

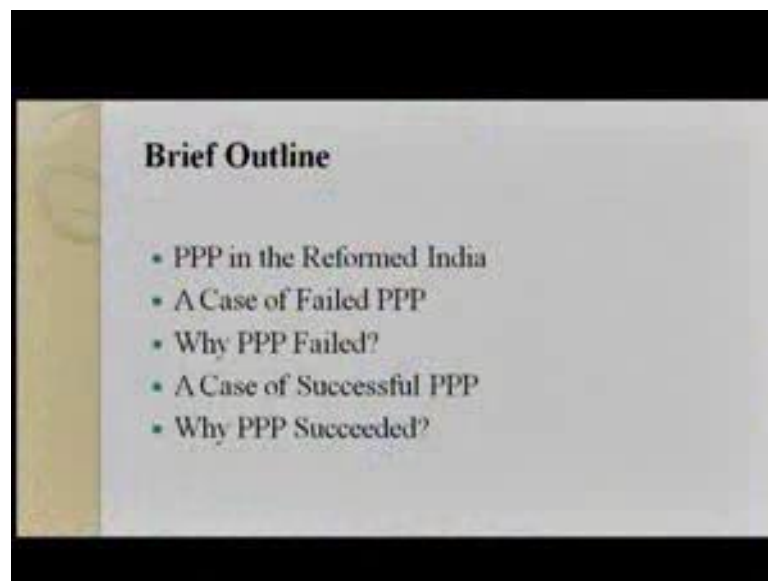
Infrastructure Economics
Department of Social Sciences
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Module-08
Lecture - 36
Is PPP Viable in Reformed India?

In last module, we have seen that how India is ready for the Make in India initiative. But, one of the question, which is always asked when infrastructure projects are discussed and implemented that, what is the viability of the Public Private Partnership model in India when some of the PPP is not really successful. So, in this lecture we are going to discuss a cases study of a successful Public Private Partnership as well as a case of failure in the Public Private Partnership in India.

And we will try to see that, what are the success and what are the failure and what are the reasons behind this success and failure. So that, when we are having more reformed India compared to the conditions of infrastructure and Indian economy priory to 1991, then we will have more precautions, when we are adopting the new models of Public Private Partnership.

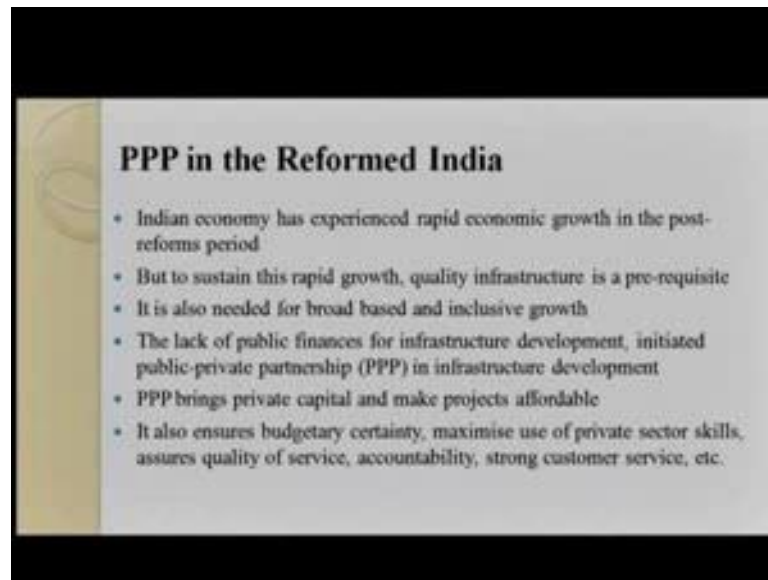
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So, the brief outline of this presentation is the public private partnership and its importance in the reformed India, a case of failed public private partnership. Why it

fails? Why public private partnership fails? Again a successful example, we are going to discuss as a part of public private partnership and then, why public private partnership is succeeded in another case? And, globally why certain public private partnership becomes very successful? This will be the main discussion of this particular lecture.

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So, Indian economy if we can consider Indian economy today; that is more experienced in terms of rapid economic growth compared to 1970-80. We are finding that Indian economy is more moving ahead in terms of GDP growth rate and we are fast enough in terms of achieving targets... overall targets in the growth. But, at the same time, we have seen that... we have lack of growth potential as well as growth contribution in GDP from the manufacturing side.

