USE OF PFI AS A TOOL FOR DELIVERING TRANSPORT INFRASTRUCTURE IN DEVELOPING COUNTRIES: THE SRI LANKAN CONTEXT

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ABSTRACT

PFI is generally advocated as a solution for the common problems of public sector finance shortage, debt crisis and reduced external borrowing capacities that are faced by many developing countries in delivering infrastructure projects. The overriding case in favour of PFI in this regard is the view that many public sector projects would not be initiated without the availability of private finance. Although the advantages seem many in a theoretical aspect, the implementation of PFI projects, especially in the transport infrastructure sector, in many developing countries, has presented numerous practical problems and has more often than not, met with failure. This paper therefore, critically explores this issue, by examining the country-specific as well as project-related conditions that ultimately caused the failure of adopting PFI as a procurement system for delivering a toll-road project in Sri Lanka. The root causes for most of the obstacles faced, which could be common to other developing countries as well, mainly include the country's prevalent political and economic situation, unpredictability of the transport markets and the culture of the society. The paper thereby offers practical lessons to other developing countries on implementation and application of PFI as a tool for procuring public transport infrastructure.

Keywords: Barriers; Culture; Developing Countries; Private Finance Initiatives (PFI); Transport Infrastructure.

1. INTRODUCTION

The government of Sri Lanka is now facing the herculean task of rebuilding the North and East parts of the country following the conclusion of a war lasting nearly three decades. The shortage of public financing is one of the major obstacles facing the government in achieving this. The scale and structure of huge infrastructure requirements combined with the shortage of public sector financing, growing debt crisis and reduction of external borrowing capacity have compelled many developing countries to shift their focus towards PFI in infrastructure projects (Jefferies *et al.,* 2002). PFI is a type of Public-Private-Partnership (PPP) where project financing rests mainly with the private sector. It seeks to combine the resources of the private sector with the public sector in order to provide a more efficient service to the public (Akintoye *et al., 2003)*. As pointed out by Rasila (2006), the Sri Lankan government has been actively encouraging private sector investment in infrastructure on PFI basis, especially in telecommunication and energy sectors due to their less risky nature. Five telecommunication projects, 11 small-scale power plants and one port development project were implemented through PFI in Sri Lanka. However, attempts to deliver a much larger scale road project (a high speed link between the Port of Colombo and the Bandaranaike International Airport in Katunayake) were met with failure. The main aim

of the research on which this paper is based on was to explore the reasons behind the failure of this project, which if successfully implemented would have been the first ever toll road project in Sri Lanka. It was found that there were two root causes behind this failure; namely, the prevalent political and economic situation of the country and the culture of the society. The findings of the research would help take necessary actions to avoid the same pitfalls in considering PFI for transport infrastructure projects in the future.

2. LITERATURE REVIEW

2.1 Private Finance Initiatives

PFI is seen as attractive in terms of the potential benefits it may bring to local economic development in the regions where the facility is built and the services are delivered. Local employment opportunities are enhanced, not only for the direct construction and operational activities associated with the project, but also for ancillary services and businesses established by entrepreneurs eager to exploit the opportunities created by its location (Ezulike *et al*. 1997, p. 179). Internationally, and particularly in developing countries, PFI is seen as attractive in terms of its capacity to achieve the transfer of technological knowledge to local enterprises. Project procurement is arranged so that private sector partners with the desired technological expertise from more developed nations are enticed into joint venture type agreement with local companies (Sundong and Tiong 2003, p. 471).

2.2 The background of the project

In 1982, the investment promotion arm of the government of Sri Lanka (GOSL) proposed constructing a high speed link between the Port of Colombo and Bandaranayake International Airport at Katunayake. The main objectives of implementing this project was to serve the traffic to and from the Northern part of the island, link with the rapid industrial expansion in the area and encourage outward migration of people living under congested conditions in and around Colombo. The proposal was resurrected by the Road Development Authority (RDA) in 1989 due to the huge increase of traffic volume (an increase of 250% from 1980 to 1990) along the existing Colombo – Negombo A3 road. According to the RDA statistics, in 1995, certain parts of the A3 road carried 40,000 vehicles per day (with approximately 2500 vehicles per hour during the peak periods). The average speed was approximately 18km/hr. The annual increase of the traffic demand was predicted to be 8% per annum. Therefore, the cabinet approval was granted on August 23, 1995 for the construction of the Colombo-Katunayake Expressway (CKE).

