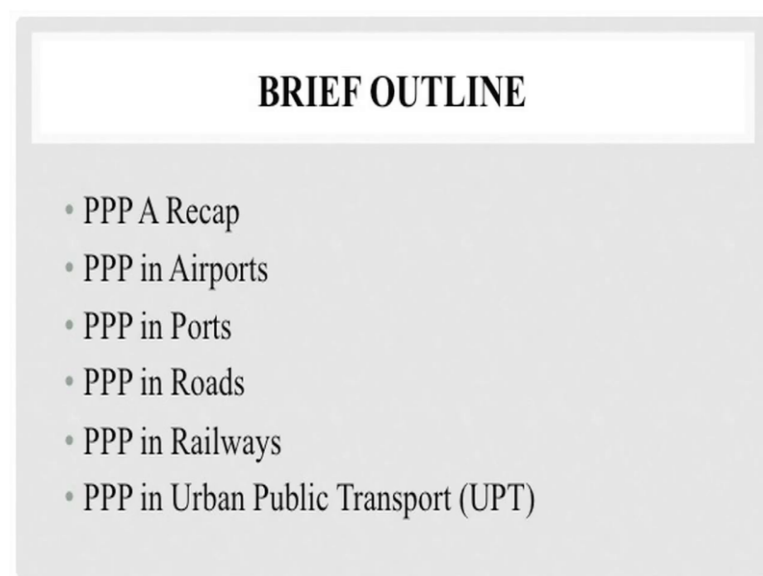


Infrastructure Economics
Department of Social Sciences
Prof. Nalin Bharti
Indian Institute of Technology Madras

Module – 05
Lecture - 20
Cross Country Experiences in PPP

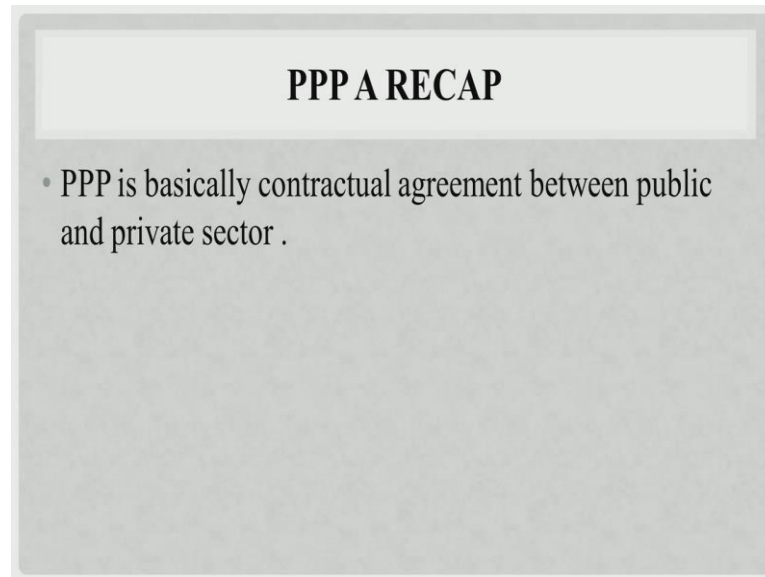
We are discussing a new topic basically the Cross Country Experiences in Public Private Partnership in three different fields, three different areas: airports, ports and roads. And after this discussion, we will also have a separate discussion on public private partnership in railways and urban transportation services.

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So, let me begin with basically... what is basically the public private partnership and then we'll try to have the different discussion, how public private partnership is working in airports, ports and roads.

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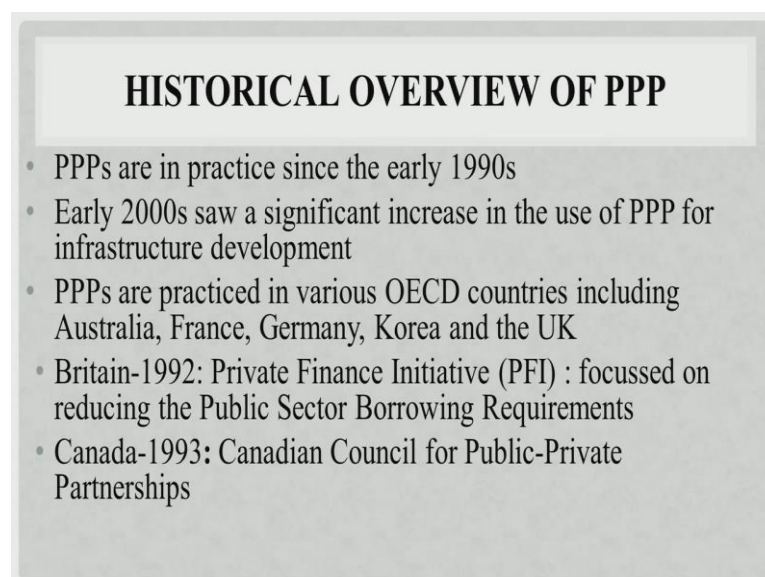


PPP A RECAP

- PPP is basically contractual agreement between public and private sector .

To recap the public private partnership, it is nothing except the contractual agreement as we have discussed in detail while discussing the public private partnership and since this is the contractual agreement between public and private sector. So, both are responsible according to the contractual agreement.

