Short-term Railway Improvement Plan (1)

1) Improvement of Station Facilities

- Improvement of Station Plaza and Access Roads

  Station: Depok Lama, Citayam, Bogor, Tangerang Serpong

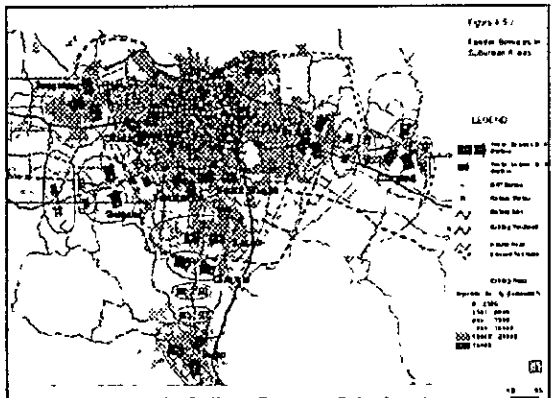
- Construction of Pedestrian Deck/Underground Passage

  Station: Cawang, Pasar Minggu Depok Lama

- Construction of Over-Track Station

  Station Cawang, Pasar Minggu Depok Lama, Bogor

- Raise/Extension of Platform and Improvement of Track Layout



Feeder Services for Railway System in Suburban Area

Short-term Railway Improvement Plan (2)

2) Reinforcement of Stabling Yard at Station Bogor

3) Rehabilitation of Electric Facilities

- Countermeasure of Lightning for Signaling
- Rehabilitation of Damaged Communication Facilities

4) Improvement of Level Crossing Equipment

Level Crossing on the Western and Eastern Lines

5) Procurement of Additional Electric Cars

32 electric cars shall be purchased to increase frequency

Cost Estimate for Short-term Railway Improvement Plan

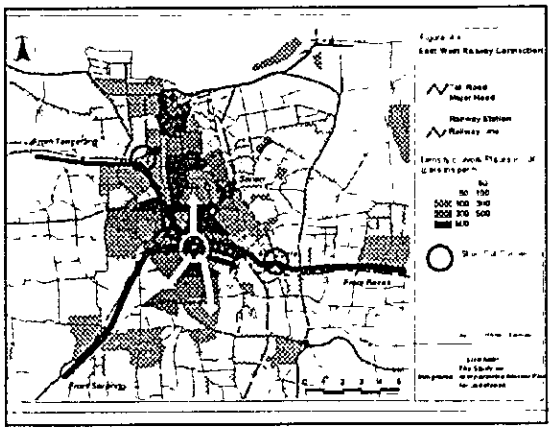
Item	million Rp
Station Facility Improvement	93,675
Countermeasure of Lighting for Signaling	37,437
Rehabilitation of Communication Facilities	121,192
Improvement of Level Crossing	52,329
Addition of Electric Cars (32 cars)	18,668
Total	323,501

Note: including Physical Contingency(10%) and Insurance (3.5%)

6) East-West Connection by Short-cut [Intermediate]

Serpong Line and Western Line (Dukuh, Manggarrai)
Tangerang Line and Western Line (Dukuh, Manggarrai)

Item	million Rp
Short-Cut on Tangerang Line	111,856
Short-Cut on Serpong Line	73,633
Subtotal	185,489
Physical Contingency (10%) and Insurance (3.5%)	25,696
Total	211,185



Short-term Bus Transport Improvement Plan

1) **Reformation of Bus Operation Regime**

- Specification of Bus Service
- Fare Collection System
- Bus Operation Monitoring System (Bus Location System) for 35 buses – demonstration project

Control Center Facility	Rp. 900 million
Software	Rp 1853 million
On-board Unit (35 units)	Rp. 3150 million
Bus Stop Display	Rp. 1350 million
Overhead (20%)	Rp. 1451 million
Total	**Rp. 8,703 million**

2) **Bus Priority Corridor Development**

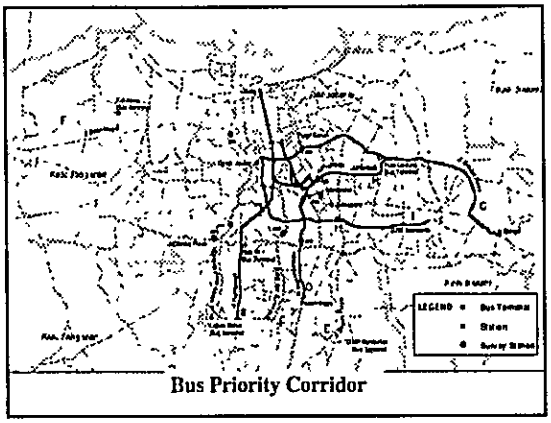
Introduction of Busway, Bus Priority Lane

a Jl. Pemuda/ Jl. Pramuka corridor (11.4 km)
Rp. 7,903 million

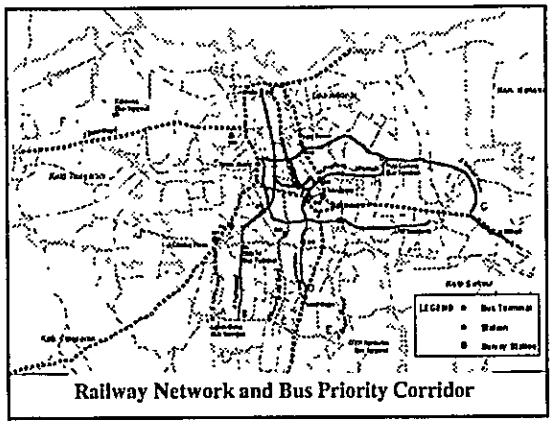
b. Jl. Sudirman and Jl. Thamrin corridor (8.2 km)
With flow case: Rp. 8,436 million
(Contra flow case: Rp. 6,230 million)

3) **Bus Priority Signal System**

4) **Bus Route Restructuring**



Bus Priority Corridor



Railway Network and Bus Priority Corridor

Trunk Bus System (Example)

Short-term Road Development Projects/Program

- Kota Bogor Ring Road Project (4.06 km)
  Rp. 36,664 million
- Jakarta – Bekasi Connecting Road Project (4.13 km)
  - DKI Rp. 18,142 million
  - Bekasi Rp. 12,328 million
- Establishment of Metropolitan-wide Road Network Master Plan

Traffic Control and Management Measures (1)

1) Traffic Signal Improvement

- Upgrading of the existing signals
- Signal coordination
- Review of signal phasing and timing
- Rehabilitation of existing signals
- Installation of additional signals

2) Traffic Control Devices

3) Geometric Improvement

4) Pedestrian Facility Improvement

5) Traffic Information System

Traffic Control and Management Measures (2)

6) Alleviation of Traffic Congestion at the Specific Points

a) Tomang Intersection in DKI Jakarta
b) Ciledug Intersection in Kota Tangerang
c) Ciputat Area in Kabupaten Tangerang
d) Tambun Intersection in Kabupaten Bekasi

Soft Measures to be implemented in Short-term (1)

1) Traffic Restraint Scheme

Road Pricing, Parking Restraint Policy

2) Short-term Environmental Improvement Plan

3) Traffic Safety Enhancing Program

4) Development of Urban Transportation Planning Database System

Soft Measures to be implemented in Short-term (2)

5) Human Resource Development

- Traffic control and signal system
- Vehicle inspection system
- Prevention of air pollution
- Database management
- GIS-aided land use planning and control system

Urban Development related to Transportation

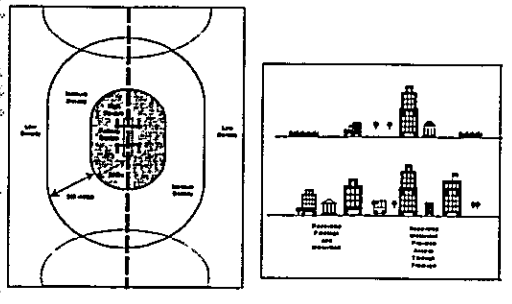
(1) Land Use Zoning

Land use zoning to guide future land development is a tool to induce the desirable urban structure geared toward for promoting rail-based transport passengers. The effects would take long time but the action can be taken in short term. E.g. Special Development Zone

(2) Capture of Development Benefit

Methodology for capturing development benefits incurred from railway developments should also be taken into consideration E.g. Involvement of landowners in transportation system development.

Special Development Zone (SDZ)



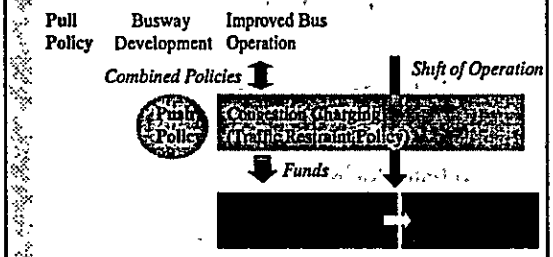
Institutional Set-up

Establishment of Jabotabek Transport Authority (tentative)

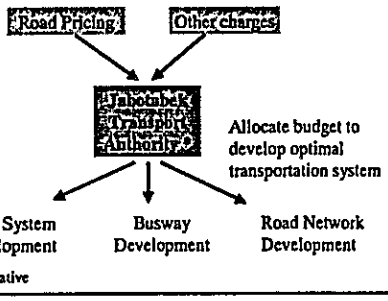
1) to make consistent metropolitan-wide transportation system development plan

2) to manage and control transport demand in the region

* to prevent the existing public transport users from shifting to private modes of transport



Fund Raising Mechanism for Integrated Urban Transportation System Development



Urban Transport Demonstration Projects

(Study Team's Proposal)

1) Bus Demonstration Project

2) Railway East-West Direct Operation and Improvement of Accessibility (Feeder Bus Service)

3) HOV* Lane on Inter-Regional Expressway
*HOV; High Occupancy Vehicle

Terima Kasih

Appendix 3

Review on Land Use and Integrated Transportation System: Some Principles

Prof. Kusbiantoro (Institute of Technology Bandung)

