

**A Study on Project Financing of PPP Based Infrastructure
Projects with Special Reference to 'Translink Infrastructure
Consultants Private Limited'**

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Comments by the Faculty

Infrastructural development is vital to the growth and expansion of an economy especially India. A well-functioning infrastructure overcomes the impediments to growth and development of economies across the globe. Infrastructure includes roads, ports, railways et al. The present study is focused on preparing a feasibility report for development of roads. This project is carried out by M/s Translink Infrastructure Consultants Private limited for their client which is one of the pioneers in executing infrastructural projects successfully. The study has employed various tools to study the feasibility of a road project. Tools such as Net Present Value (NPV), Internal Rate of Return (IRR), and Pay Back Period were used to study the viability of the project. Other tools such as Economic Value Added (EVA), Return on Invested Capital (ROIC) were used to study the financial performance of the project. The key learning of the author from the study is in understanding the complexities involved in estimating cash flows, application of capital budgeting tools in evaluating project proposals, the intricacies in a Public Private Partnership (PPP) model projects. The managerial implication of this study is taking a final call on the feasibility of the project based on the calculations and projections of the author.

(* The client name, the data analysis and tables have been withheld for reasons of confidentiality)

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Introduction

According to the Heads of the Multilateral Development Banks and the IMF "Infrastructure is key to tackling poverty and promoting inclusive growth. Infrastructure helps improve access to basic services, especially for poor people, links producers to markets and connects countries to the opportunities in the global economy. Well-functioning infrastructure is essential to overcome bottlenecks to growth in emerging and developing economies, and as an enabler of private sector led growth. No country has developed without access to well-functioning infrastructure. At a time when the outlook for global growth is disappointing, investment in infrastructure can play an important role in boosting short-term demand, as well as bolstering longer-term supply capacity."

India has been an infrastructure-starved country - be it roads, ports, railways, airports, power generation or distribution facilities, irrigation facilities, access to telecom infrastructure or even the very basic housing and sanitation infrastructure. The need for sustainable infrastructure development can hardly be overstated at this critical juncture when more and more people enter the workforce every year in search of jobs that presents us with a 'demographic dividend'. This is because infrastructure is not only critical for the movement of labor and capital across the length and breadth of the country but also is instrumental in basic development as well as in increasing the speed of doing business.

The development of highways, ports, bridges, public transport, railways, telecommunications, fisheries harbors and irrigation are important for an economy's rapid development. An efficient transport system is a pre-requisite for sustained economic development. It is not only the key infrastructural input for the growth process but also plays a significant role in promoting national integration, which is particularly important in a large country like India. The transport system especially roads also plays an important role of promoting the development of the backward regions and integrating them with the mainstream economy by opening them to trade and investment. In a liberalized set-up, an efficient transport network becomes all the more important in order to increase productivity and enhancing the competitive efficiency of the economy in the world market.

Among the various modes of transport that connect the cities and villages of the country, road transport constitutes the crucial link. Road infrastructure facilitates movement of men and material, helps trade and commerce, links industry and agriculture to markets and opens up backward regions of India. In addition, the road system also provides last-mile connection for other modes of transport such as railways, airports, ports and inland waterway transport and complements the efforts of these modes in meeting the needs of transportation. The growth in the importance of road transport within the transport sector is borne out by its growing share in GDP. The share of road transport in GDP is presently 3.69% which accounts for a major share of all transport modes which contribute 5.5% to GDP and handles more than 60 percent of the freight and more than 85 percent of the passenger traffic in India.

In the light of these it is imperative to grow the road networks in India and for a growing country like India It is important for private sector to collaborate with the government to develop infrastructure projects to have the most important component- Financing. The objective of the present study is to analyze the Project financing of PPP based infrastructure projects with major focus on roads and to prepare a financial feasibility model for Translink Infrastructure Consultants Pvt. Ltd.

The Government of India defines Public Private Partnership as an arrangement between a government / statutory entity / government owned entity on one side and a private sector entity on the other, for the provision of public assets and/or public services, through investments being made and/or management being undertaken by the private sector entity, for a specified period of time, where there is well defined allocation of risk between the private sector and the public entity and the private entity receives performance linked payments that conform (or are benchmarked) to specified and pre-determined performance standards, measurable by the public entity or its representative.

About the Company

Translink Infrastructure Consultants Pvt. Ltd. is a modern progressive consultancy that endeavors to provide expert consultancy services in areas of Transportation Engineering. The objective of Translink Infrastructure Consultants Pvt. Ltd. is to introduce the latest techniques and provide professional consultancy in multi-disciplinary areas such as Traffic Engineering, Toll Road Services, Transportation Planning & Economics, and Road Safety. Translink have future vision for spreading out the consulting services in ITS, Highway & Bridge engineering and Building & Architecture sectors through quality and commitments.

