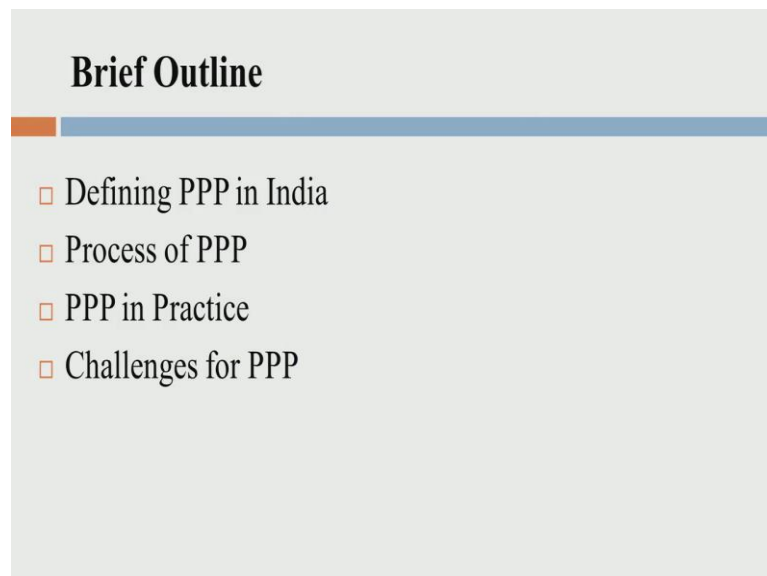


Infrastructure Economics
Department of Social Sciences
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Module – 05
Lecture - 21
PPP in India

Let me begin a new discussion after discussing the experiences in Public Private Partnership across the country. I would like to have a brief discussion on, what happened to the Public Private Partnership in India in last few years.

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And we will try to cover the definition of Public Private Partnership in India, what type of process of Public Private Partnership was involved. And different practices of Public Private Partnership in varieties of projects and at the same time, we will try to also find out, what are the major challenges for Public Private Partnership in India today.

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Defining PPP in India

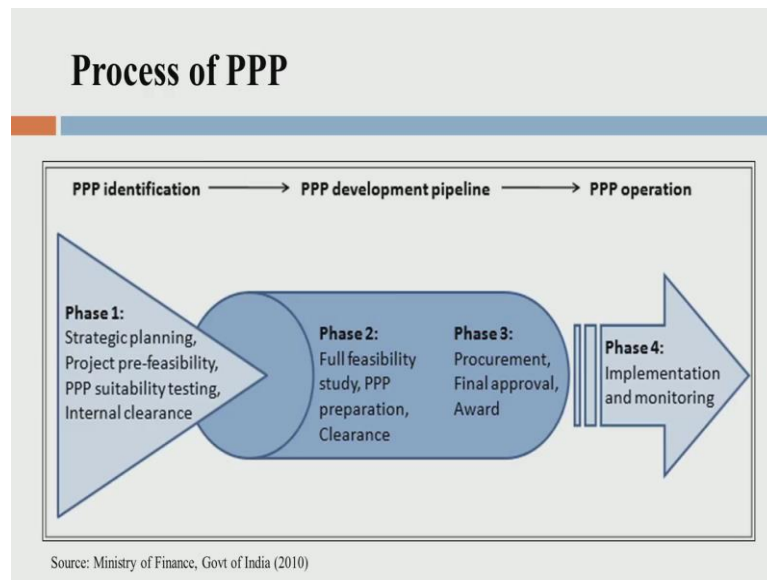
- The Department of Economic Affairs (DEA), Ministry of Finance, Govt. of India defines PPPs as:
'PPP means an arrangement between a government or statutory entity or government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or related services for public benefit, through investments being made by and/or management undertaken by the private sector entity for a specified time period, where there is a substantial risk sharing with the private sector and the private sector receives performance linked payments that conform (or are benchmarked) to specified, pre-determined and measurable performance standard.'

Let me begin with the definition of Public Private Partnership in India. As per the Department of Economic Affairs, Ministry of Finance, Government of India. The Public Private Partnership is defined as, the PPP means an arrangement between a government or a statutory entity or government owned entity on one side and a private sector entity on the other.

For the provision of public assets and or related services for the public benefit through investment being made by and or management under taken by the private sector entity for a specify time period, where there is a substantial risk sharing with the private sector. And the private sector receives performance linked payments that conform to a specified predetermined and measurable performance standard.

So, this shows that the agreement between the government or the government owned entity and the private sector is established through the Public Private Partnership. As we have also seen in the basic principles of Public Private Partnership in our earlier presentation that without understanding in contract, Public Private Partnership is not really functioning.