Institutional Set-up

Establishment of **Jabotabek Transport Authority** (tentative)

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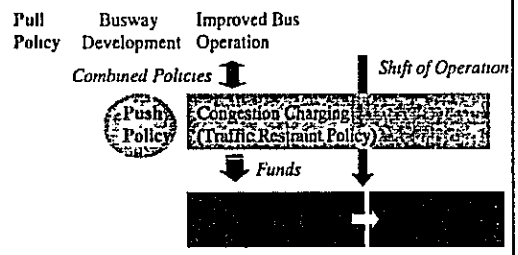
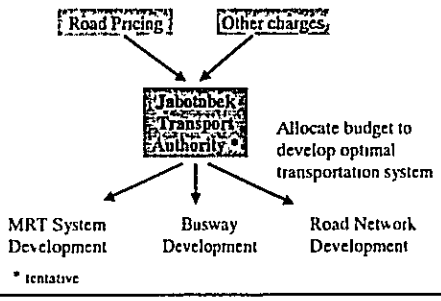


Fund Raising Mechanism for Integrated Urban Transportation System Development



Urban Transport Demonstration Projects

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Terima Kasih

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Review on Land Use and Integrated Transportation System: Some Principles

Prof. Kusbiantoro (Institute of Technology Bandung)

Review on Land Use and Integrated Transportation System: some principles

BS Kusbiantoro - ITB

Towards an Integrated Transportation System for Jabotabek, Bappenas-JICA, Jakarta, 3 April 2001

Introduction

- LU and Transportation Systems
- Integrated LU and Transportation System
  - Jakarta & Botabek
  - Type A & Type B Land Use
- Integrated Railway/MRT and LU System
- Integrated Planning in the Era of Autonomy
- Pre-condition

LU and Transportation Systems

Jabotabek

- Jakarta: tertiary oriented activities (pax trip >> freight)
- Botabek: secondary oriented activities (freight; pax = commuter)

Land Use

- Type A: relatively well established (e.g. north-south corridor); trip = relatively high
- Type B: relatively not yet well established (e.g. east-west corridor); future trip = high

Integrated Land Use and Transportation System (1)

- Jakarta = tertiary activities
  - passenger > freight; hi access inter city centers; hi access to other cities (regional-national-international); airport, etc.
  - LU within centers = compact, hi rise building, mixed LU, mixed groups => toward "zero" transportation within centers
- Botabek = secondary activities
  - freight = hi access to other cities (reg-nat-int); seaport, etc
  - LU = economic & social facilities/services => toward "zero" commuting trips

Integrated Land Use and Transportation System (2)

Type A = relatively well established

- LU = limited changes; limited additional passengers=> too low for new MRT/railway
- existing railway = hi/low access to the supporting road network; develop/improve the related stations, etc.
- existing road network = restructure road hierarchy; mixed traffic/artery -- artery-collector-local; exclusive bus lane(s)
- new road network = bottleneck areas

Integrated Land Use and Transportation System (3)

Type B = not yet well established

- LU = potential for urban renewal / redevelopment; hi density; hi rise building; mixed LU; mixed groups
  - within sub-center = "zero" transportation
  - inter sub-centers = hi trip volume
- MRT/railway = variety of LOS; supported by door-to-door facilities/services
- road network = supporting MRT/rail network; car restricted zone

Integrated Railway/MRT and Land Use System: Jakarta (1)

Type A (established)
- restructure the existing road/railway network -- artery-collector-local, bus exclusive lanes, car restricted zones, etc.
- restructure the LU where possible

Type B (not yet)
- urban renewal/redevelopment (compact, etc.) along the MRT/railway corridors
- restructure the supporting road networks -- a door-to-door MRT/railway system (including access to airport, etc.)

Integrated Railway/MRT and Land Use System: Botabek (2)

Fright
- access industrial zones/areas to other areas / regions (raw materials, market, etc.)
- integrated regional road-rail-seaport-airport networks (railway, JORR, etc)

Passenger
- toward self sufficient areas/cities -- supported by economic-social facilities-services
- improve existing railway facilities/services
- restructure supporting road network (development impact fee for collector provision, etc.)

Integrated Planning in the Era of Autonomy (1)

- LU & transportation = system => integrated system among regions (daerah otonom)
- unequal distribution of cost/benefit among the related regions
- benefit cost analysis -- as a tool for negotiation / compensation scheme

Integrated Planing in the Era of Autonomy (2)

- Benefit Cost Analysis
  - sum of individual plans/programs (do nothing) vs an integrated plan/program
  - benefit/cost for each region
- Forum / Communication
  - integrated plan/program
  - negotiation/compensation scheme
  - participation, transparency, etc.

Pre-condition

Political support & commitment
- integrated LU and transportation system
- PPCP - including mass media

Supporting resources
- legal aspects, e.g. incentive scheme, etc.
- organization & human resources, e.g. forum / communication, etc.
- finance, e.g. integrated plans, forum, etc.

Leadership
- head of the forum; mayor; bupati; gubernur; other(s) ?

Appendix 4

Review of Public Transport Improvement Plans

Dr. Heru Sutomo (Gadjah Mada University)

INTRODUCTION

- The main problems in public transport system are poor quality of services, including:
  - safety
  - comfort
  - reliability
  - accessibility
  - efficiency
- Licensing system that still opens the possibility for corruption and collusion
- A new strategy is envisaged to reform the existing system

URBAN BUS INDUSTRIES

- Most urban bus transport services are provided under the *Wajib Angkut Penumpang* (or WAP) system.
- The large number of smaller buses (24 seats and less) proof less effective especially when the fleet size decreasing. The problem of capacity to meet patronage becomes very serious.
- Bus operations running in deficit although it may not be evidently proofed by figures.

EXISTING BUS ROUTES IN JAKARTA AND JABOTABEK

- The routes may have served a major part of DKI Jakarta, but the effectiveness of each route is still questionable. The route structure is not very obvious.

- The heavily terminal based routes put extra pressure on terminal operation. In many cases the capacity simply exceeded.

OPERATIONAL PERFORMANCE

- The average headway at 20 minutes in peak hours seems to be too high. More frequent services required.
- The access to the nearest bus service is 300 m but this must be thoroughly checked.
- The current service still offer high transfer route (58%). This becomes unattractive since passengers have to pay full rate for each transfer ride.
- The average travel time of bus users has risen from 2 hours (1990) to 2,3 hours nowadays. This indicates slower speed (average 10,6 km/hour). A priority scheme is called for.
- The average load factor is around 60%. But the bus patronage cannot be determined because no ticket system is in use.
- Load factor of public transport in Jakarta is 129,1 %.
- According to DLLAJ and Land Communication until January 2000, vehicle availability of public transport in Jakarta from large bus, medium bus and mini bus is 67,9%.
- The average travel distance per day of bus in Jakarta is 264 km with average passenger 683 persons per day.

PUBLIC TRANSPORT REGULATIONS

- Unclear and no-competitive licensing system contributes to poor, no responsive services.
- The more authority is now given to local government including public transport tariff, provision and operational aspects. It is a good opportunity to modernize bus operation because the existing system is practically mismanaged and miss regulated.

- The fares are generally low, especially after the crisis when the exchange rate of US Dollars is approximately three times more than before crisis.

- Some root problems revealed includes: high operating cost (due to old bus), absence standard of bus and services towards bus crews, absence of timetable and tickets system.

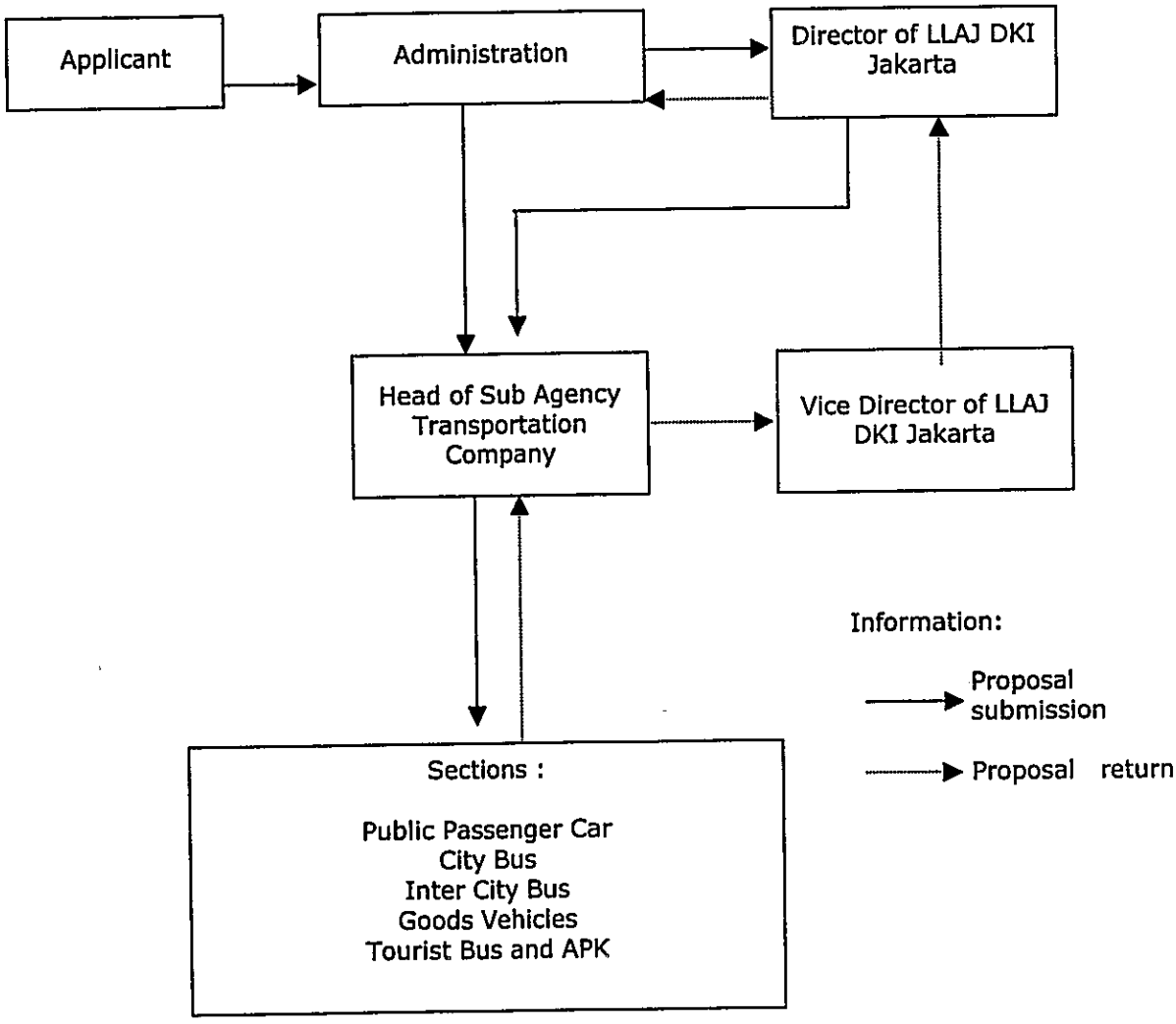


Figure Procedures for Lane Licensing/Lane Transferring and Monitoring Card and Lane License Inter City Inter Province Procedure