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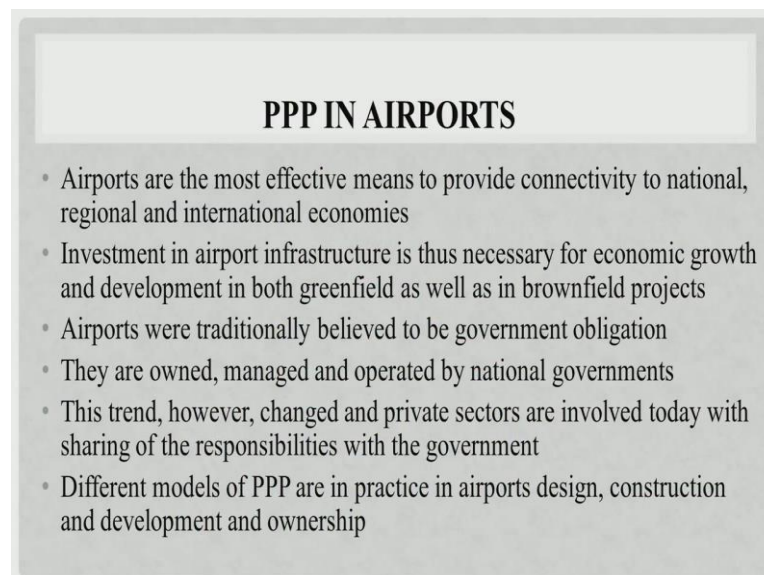


HISTORICAL OVERVIEW OF PPP

- PPPs are in practice since the early 1990s
- Early 2000s saw a significant increase in the use of PPP for infrastructure development
- PPPs are practiced in various OECD countries including Australia, France, Germany, Korea and the UK
- Britain-1992: Private Finance Initiative (PFI) : focussed on reducing the Public Sector Borrowing Requirements
- Canada-1993: Canadian Council for Public-Private Partnerships

Public private partnerships are in practice since the early 90's. By early 2000's we saw a significant increase in the use of public private partnership especially in the infrastructure sector and this type of models, which were discussed in our previous lecture. We have seen that such models are implemented in various OECD countries including Australia, France, Germany, Korea and the UK. Some of the examples... for example, in Britain 1992 Private Finance Initiatives which was focused on reducing the public sector borrowing requirements, that was one of the major initiatives in 1992. Like that in Canada in 1993, Canadian Council for Public Private Partnership were also established and with this historical overview, we can have the separate discussion on different sectors, participation of public private partnership in different sectors.

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PPP IN AIRPORTS

- Airports are the most effective means to provide connectivity to national, regional and international economies
- Investment in airport infrastructure is thus necessary for economic growth and development in both greenfield as well as in brownfield projects
- Airports were traditionally believed to be government obligation
- They are owned, managed and operated by national governments
- This trend, however, changed and private sectors are involved today with sharing of the responsibilities with the government
- Different models of PPP are in practice in airports design, construction and development and ownership

For example, the PPP in airports: airports are, as we have seen, that one of the most efficient means to provide connectivity to the national, regional and international economies and it is not only useful for the travel moment or the movement of the public from one place to another place. But, it is equally playing important role in moving the final products and the raw materials and the technical products from one place to other place. So, the investment in airport infrastructure is thus necessary for economic growth and development in both green field as well as the brown field projects. So, airports were traditionally believed to be the government obligation, as we have also realized in our

previous discussion that various airports were established with the support of the government 100 years before, but at the same time we do have seen that all those activities, which were the government activity is now being transferred to the private sector.

In some country, it is slowly transferred to the private sector if it is a green field projects. And if there are certain infrastructures continuing from past, then government is also having a different type of models which we have also seen in case of certain FDI investment in many country. So, airports are... initially it was owned, managed and operated by the national governments and this trend however changed and private sectors were involved today with sharing of the responsibilities with the government. So, different methods of models of public private partnership is practiced in the airport design, construction and development and ownership.

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PPP IN AIRPORTS IN COSTA RICA

- PPP for the design, construction, operation and maintenance of a new passenger terminal of the Daniel Oduber Quiros Airport
- Agreement between the Government of Costa Rica, Coriport S.A. and the Coriport Consortium
- Concession period is 20 years, that includes construction
- Operating risks are borne by the Coriport
- Guaranteed Minimum Income (GMI) facility is provided where government will guarantee minimum incomes for first 15 years

If one can have the cross country examination, one can see here the public private partnership in airports in Costa Rica, where we are finding that the design, construction, operation and maintenance of the new passenger terminal of Daniel Oduber Quiros airport was done by the public private partnership model. So, the agreement between the government and the Coriport S.A. and the Coriport Consortium were made. Concession

period was established for 20 years that included construction, operating risks or risk coverage by the private form and guaranteed minimum income facility is provided where the government will guarantee minimum income for first 15 years. So, this may be the example where the real public private partnership has started working, because government has provided certain assistance in terms of giving the guarantee to the developer... to the contractor that for 15 years there will not be any minimum loss in terms of generating the income for the private party. But at the same time that the firm is allowed to operate all types of activities in construction and maintaining and operating activity by their own means.

