A Comparative Study of the Effectiveness of Private Financing Initiatives in Urban Transport Infrastructure Development in Metro Manila and Kuala Lumpur

By: Ma. Sheilah A. GAABUCAYAN,* Kenji DOI**, and Kazuyuki TAKADA***

1. INTRODUCTION:

Notwithstanding the last three years, this decade has seen tremendous economic growth in the Asian region. Consequently, this has lead to a rise in the middle income households in major cities which in turn has translated into augmented household vehicle ownership and increased mobility. With the rate of urban migration and expanding urban population, the need for travel has rendered the roads of cities like Kuala Lumpur (Malaysia) and Metro Manila (Philippines) heavily congested. Based on 1994 statistics, the number of vehicles per kilometer in these cities are 620 and 592, Although the modal share of public respectively. transport differs in each city as seen in Table 1, it has truly become necessary for these cities to develop massive urban public transportation infrastructure planning to meet the increasing demand.

Traditionally, two sources of funds have been tapped for these projects: Official Development Assistance or ODA and government revenues. However, it has been noted that the amount of ODA assistance to these countries have decreased in the last few years. Thus, the concept of private sector participation in financing of projects was explored. The private sector is involved in the planning and implementation of infrastructure plans through the concept of Private Finance Initiative or PFI.

It cannot be denied, however, that the implementation of mega projects, specially in the transport sector, has many pitfalls. As Allport¹ describes it, "few megaprojects are intrinsically profitable (i.e. the revenues are inadequate to fund capital, operating and asset replacement costs, and return a dividend to shareholders)." Despite this reality,

*Research Student, Dept. of Mechanical and Environmental Informatics, Grad. School of Information Science and Eng'g., Tokyo Institute of Technology

this has been an increasing convergence for increased private sector participation in Asia. Table 2 shows the extent of private sector participation in selected Asian countries

Table 1. Modal Share in KL and MM

Mode	KL (1997)	MM (1996)
Private Cars	47.5%	30%
Bus	24.4%	17.4%
Motorcycles	26%	0.7%
Rail	0.5%	2.2%
Others	1.6%	52.5%*

(* for MM, jeepneys constitute 39.1% of Others)

Table 2. Policy Convergence Towards Increasing Private Sector Involvement

Country	Comment
Malaysia	Strong, consistent commitment. Pragmatic implementation
Indonesia	Strong commitment. Little implementation
Thailand	Strong, consistent commitment. Implementation sometimes chaotic
Philippines	Strong commitment. Implementation sometimes chaotic.

Source: Roger Allport. Making Projects Happen in Asia (1998).

^{**}Associate Professor, Dept. of Mechanical and Environmental Informatics, Grad. School of Information Science and Eng'g., Tokyo Institute of Technology

^{***}Research Associate, Dept. of Mechanical and Environmental Informatics, Grad. School of Information Science and Eng'g., Tokyo Institute of Technology

The proponents of this paper chose the two mega cities in as much as the STAR LRT of KL is one of first, if not the first, successfully implemented rail transport projects in Asia. It is the intent of this paper to identify common key factors for success.

This paper likewise seeks to evaluate the potential complimentarity of Private Financing Initiatives (PFI) and Overseas Development Assistance (ODA) in the implementation of Urban Transport Infrastructure in developing countries. It shall attempt to investigate this complimentarity in the light of the experiences of the STAR LRT (KL) and LRT 3 (MM).

A cursory evaluation of the Privatization Policy in both countries yields the following similarities:

- It seeks to relieve the government of financial and administrative burden for major projects;
- (2) It seeks to improve efficiency in the delivery of basic public services where government capacities are over-extended:
- (3) It seeks to encourage private sector participation to introduce market-based efficiency in the management and operation of projects for the attainment of economic targets.

Private Sector Participation was conceived to ease the financial burden on the government without sacrificing the delivery of necessary services to the public.