Table Operational Problems in Urban Bus Transportation in Jakarta

PROBLEMS	POSSIBLE CAUSES (ROOT PROBLEMS)
1. Poor service quality (the buses)	1. Lack of bus maintenance because the spare parts are too expensive 2. Old buses still operate (bus age $\geq$ 10 years (54% large bus, 93% medium bus and 79% small bus) 3. Bus too crowded because bus crew trying to get maximum income 4. Bus travel speed is too slow ($\pm$20 km/hour) 5. Unclear specification of service standard 6. Low revenue 7. Low commitment from management 8. Overloaded, no time for maintenance
2. Poor service quality (the crew)	1. Unclear specification of service standard 2. Crew's income is not sufficient 3. Lack of monitoring 4. Unhealthy competitive between transport companies
3. Ineffective bus lanes	1. Other vehicles also use the bus lanes 2. Bus lane only being use in peak hour 3. Weak Enforcement 4. Bus stopping is used by street vendors
4. Overlapped routes	1. Licensing still influenced by transport industries, causing many unserved routes 2. Improper routes design 3. Low capability of route planner

Continued

PROBLEMS	POSSIBLE CAUSES (ROOT PROBLEMS)
5. Buses stop outside the terminal	1. Reduce terminal time 2. Passengers usually concentrate outside the terminal 3. Waiting place is used by street vendors 4. Lack of monitoring
6. Route violation	1. Too long and winding routes 2. Low patronage 3. Technical capability of officers still low 4. Weak enforcement
7. Bus racing	1. Crew's income is not sufficient 2. Unhealthy competitive among transport companies 3. Over supply, too many empty bus especially in off peak hour 4. Mismanage on operation strategy
8. Over crowded bus	1. Headway too long 2. No time table in use 3. Fixed number of buses 4. Level of peak too high

Continued

PROBLEMS	POSSIBLE CAUSES (ROOT PROBLEMS)
	5. Unhealthy competitive between transport companies 6. Lack of monitoring 7. Crew's income is not sufficient
9. Unable to issues tickets	1. Lack of monitoring 2. Crew's income is not sufficient 3. Passengers usually ignore tickets 4. No cost for tickets production 5. Public do not realized about the obligation using the tickets
10. Irregular bus stopping	1. Lack of monitoring 2. Passengers stop the bus not at the bus stop 3. No time table in use 4. Crew's income is not sufficient
11. Excessively long stop	1. No time table 2. Unclear time of operation 3. WAP system 4. Lack of monitoring 5. Operational interference by "preman" 6. Low revenue/patronage

PROBLEM DIAGNOSIS

- Public transport planning as part of urban planning is not always properly prepared by local authority.

- Limited personal capacity and planning tools and no monitoring or evaluation normally conducted.

- The absence of public transport vehicle physical standards coupled with weak vehicle testing system has made poor quality of buses in operation.

- The absence of standard on quality of services has made bus crew to run the service without a clear standard of service.

- Owner who also operates the bus tend to not to comply with the operational specification such as headway, regularity and availability.

Appendix 5

The Experience of Railway Development in Japan

Mr. Yoshiaki MURATA (JICA Advisory Team)

The experience of railway development in Japan

Deputy Director
International Affairs Office, Railway Bureau
Ministry of Land, Infrastructure and Transport

Yoshiaki Murata

Apr. 2001

1

Management System of Urban Railways in Japan

- National Railway
  - →JR Group
- Private Sector
- Public Sector
- Teito Rapid Transit Authority
- *Third Sector

*Third Sector refers to stock companies in which regional government, relevant railway companies and general private sector enterprises provide capital.

2

History of Teito Rapid Transit Authority (TRTA)

- Construction of subways requires enormous funds.
- However, their profitability is low.

↓

- It is impossible for private companies to construct subways due to the difficulties of raising adequate funds.

↓

- TRTA was established through joint investment by the national government and Tokyo Metropolitan Government in order to maintain underground transit.

3

The role of government in the construction of urban railways

Central government

- ◆ Preparation of a master plan for a railway network by a city area
- ◆ Adjustment to wide-area city planning
- ◆ Provision of subsidies and low-interest financing for railway construction

Regional governments

- ◆ Adjustment to city planning
- ◆ Expenditures and financing for railway construction

4

Urban railway projects are very difficult to manage

The role of government is important

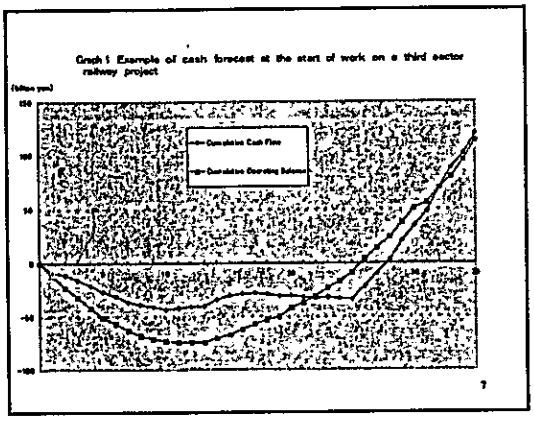
- ◆ Cooperation with various city businesses

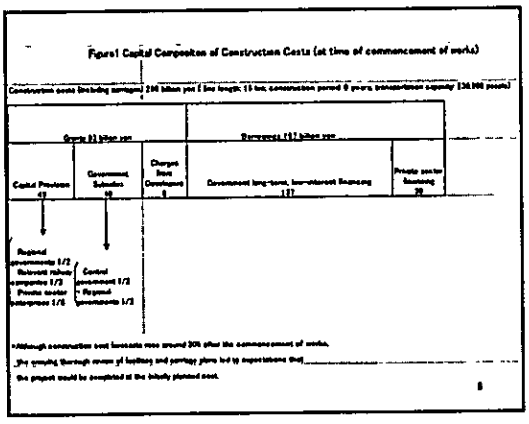
5

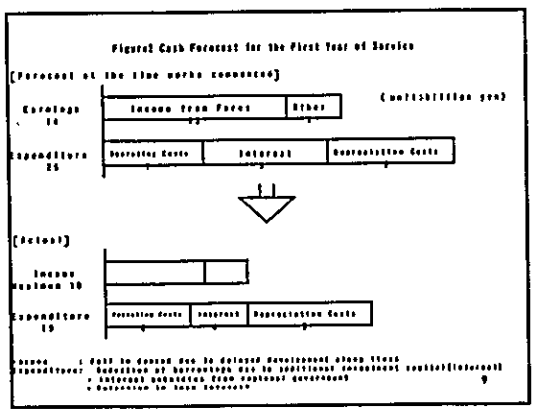
Issues of urban railway construction (case study)

Saitama Railway Corporation

6







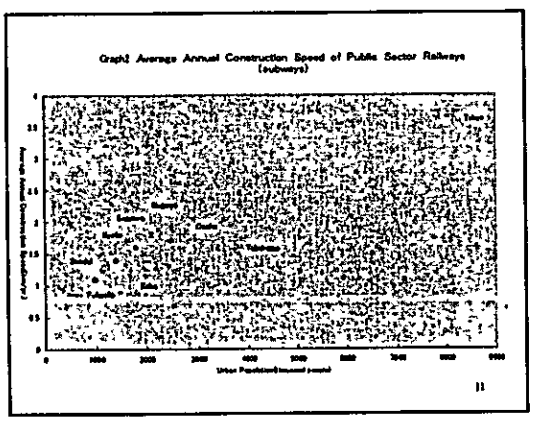
Crisis faced through projects

- ◆Rise in construction costs
- ◆Decline in demand

Extrication from the crisis through the following measures

- ◆Strict control of construction costs and the term of work
- ◆Additional financial assistance mainly from regional governments

10



Conclusion

Point of success on urban railway construction projects

- ◆Stable long-term and low-interest funds for ten years after the opening are secured
- ◆Central and regional governments cope with projects decisively

12

Appendix 6

Review of Jakarta MRT Project

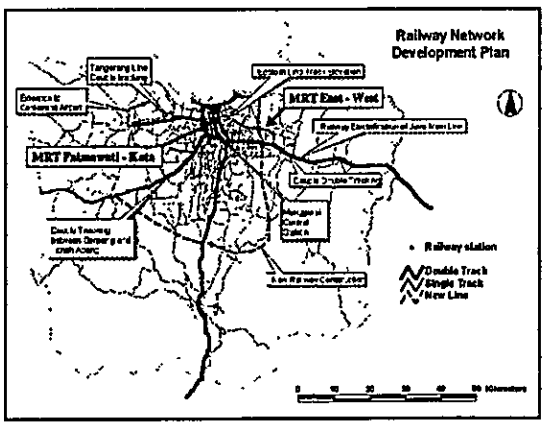
Mr. Isamu GUNJI (Team Leader, JICA Study Team)