The proposed 4-lane divided expressway is approximately 24.6 km in length with complete access control and a direct tolling system, includes 4 interchanges at Kelaniya, Peliyagoda, Ja-Ela and Katunayake, 2 major bridges, 18 minor bridges, 13 over bridges, 6 underpasses and drainage structures. The facility is designed to cater for speeds of 110 km/hr. Tolls were to be collected from each vehicle and this was expected to be around Rs. 50 to 75. The road traverse predominantly marshy and water logged areas and the embankment was to be constructed using 4.7 million cubic meters of sea sand.

3. RESEARCH METHODOLOGY

According to Yin (1994), when a phenomenon of interest requires detailed and in-depth information, a qualitative research approach is the best suited technique. Since this research essentially requires interpreting and studying the current context, qualitative approach, consisting of a single case study design was used to achieve the aforementioned aim of this research. Data was collected from multiple sources to triangulate the data for the purpose of reducing inconsistencies and confirm results from more than one source. Consequently, the interpretation would be stronger because it comes from different sources.

3.1 Data collection

It was important to first collect the information that already exists in files, reports, and publications. This included a wide range of written material, such as, annual reports, cost benefit analysis, Contract documents, other administrative documents, web sites negotiation reports and, newspaper clippings. This helped gain background information about the project and reduced the amount of new, primary information that had to be collected through interviews. Furthermore, the information thus collected helped in developing questions when collecting data through interviews.

Altogether 11 semi-structured interviews were conducted, which constituted the main source of primary data gathered. The interviewees consisted of Project Engineers and Project Directors from the top 3 PFI bidders (selected by the GOSL after evaluating RFQs), Engineers from the Technical Consulting organisation, as well as officials from related government authorities. Snow ball technique was used to recognize and select the interviewees. However, this presented the problem that more often than not one person in a particular organisation tends to recommend people with same opinions. To avoid this, different people (for instance from different organisation levels) were interviewed in the same organization with different opinions to ensure that any findings were not based on data coming from "one side" only.

The questions for the semi-structured interviews were formulated before the interview and were sent to the interviewees so they can be prepared with the responses. The responses from one respondent were revealed to the other to get his/her opinion on the other's responses. The interviews were recorded and later transcribed providing a basis for detailed analysis. To increase the reliability of the information gathered same items were sometimes repeated with the intention of getting the same answer twice and thereby confirm its reliability.

These different sources were important in double-checking and verifying information collected from each source, thereby increasing validity. The information collected through these multiple sources were stored methodically and systematically in formats that can be referenced and sorted.

3.2 Data analysis

Manual code based content analysis was used to analyse the collected data and to determine the failure factors and root causes for the failure of applying PFI in CKE project. Data analysis consisted of three activities as described below.

1. **Data reduction** ***(i.e. the process of selecting, focusing, simplifying, abstracting, and transforming the data in written-up field notes and recorders)***

2. **Data display** ***(which is the organised, compressed gathering of information that allows conclusion drawing and action)***

3. **Conclusion drawing/ verification data reduction** ***(Inducting of meanings from the data and testing for their plausibility, sturdiness, and validity)***

4. FINDINGS AND DISCUSSION

When analysing the information gathered it became apparent that the GOSL and the concessionaires were able to reach a consensus with regard to the 'build' part of the agreement. The main disagreements lay on the operation of the toll road by the selected concessionaire. There were reasonable doubts on the part of the concessionaires on their ability to recover the total project cost plus profit from the toll revenue.

4.1 Impediments Identified and Suggestions to Overcome

The factors identified as resulting in the failure of implementation of PFI system in the CKE project through data analysis, could be presented under five categories as follows.