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PPP IN AIRPORTS IN SOUTH AFRICA

- For the management and operation of the Skukuza Airport in Kruger National Park, 2008
- Single runway small scale airport
- 10 years concession is provided from the starting of operations
- Private Party has to bear the liability and insurance obligations

In case of South Africa, for the management and operation of Skukuza airport in Kruger National Park, 2008. Single runway was there, airport was a very small airport. So, private party has to bear the liability and insurance obligation in this particular case where the 10 years concession is provided from the starting of the operations.

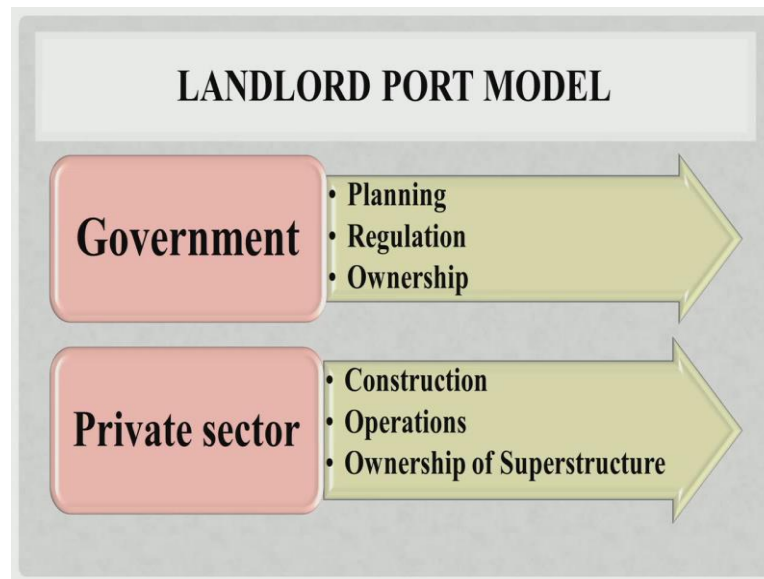
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PPP IN PORTS

- PPPs are practiced in ports management, development and operations
- Traditionally, governments function as the port operator and regulator
- The 'landlord port model' has been developed to allow private entities for port operations
- Government holds the entitlement of land and other assets of the ports

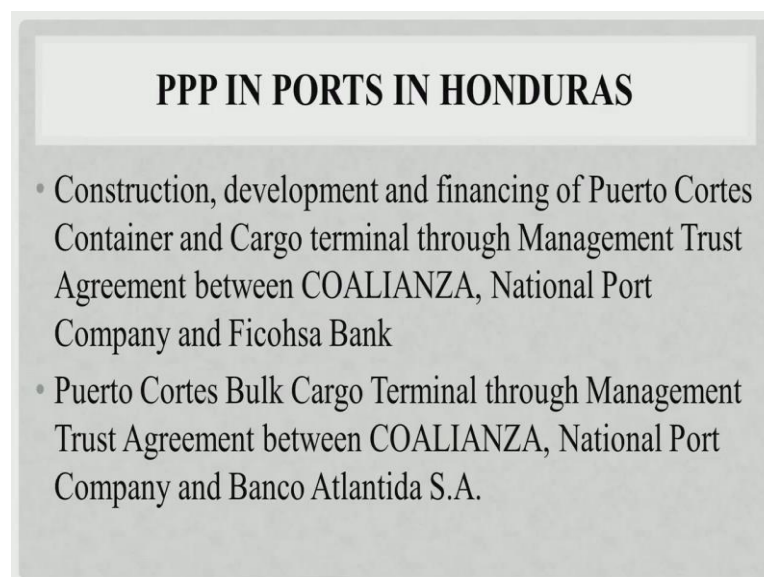
Now, in terms of ports development, public private partnerships are practiced in ports management, development and operations. Traditionally, government functions as the port operator and regulator were seen. So there are certain models of public private partnership which may be discussed here. One of the models is the landlord port model, which has been developed to allow the private entities for the port operations; government holds the entitlement of land and other assets of the port.

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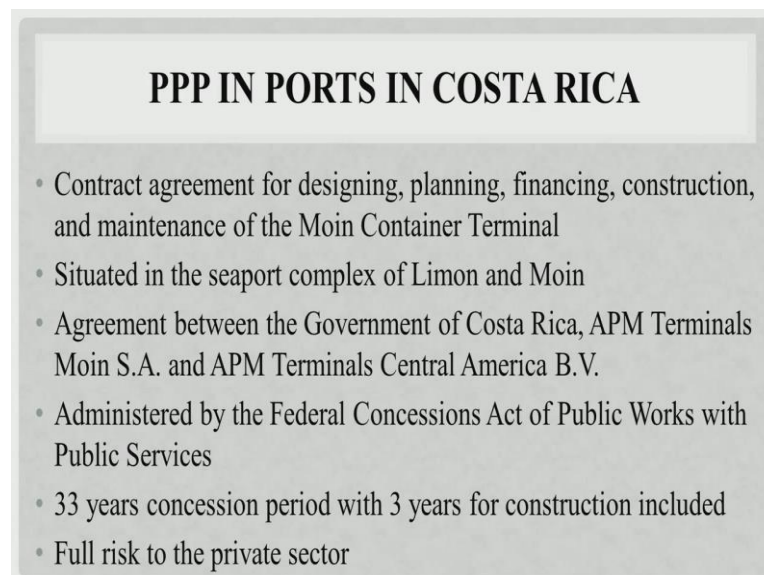
So, in this model government is basically taking care of the planning part, regulation part and the ownership part of that particular port, but at the same time, private sector is really responsible for the construction, operation and the ownership of superstructure of that particular port. So, this is one of the model, which was basically used as a part of public private partnership in the ports development.