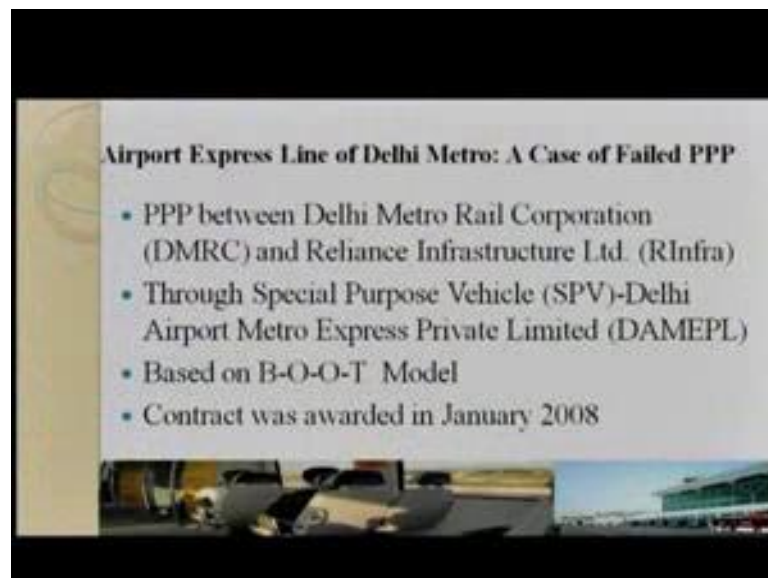
And one of the reason of such failure is the missing connectivity between the farm and firm, at the same time connectivity between the raw materials and the manufacturing units, the scarcity of electricity, the scarcity of transportation and the scarcity of roadways. So, these scarcities are basically infrastructure based scarcity and all these scarcities are further linked with the scarcity of investment. So, to sustain this rapid growth which India had in last few years, it is important to have the quality infrastructure developed.

And it is also needed for broad based and inclusive growth, which means that contribution from all the sides of economy, manufacturing services and the primary

sector and the lack of public finance for infrastructure development... initiated public private partnership infrastructure development is the only solution to fulfill the gap, which is emerging from the public finances especially for infrastructure development, because we are today more open economy.

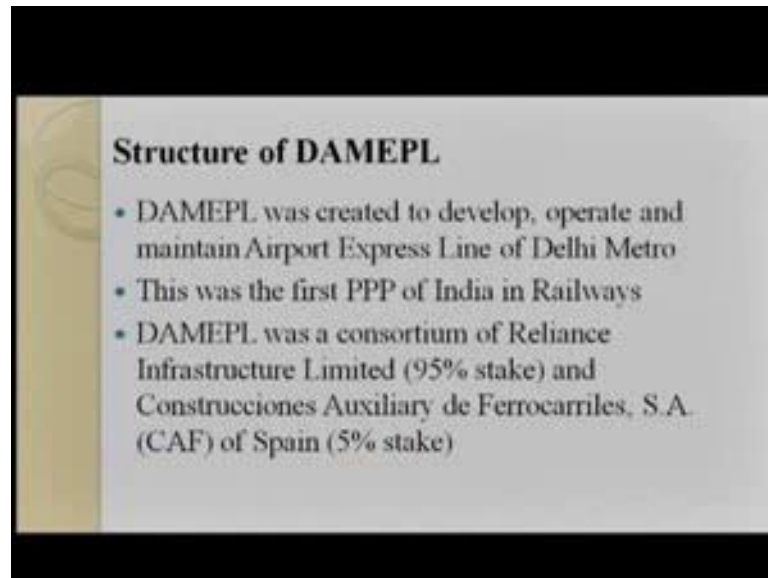
So, we do not really depend only on the public support, but we have to also look for the private investors, which has profit motive as well as the motive to follow the government guidelines not on the cost of loss, but on the due to the return in terms of profit. So, this Public Private Partnership brings private capital and makes projects affordable. It also ensures budgetary certainty, maximize use of private sector skills. It assures the quality of services, accountability and a strong customer services.

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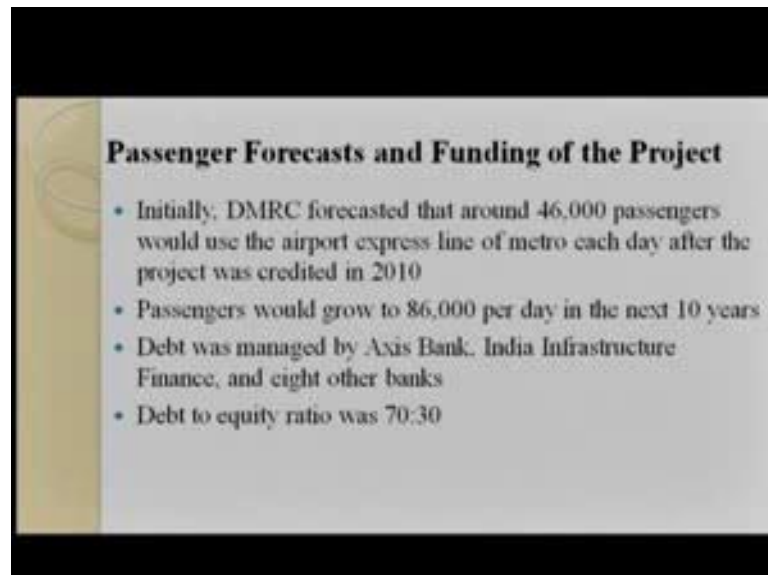
So, let me discuss the one of the case failure of the public private partnership in India. PPP between the Delhi Metro Rail Corporation, DMRC and the Reliance Infrastructure Limited is one of the major case of fail in the public private partnership, especially in the reformed India. And through a Special Purpose Vehicle SPV, Delhi Airport Metro Express Private Limited was really developed, which was based on the build, own operate and transfer model. Contract was awarded in January 2008.