4.1.1 Political risk

This includes risk of continuous political support and policy changes which impeded concessionaires from taking the operation responsibility of the CKE. The foreign contractors were uncertain on the actions of the coming governments. There were concerns about termination of the concession agreements, imposition of taxes/regulations that severely damage the project's value to investors; not allowing the collection of tolls as specified under the concession agreement; prevention of earnings transfers out of the country; or not allowing for contract disputes to be settled fairly under neutral jurisdiction. However, there was agreement on the part of the GOSL to provide compensation in the case of violation of the concession agreement. Nevertheless, the private concessionaires perceived a significant risk in the ability to obtain compensation in the event of a coming government's violation of the concession agreement, which included the willingness and creditworthiness of coming government to provide compensation

There was no firm legal framework for PFI projects in place that could have helped mitigate the above mentioned uncertainties arising from government and policy changes. Further, there were no multilateral or bilateral credit enhancements to guarantee the government's obligations under the concession agreement and provide protections for investors ensuring cash will be available to pay compensations.

4.1.2 Traffic revenue risk

CKE being the first toll road project in Sri Lanka, the foreign concessionaires had uncertainties regarding the willingness of users to pay tolls. The willingness to pay tolls is mainly affected by the wealth of the users, their attitudes and the value they assign for time saving. It is the prevalent attitude among the general public that the use of public transport infrastructure is free of charge. Thus, paying tolls for using a public road (let along paying tolls to a foreign party) necessitated a significant change of attitude of the general public. Education of the general public was necessary in achieving this change of attitude. Education should be provided on the real meaning and benefits of the PFI arrangements, difference between the privatization and PFI, and on the importance (or the necessity) of PFI schemes for the infrastructure development of the country.

Further, as per the Sri Lankan regulations, it is necessary to have an alternative road for every toll road implemented. Therefore, the concessionaire also had a doubt on their ability to draw traffic away from the existing Colombo-Negombo A3 road to CKE. The foreign concessionaires have requested a minimum traffic revenue guarantee from the GOSL during negotiation sessions to mitigate the traffic revenue risk.

The concessionaires also had distrust on the accuracy of the traffic forecasting carried out by the GOSL. There were disagreements on factors such as, land use, population growth along the route, public acceptance and use of the expressway, and various economic indicators used in traffic models. Some respondents suggested using refining methodologies, empirical equations and cross-checking by at least one independent consultant for improving the long term accuracy of traffic volume estimates.

Another important concern of the concessionaires with regard to traffic revenue risk was the possibility of the governments imposing limitations on increasing of toll rates with the inflationary economic environment in the country. There were disagreements as to whether these toll rate adjustments should be left to the discretion of the GOSL or be based on a formula that is usually linked to changes in some price index. Hence, it is important to establish a straightforward, transparent, fair, and binding Toll Adjustment Mechanism by both parties. If traffic and therefore, revenue falls below a forecast volume, the operator will be allowed to a reasonable toll increase. Conversely, if the amount of revenue received by the operator is above the forecast, toll increase will be postponed. This approach gives the concessionaire security in the project's ability to achieve a minimum return on the equity investment.

4.1.3 Financial risk

The main impediment which discouraged foreign investors from financing the CKE project was their uncertainty with regard to the financial policies the GOSL. There were risks of the GOSL restricting the

repatriation of profits by imposing taxes. Another main negative feeling was the unexpected increases in the construction cost due to the inflationary economic environment which will seriously affect the economic plan of the concessionaire. Introducing a firm legal framework for the PFI arrangement to avoid influences of the government policy changes was the main solution proposed to encourage foreign investors to finance for the CKE project. Respondents also suggested expanding the concession operation period or compensating the concessionaire by GOSL to cover the increases in the construction cost due to inflation.

Another major impediment pointed out by the respondents was the exchange rate risk. If the value of the Rupee was to fall below the expected exchange rate, it will not be able to pay the return on investor's foreign currency for his capital. The proposal was to mitigate exchange rate risk by indexing the toll rates to local inflation rate or to the exchange rate of the investor's foreign currency. They recommended to use consumer price index as the inflation index and adjustments to be made according to a fixed schedule.