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What are basically the process? There are four different phases of Public Private Partnership identified and which is also shown in some of the reports of the Ministry of Finance, Government of India. In phase 1, which involves in phases 1 involves the strategic planning, project pre-feasibility, PPP suitability testing and the internal clearance.

This is the first phase of having the Public Private Partnership, the second phase is again having the feasibility, but that feasibility is studied at a very large level, full level, at the same time Public Private Partnership preparation and then, clearance. And in third phase, procurement, final approval and award and the last phase, which is the phase 4 is the implementation and monitoring of the Public Private Partnership.

So, the entire process of Public Private Partnership may be again identified as the Public Private Partnership identification, then Public Private Partnership development pipeline and the Public Private Partnership operation.

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PPP Models in India

- PPP model started in India in mid-1990s
- Initial Model BOT (Toll)
- Rau Pitampura State Highway, Madhya Pradesh: 1st PPP Project (11.5 km), awarded in 1993
- Total Road Projects completed including National Highways (NH)- 241 (March 2013)
- Under Implementation- 348 Projects

The Public Private Partnership model is started in India in mid-1990's. Initial Model adopted for the Public Private Partnership in India was build operate transfer model. Rau Pitampura State Highway, Madhya Pradesh was the first PPP project of 11.5 kilo meter, which was awarded in 1993. Total Road Projects completed including national highway through this Pubic Private Partnership is 241 by March 2013 and under implementation is 348 projects.

This shows that especially in the road sector, how Public Private Partnership model is really effective from the first case of Public Private Partnership to the finished case of around 241 projects and to the cases, which is under implementation that is 348 projects. We can really see that especially build operate transfer model as a part of Public Private Partnership model is really very successful.

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Some Successful PPP Projects

- Terminal 3 at IGI Airport, New Delhi
- Yamuna Expressway
- Akshay Patra Foundation
- Gujrat Solar Power
- Gujarat Ports

Some successful Public Private Partnership apart from the road sector are the Terminal 3 at Indira Gandhi International Airport, New Delhi, Yamuna Expressway, Akshay Patra Foundation, Gujarat Solar Power and Gujarat Ports.

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PPP in Airports Mumbai and Delhi

- **Mumbai:** Operation, management and development of Mumbai International Airport
Contract between Airports Authority of India and Mumbai International Airport Private Limited in 2006 (brownfield)
- **Delhi :** development, operation and management of Delhi International Airport
Agreement between Airports Authority of India and Delhi International Airport Private Limited, 2006 (brownfield)

PPP in airports, especially in Mumbai and Delhi, we can see here that in Mumbai operation management and development of Mumbai international airport, contract between Airports Authority of India and Mumbai International Airport Private Limited started in 2006 and in Delhi, the development, operation and management of Delhi

International Airport, the agreement between the Airports Authority of India or the Delhi International Airport Private Limited is two important case, which is in the brown field of a state.

Infrastructure projects, because there were some airports, initially airport infrastructure initially established by the government. And these two cases are again one of the very prominent and important case to understand the Public Private Partnership model in India.

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PPP in Airports in Hyderabad

- **Hyderabad:** Agreement for the development, construction, operation and maintenance of the Hyderabad International Airport
The concession agreement between the Government of India and Hyderabad International Airport Limited, 2004 (greenfield)

Apart from that we can also see here the Hyderabad Airport agreement for the development, construction, operation, maintenance of the Hyderabad International Airport. The concession agreement between the government of India and the Hyderabad International Airport limited was established in 2004 as a part of the green field project.

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PPP in Ports in Gujarat

- Contract agreement between the Gujarat Maritime Board and a private company
- Greenfield ports developed in the joint sector on BOOT (Build, Own, Operate and Transfer) basis
- Will be transferred to the state after 30 years
- Chhara - developed by Shapoorji Pallonji & Co. Ltd.
- Dahej - by Sterling Biotech Ltd.

Apart from that, if we look at a state level, especially in Gujarat, which has very successful example of Public Private Partnership especially in the ports, contract agreement between the Gujarat Maritime Board and a private company was established. That was the Greenfield Ports developed in the joint sector of build, operate, own and transfer method.

It will be transferred to the state of the 30 years and Chhara developed by the Shapoorji Pallonji Co. Limited and Dahej by Sterling Biotech Limited. So, this shows that at the state level also not only in the airport sector, but also in the port sector, we are having a successful case.