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The structure of this DAMEPL was created to develop, operate and maintain Airport Express Line of Delhi Metro. This was the first public private partnership of India in railways. So, DAMEPL was consortium of Reliance Infrastructure Limited, 95 percent of stake and one of the company from a Spain CAF, 5 percent stake.

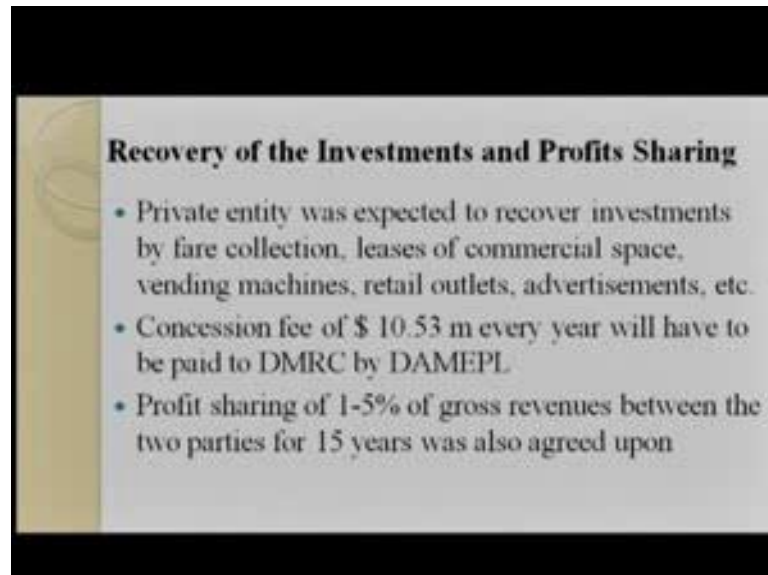
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Initially, DMRC forecasted that around 46000 passengers would use the airport express line of metro each day after the project was credited in 2010. Passengers would grow to

86,000 per day in the next 10 years. Debt was managed by Axis Bank, India infrastructure finance and eight other banks. Debt to equity ratio was 70:30.

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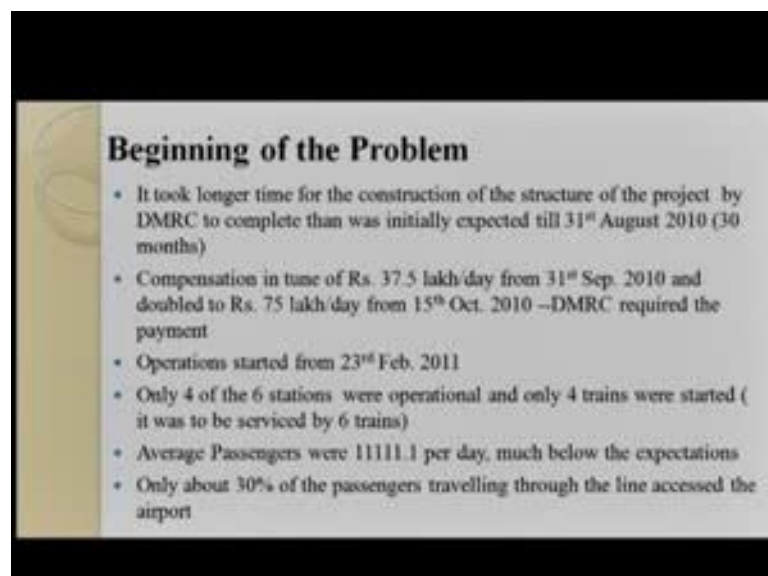


Recovery of the Investments and Profits Sharing

- Private entity was expected to recover investments by fare collection, leases of commercial space, vending machines, retail outlets, advertisements, etc.
- Concession fee of \$ 10.53 m every year will have to be paid to DMRC by DAMEPL.
- Profit sharing of 1-5% of gross revenues between the two parties for 15 years was also agreed upon

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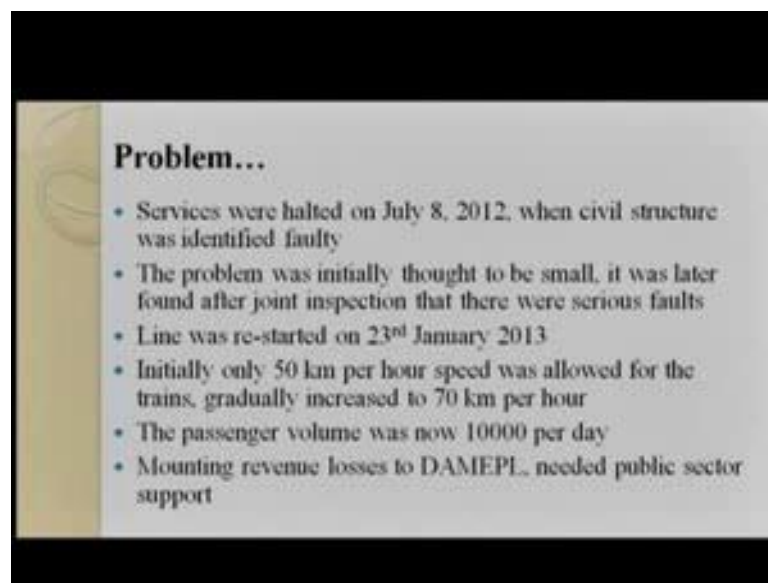