4.1.4 Disagreements among upper level politicians

It was found that there were strong disagreements among the upper level politicians regarding the foreign concessionaire's operation of the CKE during the concession period. There were several reasons for this objection. Under the PFI arrangement, toll revenue handling is completely with the foreign concessionaire for the agreed period. During this concession period politicians have no control over the toll revenue. In addition there was also the concern that foreign operation of CKE would make a bad public impression of the government similar to privatization, which could lead to adverse affects during elections. Respondents also believed that when the top level decision makers' impression is bad towards the foreign contractor's operation, the lower level educated people also have to agree on their decisions even their own opinion is not the same. Therefore, it is essential to educate politicians on the benefits of having a PFI arrangement for realizing the CKE project.

4.1.5 Unavailability of a strong local financial market

Local financial market is not strong to finance for the whole project, due to high project cost and long payback period, although they will receive annual interest payments. Therefore, the project has to be financed by the foreign investors. So as mentioned under the financial risk, if there are local financial sources to invest for CKE project it will facilitate to reduce the effect of the currency risk.

4.1.6 Unavailability of Sound macroeconomic environment

According to the respondents, a favourable macroeconomic environment is crucial for attracting finance and thereby limit the need for the government to undertake a majority of the project risk. But in Sri Lanka there is a high inflationary economic environment. This discouraged most financing sources from investing in this project. Further, this added on to other impediments discussed earlier such as, revenue risk, currency risk and financial risk due to construction cost increases.

4.1.7 Lack of Government involvement: providing guarantees

Concessionaires proposed a supposed a variety of mechanisms (i.e. Equity Guarantees, Debt Guarantees, Exchange rate Guarantees, Grants, Subordinated Loans, Minimum Traffic Revenue Guarantees, Shadow Tolls, Revenue Enhancements and Concession Extensions) to support their financings. If the government provided guarantees for the PFI concessionaries, most of the impediments such as political risk, traffic revenue risk and financial risks could have been minimized.

4.1.8 Other unfavourable conditions

According to respondents, CKE bidders expected to involve in irrigation and hydropower sectors for concession contracts while staying in Sri Lanka by operating the toll road. But in negotiation sessions they understood that they will not be able to realize their long term plans due to public resistance to pay tariff for infrastructure facilities. On the other hand foreign concessionaires did not prefer to stay for a

long operation period in Sri Lanka due to the terrorist problem. Respondents also pointed out that the foreign concessionaires do not like to live in such an uncertain environment for a long period even though it is possible to have an insurance cover.

However, some of the factors identified by researchers in other countries as impediments to implementing PFI were found to be not present in the CKE project. These included factors such as, lack of appropriate skills, high project costs, lack of credibility, prolonged negotiation periods, and completion risk. Furthermore, it was identified that factors such as, proper project identification, thorough and realistic cost benefit assessment, capacity of the project promoter, attractive financial package, acceptable toll or tariff levels, technology solution advantage and transparency in procurement process and reasonable risk allocation, which could be considered as facilitators for implementing PFI were present in this project.

4.2 Root Causes for Failure of PFI

Analysis of the above identified factors causing the failure of implementing PFI in CKE project revealed three Root Causes; namely, unfavourable political and economic environment in the country, conservative society and inaccurate traffic forecasts which are explained below.

4.2.1 Unfavourable Political and Economic Environment in the country

This resulted in impediments such as, uncertainty on continued political support, risk of government policy changes, inflationary economic environment, issues relating to toll handling, the terrorist problem and the inability of having duty waivers.

The construction industry in Sri Lanka, as in many other developing countries, is affected by the national policies of the political party that comes into power. It is the general practice to implement new policies and practices when a new government comes into power abandoning the policies and procedures of the previous government. Governments can change government expenditure and taxation through fiscal policies and money supply and interest rates through monetary policies. Further, the government can change grants and subsidies, productive enhance measures, tax concessions and financial incentives by imposing supply policies. Thus, considering the life span of the project, the concessionaire runs the risk of less supportive political plans and policy changes with the changes in government.

Furthermore, the foreign concessionaires expected duty waivers for their imports during the concession period. However, the government refused to provide such facilities. Therefore, it is important to educate politicians on the importance of having flexible procedures as well as collaboration between both government and concessionaire to form a proper PFI agreement.

