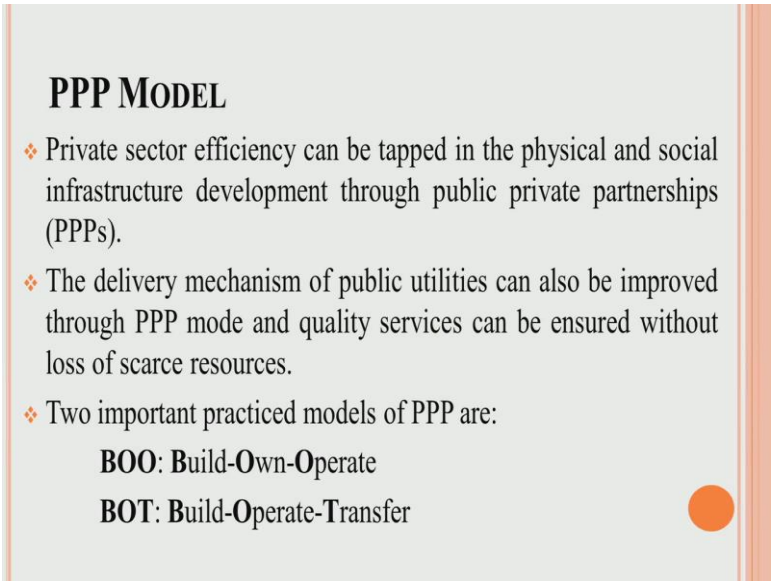
As promised in my previous lecture that I will be dealing with the Build Operate Own and Build Operate Transfer in detail. This particular lecture will give you little more idea about how Build Own Operate and Build Operate Transfer works.

(Refer Slide Time: 00:35)



And what are the merits basically with these models and what are benefits derived from these models.

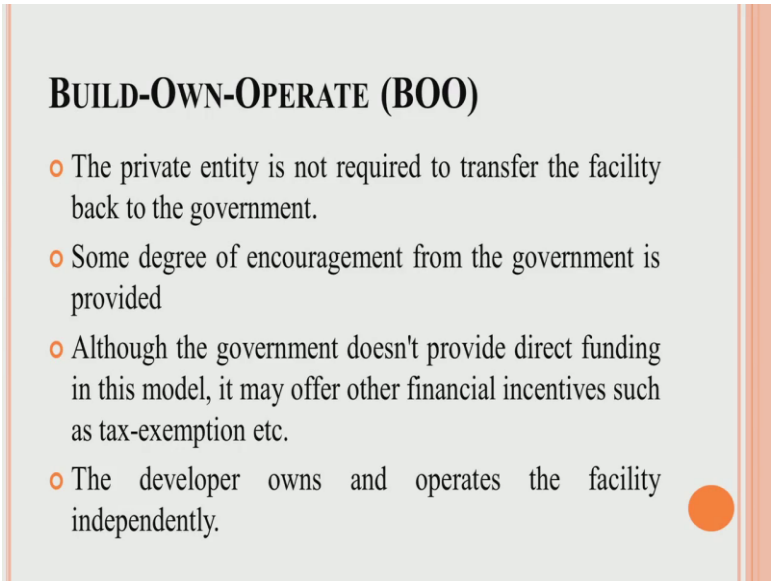
(Refer Slide Time: 00:50)



As we have discussed that private sector efficiency can be tapped in the physical and social infrastructure development through public private partnership and with a background that government alone cannot take the responsibility of infrastructure development in the current world today. And from 1980's we are finding that there is a shift from public to private through the process of privatization or through the process of decentralization and this type of public private partnership or disinvestment or lease or contract or voucher privatization or varieties of other steps being taken by the government to transfer the responsibility from government to the private parties.