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Public private partnership in ports in Honduras, where the construction, development and financing of Puerto Cortes Container and Cargo Terminal through Management Trust Agreement between the company and the national port company and the Ficohsa Bank where established. This particular example through management trust agreement between the company and the government, which shows that the public private partnership is one of the agreement where the management trust agreement can be also adopted to find out that what basically... that what responsibility basically the public private is having and what responsibility the government is having. As in case of landlord port agreement, we have seen the responsibilities shared between the government and private party.

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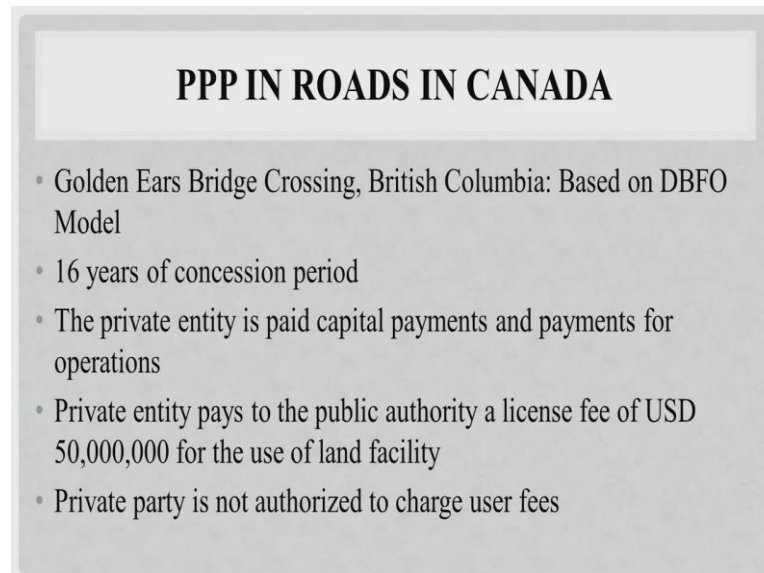
PPP IN PORTS IN COSTA RICA

- Contract agreement for designing, planning, financing, construction, and maintenance of the Moin Container Terminal
- Situated in the seaport complex of Limon and Moin
- Agreement between the Government of Costa Rica, APM Terminals Moin S.A. and APM Terminals Central America B.V.
- Administered by the Federal Concessions Act of Public Works with Public Services
- 33 years concession period with 3 years for construction included
- Full risk to the private sector

In case of ports development in Costa Rica, we are finding that contract agreement for designing, planning, financing, construction and maintenance of the Moin Container Terminal was developed, which was situated in the seaport complex of the Limon and Moin. Agreement between the government of Costa Rica and APM Terminals and the APM Terminals Central America where also done, which was administered by the Federal Concessions Act of the Public Works with Public Services. So, in this case the 33 years concession period with 3 years of construction included was awarded to the private firms, but at the same time the private sector has to completely take over the entire risk

in the project.

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PPP IN ROADS IN CANADA

- Golden Ears Bridge Crossing, British Columbia: Based on DBFO Model
- 16 years of concession period
- The private entity is paid capital payments and payments for operations
- Private entity pays to the public authority a license fee of USD 50,000,000 for the use of land facility
- Private party is not authorized to charge user fees

So, now we are seeing a different sector that is the road sector, public private partnership in roads in Canada is one of the example here to discuss and we are finding that in Canada, Golden Ears Bridge Crossing and British Columbia Based on DBFO model was adopted. In this model, 16 years of concession period were allotted. The private entity is paid capital payments and payments for the operation, private entity pays for... to the public authority, a license fee for US dollar... a huge US dollar for the use of land facility and private party is not authorized to charge user fees.

So, in this case as we have discussed in our discussion on public private partnership methods, where we were also discussing that there are certain areas where the government can decide whether the private party is allowed to charge any fees or not. And it all depends on what type of government policy is for the public, in which sector government really wants to support the public and in which sector government really wants to charges the public. So, in road sector if we compare this particular example or this type of public private partnership with some other country, we are also finding that in road sector itself there are certain models where the public parties are allowed to charge the fees for a certain period of time and a certain amount. Of... after charging

that, after certain period of time the private authority is allowed to transfer the infrastructure to the government and that is really happening in the build operate transfer condition.

But, here we are finding that there is not any private party involved in this case which can charge the fee, but at the same time, private entity pays to the public authority a license fee which is again one of the for using the land facility, because the land owner is not the private party. So, the ownership of land is in the hand of government. So this is again one of the landlord public private partnership model, where the ownership is in the hand of government, but at the same time private parties are constructing, maintaining and operating one of the infrastructure, road infrastructure, for some time and in return, they really pay to the public... they really pay to the government a certain amount of payment.