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PPP in Roads

- NHAI started PPP model for maintenance of National highways in 2009
- Andhra Pradesh: Part of NH 7 of km 80.050, Jadcherla to km 135.469, end of proposed kotakatta bypass- BOT basis
- Bihar: Up gradation of Hajipur - Muzaffarpur section of NH 77- BOT (Annuity) basis
- Delhi: Delhi-Agra section of NH 2- BOT basis

In the road sector, especially in National Highway Authority of India which has started the Public Private Partnership model for maintenance of national highway in 2009. At the state level in Andhra Pradesh, we find out that the part of NH 7 of kilo meter around 80 kilo meter and Jadcherla to a part of NH 7 of around 80 kilo meter and around Jadcherla to 135.469 kilo meter end of proposed Kotakatta bypass. This build operate transfer model of Public Private Partnership was adopted in this particular project.

At the same time in Bihar, we find out that up gradation of Hajipur-Muzaffarpur section of NH-77 was also implemented on the basis of build operate transfer that was the annuity basis. And again in Delhi, Agra section of NH-2, we find out that there is a build operate transfer model adopted and this shows that, in the road sector especially not only in one state, but in many states, the build operate transfer model is adopted as a part of Public Private Partnership model.

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PPP in Energy/Power

□ **Thermal power project, Cuttack- BOT model**

IL&FS Engineering Services in consortium with KVK Group is setting up a 300 MW thermal power project on BOT basis at Gurudijhatia, Cuttack district in Orissa.

□ The project cost is estimated at Rs13.5 billion

□ **Mittal-HPCL refinery project in Punjab**

□ Joint venture between Hindustan Petroleum Corporation Ltd (HPCL) and Mittal Energy Investment Pvt. Ltd., Singapore- a Lakshmi N. Mittal Group Company

If one can see here the Public Private Partnership in energy and power sector, especially the thermal power projects Cuttack is again based on the BOT model. The IL and FS Engineering Service in consortium with KVK group is setting up a 300 mega watt thermal power projects on build operator transfer basis at Gurudijhatia, Cuttack district in Orissa. The project is having the estimated cost of around 13.5 billion rupees.

At the same time in Punjab, we find out that Mittal HPCL refinery project is again on the basis of Public Private Partnership. The joint venture between Hindustan Petroleum Corporation limited and Mittal energy investment private limited, Singapore- N. Mittal Group Company has started investing in this particular project.

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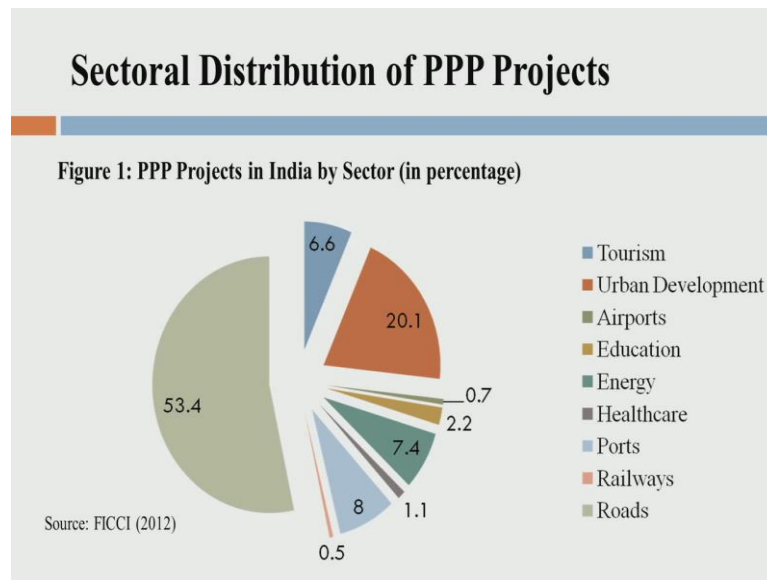
Other PPP Projects

- Bangalore Water Supply Project-BOOT model
- Karur Bridge on BOT basis by East Coast Constructions & Infrastructure Pvt. Ltd.
- SMS Hospital, Jaipur (Rajasthan)- CT Scan, MRI and other Hi-tech diagnostic facilities are being provided by private company at low cost
- Yeshasvini Health Scheme in Karnataka- PPP between Narayana Hrudayalaya Specialty Heart hospital, Bangalore and Dept. of Co-operatives, Government of Karnataka

Other Public Private Partnership projects is the Bangalore water supply projects, which is based on the build, operate, own and transfer model, Karur Bridge on BOT basis by east coast construction and infrastructure private limited. SMS hospital in Jaipur, Rajasthan which has the CT scan, MRI and other hi- tech diagnostic facilities are being provided by private company at very low cost.