Beginning of the Problem

- It took longer time for the construction of the structure of the project by DMRC to complete than was initially expected till 31st August 2010 (30 months)
- Compensation in tune of Rs. 37.5 lakh/day from 31st Sep. 2010 and doubled to Rs. 75 lakh/day from 15th Oct. 2010 --DMRC required the payment
- Operations started from 23rd Feb. 2011
- Only 4 of the 6 stations were operational and only 4 trains were started (it was to be serviced by 6 trains)
- Average Passengers were 11111.1 per day, much below the expectations
- Only about 30% of the passengers travelling through the line accessed the airport

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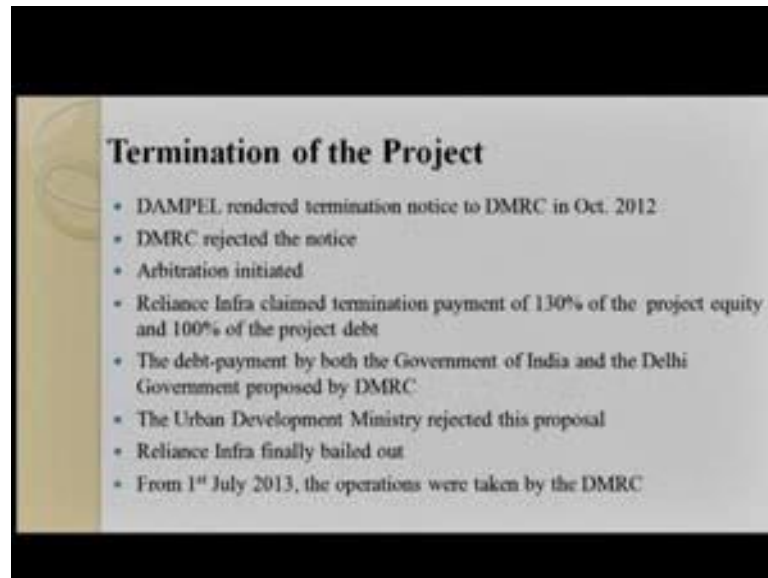


Problem...

- Services were halted on July 8, 2012, when civil structure was identified faulty
- The problem was initially thought to be small, it was later found after joint inspection that there were serious faults
- Line was re-started on 23rd January 2013
- Initially only 50 km per hour speed was allowed for the trains, gradually increased to 70 km per hour
- The passenger volume was now 10000 per day
- Mounting revenue losses to DAMEPL, needed public sector support

Services were halted on July 8 2012, when civil structure was identified faulty. The problem was initially thought to be a small. It was later found after joint inspection that there were serious faults. Line was re-started on 23rd January 2013, initially only 15 kilometer per hour speed was allowed for the trains; gradually this was increased to 70 kilometer per hour. The passenger volume was now 10000 per day, mounting revenue losses to DAMEPL needed public sector support.

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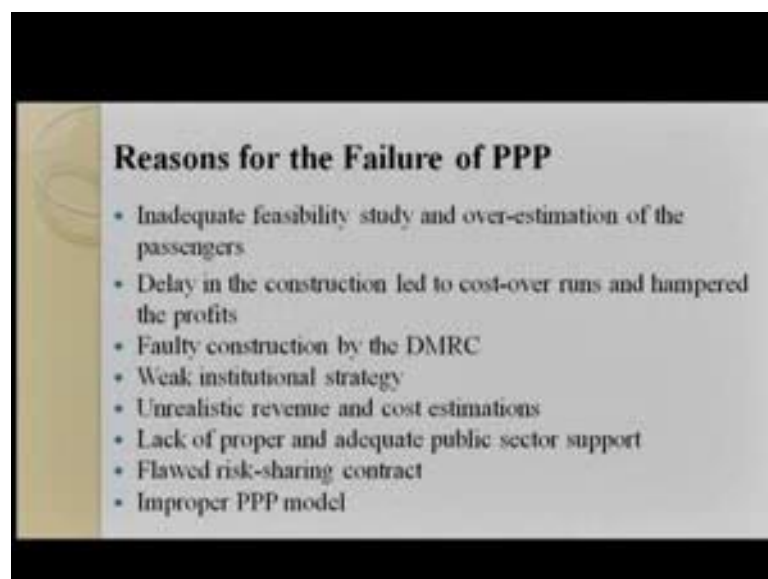