2. PROJECT IMPLEMENTATION

This section shall investigate the project implementation strategies of STAR LRT (KL) and LRT 3 (MM). The former was implemented under the Build-Operate-Own Scheme (BOO) with a concession period of 60 years, subject to review after 30 years, whereas the latter is being implemented under the Build-Lease- Transfer Scheme (BLT) with a concession period of 25 years. Depth of planning differ for each project.

(1) STAR LRT

Based on two transport studies undertaken in Malaysia, the Kuala Lumpur Master Plan Transport Study (1979-1981) and Klang Valley Transportation Study (1986), it was identified that the introduction of a light railway transit system would be appropriate in four corridors, namely;

- North to Batu/Kepong
- Southwest to Petaling Java
- Southeast to Ampang/Cheras
- Northeast to Wangsa Maju

Thorough evaluation showed that the most viable corridor, from the financial and technical aspects, would be the Southeast corridor from Ampang to Jalan Sultan Ismail via Plaza Rakyat.

In April 1991, STAR submitted a proposal to the

government to implement a light rail system along the preferred route and negotiations started in July of 1991. The Build-Operate-Own arrangement for STAR included the following obligations of the key players:

STAR (CONCESSIONAIRE)

- Design, construct, equip, test, and commission the railway
- Finance the project
- Operate and maintain the railway
- Demand, collect, and retain fares from users of the railway;
- Carry out the activities pertinent to the provision of railway services and facilities within the site, subject to the prior written approval of the Government.

Table 3. STAR LRT Risk Chart

	CNTR	CONC.	GOV'T.
POLITICAL RISKS		x	x
Land Acquisition		x	x
Import License		x	x
Taxation			
ECONOMIC RISKS Foreign Exchange		x x	x
Interest Rates		X	
Inflation		•	
Construction			
Operations			
Cashflow Sensitivity		x	
Cost of Power Supply		x	
Fare Revenue		х	
Future Fares		x	x
TECHNICAL RISKS		x	x
Construction	x	x	
Operations		x	x
COMPLETION RISKS		x	x
Price and time		x	
Delay in Start-Up		x	х
Squatter Relocation		x	x
Contractor Default	x	x	
OPERATIONAL RISKS		x	x
Adequate Skilled Staff		x	
Feeder Bus			x
Safety		x	х
Power Supply		x	
Competition		x	

Source: Ghani, Z.A., Malaysia's First Privatised

Railway System – The STAR LRT

Table 3 shows the chart drawn to identify allocation of risks among the key players of the project, namely the Contractor (CNTR), the Concession Company (CONC), and the Government (Gov't).

Although the Government provided STAR with no written assurance for political risks, it provided fund to offset costs incurred for delays due to land acquisition. Likewise, imposed no import duties for any equipment or supplies that may be required by the project but are not manufactured in Malaysia. In terms of economic risks, the Government provided foreign currency hedging at commercial rates during the construction period.

(2) LRT 3

There are five identified corridors for Urban Railway Development. These are:

- LRT 1 Rizal -Taft Avnues
- LRT 2 Magsaysay Blvd. Aurora Blvd. Cubao-Katipunan route
- LRT 3 Epifanio De Los Santos Ave.
- LRT 4 Espana Quezon Ave. Commonwealth Ave.
- LRT 6 Buendia Zapote Route

The Capacity Expansion for LRT 1 as well as the construction for LRT 2 is funded by OECF. LRT 3 is funded through the Build-Lease-Transfer Scheme. LRT 4 and LRT 6, though to be funded through Build-Transfer – Build Operate-Own Scheme (BT-BOO), are still under negotiations.