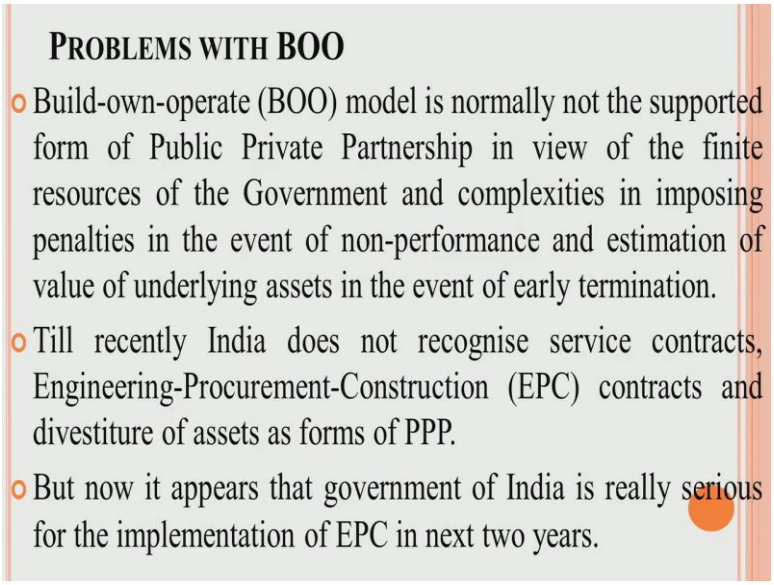
As a part of such transfer of responsibilities, the public private partnership model is being implemented throughout the world. And the delivery mechanism of public utilities can also be improved or other physical infrastructures such as flyovers, roads, bridges, rail, communication, telecommunication. At the same time social infrastructure such as schools, health centers, then they can also be operated through the public private partnership model. So, in this particular lecture we are only concentrating on the Build Own Operate and Build Operate Transfer in little more detail.

(Refer Slide Time: 02:46)



So, as we have also discussed previously, but here again we can recap those discussion that private entities is not required to transfer the facility back to the government in Build Own Operate model of public private partnership. But some degree of encouragement from the government is provided, although the government does not provide direct funding in this model. It may also offer other financial incentives, such as tax exemptions. Many states today in north eastern part of India they offer the tax free package, tax free conditions for certain private companies to join the industrial sector. Such exemptions… such tax free or tax holiday conditions can also be implemented and being implemented in the world today. In case of Build Operate Own, so the contractor owns and operates the facility independently. That is the beauty of this particular model. As we have also seen in our previous lecture, that in case of BT model Build and Transfer model there is not any feeling of owning that particular infrastructure. But in this particular model Build Own Operate, the contractor has the feeling of owning the model… not only feeling, but it is really practicing the ownership of that particular infrastructure for some time. But there are certain problems related to the Build Operate Own model.

(Refer Slide Time: 04:18)

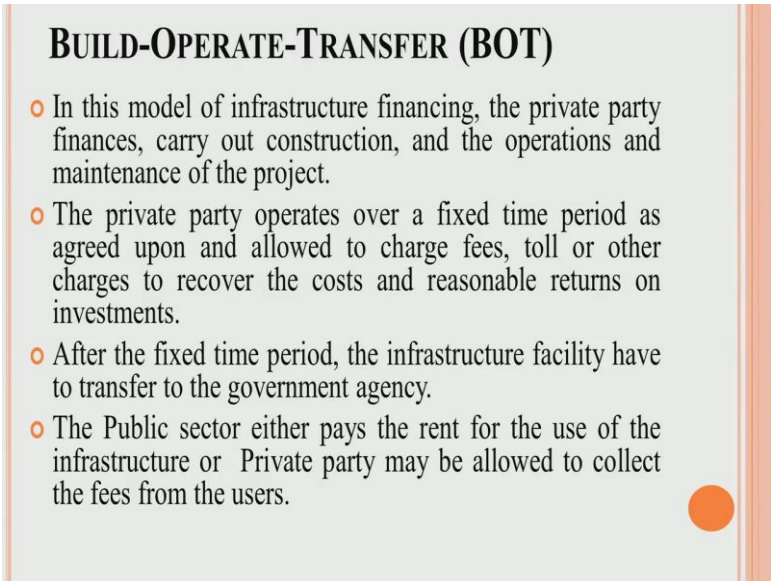


Because, this particular model is normally not the supported from… it is not really supported from the public private partnership. In the view of the finite resources of the government and complexities in imposing penalties in the event of non-performance and estimation of the value of underlying assets in the event of yearly termination. So, suppose the facilities or infrastructure is not really buildup. There are huge penalties imposed by the government on the private parties.