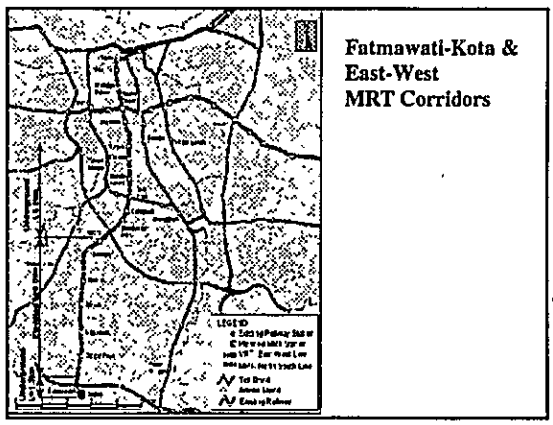
Review of Jakarta MRT Project

JICA Study Team
April 11, 2001

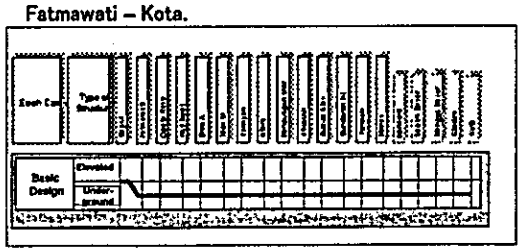
History and Background of Jakarta MRT Project

(1) Consolidated Network Plan by Inter-Department Working Group in February, 1993 (Fatmawati – Kota New Railway Line)

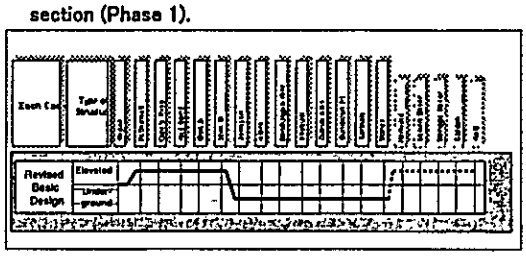




(2) 1997 Basic Design
Prepared by DKI Jakarta and private sector Indonesian-Japanese-European Group (IJEG) and which proposed a full underground guide-way system between Fatmawati – Kota.

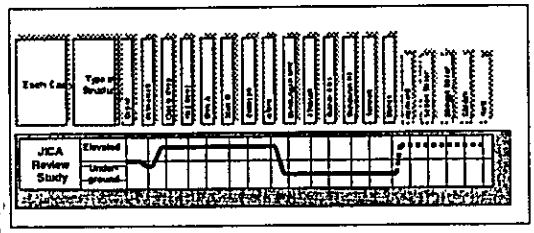


(3) 1999 Revised Basic Design
The monetary and economic crisis in 1997 directly hit the DKI-IJEG MRT plan. In order to reduce the initial investment, the Revised Basic Design was prepared by MOC/JTCA by introducing the elevated structure to the southern part of the Fatmawati – Monas section (Phase 1).



(4) 2000 JICA Study Review Result of Revised Basic Design

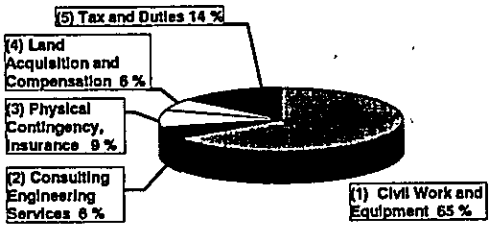
Further efforts to reduce the initial investment cost were made by avoiding the steep vertical alignment over the existing JORR in Fatmawati and adverse environmental impact on Fatmawati Hospital and its surrounding settlement.



MRT Project Cost Estimate (in 2000 prices)

Major Cost Components	Cost (Trillion Rp.)	Composition (%)
(1) Civil Work and Equipment	9 0	66%
(2) Consulting Engineering Services	0 8	6%
(3) Physical Contingency, Insurance, etc.	1 2	9%
Sub-total (Engineering Base Cost)	*11.0*	*80%*
(4) Land Acquisition and Compensation	0 8	6%
(5) Tax and Dubes	1 9	14%
Sub-total (GOI Contribution)	*2.7*	*20%*
Total (Project Base Cost)	13.7	100%

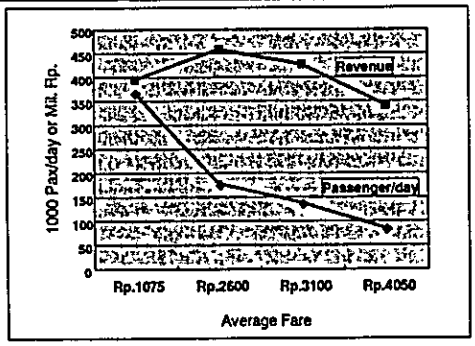
% Composition of MRT Project Costs



Projection of 2005 MRT Ridership and Revenue against Varied Fare Levels (without enhancement measures)

Fare Structure		Total Pax/day	Pax.-Km/day	Revenue	Average
Access Charge	+ Dist. Prop	($x10^3$)	($x10^3$)	(mil. Rp/day)	Fare
(1) Rp. 500	+ Rp. 100 /Km	368	2110	395	Rp 1075
(2) Rp. 800	+ Rp 325 /Km	177	975	458	Rp.2600
(3) Rp. 800	+ Rp. 425 /Km	137	746	427	Rp 3100
(4) Rp 1000	+ Rp 575 /Km	84	447	341	Rp.4050

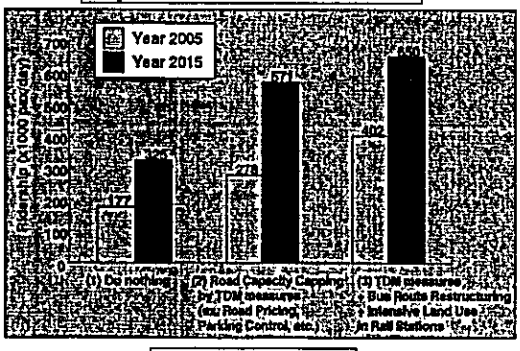
Projection of 2005 MRT Ridership and Revenue Against Varied Fare Levels



Projection of MRT Demand in Different Scenarios (at an average fare level of Rp.2600/ride)

Enhancement Measures	Ridership (x 1000 pax/day) Year 2005	Year 2015
(1) Do nothing	177 (100)	325 (100)
(2) Road Capacity Capping by TDM measures (ex. Road Pricing, Parking Control, etc.)	278 (157)	571 (176)
(3) TDM measures + Bus Route Restructuring + Intensive Land Use in Rail Stations	402 (227)	650 (200)

Projection of Future MRT Demand



Economic and Financial Internal Rate of Returns (IRRs)

	Demand Scenario*		
	(1)	(2)	(3)
Economic IRR	7.5%	13.2%	14.1%
Financial IRR	Negative	Negative	Negative

Note*:
Demand Scenario (1) No enhance measure is taken
Demand Scenario (2) Road Capacity Capping by TDM Measures (ex. Road Pricing, Parking Control, etc.)
Demand Scenario (3) TDM Measures + Bus Route Restructuring + Intensive Land Use in Rail Stations

Intangible Benefits other than the quantified cost savings in vehicle operation costs and time costs are:
- *Reduction of traffic accidents*
- *Reduction of air pollution*
- *Indirect development benefits along the direct influence area*
- *Short-term increase in job opportunities by the MRT Project*

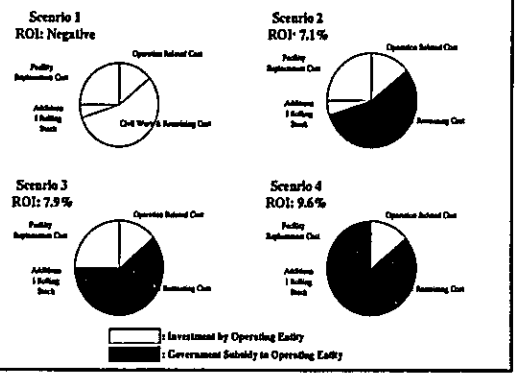
Life Cycle MRT Project Cost (Demand Scenario 3)

(Unit: Trillion Rupiah in 2000 price)

Initial Investment Cost			Life Cycle Additional Investment Cost			Life Cycle Total Investment Cost	Life Cycle Operation & Maintenance Cost
Operation Related Costs*	Civil Work & Remaining Costs	Sub-Total	Additional Rolling Stock	Facilities Replacement Cost	Sub-Total		
2.7	11.0	13.7	1.1	4.9	6.0	19.7	12.5
(20%)	(80%)	(100%)	(18%)	(82%)	(100%)	-	-
(14%)	(56%)	(70%)	(5%)	(25%)	(30%)	(100%)	-

Note*: Including platform facilities, rolling stock, power supply & distribution system, workshop equipment, safety & security systems, signaling & train control systems, communication system, SCADA system, control center, etc.