In contrast to the thorough planning effected prior to and during the construction of STAR LRT, it is contended that the government of the Philippines gave up a lot of its control to the demands of the winning Concessionaire. in the guise of fast-track implementation (Santiago, 1993)². Responsibilities of LRT 3 were allocated as follows:

EDSA MRT Corporation (CONCESSIONAIRE)

- Design, construct, equip, test, and commission LRT3
- Deliver system to Department of Transportation and Communications (DOTC) by way of lease/purchase for over a period of 25 years during which DOTC will operate MRT system
- Provide technical management assistance and specific maintenance and repair service

DOTC (Government Entity)

Technical Supervision of the Project

.Highlights of the LRT3 Contract are as follows:

- Revenue guaranteed via a lease payment and commercial rights extend to depot.
- Common Carrier's Insurance at Government's expense

Due to the fact that the initial design was drawn by the private entity, LRT3 was conceived to be at-grade at most part. Thus, Government had to submit proposed changes as negotiation proceeded, otherwise the perceived benefit of having a rail transport in decongesting the roadways would be negated. The total project cost of the project has reached US\$655 Million, up from the original cost of \$160 M.

3. PROJECT STATUS

STAR LRT has started operations since December 1996 yet it has been evaluated to suffer from low ridership from projected figure. Possible factors contributing to this situation could be existing bus competition and lack of physical coordination.

On the other hand, LRT 3 is scheduled to be completed by year 2000. It is projected to have a capacity of 600,000 passengers per day with a total of 73 vehicles. However, based on the available studies on LRT 3 (Table 4), this may seem to be a very optimistic estimate.

Table 4. Available Studies on LRT 3

- 1. Metrorail Network Options Feasibility Study (1985), Electrowatt Eng`g.
- Assuming distance-related fare, same as bus Pax/day in 1990 430,941 Pax/day in 2000 768,294
- Assuming flat fare of P3.50 (US\$0.08) in 1985 prices

Pax/day in 1990 214,161 Pax/day in 2000 384,245

- MManila Urban Transport Dev't. Plan (1991), Dept. of Transportation and Comm.
 - Assuming flat fare of P4.50 (US\$0.11) in 1990 prices

Pax/day in 1996 267,260 Pax/day in 2006 577,000

- EDSA LRT Line F/S (1991), internal study of ALMEC Corp.
 - Assuming distance-related fare with 70% bus curtailment

Pax/day in 1998 527,140 Pax/day in 2010 583,705

- Assuming distance-related fare with full bus competition Pax/day in 1998 296,146
- Assuming flat fare at P4.50 (US\$0.11) in 1991 prices, full bus competition Pax/day in 1998 279,383

Source: Heresies of the BOT Kind, Rene Santiago, 1993

Based on the EDSA LRT F/S, the best scenario for LRT 3 is if there should be a 70% reduction of the buses plying the Epifanio De Los Santos Avenue. The next challenge would then be how to encourage the commuters to shift from buses to rail.

4. FUTURE DIRECTIONS

Despite the careful planning prior to the construction of the STAR LRT, it would appear that it still suffers from low ridership. On the other hand, LRT 3 which is projected to carry about 600,000 passengers per day may suffer the same fate. A further investigation of ridership figures and costing of each project shall be conducted to verify the hypothesis that the infrastructure and electro mechanical component of a rail project should be separated from the rolling stock components. Further, that infrastructure should be funded by the Government through ODA and operation of the transport system should be by the winning concessionaire.

REFERENCES:

- Allport, Roger J., Making Projects Happen in Asia: The Necessary Role for Government and the Feasible Role for the Private Sector. 8th World Conference on Transportation Research. July 1998. Antwerp, Belgium.
- Santiago, Rene S., Heresies of the BOT Kind: Lessons from Manila's LRT. 1st TSSP Conference, Philippines.
- Ghani, Zainal Abdul., Innovative Approaches to Financing Infrastructure Development in Malaysia. Public Transport International. 1998/3.
- Ghani, Zainal Abdul., Malaysia's First Privatised Railway System – The STAR LRT: A Case Study on Public-Private Partnership. Public Transport International. 1998/3.
- Mohamad, Jamilah. Private Financing Initiatives in Malaysia. Unpublished Paper. 1998.
- Galvante, Eleuterio Jr., Overview of Urban Rail Development in Metro Manila. Urban Rail Summit, Nov. 1998, Philippines