And since there is not any question of transfer of that infrastructure from the parties which were developing this particular infrastructure. So, in that case the private party feels and private party practices a little lethargic way of completing this type of project and the contract is not really allowing this. The contract is not for transferring the assets. So government cannot really takeover the assets also. And at the same time, from the government side also, if the government is not really supporting to the builder or to the contractor, then in that case also the whole purpose of Build Own Operate model is being… the whole purpose of such models are not being fully transformed.

And in such a situation the model is having the failure in many cases. And till recently India does not recognize service contracts, engineering, procurement, construction, contracts and divesture of assets as a form of PPP. But the recent news and discussions in the government is very much in favor of engineering, procurement, construction. Because that makes the entire process little bit speedy in nature compared to the Build Operate Own. It appears that government of India is really serious for the implementation of engineering, procurement, construction model.

(Refer Slide Time: 06:54)

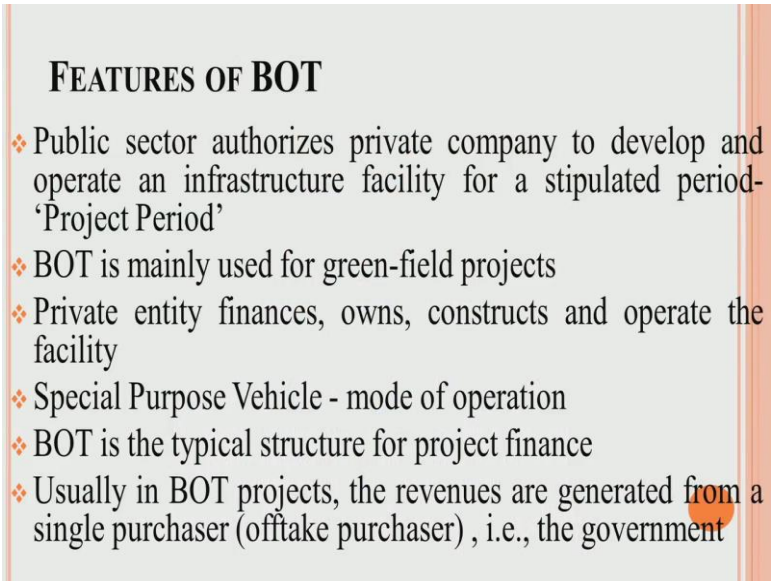


Now, coming to this particular model of Build Operate Transfer, as discussed previously also, this particular model of infrastructure financing or the private party finances carry out construction and the operation and maintenance of the project. So, not only building the infrastructure, but also the operating the infrastructure, maintaining the infrastructure, financing the entire infrastructure is the responsibility of the builder or the contractor.

So, the private party operates over a fixed time period as agreed upon and also align to… also allowed by the government to charge the fees or the toll tax or other charges to recover the cost and reasonable returns on the investment. And as it is clear from the name itself that the whatever infrastructures are basically buildup and whatever infrastructures are basically in operation that has to be transferred to the government after a fixed time period.

So, the infrastructure facility is transferred to the government agency and the public sector either place the rent for the use of the infrastructure or private party maybe allowed to collect the fees from the users. So, this is the beauty of this Build Operate Transfer model.

(Refer Slide Time: 08:26)