ROI and Investment Scenario of Operating Entity



ROI by Combined Scenarios of Investment and Passenger Demand

Investment Scenario* (% Share of Life Cycle Invstment by Operating Entity)	Demand Scenarios (Demand in 2005)		
	(1) No Enhancement Measures (177,000 pax/day)	(2) Road Capacity Capping by TDM (278,000 pax/day)	(3) TDM, Bus Rerouting & Intensive Land Use (402,000 pax/day)
(1) 100%	Negative	Negative	Negative
(2) 44%	4.2%	6.4%	7.1%
(3) 39%	5.1%	7.6%	7.9%
(4) 14%	7.1%	9.4%	9.6%

Investment Scenario 1: Life Cycle Total Investment Costs
Investment Scenario 2: Operation Related Initial Investment and Additional Rolling Stock & Replacement Costs
Investment Scenario 3: Operation Related Initial Investment and Replacement Costs
Investment Scenario 4: Only Operation Related Initial Investment Cost
*: Annual Operation and maintenace costs are assumed to be fully shouldered by Operating Entity

Cash Flow Analysis: The First Year of Positive Cumulative Cash Flow

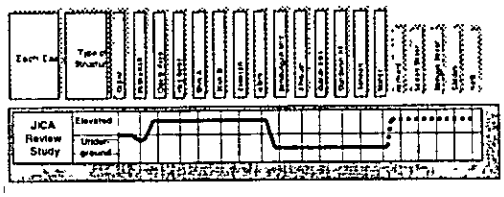
Investment Scenario* (% Share of Life Cycle Investment by Operating	Demand Scenarios (Demand in 2005)		
	(1) No Enhancement Measures (177,000 pax/day)	(2) Road Capacity Capping by TDM Measurers (278,000 pax/day)	(3) TDM, Bus Rerouting & Intensive Land Use (402,000 pax/day)
(1) 100%	-	-	-
(2) 44%	-	2030 (23rd year)	2008 (1st year)*
(3) 39%	-	-	-
(4) 14%	2025 (18th year)	2009 (2nd year)	2008 (1st year)

Note*: Temporal negative figures of cumulative cash flows appear when additional investments are required in 2017, 2025 and 2028. However, these negative cash flows are recovered in the following

Assumed Financing Conditions for Operating Entity:
(1) Equity Debt Ratio: 30% - 70%
(2) Terms and conditions of lender to GOI: 40 years repayment with 10 years grace, and a rate of interest 0.75% p.a
(3) On-lending conditions to operating entity: 40 years repayment with 10 years grace, and a rate of interest 5.0% p.a.

(4) 2000 JICA Study Review Result of Revised Basic Design

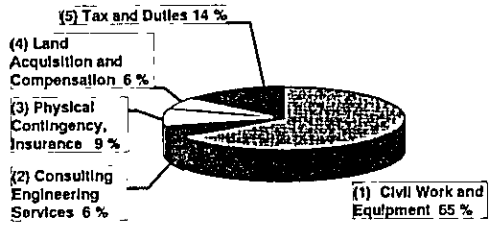
Further efforts to reduce the initial investment cost were made by avoiding the steep vertical alignment over the existing JORR in Fatmawati and adverse environmental impact on Fatmawati Hospital and its surrounding settlement.



MRT Project Cost Estimate (in 2000 prices)

Major Cost Components	Cost (Trillion Rp.)	Composition (%)
(1) Civil Work and Equipment	9 0	66%
(2) Consulting Engineering Services	0 8	6%
(3) Physical Contingency, Insurance, etc	1 2	9%
Sub-total (Engineering Base Cost)	*11 0*	*80%*
(4) Land Acquisition and Compensation	0 8	6%
(5) Tax and Duties	1 9	14%
Sub-total (GOI Contribution)	2 7	*20%*
Total (Project Base Cost)	13 7	100%

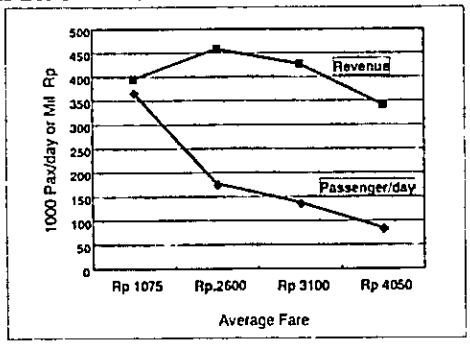
% Composition of MRT Project Costs



Projection of 2005 MRT Ridership and Revenue against Varied Fare Levels (without enhancement measures)

Fare Structure		Total Pax/day	Pax. Km/day	Revenue	Average
Access Charge	+ Dist Prop	($x10^3$)	($x10^3$)	(mil. Rp/day)	Fare
(1) Rp 500	+ Rp 100 /Km	368	2110	395	Rp 1075
(2) Rp 800	+ Rp 325 /Km	177	975	458	Rp 2600
(3) Rp 800	+ Rp 425 /Km	137	746	427	Rp 3100
(4) Rp 1000	+ Rp 575 /Km	84	447	341	Rp 4050

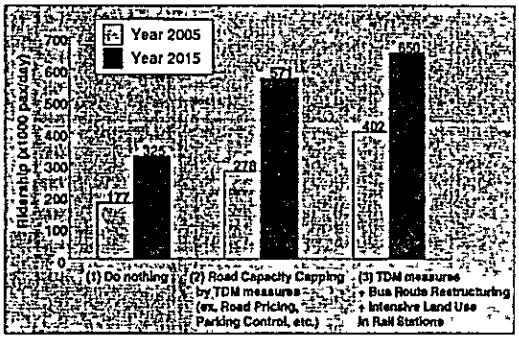
Projection of 2005 MRT Ridership and Revenue Against Varied Fare Levels



Projection of MRT Demand in Different Scenarios (at an average fare level of Rp.2600/ride)

Enhancement Measures	Ridership (x 1000 pax/day) Year 2005	Year 2015
(1) Do nothing	177 (100)	325 (100)
(2) Road Capacity Capping by TDM measures (ex Road Pricing, Parking Control, etc)	278 (157)	571 (176)
(3) TDM measures + Bus Route Restructuring + Intensive Land Use in Rail Stations	402 (227)	650 (200)

Projection of Future MRT Demand



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Intangible Benefits other than the quantified cost savings in vehicle operation costs and time costs are
- *Reduction of traffic accidents*
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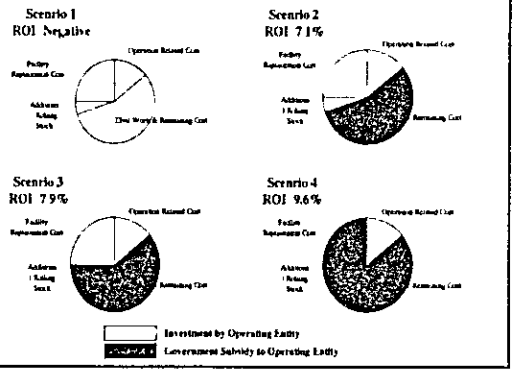
Life Cycle MRT Project Cost (Demand Scenario 3)

(Unit: Trillion Rupiah in 2000 price)

Initial Investment Cost			Life Cycle Additional Investment Cost			Life Cycle Total Investment Cost	Life Cycle Operation & Maintenance Cost
Operation Related Costs*	Civil Work & Remaining Costs	Sub-Total	Additional Rolling Stock	Facilities Replacement Cost	Sub-Total		
27	110	137	11	49	60	197	125
(20%)	(80%)	(100%)	(18%)	(82%)	(100%)		
(14%)	(56%)	(70%)	(5%)	(25%)	(30%)	(100%)	

Note*: Including platform facilities, rolling stock, power supply & distribution system, workshop equipment, safety & security systems, signaling & train control systems, communication system, SCADA system, control center, etc.

ROI and Investment Scenario of Operating Entity



ROI by Combined Scenarios of Investment and Passenger Demand

Investment Scenario* (% Share of Life Cycle Investment by Operating Entity)	Demand Scenarios (Demand in 2005)		
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* Annual Operation and maintenance costs are assumed to be fully shouldered by Operating Entity

Cash Flow Analysis: The First Year of Positive Cumulative Cash Flow

Investment Scenario* (% Share of Life Cycle Investment by Operating	Demand Scenarios (Demand in 2005)		
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Assumed Financing Conditions for Operating Entity
(1) Equity Debt Ratio: 30% : 70%
(2) Terms and conditions of lender to GOI: 40 years repayment with 10 years grace and a rate of interest 0.75% p.a.
(3) On lending conditions to operating entity: 40 years repayment with 10 years grace and a rate of interest 5.0% p.a.

Conclusion and Recommendation

(1) Absolute Financial Support by GOI, sharing more than 80% of the Initial Investment Cost

(2) Strong Political Will and Consensus among the People to have a great financial contribution by GOI

(3) Low Lending Terms to GOI for the Long-term Loan such as Special Yen Loan

(4) Minimal On-lending Conditions by GOI at less than 5% p.a. to Operating Entity. The higher the on-lending rate to the operating entity, the higher the share of investment cost should be borne by GOI

(5) Absolute Necessity to Effectively Execute Enhancing Measures to Encourage the Use of MRT

Issues and Policy Measures on Jakarta MRT Project

(A) Reduction of Public Funding

(Equity Investment by private sector)

(B) Revenue Increase

(C) Appropriate Tariff for MRT

(1) Maximum Fare Revenue of MRT

(2) Necessity of Deliberated Tariff Policy on Public Transport

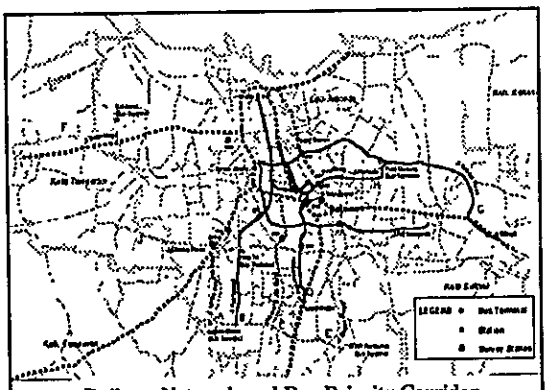
(3) Necessity of Public Funding

(4) Sharing of Public Funding

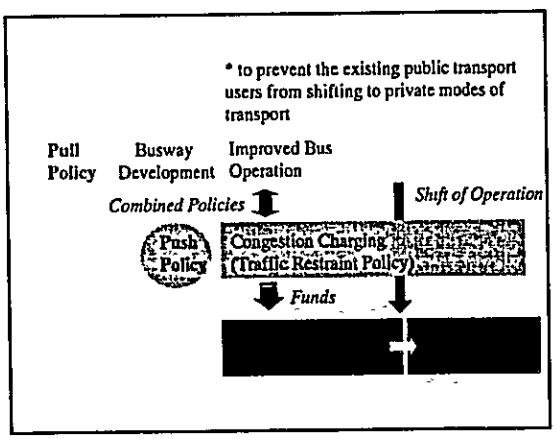
(5) Expected Increase in Equity Investment by DKI Jakarta