Termination of the Project

- DAMPEL rendered termination notice to DMRC in Oct. 2012
- DMRC rejected the notice
- Arbitration initiated
- Reliance Infra claimed termination payment of 130% of the project equity and 100% of the project debt
- The debt-payment by both the Government of India and the Delhi Government proposed by DMRC
- The Urban Development Ministry rejected this proposal
- Reliance Infra finally bailed out
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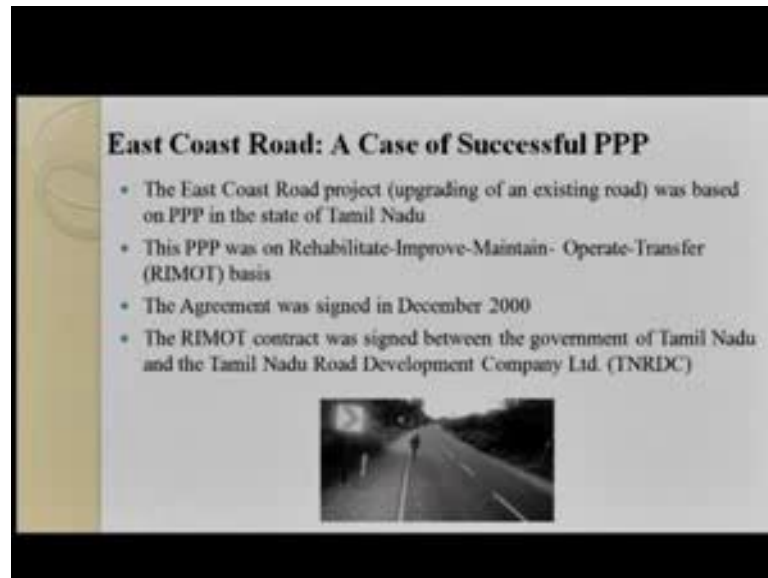


Reasons for the Failure of PPP

- Inadequate feasibility study and over-estimation of the passengers
- Delay in the construction led to cost-over runs and hampered the profits
- Faulty construction by the DMRC
- Weak institutional strategy
- Unrealistic revenue and cost estimations
- Lack of proper and adequate public sector support
- Flawed risk-sharing contract
- Improper PPP model

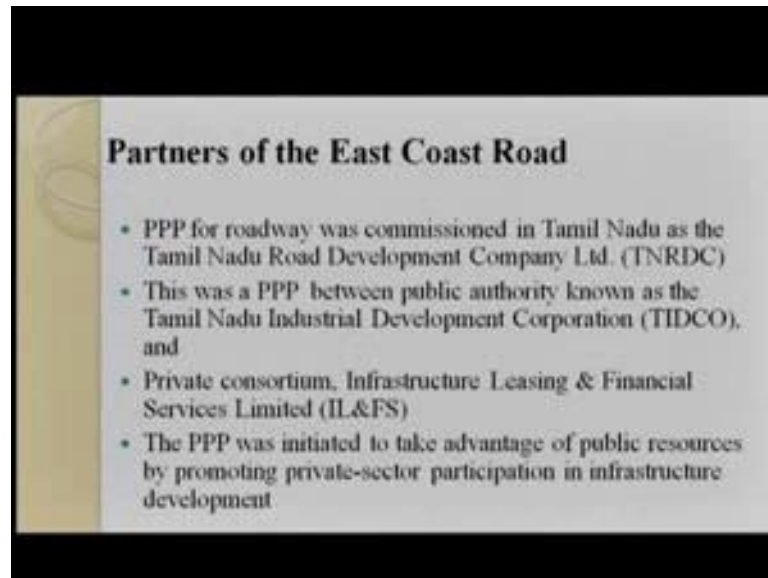
Reasons for the failure of Public Private Partnership in this case, inadequate feasibility study and over-estimation of the passengers, delay in construction led to cost-over runs and hampered the profits, faulty construction by DMRC, weak institutional strategy, unrealistic revenue and cost estimations, lack of proper and adequate public support, flawed risk sharing contract and improper Public Private Partnership model.

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Now, after discussing the case of failure let me also discuss the case of successful in the reformed India. This is the East Coast Road Project, upgrading of an existing road was based on PPP in the state of Tamil Nadu. This Public Private Partnership Model was on rehabilitation- improve-maintain-operate-transfer basis, RIMOT model. The agreement was signed in December 2000; contract was signed between the government of Tamil Nadu and the Tamil Nadu Road Development Company Limited.

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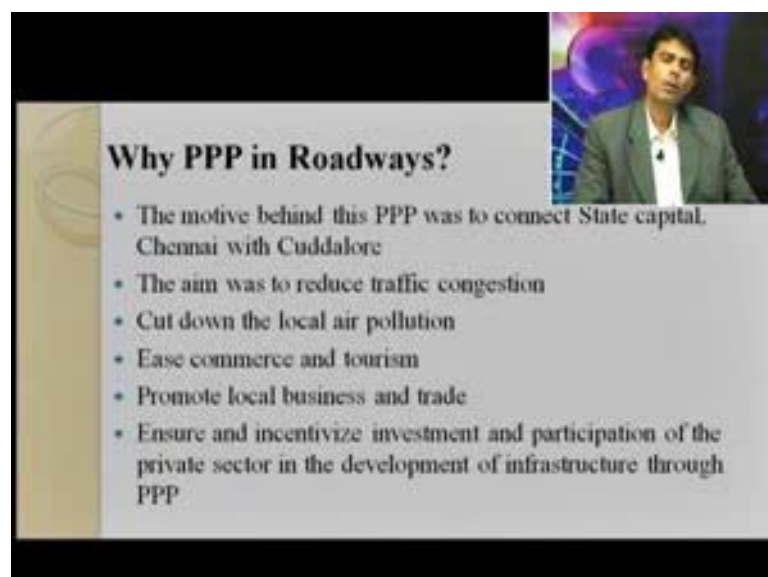