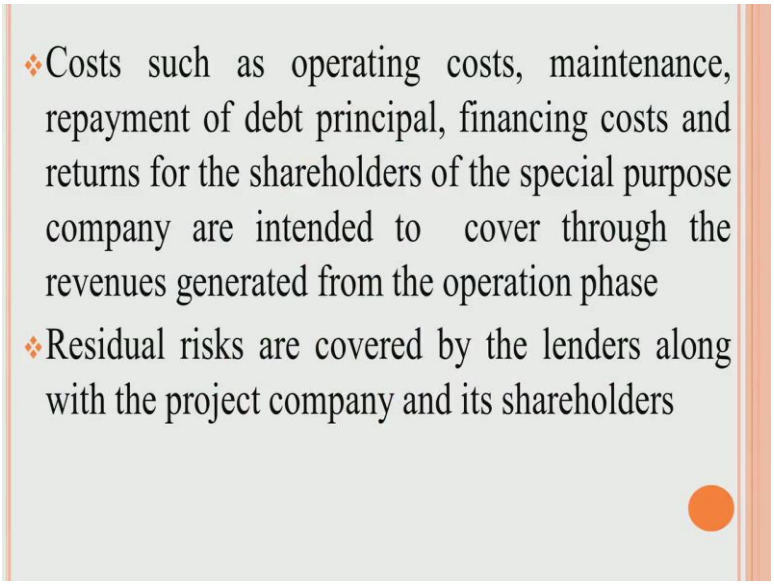


The main features of this Build Operate Transfer models maybe summarized as that the public sector authorities private company to develop and operate an infrastructure facility for a stipulated period that is named as the project period in infrastructure development and BOT is mainly used for green field projects. Private entity finances, owns, constructs and operate the facility and a special purpose vehicle mode of operations are also being used.

Green field projects are those projects in which there is not any previous infrastructures developed, there is not any previous constructions, and other things available. and the special purpose vehicle is a mode of operation, where you have a subsidiary company as a part of Build Operate Transfer, who takes care of various public interest. Even if the main company is failed in delivering certain facilities, you have a subsidiary company to really support the public interest.

So, the Build Operate Transfer is a typical structure of project finance. This is usually in this particular BOT projects that the revenue are generated from a single purchaser and basically after some time it is being transferred to the government.

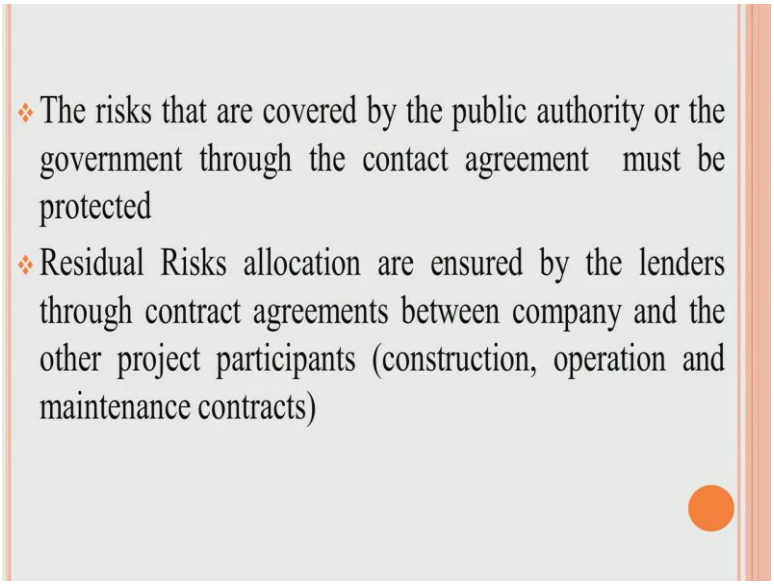
(Refer Slide Time: 09:59)



A different cost such as operating cost, maintenance cost, repayment of debt principles, financing cost and returns for the shareholders of a special purpose company are intended to cover through the revenue generated from the operation phase. Residual risk are covered by the lender along with the project company and its shareholders. That is basically the distinction of this particular model from the Build Operate Own, because government has to get that infrastructure in their hand after some time.