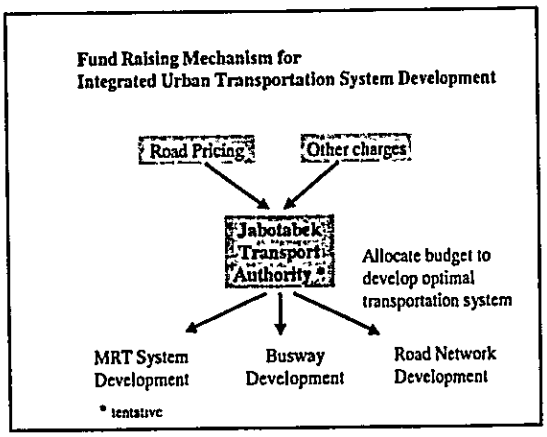
(6) Revenue Incentives to Private Sector

(7) Assurance of MRT Ridership



Railway Network and Bus Priority Corridor





Appendix 7

Review on the Jakarta MRT Project: Financial and Economic Analysis

Dr. Sidharta Utama (University of Indonesia)

Review on the Jakarta MRT Project: Financial and Economic Analysis

April 3, 2001

Siddharta Utama, PhD CFA
Master in Accounting Program,
University of Indonesia

Outline

- Review on assumptions: revenue and cost
- Potential risks
- Review on share of government funding
- Review on the capital structure of the operating entity

Characteristics of the MRT Project

- The nature of public good
  - Externalities: external benefits (e.g., reduced travel time, travel congestion, pollution, etc) are much higher than private benefits (in term of ticket revenues)
  - Require government participation (how much?)
- Long-term investment
  - Employ long-term sources of financing

Review on Assumptions: Demand Growth

- Growth assumption
  - No enhancement measures: Growth rate between 2008-2038: 6.3%/year, zero afterwards.
  - Passengers/day in 2008 174400 (8.1% of passengers passing MRT corridor).
  - Passengers/day in 2038. 1084300 (24.1%)
    - Assuming 2.5% annual growth of passengers passing MRT corridor.
  - Too optimistic?
    - The impact of economic crisis
    - Slower growth in the south-north corridor.
    - Plan to distribute economic activities to other areas in Jabotabek

Review on Assumptions: Pricing and Target Market

- Assume that price is adjusted for inflation
  - Past experiences show that price is sticky.
- Assume that 'the market pool from former bus users depends on tariff level'
  - Non price factors should also be considered
    - e.g., reduced travel time, security, on-time schedule, condition of MRT
  - MRT users may still need to use buses to reach their destinations.
- Target market Patas AC users
  - Rather limited
  - Private mode the number of passengers are higher and they bring more economic benefits

Review on Assumptions: Costs

- The assumption of exchange rate (USD 1.00 = Rp. 7950 and Yen 1= Rp. 75) at present condition is unrealistic.
- More than 50% of the costs are in term of foreign currency (i.e., Japanese Yen).
- Using the current exchange rate, the cost would increase by 1.15 trillion to 14.83 trillion rupiah.

Potential Risks

- Demand risk
  - Enhancement measures are crucial
- Price risk
  - Government commitment to guarantee inflation adjusted price
- Cost risk
  - Exchange rate risk
    - Minimize import content of the project
    - Sharing the risk (e g., with the creditors and suppliers)
    - Hedging

Potential Risks

- Cost risks (after operating)
  - Operating leverage: relatively large fixed expenses
    - Proportion of variable expenses should be increased.
  - Financial leverage: relatively large interest expenses
    - Interest expenses is tied to the amount of revenue.

Review on share of government funding

- Objective: Minimizing government funding while allowing the operating entity a reasonable return.
- Given the external benefits, investment scenario 1 is not considered.
- Investment scenario 2: '... help foster stronger responsibility and management of the operating entity in the future.'
- Investment scenario 2 demand scenario 2 or 3: provide reasonable rate of return.

Review on share of government funding

- Share of government in investment scenario 2 demand scenario 3: 72%.
- Is it appropriate?:
  - Compare present value of economic savings and present value of revenues
  - Share of government funding should approximate the share of present value of economic savings.

Review on the capital structure of the operating entity

- The proposed capital structure: 70% debt 30% equity.
- Using this structure, only demand scenario 3 and investment scenario 4 results in positive net cash flow after servicing LT-debts in all operational years.
- Further, in all scenarios the fixed coverage ratios (especially in early years of operation) are fairly low – high default risk.

Review on the capital structure of the operating entity

- The debt to equity ratio may need to be lowered.
- Or, the interest payment is tied to the revenue generated.
- The debt should be in Rupiah.

Appendix 8

Review on the Jakarta MRT Project: Social Impact

Mr. Dody Prayogo (Universitas Indonesia)

Review on the Jakarta MRT Project: Social Impact

Mr. Dody Prayogo, Universitas Indonesia

I. Regional inequality

Urban bias and unequal development: One of the main concerns of development in Indonesia is "urban bias development", and Jakarta is the prime national growth pole which previously have main priority for facilities from central government. As a consequence, unequal development among regions have resulted pressures from other regions and outer Indonesia for decentralisation and local autonomy.

Fairness on cost burden: if the cost burden of MRT is provided by the central government, it will politically "unfair " for other regions. The cost burden should primarily be provided by the local government and the users, "who get benefit should pay the cost". It will be unfair if citizen of other regions will pay the cost for the development of MRT in Jakarta, particularly under state policy of decentralisation and local autonomy.

Sources of funding: Meanwhile MRT for a metropolitan city of Jakarta is basic and urgent and it seems other solution is absent. Therefore, there should be other financial resources to be provided. There are some alternatives, for examples

- General progressive tax system,

Progressive private car tax system (particularly luxuries and number of private cars), since main source of traffic congestion is private cars,

Cross subsidy from other related resources, such ad CBD and real estate areas which have direct/indirect benefits from the MRT,

- Commercial income etc.

II. Public's attitude

The main concern of public attitude toward a project is public participation. It is remarkable under current political circumtances, public participation is principle and cannot be neglected. Hence, public's opinion and attitudes toward MRT project should be accomodated through an institutional mechanism. To gain public opinion, the local government may apply:

- Socialization

- Public hearing
- Media etc.

III. Social Jealousy, Security and Vandalism

It should firstly be recognized whether the source of vandalism and public' temper toward MRT is a social (class) jealousy, or other practical causes, such as management and security system.

- If there is jealousy and the main cause is ticket' price this reflects that the policy on the fare system should be reconsidered. In many cases, Massive Rapid Transport is provided for all social classes, and this is basic for metropolitan citizen. Therefore, the Local Government should provide subsidy for the fare. If the MRT can only be accessed by only middle and upper strata, this may strengthen the existing social inequality.

- If the source of vandalism is a matter of management and security system, the management may apply "reward-punishment" pr other mechanism with a more discipline system.

Thus there can be a divergent sources of public anger and vandalism toward the government polity and facilities. To deal with this problem, a social study is required.

IV. Social Feasibility Assessment and Study

The study (main text) has already applied a comprehensive assessment on market, financial, technical, demographical etc. However it has not addressed social feasibilities, particularly communities along the elevated corridors and stations. This can be crucial considering a massive transport system may bring about a significant effects and impacts on communities along those areas.

Hence, through this social study, it is necessary to indicate community's characteristics and plausible social problems raised by the exixtence3 of MRT, leg. Slums, "hot spots" of crime and social riots, influx and out flux of population, land price and speculation and mechanism of land acquisition, possible effects and impacts during preparation, construction and operation/maintenance etc).

Appendix 9

Review on the Jakarta MRT Project: Possibilities for Private Sector Participation

Mr. Santoso Ramelan (Bakrie & Brothers)

Possibilities for Private Sector Participation in the Jakarta MRT Project

Mr. Santoso Ramelan, Bakrie & Brothers

In the Term of Reference sent to me regarding the involment of Private sector in MRT project, and I understand that specifically in the Jakarta MRT project, it was mentioned that there are two purposes of the involvement of private sector that are

(1) Rreduction of the financial burden to the public sector (i.e. the central and the local govemment) and

(2) Introduction of the efficient private management skill

It was also introduced patterns of private sector involvement, classified as BOO (Build Own Operate), BOT (Build Operate Transfer), BLT (Build Lease Transfer) and DBOM (Design, Build, Operate and Maintain). And for all of these pattern, applies separation of infrastructure facilities (such as track and civil structures) from operating facilities.

With the above mentioned, we were asked with a question of which scheme / pattern would we prefer if there were a chance for our firm to be involved in the MRT project development.

A good question that means difficult to answer. But I will try to answer it.

Normally, we private sector thinking in an implementation of a project that it should be (1) human, (2) rational and (3) realistic.

Firstly, it should be "human" because we are human and in our life we have to intensively deal with other human. Any regulation implemented should be human, any technology used to be human technology.

Secondly, we have to be "rational", and from the private sector point of view, rational means that we must survive to become a going concern firm of company to be responsible to all stake holders of the company (including public, government, owner, financer etc.).

Thirdly, we have to be "realistic", that we have to finish what we have started using only all resources that are "within" our control (including funds, technology, human resources, experiences etc.).

Talking about rational, the private sector would prefer the pattern or scheme that will give efficient and effective mechanism that will give proper revenue that will cover all cost, operating cost such as financial cost, depreciation/amortization

cost. Then in which ever pattern we choose, whether the BOO/BOT/BLT or DBOM, the arrangement between public sector and private sector should entertain the rational of private sector mentioned, revenue should also sufficiently to serve loans and provide return on equity. Separation between infrastructure construction from operating facilities emerged the problems of sharing of revenue between the private sector and the public sector.