Partners of the East Coast Road

- PPP for roadway was commissioned in Tamil Nadu as the Tamil Nadu Road Development Company Ltd. (TNRDC)
- This was a PPP between public authority known as the Tamil Nadu Industrial Development Corporation (TIDCO), and
- Private consortium, Infrastructure Leasing & Financial Services Limited (IL&FS)
- The PPP was initiated to take advantage of public resources by promoting private-sector participation in infrastructure development

The public private partnership for roadways... roadway was commissioned in Tamil Nadu as the Tamil Nadu Road Development Company Limited. This was a PPP between public authority known as the Tamil Nadu Industrial Development Corporation and the private consortium, infrastructure, leasing and financial services limited. The PPP was initiated to take advantage of public resources by promoting private sector participation in infrastructure development.

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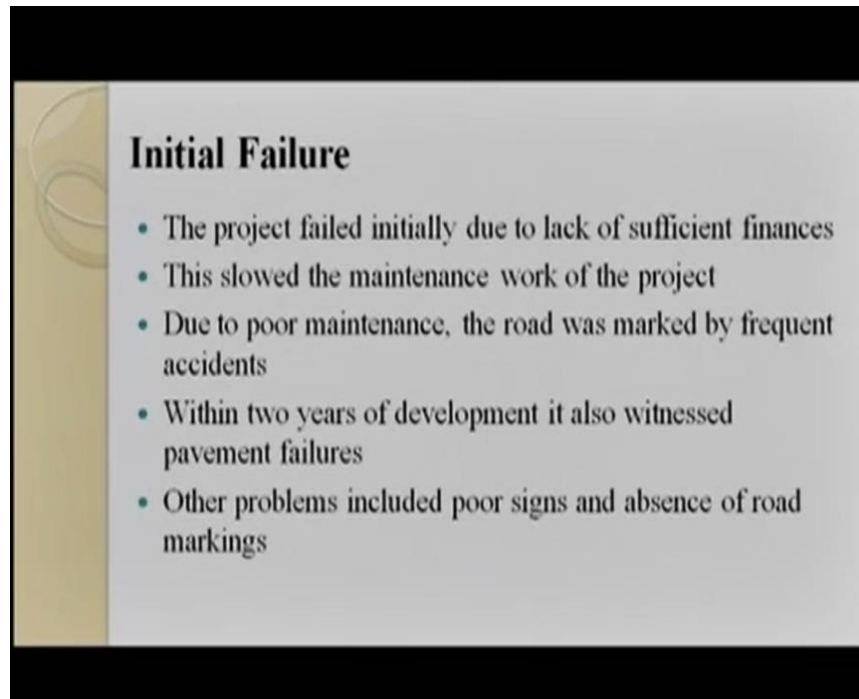


Why PPP in Roadways?

- The motive behind this PPP was to connect State capital, Chennai with Cuddalore
- The aim was to reduce traffic congestion
- Cut down the local air pollution
- Ease commerce and tourism
- Promote local business and trade
- Ensure and incentivize investment and participation of the private sector in the development of infrastructure through PPP

So, one can ask that why such PPP is important in roadways- the motive behind this PPP was to connect state capital Chennai with Cuddalore. The aim was to reduce traffic congestion, cut down the local air pollution, ease commerce and tourism, promote local business and trade and ensure and incentivize investment and participation of the private sector in the development of infrastructure through PPP.

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Initial Failure

- The project failed initially due to lack of sufficient finances
- This slowed the maintenance work of the project
- Due to poor maintenance, the road was marked by frequent accidents
- Within two years of development it also witnessed pavement failures
- Other problems included poor signs and absence of road markings

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The New Contract

- New contract for the rehabilitation and maintenance of the project was negotiated by the TNRDC
- The government approved the project on Feb. 11, 2000
- The agreement was signed in December 2000
- The project was 113.2 km East Coast Road between the cities of Chennai and Pondicherry, via Mahabalipuram
- The cost of this road was \$12.6 million
- It was on Rehabilitate-Improve-Maintain-Operate-Transfer (RIMOT) model of PPP