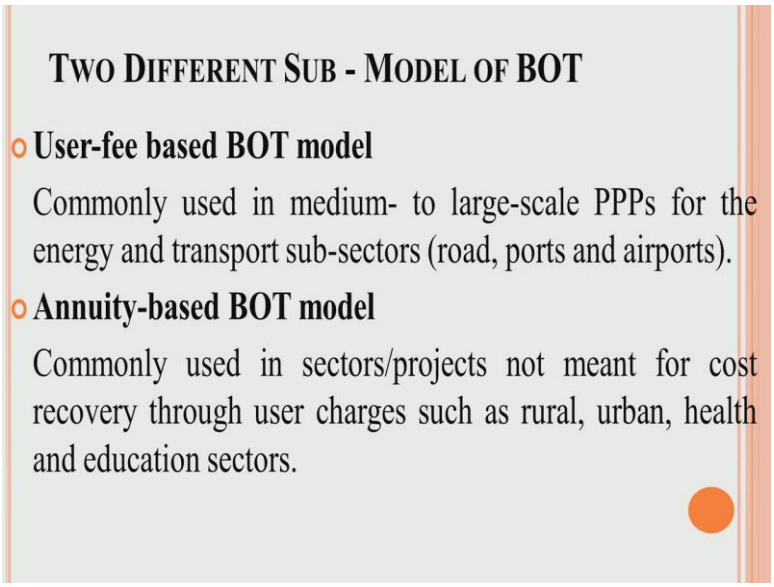
So, from the government side also there are certain obligations to provide assistance to the builder because the moment the building of the infrastructure is incomplete, what transfer is being done to the government that is also the issue under question. And if the transfer is not being done to the government then the entire contract between the public party and the private party is an unfinished agenda. So, as per the contract it is the responsibility of the builder and contractor to build the product, to own the project for some time and again after all maintenance and cost recovery and the return on investment they have to again transfer it to the government.

(Refer Slide Time: 11:29)



The risks that are covered by the public authority or the government through the contract agreement must be protected. So, the residual risk allocations are ensured by the lenders through contact agreements between company and the other project participants, such as the construction, operation and maintenance contracts.

(Refer Slide Time: 11:54)



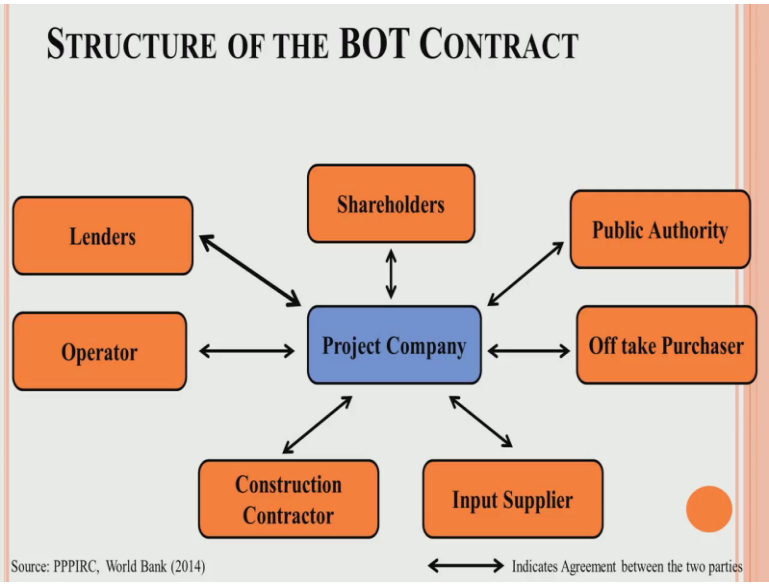
So, one can see here that there are two different sub-models of Build Operate Transfer: one is the user-fee based BOT model, which is commonly used in medium to larger scale public private partnership for the energy and transport sub-sectors, such as roads, ports and airports. And the second model is annuity-based BOT model which is commonly used in the sectors, projects not meant for cost recovery through user charges such as

rural, urban, health and education sectors.

So, with this particular user-fee based BOT model and the annuity-based BOT model, in one case we the contractor is fully free to decide a fee or to have the fee charged from the public, in case of road, in case of flyovers, in case of ports, in case of airports.We have seen that there are certain toll tax and fees and charged to the public and through that activity, the private owner is basically earning the revenue and basically matching the returns on their investment.