Talking about realistic, to be involved in this big project the private sector should consider their capability in raising funds, provide technology, provide capable / experiences human resources to manage or to work.

As we all know that present situation in Indonesia, we are facing Banking Crisis, big companies facing liquidity problems, loan constraint, difficult to find long term financial market etc., that limited them if they have to build especially the infrastructure that will absorb maybe around 70 % of total cost.

Above are some consideration of us as private sector.

But, to make it short, if we were asked which scheme we prefer, we can say that we prefer, the scheme that separate infrastructure in a BLT pattern that will be in the hand of the public sectors (Central/ Local Government) to make it available, that consist of civil cost (tunnel, railway), stations and depot cost consist of E&M of stations, land cost, project management cost, pre-operating expenses, non operating cost such as inflation and devaluation (if any). Private sector can be involved as contractors in the implementation of this task. In handling this portion, public sector has to use soft financing that can be arrange G to G, make available or acquisition land with a reasonable price including to provide the right of using the land. And private sector also has to operate these facilities, before later on after fully depreciated these facilities can be fully transferred to private sector to own, maintenance and replacement what is necessary.

And we as private sectors will hand on the operating facilities in a BOO pattern that include to make available the finance and provide E&M such as train, cars. Operating them, maintenance, replace. Private sector will `rent' facilities that made available by the public sector and run the business of operating the services for the public or MRT users, efficiently, forever.

By doing so, the private sector will become more realistic in overcome their biggest constraint, that is to provide funds or financing, because they only have to make available less funding/ financing (about 30% or less of total project cost) that is still within their capacity at present situation, with commercial interest rate and their project will still feasible.

From here we see in this scheme that a good and transparent partnership' between private sector and the public sector must really be established.

Public sectors should make effort of enhancement measurement. Again in this matter private sector can be involved in implementation such that are to manage and optimized the utilizing of available land above the depot as a real estate or property development, manage and optimizing in the implementation of road pricing etc. that is within public sector portion.

In this our preferred scheme, to share the risk we can use the conventional way of risk-sharing, simply that in the public sector portion the implementation can be managed by a joint venture company established and owned between public sector and private sector where the private sector will become the major shareholder. And a very important company should be established as a joint venture company between public sector and private sector in an equal basis, to manage the fare box and to deal with the government for the establishment of fair environment for the MRT system to continue (such as ticket fare etc.).

I hope that the thinking about the participation of private sector as I deliver to all of you, can cover the thinking of purpose of involving private sector that can (1) reduce of the financial burden to the public sector (i.e. the central and the local government) and (2) introduction of the efficient private management skills to optimized the result of the system.

That is my thinking on the possibilities for private sector involvement or participation in the implementation of the Jakarta MRT Project.

But please also share our opinion that private sectors sees the Jakarta MRT .Project with very high or full enthusiasm, because if Jakarta has started the implementation to use MRT system with the North - South and then East - West, as the answer to the demand of transportation system or as the solution to the congested traffic in Jakarta and to reserve energy etc., we believe that it will be developed for more tracks to follow, since the demand is there. And after Jakarta, there are many cities that will also need this MRT system. So many dwellers in Jakarta and other big cities in Indonesia who dream to have a convenience fast transportation, their dreams can be fulfilled. And for those who have the experience in utilizing MRT system in many cities in the world, I am sure they will agree to say that MRT system is really a very convenience and fast transportation system we need or dreamt of.

And for private sectors, they see that behind the MRT system, there is a large job opportunities stretched from design, construction, procurement, production,

operating services including the repair/maintenance, as the direct and a must for a good system. And there is also side jobs or business that will automatically developed as the consequence of the availability of MRT system, such as media, restaurants, shops, kiosks and even real estate or property business.

It is true that Indonesia has no experience yet in developing, construct and operating MRT system, and as the consequence that for some specific jobs the Indonesian Private Sector might still need assistants from foreign experienced companies.

We hope that this MRT project plan will be implemented very soon with the implementation of Jakarta MRT project and will be developed through out Jakarta and also in other big cities in Indonesia, that will give a lot of benefit to this large populated nation by savings on working time, energy, health and enhancement of experience, technology mastering, quality job opportunities etc.

But in this occasion I want to take the opportunity to mention my personal thinking that maybe can also be considered, even this personal thinking of me might be very unpopular.

I am thinking that for the pricing of MRT ticket should be targeted to attract the personal car owner to use the MRT system rather than to attract the bus users. By doing this, we can reduce personal cars that fill the street rather than reducing buses. By doing this we also can higher the income or revenue to make this project more attractive and also will not compete the bus system operating companies.

Appendix 10

Review on the Jakarta MRT Project: Central Government Perspectives

Mr. Maryono, (Directorate General of Budget)

Review on the Jakarta MRT Project: Central Government Perspectives

Mr. Maryono, Directorate General of Budget

We realize that rapid growth of vehicle transportation in Jakarta, which includes remarkable increase of private vehicle usage, has brought about serious traffic problems, among which are traffic congestion, traffic accidents and air pollution. These problems are worsening and spreading over the entire Jakarta area. That is why a comprehensive study on an integrated transportation master plan in Jabotabek metropolitan area is urgently needed.

However, as mentioned in the study report, the implementation of the MRT system requires huge amount of investment, approximately Rp 13,683 billion (Rp 14 trillion). In fact, the government budget is currently facing financial problem. I emphasize two points concerning this program. My first point concerns the implementation of the MRT system, especially during the economic crisis in relation with the Government budget priority.

Let me explain the budget allocation during 5th period based on DIP's Directorate General of Land Transportation.

Unit: Million Rp.

No.	Fiscal Year	Transportation Sector	Land Transportation	Railway Transportation	Jabotabek
1	97/98	1,014,150	409,925	263,800	20,401
2	98/99	615,181	226,580	143,254	16,555
3	99/00	627,700	251,700	148,800	19,767
4	2000	315,500	116,000	64,442	5,026
5	2001	619,000	218,000	97,879	6,957
	TOTAL	**3,188,531**	**1,222,205**	**718,175**	**68,706**

Note: Project activity of Praska Jabotabek

1. Procurement of telecommunication equipment
2. Procurement of Trainset (Railway coach)
3. Rehabilitation of Station Building
4. Development of Network transmission

Comparing the total cost of the MRT system of about Rp 14 trillion to the existing Jabotabek project just Rp 7 billion in fiscal year 2001, the cost of the Jabotabek project is too small. It means that an expectation to allocate Rupiah from the central budget as counterpart fund for this system is only a sporting chance or a little hope in the next budget due to limitation of central budget. Considering the government budget limitation, the implementation of the action plans and programs should take into account suitable funding plans including

public-private partnership (PPP) and offers from the government of Japan in the form of Special Yen Loan (SYL) through subsidiary loan agreement to the operating entity. Unfortunately, at this moment at least since fiscal year 2000, the policy of the central government budget tries to control external borrowing tightly.

My second point, another essential element in this case is to proceed step by step as is done in financial analysis and to consider the capability of government budget to maintain this program. Actually, we are not only to build up a system but how to maintain it and make better use to get the best results with the changing environments. Consequently, we should consider allocating operating fund at the current or development budget for maintaining that program.

Finally, this is something very important which has been pointed out from the study:

1) This study should consider that base on GBHN and Propenas, and Budget proposal 2002, the first priority of development budget is directly linked with supplying social basic need that is spread evenly in good condition. In term of transportation sector, the budget proposal 2002 just stress or emphasize the maintenance of existing network transportation.

2) We recognize that developing integrated transportation master plan to establish overall transportation system in the Jabotabek area is needed. The implementation of these programs requires coordination between implementing agency and departments concerned and is subject to discuss with Legislative (DPR).

Appendix 11

Review on the Jakarta MRT Project: Local Government Perspectives

Mr. Rusdi Yusuf, (Bappeda DKI Jakarta)

Review on the Jakarta MRT Project: Local Government Perspectives
Bappeda DKI Jakarta

Issues No. 1 Project Capital Investment, Subsidy Consequences

- MRT systems all over the world are not financial success stories
- High capital investment low financial rate of return
- High percentage of investment is treated as sunk cost borne by government
- Study suggests 80% of initial capital investment will be borne by government
- If DKI could not afford to bear 100% sunk cost what is the propose sharing arrangement with central government.

DKI response:

It is true that fare revenues alone cannot cover all direct operations and related investment costs, even with additional revenues as stated in the report. However, to assume that it is the local government responsibility to bear the entire project capital costs seem to be unrealistic. There is no system in the world demonstrate this assumption especially for the first time implementation of a new MRT line. Arguably, for the reason of fairness, DKI local government contribution to the capital costs is accepted to the extent that local government revenues can sufficiently bear the costs without heavily influencing its expenditure on other sectors. DKI Government can assume this responsibility only with strong justification and within policy risks controllable by DKI authorities in the possible subsidy consequences of MRT operation.

On the issue of initial investment cost which is to be borne by both Central and Local Governments the reasonable sharing arrangement should be based on the ability of local government to service its debt without hampering the expense on other important social and economic sectors. One argument raise by the World Bank on this matter relates to the loss of opportunity for people on education, health, housing and other basic needs. This implies that other new sources of revenues need to be explored possibly through internalisation of externalities relating to the impact of MRT. The channeling of loan can take any forms allowable by laws and regulations; the important things are whether DKI projected income and the reliability of the forecasts can service the debt.

Issue No. 2 - Local Government's Readiness to Implement MRT Enhancement Measures

- Application of traffic restraint measures (road pricing, bus route restructuring) DKI response:

To gain widely public acceptance on any government policies will depend on how transparent the consultation processed are and the degree of public participation in the discussions. The questions mostly raised on any pricing policies introduced by any government relate to affordability, possibility of leakage and fraud, and the use of the revenues. So long as the public can be convinced on the benefits and on what would be received in terms of improvement there seems to be little rejection can be expected from the public in question. Enhancement measures that were mentioned by the study team is relevant to DKI Jakarta's transportation issues relating to demand management strategy, which have been explored since early 1996. However, experience in Jakarta showed that none of these measures could realistically be implemented without any perceive benefits from the travelling public. These are the things to be conveyed clearly to the public and the readiness of DKI Jakarta government to implement these measures will solely depend on the real benefits to be offered to the public.