We are also having some other example of Public Private Partnership in the health scheme that is Yeshasvini Health Scheme in Karnataka. The Public Private Partnership between Narayana Hrudayalaya Specialty Heart hospital Bangalore and the department of cooperatives government of Karnataka are jointly involved in this Yeshasvini Health Scheme in Karnataka.

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So, if one can see the sectoral distribution of Public Private Partnership in India, we find out that the road is getting the largest Public Private Partnership around 53 percent of the Public Private Partnership till today is basically in the road sector. After the road sector, the second largest important sector to attract the Public Private Partnership is the urban development where we find out that around 20 percent of the projects are in the urban development sector.

After that we also see here that tourism is again one of the major sectors after ports and also after energy. But, if we combine energy and ports, we find that, it is still less than the road sector. And if we combine the urban development with these other sectors, then also we find out that, it is still less than the total Public Private Partnership in the road sector.

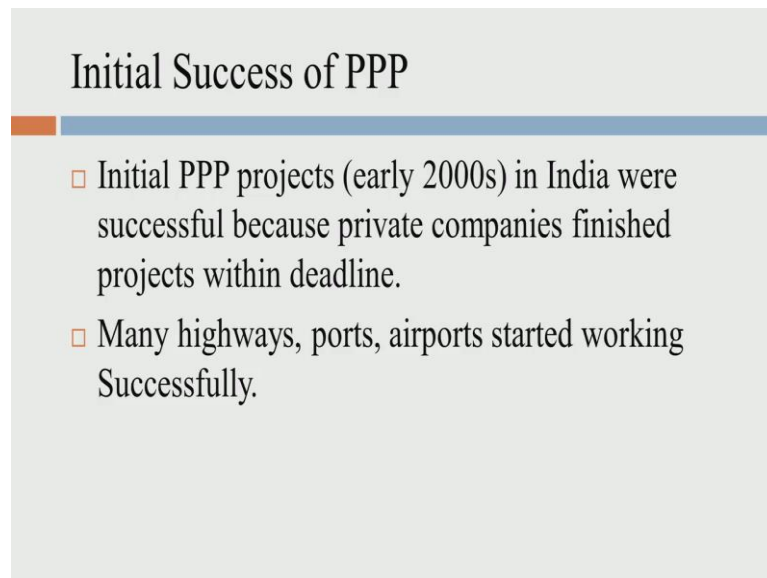
So, we are also finding that build operate transfer is the most successful example of the Public Private Partnership in the road construction sector. So, there is a sectoral imbalance in the Public Private Partnership, which is seen in this pie diagram. And how to improve this, because we have other sectors, such as education and health care, where the Public Private Partnership is really negligible.

Government should look that; there should be balance between the physical infrastructure projects going on. At the same time, the social projects such as health and energy where it is indeed important to find out that how to have a proper coordination

between the social infrastructure development as well as the economic infrastructure and physical infrastructure.

So, this particular percentage distribution is based on the data received from federation of Indian chamber of commercial industry. And that shows that Public Private Partnership projects in India has very physical infrastructure bias and there are really contributing to the social infrastructure sector.

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The slide features a title 'Initial Success of PPP' in a serif font, positioned above a horizontal bar with an orange segment on the left and a blue segment on the right. Below the bar, there are two bullet points, each marked with a square icon. The first bullet point states that initial PPP projects in India were successful due to private companies meeting deadlines. The second bullet point notes that many highways, ports, and airports began operating successfully.

Initial Success of PPP

- Initial PPP projects (early 2000s) in India were successful because private companies finished projects within deadline.
- Many highways, ports, airports started working Successfully.

In India, one can really find out that initial Public Private Partnership in early 2000 were successful because private companies project within that deadline. So, the most important point here is soon after the economic reform process, there were many Public Private Partnership projects started in India. And many highways ports started working successful today.

This is just because of the contribution of the public Public Private Partnership as we have seen in case of IGI, Indira Gandhi International Airport or in case of Hyderabad Airport or in case of Mumbai International Airport. We are finding that these are well developed and well designed and constructed airports, due to the supports from the Public Private Partnership. Again, whatever total projects, we have completed in the road construction, also the projects which we have completed in the urban infrastructure; that is also the due to the help after Public Private Partnership. But, apart from this success story, we have varieties of challenge on the way.

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Challenges for PPP

- But with subprime crisis, global economic slowdown, these companies couldn't finish projects on time, OR sustain the losses (because expected traffic did not come.)
 - Infra Companies couldn't raise fresh loan / equity / capital / finance because of the slowdown.
- Government's inability to help companies
 - Many PPP contracts stuck in courts because of corruption allegations.
 - Bank's NPAs are increased.
 - Infrastructure planning is not integrated : ports that lack railway lines or power plants that lack coal supplies
 - Corporate bond market is not developed.
 - Companies rely on banks for finance.
 - Higher interest rate for projects leading to more chances of NPA

With the subprime crises, the global economic slowdown, the private companies especially the infrastructure complete could not finish project on time, because expected tariff did not come. They were also investing the money in equity funds and loans outside India. And infrastructure companies now, they are not in the position to raise fresh loan or equity and capital finance, because of the global slowdown.