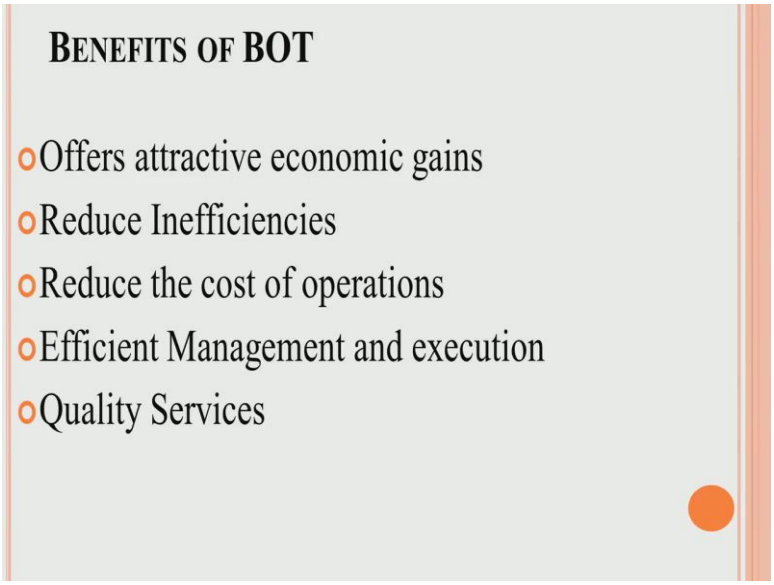
But, in some cases such as the cases of health and education or in case of rural infrastructure, where we don't find majority of the payers, if people are not ready to pay, even if you are charging for certain infrastructure people are not having the capability to pay. That is the real conditions in especially in rural area. Also in case of health and education, while government is really participating for… are actively participating for the health and education, they cannot really charge for each and everything. Because then in that case the message of the welfare or the responsibility of welfare will be missing from such models. So, some models are basically without fee, some models are with fee and when it is with fee that there are certain areas, where government can really have the contract with the private partner to certainly have certain fee. But at the same time where the government has to take responsibility as the protector of the welfare of the society in that case government cannot really put the fee as the main goal of the project. But the purpose is to really provide certain facilities, certain services to the public.

(Refer Slide Time: 15:07)



So, if one can see here, the private project company is associated with many other partners in case of BOT. One of the partner is lenders, one of the partner is operators, the construction contractor, input supplier, off take purchaser, public authority such as the district administration or the state administration and the other shareholders, which maybe the farmers or which maybe the local people, which maybe the political party sometime in the hidden form. So, this particular… it is true that BOT contract in principle is basically the huge management of many partners involved in the project and it is not so easy to really have such management without any disputes and without any risk.

(Refer Slide Time: 16:08)



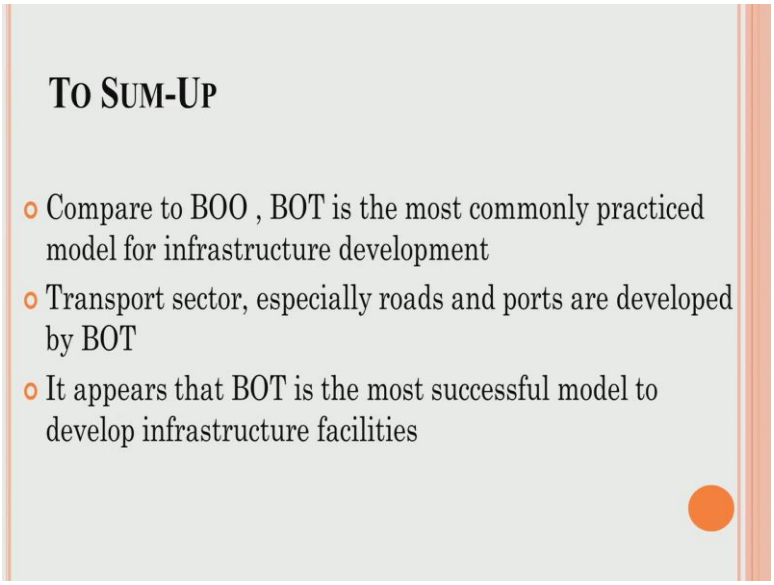
But, apart from those risk and benefit there are certain benefits of this particular model – Build Own Transfer model. And because of that benefit BOT is more practiced in the world today because it offers the attractive economic gains. The private parties are investing, financing, maintaining, operating and then that private party is charging the money, raising the funds, having the returns on their investment and they have the sense of ownership for some time and then finally, it is being transferred to the government.