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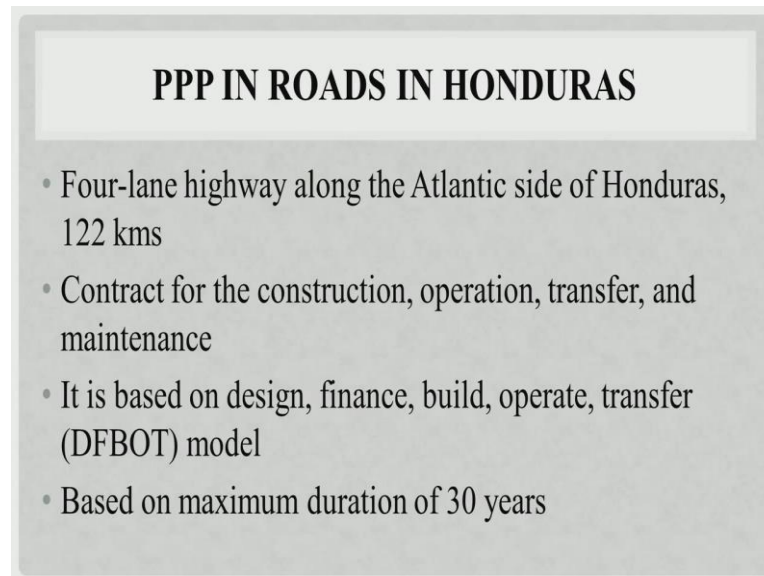
PPP MODEL IN CANADA

- Sea-to-Sky Highway in British Columbia on DBFO Model
- Agreement for designing, building and financing for renovation (brownfield project)
- The concession period is 16 years
- Private party is not entitled to charge user fees for the facility
- The private entity is paid total performance payments

So, Sea-to-Sky highways in British Columbia again is on DBFO model, where the agreement for designing, building and financing for renovation were done. The concession period was again 16 years. Private party is not entitled to charge user fees for the facility. The private party is paid total performance payments. So, again in model, in the second example we are finding that this road development, root construction in

Canada is basically the example where the private parties are not really free to charge whatever fees they are charging in, whatever fees they want to charge. But ultimately government has finally decided that there should not be any charge, any fee charged from the public.

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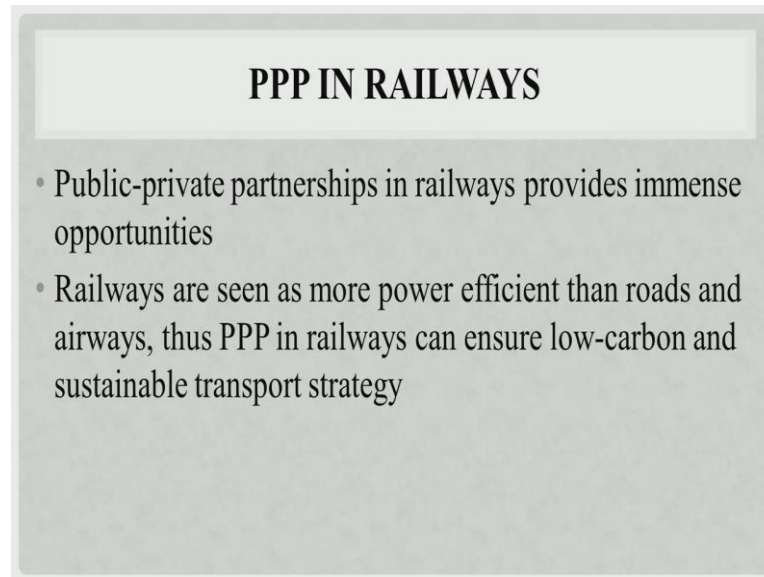
PPP IN ROADS IN HONDURAS

- Four-lane highway along the Atlantic side of Honduras, 122 kms
- Contract for the construction, operation, transfer, and maintenance
- It is based on design, finance, build, operate, transfer (DFBOT) model
- Based on maximum duration of 30 years

So, in case of public private partnership model, especially in roads in Honduras, a four-lane highway along the Atlantic side of Honduras was 122 kilo meters. The contract for construction, operation, transfer and maintenance were again given for the... given to the private party that in whole that involves design, finance, build, operate and transfer. This model may be also named as DFBOT model, because ultimately the project has to be transferred to the government.

So, based on minimum duration of 30 years this particular product... this particular project is again different from the projects in Canada, because in Canada the government has to really see the performance of the firm without any transfer, but in case of Honduras the government has to get the infrastructure ready from the private sector after 30 years.

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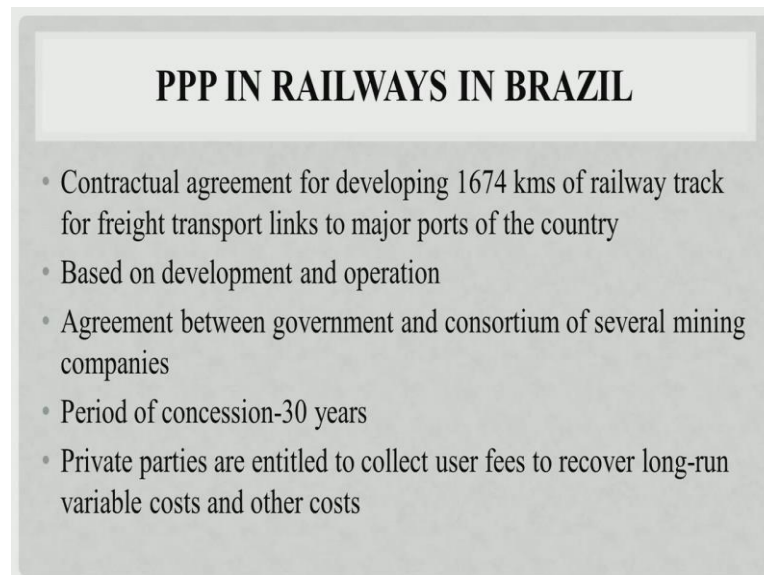


PPP IN RAILWAYS

- Public-private partnerships in railways provides immense opportunities
- Railways are seen as more power efficient than roads and airways, thus PPP in railways can ensure low-carbon and sustainable transport strategy

So, the public private partnerships in railways: it provides immense opportunities today.