The terrorist problem of the country added on to these problems, making the concessionaires reluctant to stay in the country for long periods to operate the toll road.

4.2.2 Conservative society

Public perception towards tolling, Competition from existing A3 road , Inability to realizing long term plans by the concessionaire and Inaccuracy on traffic forecasting can be seen as resulting from having a Conservative Society.

The people of Sri Lanka and most other developing countries are used to having the benefit of using the infrastructure services free of charge. Therefore, there was an obvious difficulty in changing their attitudes towards paying money for the free services that they have received earlier. Further, due to financial problems, there is an uncertainty whether the people will opt to pay money for the use of the CKE or use the existing A3 road free of charge.

4.2.3 Lack of knowledge and understanding of the PFI concept

Finally, it was clear that the lack of understanding of the concept of PFI, especially amongst the upper level politicians and the general public was behind a number of the factors causing the failure of implementing PFI in this project. Therefore, it is clear that educating of both the general public and

politicians on the principles and benefits of PFI arrangements for the infrastructure development of the country is a necessary.

5. CONCLUSION AND FURTHER RESEARCH

The procurement history of the long awaited Colombo-Katunayake Expressway (CKE) project, presents the first Sri Lankan attempt at implementing PFI procurement process in road sector. This study revealed eight main impediments to implement the project on PFI basis as political risk, traffic revenue risk, financial risk, disagreements among upper level politicians, unavailability of strong financial marktets, unavailability of sound macro-economic environment, the lack of government involvement and other unfavourable conditions.

Uncertainty on the coming government's political support and government policy changes were the main causes for political risk. It was recommended that forming a comprehensive legal framework and getting support of multilateral or bilateral financial institutions was crucial in mitigating those risks. The traffic revenue risk, another significant obstruction for PFI, was mainly the result of public perception, competition from the existing A3 road, increase of tolls and accuracy level of the traffic forecasting. It was suggested to educate people on the benefits of PFI to make a better public impression.

Inflationary economic environment was the reason for the increase of tolls and it is proposed to implement straight forward, transparent, fair and binding toll adjustment mechanism to reduce the affect on concessionaires from inflation. It is also advised to use refining methodologies, empirical studies and cross checking by independent consultants to improve the accuracy of the traffic forecasting.

Grounds for the financial risk were the currency risk, uncertainty in policy changes and increase in construction cost. Currency risk was another result of the inflationary economic environment. Indexing toll rates to local inflation rates and/or to exchange rate of the foreign currency and involving local funding sources were the major recommendations for minimising the currency risk. Inflationary economic environment caused the construction cost increases and it was proposed to come up with a mechanism to either compensate the concessionaire or expand the concession period to mitigate this.

Fear of negative public impression, which can influence for elections and inability of handling toll revenue until the end of the concession period were the main sources for the disagreement among the upper level politicians on concessionaire's operation of CKE. As a remedying measure, it was proposed to educate politicians on the operating principles and benefits of PFI. Further, the concessionaires' were reluctant to stay in the country for long periods for operating the toll road due to the terrorist problem of the country and the inability of realizing their long term plans (for e.x. concession contracts for irrigation and power sector projects). Inability of having duty free waves from the GOSL for the imports of the concessionaire also was a negative factor.

The bidders of the CKE project were well established foreign concession contractors. Therefore, they were well equipped with appropriate skills and held good in house capacity. Hence, the impediments mentioned in the literature as lack of appropriate skills and high project costs, lack of credibility and contacts were not present in the CKE project. Conducted negotiations were not too lengthy and completion risk was not with the contractor because the government had already settled all public interferences against the project, environmental clearances, government approvals and land acquisition.

When comparing with the facilitators identified in the literature, proper project identification, thorough and realistic cost benefit assessment, high capacity of the concession contractor, attractive financial package, acceptable toll level, technology solution advantage, transparency in procurement process and reasonable risk allocation were present in the CKE project.

Through the analysis, three root causes were identified for the existence of the PFI failure factors as unfavourable political situation in the country and conservative society. Therefore it is important to educate both public and politicians on the benefits of having PFI arrangement for the infrastructure development of the country to eliminate the effect from the root causes for the CKE project

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