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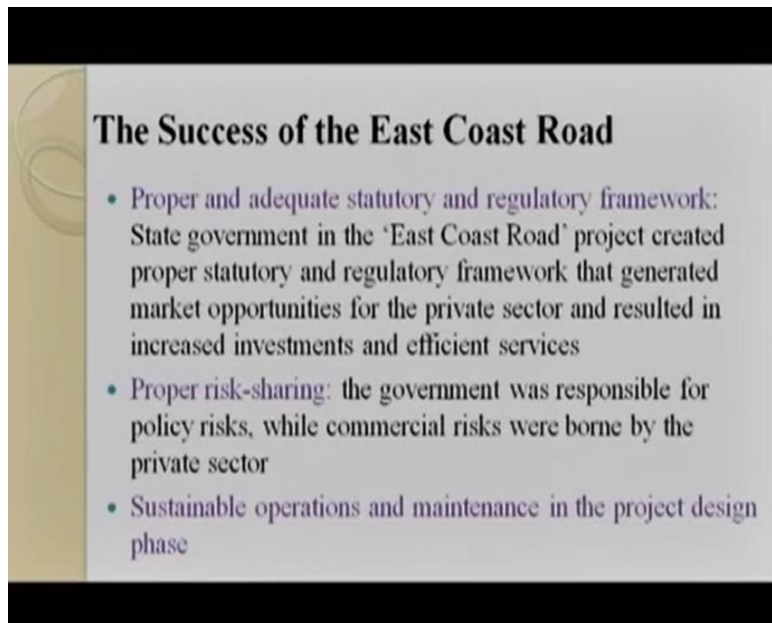
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The Development of the Work

- Project under new contract started in February 2001
- Major portion of the work was completed by December 2001
- The Operations started on March 24, 2002
- It is a toll road
- Toll revisions are under the capacity of the government
- However, the corporate structure protects the interests of all the parties

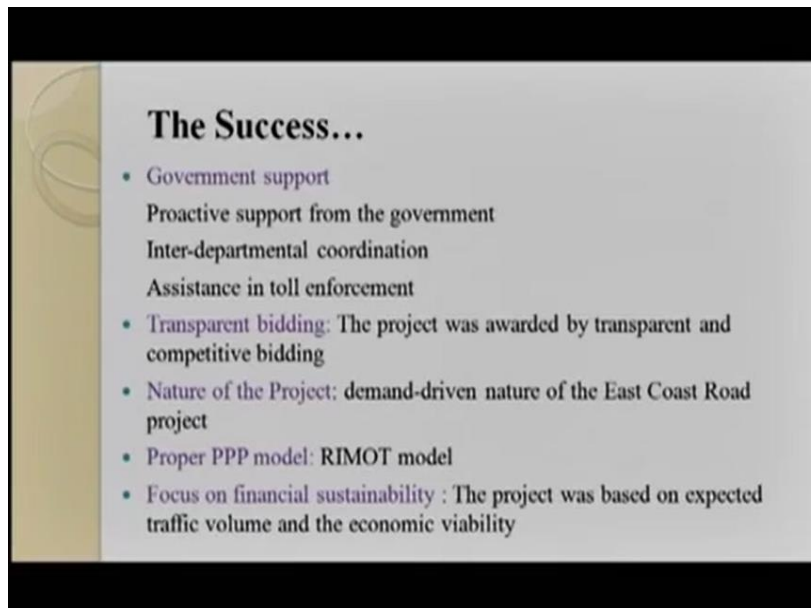
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The success of the east coast road is depending on some of the points. Proper and adequate statutory and regulatory framework- state government in the East Coast Road project created proper statutory and regulatory framework that generated market opportunities for the private sector and resulted in increased investments and efficient services. Proper risk-sharing- the government was responsible for policy risks, while commercial risk were borne by the private sector. Sustainable operations and maintenance in the project design phase. One of the other reason of the success is the sustainable operations and maintenance in the project design phase, because one can see here when the... when it was realized at there are certain indications of the failure, government took as one of the positive steps to sign the new contract and to start the revision of the projects and to have new basically investment and shaping of the failures to reduce the level of accidents and the damage.

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So, government support was one of the major point in this particular project. Proactive support from the government, which was the inter-departmental coordination, assistance in toll enforcement and this support cannot be really deleted from the entire discussion on PPP and one can really understand why certain PPP is successful? Because, it **is** not only the private initiative... **the** Public Private Partnership model is not only the private initiative model, but it is well supported if the government is really proactive and taking care of the interest of the investor as well as the taking care of the interest of the general public.

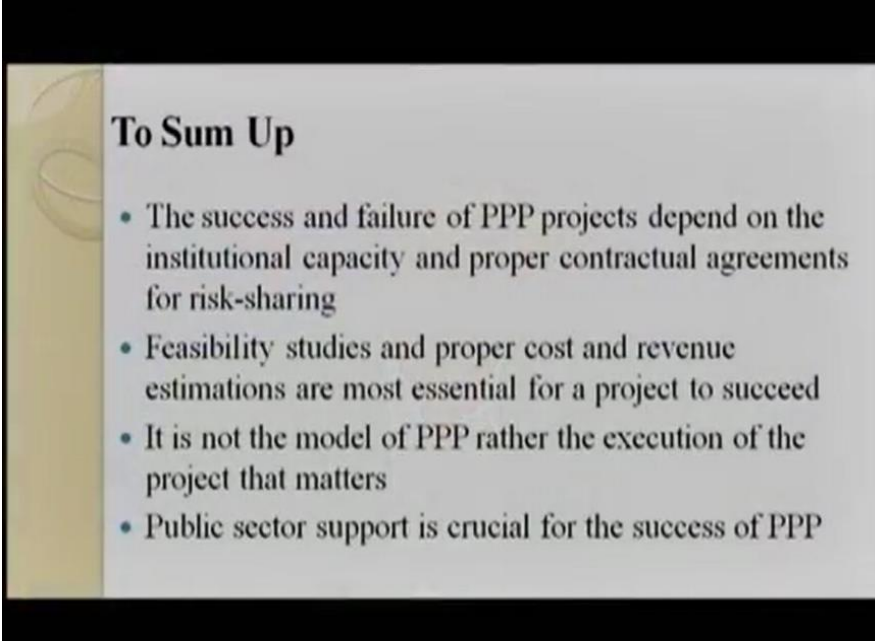
How transparent system you are having in terms of bidding that is also matter a lot. The project was awarded by transparent and competitive bidding, that is also one of the major point of the success of this particular project. Then, again what was the nature of the project? - the nature of the project was demand driven. East Coast Road Project was a demand driven project and because, of that what was the suitable model, the suitable model was the rehabilitation enforce, RIMOT model.