Reduce in efficiency: the fact is that when they have this transfer as a part of the contract they are also sincere about there should not be any inefficient production, inefficient infrastructure developed, they do take care of how to reduce the cost of operation. Because more they will reduce the cost of operation, more they will have the profit; more they will incur the cost of operation, they will have less profit.

So, when they are charging the price for the infrastructure they cannot really look for a very high price. But at the same time they cannot really ignore the cost incurred in the project. So, BOT is more practical way of having the public private partnership, where government provides certain assistant to the contractor, at the same time contractor do take care of the public interest without losing the interest of making that project profitable.

So, since it is the involvement of varieties of partners, so there is a chance and there are really efficient management in this particular model. And ultimately when you are charging for some certain services, you cannot really charge for the certain services without providing the quality of the service. So, if one can really see the complete merits of these models… this particular model is quite beneficial for the economy which has less resources, the economy which has capacity to pay, the economy which has varieties of resources available, but in absence of capital and technology they are not able to really develop the infrastructure.

(Refer Slide Time: 18:59)



To sum up, if we can see these two models… why these two models are being so useful in the world? Because this Build Operate Own model which was one of the model initially practiced in the world, it has a problem. The problem is many infrastructure companies they do not want to continue with operation of such infrastructure for many years. But they are interested in how to really get return and then get out from the project and to have a new investment in other projects.

So, that way the Build Own Operate model is little time taking for the contractor and the sole responsibility of building, operating and owing is in the hand of private party. And basically government support or maybe the accountability of that private firm is also very limited. Because government do not want to really support in terms of finance, government do not want to really become the partner in terms of sharing the benefits, as we have seen in other models of public private partnership in my previous lecture.

But, in case of Build Operate Transfer, this particular model we have seen that this model is being very useful. It is one of the useful model for transport sector, especially for roads and ports. And why? Because the contract is for transferring the infrastructure after some time. While they are transferring the infrastructure, they have another merit in this model that they will own this particular infrastructure for some time and they will charge fee for that they will have the toll tax for that and that fee is basically one of the revenue for them.

And private parties are more inclined to implement this model, because they will certainly have the return on their investment, whatever investment they have incurred, whatever cost they have incurred that investment and cost they are going to catch from the market. Because if the market is really having tax payers or you can say the fee payers, this particular BOT model is more successful. Because the moment you are charging fee, you are also very much sure that you are having a fund for maintaining the project and you do not have to depend on some other external sources for maintaining and operation of such infrastructure.

But in some cases as we have seen the two different part of the BOT: BOT with fee, BOT without fee, annuity model of BOT and the BOT with certain fee. We can see here that in certain areas, where major welfare responsibilities are with the government BOT cannot be implemented without considering those factors. And the conditions of payment for those subscribers and the citizens who cannot really afford to buy certain services on the market price.

So, in certain areas the BOT is not going to really give us… contractors are not really going to have a very profitable return. But when BOT is not really for the profit making government do take care of certain assistants, certain governments do provide certain support to the builder… to the contractor. And since the transfer part is also involve in BOT. So, the contractor is really accountable for transferring a product… transferring a

project in a good condition, well condition. Otherwise, government is always having the say to criticize such of the… and to have the control on certain infrastructure buildup. Because government is not only the government which is seeing entire infrastructure development from outside, but government is one of the partner in developing that infrastructure. So, with this discussion on Build Operate Own and Build Operate Transfer and the discussion which we had in the previous lecture about other different methods of infrastructure development through the public private partnership such as the Build Transfer or BO double O or BLT we are finding here that all these methods… as we have also discussed that all these methods are subject to the proper regulation and implementation. We cannot really… a country cannot really afford any model without prior home work, without having the proper calculations of what type of benefit a country is going to get it, what type of benefit a firm is going to get it. Because firms also do this feasibility study before joining the projects. And financial companies, banks and financial companies do take care of certain finance before financing to that particular projects. So, we can sum up in a single sentence that BOT is the most successful model to develop infrastructure facilities. But still there are certain problems related to BOT and whenever we are reforming any models, the public private partnership models are again facing different criticism and policy makers and economists are also suggesting to have certain reforms in these models based on the past experiences in the world today.

Thank you.