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PPP IN RAILWAYS IN BRAZIL

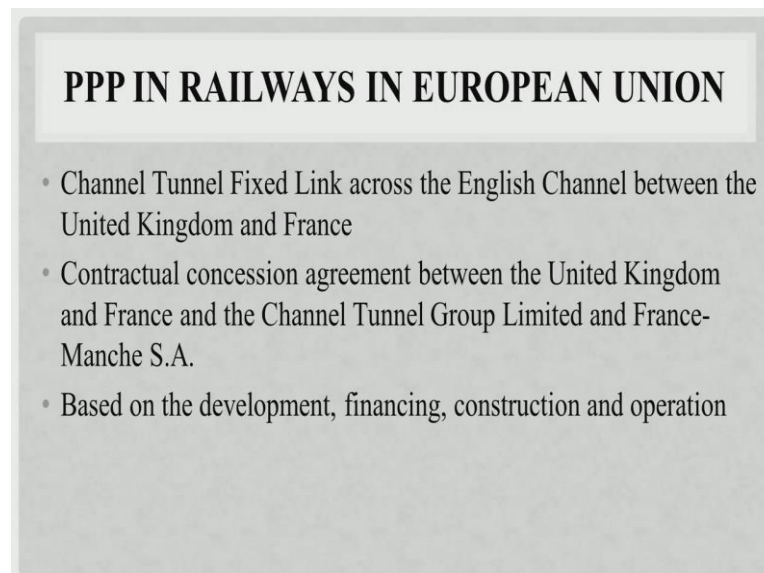
- Contractual agreement for developing 1674 kms of railway track for freight transport links to major ports of the country
- Based on development and operation
- Agreement between government and consortium of several mining companies
- Period of concession-30 years
- Private parties are entitled to collect user fees to recover long-run variable costs and other costs

And as a developing country here we have taken the examples from Brazil, where we are finding that contractual agreements for developing 1674 kilo meters of railway track for freight transport links to major ports of the country. It is being done by the public private

partnership models, based on the development and operation model, agreements between the government and consortium of several mining companies and with 30 years period of concession, private parties are entitled to collect user fees to recover long term variable cost and other costs.

So, this is completely different from the Canadian road construction example, where the contractor was not supposed to charge any fee from the public. Here, in Brazil the government allowed them to charge, private party is being allowed to charge the fee from the public.

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PPP IN RAILWAYS IN EUROPEAN UNION

- Channel Tunnel Fixed Link across the English Channel between the United Kingdom and France
- Contractual concession agreement between the United Kingdom and France and the Channel Tunnel Group Limited and France-Manche S.A.
- Based on the development, financing, construction and operation

In case of European Union, we can find out that Channel Tunnel Fixed Link across the English Channel between the United Kingdom and France is one of the public private partnership project. Contractual concession agreement between the United Kingdom and France and the Channel Tunnel Group Limited and France Manche S.A. are being implemented and based on the development, financing, construction and operation, this model is being implemented in railways.

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PPP IN RAILWAYS IN UK

- High-speed railway link from St. Pancras Station, London to the Channel Tunnel
- Agreement between the Secretary of State for Transport, UK and High Speed 1 Limited
- Includes the design, construction, financing, operation, and maintenance

In UK, high speed railway link from St. Pancras Station London to Channel one Tunnel, agreement between the Secretary of the State of Transport UK and High Speed 1 Limited has been also experienced and that includes the design, construction, finance, operation and maintenance, not the transfer.

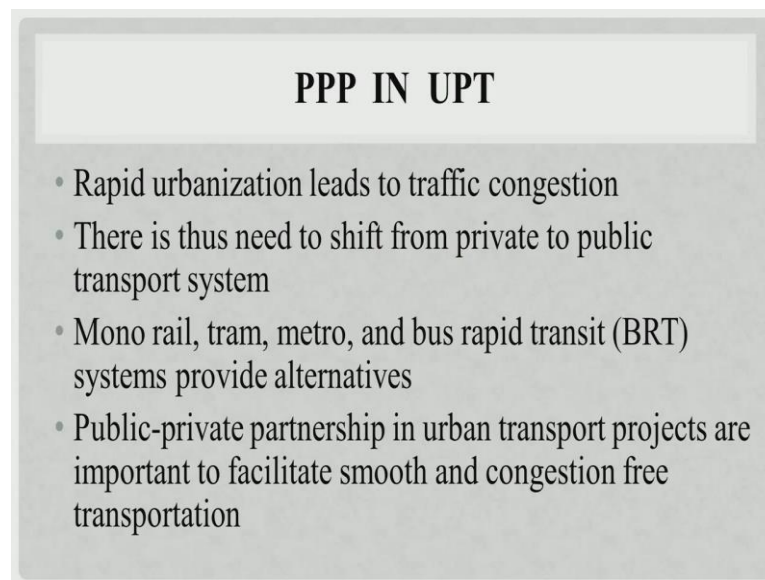
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PPP IN RAILWAYS IN PERU