Because, you have to have rehabilitation for such construction, rehabilitation of the poor people, who were having the loss of lands and at the same time they should be also very much supportive to such projects and it cannot happened without providing them a proper place for their new life. So, if we see here... we see that in terms of government legal and regulatory support and assistance in terms of enforcement and inter departmental coordination.

At the same time transparent bidding the demand drawn nature of the project and the model adopted in this particular project, which was really focusing on the financial sustainability. Expected traffic volume and the economic viability was the main point of success of this particular project. So, if we compare the DMRC project and this particular project in the... In India's first PPP model, we have seen that that model was failed and the reason was overestimation of the traffic, at the same time over expectation in terms of profit.

But, here in this case the project was based on the expected traffic volume and economic viability with a proper model, which is the rehabilitation and operate and transfer model, because in road construction you have to take care of the rehabilitation part. At the same time, government support and the transparent system of the bidding was also played a very important role.

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To Sum Up

- The success and failure of PPP projects depend on the institutional capacity and proper contractual agreements for risk-sharing
- Feasibility studies and proper cost and revenue estimations are most essential for a project to succeed
- It is not the model of PPP rather the execution of the project that matters
- Public sector support is crucial for the success of PPP

To sum up, the success and failure of public private partnership projects depend on the institutional capacity and proper contractual agreements of the risk-sharing. We have seen in both example, that in first case the support from the government was not as good. But, at the same time the action by the private sector was also not very conducive, because it was not basically to run the project but, it was basically to lead the project in between and to stay out from the project and that happened in case of Delhi Metro Rail

Project. The feasibility studies and proper cost and revenue estimations are most essential for a project to succeed especially in the infrastructure development.

We have seen in case of road construction in Tamil Nadu, we have seen... in the second example we have seen that the feasibility study and cost and revenue estimation were much practical compared to the first case of Delhi Metro Project. So, it is not the model of PPP, does not the execution of the project that is matter a lot when we are in a much reform economic condition. We have seen in our previous discussion that India is looking for more FDI in infrastructure development being the fourth largest market in the world in terms of infrastructure market and when we are looking for such investment, we cannot really say that PPP models or any model of the PPP is really a failure model.

And we should not really look for the model which is failed in one case, but one can really look for the causes of the failure of the model in one case and government and the private parties can really work together to counter some of the challenges, some of the issues which we have also discussed in our previous lectures, such as economic issues environmental issues and the issue of inclusiveness, when we are making road, when we are making bridges, when we are having rail and road transport being developed in the country on the very fast speed to cater the growing population.

We cannot really say that, we will not really consider the inclusiveness in our public private partnership projects. So, when public sector support is crucial for the success of public private partnership we cannot really... we cannot really say that we are not really supportive, like in case of the second example, which was discussed in this lecture we have seen that how government of Tamil Nadu was supportive to have the finalization of the projects. When we are looking for make in India initiatives and some more initiatives like digital India and other things we cannot really continue with old infrastructure. We cannot really depend on the previous infrastructure. We have to look for the new way of developing the infrastructure and continuing with the previous one with some better maintenance. So, in this connection the entire discussion, which we had on the PPP, how a failure or success example of the PPP tells us that, what precautions we have to take? And, how to really consider the new projects when we are looking for more investment?

And when we are looking for making India more vibrant country in terms of manufacturing, we cannot really ignore the public private partnership model and it is

high time like today I was hearing that Indian railway just started 500 new stations... renovating or making new stations with the help of public private partnership. This is one of the welcome step. Because, we are ignoring public private partnership in Indian railway for many years, but at the same time if government is really looking for some proactive steps from the private sector, we have to provide them some opportunity to be the partner in our infrastructure development and public sector is no more public sector which we had in 1970 and 60. The size of the public sector has to be reduced, because the cost of running those public sector enterprises and the organizations are becoming very tough for the government.

So, to manage those costs and to maintain the quality of the infrastructure it is indeed important to maintain the quality of public private partnership. I hope this discussion will certainly help you to understand how certain public private partnership helps and certain public private partnership is really helpless when the expectation, when the cost calculations, when the feasibility study is not really good. At the same time, when the projects are not really well supported by the government.

Thank you.