So, at the same time, we do find that governments are also available to help these companies, because many Public Private Partnership contracts stuck in the courts because of the corruption allegations. We do find that the non-performing assets of banks has increased in last few years and they show that the people or the firms, which are taking the loan from the nationalized banks also some of the private banks, they are not in provision to return it back to the banks.

So, this is very bad indicator for the banking sector, if the non-performing assets are really not recovered. Since, these non-performing assets are not recovered, so they are not really assets for and banks are facing trouble to really finance some of the new projects. At a same time, we do find that infrastructure planning is not integrated properly; ports that lack railway facility line, railway lines and power planes also lack coal supplies.

So, this shows that, there is any coordination between the infrastructure firms and the subsidiary firms and subsidiary industries and facilities, which these firms can really

receive and because due to that facility, then they can really than the project successfully. At the same time, India is not having a very well develop bond market like other developed country.

So, company has to rely on banks for the finance and since they have to rely on banks for finance higher interested for projects in living to more chances for non-performing assets or again. So, apart from these challenges, if we can go back and see the current challenges, we find out that, at it is not so simple to have the infrastructure development going on a very high speed. Because, after 1991 or in recent years, we are global treaties, we have more integrated economy.

In such a situation, our countries openness and integration with other countries are at a very high speed. So, crises started in a part or any part of the world becomes the matter for concern for us also. And it happened in case of financial crisis; when it started companies' capability to funds the projects as reduced because infrastructure firms are globally linked today.

At the same time in absence of a proper bonds market and in absence of a really having very good banking system in terms of having the very less level of the non-performing assets, banks are also reluctant to pay loan to the firms and firms are also reluctant to take loan for the bank, even if do not have other choices to take the loan. So, they have to fully depend higher interested for the projects and that lead to the development based further assistance from the bank.

So, it is the construction based and it is the result based loan, if the firms are not really coming out with the result, if the projects are not on time, banks are again reluctant to further finance the project. And these infrastructure projects as we have also seen that infrastructure project are not really dependent on one factor, but infrastructure project are inter dependent on varieties of political economic political economic factors.

The raw material or the political unrest or labour and rest make create verities are other problems for social and physical infrastructure development projects in any country. So, India which is really facing a great sense of a transformation, high level of urbanization is also very concerned towards the recent issues of the land acquisition and infrastructure development cannot be possible without having the land acquisition.

At the same time, the compensation package and the compensation programs offered by these forms or by the government is not really sometimes suitable and sustainable for financing the families, which are really losing the land. So, because the land distribution is not as good as the land distribution in other part of the world, especially the Asian countries, Sri Lanka and other parts of the world.

So, we find it difficult that, whatever policy we are making for infrastructure development that again leads to a new type of dilemma. Whether the farmer should be free from the farming for the further economic growth rate of the country or we have to continue with the older or traditional system of farming. And we should not allow for further industrial development or infrastructure development, which is the need of the server.

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To Conclude

- PPP models are practiced in India since 1990s
- PPP models has been in use in almost all the infrastructure services
- Highest number of PPP projects are awarded to the roads
- India presents many successful examples of PPP projects but current challenges are really hard to address.

So, in a very strange condition today, we find out that the Public Private Partnership model, which requires the support from all the corner of the economy, not only from government, but also from the public. Not only from the public but also from the political party, not only from the political party, but also from the small group of the society.

So, the practicing Public Private Partnership model is not really very easy today, it is true as India as practice these some of the models from 1990 and we got success almost in many sectors including airports, ports and roadways. And also some sense of success in

the Public Private Partnership in health and at a same time, the statistics by federation of Indian chamber of commerce in industry, who shows that there is huge infrastructure developed projects in physical sector. But, we have very negligible contribution in social infrastructure development to the Public Private Partnership model.

So, highest numbers of Public Private Partnership projects are awarded in the road sector so India presents many successful examples of a Public Private Partnership projects. But, at the same time, we do have varieties of challenges on the way and it is really hard to address those challenges today. I think this discussion gives you an exposure to what type of success we had and what type of method India has adopted in past. At the same time, with certain challenges, which we have discussed now, it is very important to understand that the coming years are very difficult in challenging years for India in terms of developing infrastructure on a very efficient manner.

Thank you.