- Southern (Matarani/Mollendo to Cusco) and the southeastern (Cusco to Machu Pichu) railway lines
- Contract between the government and Ferrocarril Transandino S.A. (FTSA)
- 30 years of concession which can be extended
- The Private party will upgrade and rehabilitate the railway infrastructure which includes signaling and telecom systems, and advancement of the operations
- The access is open to other railway operators on payment basis

In Peru, southern and the southern railway lines contract between the government and the private party is being achieved and 30 years of concession, which can be also extended. The private party will... are supposed to upgrade and rehabilitate the railway infrastructure which includes the signaling and telecom system and the advancement of the operations. The access is open to other railway operators on payment basis. Here this is little different form the other examples, where the concession period is again subject to the extension.

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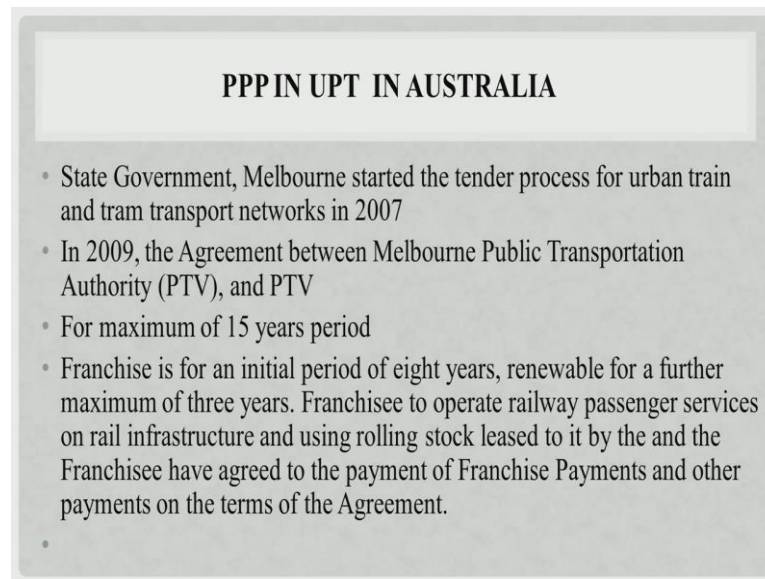
PPP IN UPT

- Rapid urbanization leads to traffic congestion
- There is thus need to shift from private to public transport system
- Mono rail, tram, metro, and bus rapid transit (BRT) systems provide alternatives
- Public-private partnership in urban transport projects are important to facilitate smooth and congestion free transportation

Public private partnership in urban, basically in case of this example we are finding that due to the urbanization, rapid urbanization which leads to the public transport... urban public transport when we have to provide. It is not really an easy job for any government to provide such rapid urbanization requirements especially for the traffic. So, there is a need to shift from private to public transport system, which was realized by many country and mono rail, tram, metro and bus rapid transit systems provide alternatives.

Public private partnerships in urban transport projects are important to facilitate smooth and congestion free transportation. Delhi metro is one of the best example today, where we can see that how the urban public transport such as Delhi metro has provided a very peaceful way of travel compared to the diesel-run bus in Delhi.

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PPP IN UPT IN AUSTRALIA

- State Government, Melbourne started the tender process for urban train and tram transport networks in 2007
- In 2009, the Agreement between Melbourne Public Transportation Authority (PTV), and PTV
- For maximum of 15 years period
- Franchise is for an initial period of eight years, renewable for a further maximum of three years. Franchisee to operate railway passenger services on rail infrastructure and using rolling stock leased to it by the and the Franchisee have agreed to the payment of Franchise Payments and other payments on the terms of the Agreement.
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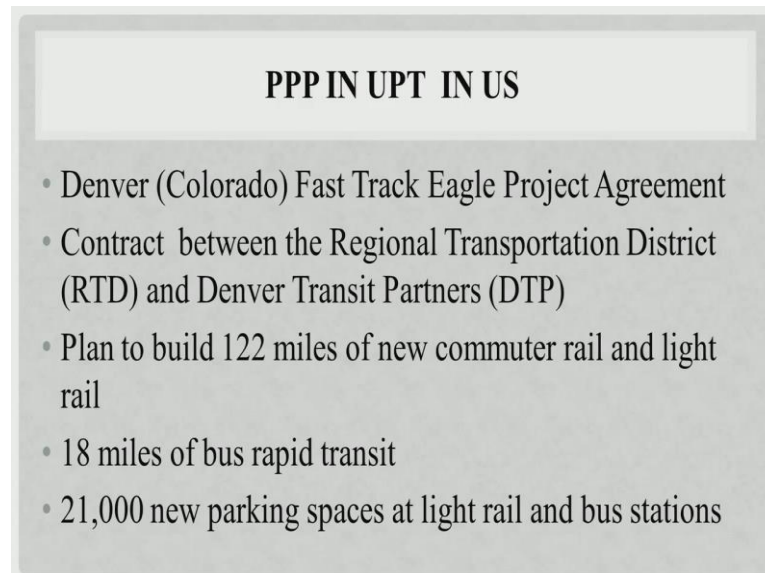
So, in case of Australia, the urban public transport facility in Australia, state government Melbourne started the tender process for urban train and tram transport networks in 2007. In 2009, the agreement between the Melbourne Public Transport Authority and the PTV was achieved and for maximum of 15 years period. Franchise is for an initial period of 8 years and renewable for a further maximum of 3 years.