Methodology

Data Collection

Data is collected for traffic across various categories for the base year and it is done through various civil engineering tools of traffic survey like CVC, Axle load survey etc. Final vehicle count for all categories like two wheeler, three wheeler, Cars, 2 Axle, HMV etc are found out.

Period of Study

The study is conducted for a period of 30 years typically which can go more or less depending on the specific projects and DPR requirement specification by government. Base year data is been calculated based on the Engineering tools and then it is projected and estimated for the period for which it has been decided to study.

Tools Employed

For the technical information and data, certain civil engineering tools were used. For example to do traffic survey CVC, Axle load survey etc., were done.

To do the financial feasibility of the project, certain accounting and corporate finance techniques

have been used to prepare important statements like, depreciation schedule, Interest during Construction (IDC) and others. Techniques such as, NPV, FIRR, IRR, ROIC, EVA, MVA, Payback period, Discounted payback period etc has been used to study the feasibility of the project. The ROIC gives the clearest picture of exactly how efficiently a company is using its capital, and whether or not its competitive positioning allows it to generate solid returns from that capital. Typically, if the project has an ROIC in excess of 15% for a number of years, it most likely has a balanced backup to prevent the project under any unusual circumstances. That said, whether a company is creating value depends on whether its ROIC exceeds its cost of capital. Economic value added is the value generated from funds invested in a project. It gives a very important indication- If the economic value added measurement turns out to be negative, this means a project is destroying value on the funds invested in it. It is essential to review all of the components of this measurement to see which areas of a project can be adjusted to create a higher level of economic value added. If the total economic value added remains negative, the project should be shut down.

Sensitivity analysis technique was used to check the feasibility under different scenarios and how returns are affected under various scenarios. Graphical representations of various important values were charted to show the trends to make appropriate decision.

Analysis and Interpretation

Traffic and Toll rates were calculated for base year and then projected for 30 years based on the traffic growth rate and WPI respectively and expected income from the project is calculated. The project cost incurred is calculated by taking cost incurred, associated overhead and additional expenditures for miscellaneous on the preparation of infrastructure plus the interest accrued on the debt and interest accrued during construction. Thus incurred cost and expected income are calculated to get to final Result.

Cash Flow is calculated in usual terms of cash flow from operation, cash flow from investing, cash flow from financing. Cash flow from operations is calculated by taking profit after tax and adding back depreciation. Cash flow from investing is zero till date for PPP projects as there are no investing activities undertaken for such projects. Cash Flow from financing activities consists of Cash Inflow from Loan, Cash outflow towards Loan, Cash outflow towards External Loan, Cash Inflow from Equity, Cash Inflow from External loan, Cash Inflow from Annuity, Cash Outflow from Annuity. Adding all the three activities gives the final cash flow. All the cash flows are projected for a period typically 30 years based on the assumptions provided by government circular and private player participation norms.

Results of tools used for analysis has criteria for FIRR on Project Investment, Debt Service Coverage Ratio (DSCR), Net Present Value (NPV), Benefit Cost Ratio (BCR), Net Benefit Cost Ratio (NBCR), Discounted Payback period, Payback period and ROIC. NPV gives the net outflow from the project at current date. IRR shows the return generated from the project when net cash outflow becomes equal to the total cash invested considering the time value of money aspect and taking appropriate present values. These values are matched across expected requirements from the project and accordingly viability of project is decided. The debt service coverage ratio measures the ability of project to service its current debts by comparing its net operating

income with its total debt service obligations. The debt service coverage ratio takes into consideration all expenses related to debt including interest expense and other obligations. This is very important for creditors as they not only want to know the cash position and cash flow of a company, they also want to know how much debt it currently owes and the available cash to pay the current and future debt.

Major Findings and Conclusion

The project faced few difficulties while implementation like whether depreciation should be calculated on the asset, reverse lookup, automation of various functions, appropriate calculation for toll rates, number of lanes of roads, toll structure for structures like bypass, tunnel etc. Major findings include Cash flow expected from the project, free cash flow available to the Firm, Economic Value Added, Return on Invested capital, NPV, IRR, payback, Discounted Payback. These factors give an indication of the financial feasibility of the Project and the return on invested capital and the incentives for Private Player.

Based on the above findings the financial feasibility is determined with the Project NPV and IRR in two scenarios, with government grants, and without government grant. The above calculation gives us few important findings like, NPV gives net cash outflow from the project and IRR gives the expected rate considering the cash outflow equal to cash inflow at present date. A **typical conclusion** will be like- “Based on the above assumptions, financial forecasts and the project evaluation parameters, it may be concluded that the 4 laning of Modi Nagar-Mirpur section from km 16.000 of NH-75 to km.236.000 of NH - 3 in the State of Jharkhand on DBFOT Toll basis achieves 15% Equity IRR with a grant of Rs. 40.79 Crores (i.e. 40.66 % of the total project cost). In case no Grant is assumed, the Equity IRR works out to be 13.11%”.

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