Franchisee to operate railway passenger services on rail infrastructure and using and rolling a stock leased to it by the end of the Franchisee have agreed to the payment of franchise payments and other payments on the terms of the agreement. So, here in this case the 10 year for providing infrastructure facilities not for 30 years, but for 15 years, but at the same time the payment and other payments on the terms of the agreement is also very much clear between the government and the private party. And this is another way to see that Franchisee is initially for the period of 8 years, but again it is the subject of renewal for further 3 years.

The Australian government has not really given a complete freedom to this particular firm to continue with the infrastructure facility without any proper control by the government. So, government year, after a certain year government is really having a control on the facility and the infrastructure provided by the private firm. So, this is one

way to find out a very controlled mechanism of public private partnership.

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PPP IN UPT IN US

- Denver (Colorado) Fast Track Eagle Project Agreement
- Contract between the Regional Transportation District (RTD) and Denver Transit Partners (DTP)
- Plan to build 122 miles of new commuter rail and light rail
- 18 miles of bus rapid transit
- 21,000 new parking spaces at light rail and bus stations

Again in case of United States, an example can be the Fast Track Eagle Project Agreement, the contract between the Regional Transportation District and the Denver Transit Partners being made and the plan to build 122 miles of the new commuter rail and light rail, 18 miles of bus rapid transit and 21000 new parking spaces at light rail and bus stations. This is one of the bigger project.

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PPP IN UPT IN CANADA

- The construction and operation of a rapid transport link from Richmond City Center to Vancouver Airport in Ottawa
- Partners are the Government of Canada, the Province of British Columbia, Greater Vancouver Transportation Authority (Trans Link), the Vancouver Airport Authority (VAA) and the City of Vancouver and private partner In Transit BC
- In Transit BC will design, build, partially finance, maintain and operate the Canada Line
- Construction and operation risks are to be borne by In Transit BC

So, coming back to again Canada in terms of urban public transportation, the construction and operation of a rapid transport link from the Richmond City Center to Vancouver Airport in Ottawa. And partners are the government of Canada, the Province of British Columbia and other private companies. In Transit BC will design, build, partially finance, maintain and operate the Canada line. Construction and operation risks are to be borne by the private company In Transit BC. So, in Canadian example we are finding that complete risk is basically on the shoulder of the private party.

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PPP IN UPT IN SOUTH AFRICA

- Integrated Rapid Transit (IRT) Vehicle Operator Contract
- Agreement between the City of Cape Town and a Vehicle Operator Company
- Its objective is to promote and improve public transport in the city by using Bus Rapid Transit (BRT) system
- Private operators for specified contract periods are allowed to operate through BRT system
- Private operator is not authorized to collect fares

In South Africa, the Integrated Rapid Transit Vehicle Operator Contract, the agreement between the City of Cape Town and a Vehicle Operator Companies again established with the objective to promote and improve public transport in the city by using Bus Rapid Transit system. Private operators for this specified contract periods are allowed to operate through BRT system and private operator is not authorized to collect any fees. So, the South African example in this particular case is similar to the example of Canadian road construction, where the private parties were also not allowed to charge any fee.

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SOME MORE INSTANCES OF PPP

Canada → Ontario Highway 407

Australia → Airport Link, Cross City Tunnel, Sydney harbour Tunnel

United States →

- 1st Generation PPP Projects: Asset Monetization: Indiana Toll Road
- 2nd Generation PPP Projects: Variable pricing: the Port of Miami Tunnel, I-595 express lanes
- 3rd Generation PPP Projects: Value-for-money (VfM), Cost-benefit analysis: Dulles Toll Road, State Highways 121

Some more instances of public private partnership can be also seen in Canada – Ontario Highway, in Australia – Airport Link, Cross City Tunnel and Sydney Harbour Tunnel. In United States – first generation PPP projects has the Asset Monetization, Indiana Toll Road, a second generation PPP projects, has the variable prices on the port of Miami Tunnel and the third generation PPP projects, value of money, cost benefit analysis, Dulles road, Toll road, State highways.

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TO SUM UP

- Various experiences in Railway and UPT proves how through PPP models new basic infrastructure facilities were provide to the people.
- It was impossible without such partnership between Government and private parties.

So, we can see here the varieties of public private partnership models are being adopted in the world today and experiences of these countries, various experiences in railway also in case of urban public transports, in case of ports, in case of roads, in case of airports. We have seen that these models are basically the models, which provides us the new basic infrastructure and these facilities are now being provided to the public.

It was impossible to have such infrastructure without partnership between the government and private parties. So, through this PPP models, various PPP model we can sum up that these models are really the new innovations in the governance and we are finding that these models are really coming up successfully in many countries. And we hope that innovation... further innovation in public private partnership model is again going to bridge the gap between the infrastructure demanded and infrastructure supplied.

Thank you.