Issue No. 3 Intensive Land Use Development

- Strengthening urban centers and urban functions surrounding Jakarta
- Intensive land use development potential around stations implementation time

DKI response:

The DKI Jakarta Structure Plan 2010 has clearly established the development scenarios and has incorporated the existence of MRT lines along major corridors in Jakarta. The policy of enhancing and spreading the urban functions within Jabotabek region need to be seen within the context of preventing more inflow coming into Jakarta rather than moving out the current trips from Jakarta. As the study team indicated in their reports, the trips generated within Jakarta alone constitute around 80% of the overall trips in Jakarta. The introduction of MRT on Fatmawati - Blok M - Sudirman - Thamrin corridor should be viewed as opportunities to redeveloped the land uses that previously followed ribbon development pattern to. Implementation time can be observed from previous experiences, however care should be taken on the different characteristics of the areas and type of development considered. The other key issues relate to how quickly the development outside Jakarta can be realized to cater for future socio economic activities within the region.

Appendix 12

Review on the Jakarta MRT Project: Local Legislative Perspective

Mr. Sugeng Supriatna, Committee-D of Local Legislative of Jakarta

Local Legislative (DPRD) Perspective

Mr. Sugeng Supriatna, Committee-D of local legislative of Jakarta

I. INTRODUCE

As set forth in law No. 22 year 1999 re provincial regulation that currently, local legislative no longer as provincial Government component as provided with law No. 5 year 1974 beforehand, on government principals in local. By virtue new Autonomy Acts of which local legislative existence representing legislative agency in local having a linear position as partner of provincial government in implementing task in fields of both government and development affairs and society building. Local legislative having legislation, aspiration and supervision function pertaining to this agency, as well as local policy.

Of course, as local legislative having authority in making local policy, it should own any sensitivity and active role against emerging problems in local, the extent to which local legislative may give suggestion and positive solution to solve such problems in accordance with its authority essentially, the problems in local as executive affairs solely, but as well it represent local legislative concern to seek out solution for settlement process. Provincial problems as in Jakarta area, of course it will be influenced by very complex condition in taking account of pertained predicate such as center government of Republic Indonesia, trading, political activity town, as well as gate of Indonesia country either in regional of international scales.

Actually, Jakarta problems as capital city likewise other cities throughout the world having similar characters such as population, housing, transportation and communication and other social problems need comprehensive and proportional handling. As capital city, the existence of Jakarta provided with law No. 34 year 1999 in special it had capability in solving various cases, specially, concerning citizens needs satisfaction. Although, to apply it is not simple, but citizen participation is required too, as well as self capability such as Local Budget (APBD) supported by State and Political commitment from both agencies existing.

II. PROBLEMS MATTERS

DKI Jakarta role as capital city it had lead as one of condensed population in the world in significant numbers. Hence, it had resulted in highest economic and social development aside of some serious problems relatively, among them having impacts such as environmental pollution. According to date we collect

represent the third condensed population in the world after Bangkok and Mexico City. Subsequently, it had occurred the downturn of network performance as center of Indonesia Government and international economic activities causing travels management level is not optimal, objectively, based on condition there is lowest travels level on average, specially, by high traffic jam. Last but not least, other impact is automotive growth in Jakarta. Proportionately, transportation service remain dominant compared to train transportation service, according to data about 49.1 % being dominated by public transportation users, where as train transportation is around 3 4 % and its residue is private's car users. Number of automotive growth and its propriety right that will appeal the high of private's automotive use as implementation and traffic jam demand being estimated it will always rise either in Jakarta or its vicinity.

Actually, transportation problems in Jakarta is related with Jabotabek (Jakarta, Bogor, Tangerang and Bekasi) borders, of course, hence, it requires any transportation system being capable to accommodate public needs. Generally, the citizens who stay around Jakarta in certain times to arrive and return to their homes used limited transportation modes, and frequently, they lead not to capability to support this sector.

Indeed, transportation development in Jabotabek area it should be viewed as not separated unity system. Directly, Botabek (Bogor, Tangerang and Bekasi) development pattern will influence Jakarta one and vise versa. The motion occurred in Botabek area will have impact against Jakarta development that being concentrated in main corridor specially.

Of course, logical consequences from such condition is very required any policy being formulated in comprehensive and integrated by structured stages and being oriented to social and environment interest. It should be implemented. by public transportation as mainstream mode.

Of course, depart form such case, properly, provincial Government of DKI Jakarta as buffer zone for Botabek having transportation modes in real or even accommodate subtle transportation problems. Actually, one of alternatives to solve transportation problems is by efforts to supply mass transportation on train rail bases which of the year 1998 provincial Government of DKI Jakarta had prepared planning on mass transportation system pattern. Unfortunately, it had not been continued by impossible situation and condition.

Some Benefit To Use Public Transportation as follows

a) To reduce traffic jam

Mass Rail Train (MRT) rather, having load power of passengers is big in proper service quality such as safety, convenience, and timely. This condition will appeal service user who always use private's automotive turn to MRT. Yet, it will reduce private's automotive use representing the main cases of traffic jam.

b) To reduce time when traveling

One of benefits from this MRT system is to save time consumption significantly; service user will feel it. Actually, such time saving is not related when travel solely, but, as well it will be concerned with waiting time and to make sure when should arrive at train station.

c) To reduce accident

As logical consequences by reducing of traffic jam, then, traffic accident may be minimized.

d) To increase public transportation service

Passenger (s) will get convenient when waiting MRT, because given train station will be facilitated by proper facility aside of location in inner space. It is different with bus transportation passenger.

When traffic jam the passenger (s) will suffer as result of waiting time is longer, it is disturbed by traffic jam. Meanwhile, MRT offer on time and mainstream services, as well as other convenience condition. Additionally, ticket of tariff price is rather competitive than AC bus tariff.

MRT will be able to absorb workers, it is not only when constructing but along MRT operations. Yet, unemployment problems representing serious problems in Indonesia it may be solved.

Approximately, construction's time will employ so many workers, either direct or not having relation with construction activity. Meanwhile, when operate it will absorb many workers.

We are local legislative members is confident that if Mass Transportation System (MRT) may be realized by provincial government of DKI Jakarta, then, one of more crucial problems in Jakarta may be solved although to apply it requires technology and investment is large enough.

III. PERSPECTIVES OF LOCAL LEGISLATIVE OF DKI JAKARTA PROVINCE

As described above it may be drawn conclusion that supply of mass transportation for big city such as Jakarta it represent necessity although requiring intense capital to realize it, $ 13.883.000.000 (US Dollars) any extraordinary infrastructure transportation in Jabotabek, I Jakarta specially.

Some opinions of local legislative to the MRT

1) As public/mass transportation which of budget in fulls it may not be financed by APBD. Hence, any proportional breakthrough among them by collecting foreign loan, State Government support as well as participation forms Private enterprise. Proportion of finance among state and Local Government will be determined by local financial capability without sacrificing interest of development budget for other sectors. However, necessarily, it should be manifested by vision similarity among state Government and high State Body to support MRT project specially.

2) If this MRT project socialization it may be implemented either by local government or other parties transparently, we believe that society will understand it. So, provincial Government and Local legislative and other related parties should prepare such stages.

3) Of course, to the year 2010, Jakarta will have land use planning and represent permanent area in order to face Jakarta's growth being concentrated to business districts related with this MRT program. Of course, necessarily, we should attempt the changes trend to place business districts in right and proper site and to get benefit of MRT maximally.

IV. CLOSURE

Those cases above we send we wish it will have benefit and may be made as reference within framework MRT project development in Jakarta.

Appendix 13

Review on the Jakarta MRT Project: Users' Perspective

Mr. Agus Pambagio, YLKI (Indonesian Consumer Institute Foundation)

Review of the Jakarta MRT Project: User Perspective

Mr. Agus Pambagio, YLKI (Indonesian Consumer Institute Foundation)

- The consultant study result is very impressive complete with economic component until technical and its result is no doubt, however, the superiority of economic/ financial and engineering become no meaning since the consultant did not conduct a social study towards the impact to anticipate social excess from the development and operation of MRT.
- Social study is needed to anticipate the possibility of any social excess in the community since the beginning of construction until operation, including:
    1. The effect on traffic flow diversion during construction
    2. Social effect of any or many foreign workers walking around in the society which is in macro being sick.
    3. The habbit of Indonesian community that are not willing to be regulated, for instance, if later on MRT is operated who guarantee the community will not hanging around on the roof, vandalism, eating and smoking inside the car, destroying or stealing vital equipment.
    4. Have you anticipated the habbit of community who want to be free and trade in all places including stay in underground station, etc.
- Before to start the construction, it is better if government have a pilot project to simulate orderliness of community by using the existing Jabotabek electric/diesel railway.
- Based on the above comments, so it is proper if YLKI does not agree yet, if MRT is built soon because social study is not made yet by the consultant and also we have to have loan again to Japan. It can be imagined if it is forced without readiness of all parties, loan have been done but in the short period, the facilities or goods already damaged because no anticipation in the feasibility study.

Appendix 2 Expected Reviews from Panelists

This document was prepared by the Seminar Committee
and distributed to the Panelists for their review on the reports of
the Study on Intergrated Transportation Master Plan for Jabotabek (Phase 1)

EXPECTED REVIEWS FROM PANELISTS

Note: The Panelists are expected to address the following issues. However, in addition to these indicated issues, the panelists are welcome to address other issues that are deemed important (subject to time limitation).

MORNING SESSION:
"CONCEPTUAL INTEGRATED TRANSPORTATION MASTER PLAN"

Topic: Review on INTEGRATED Land Use and Transportation System

ISSUE NO. 1- INTEGRATION OF LAND USE AND TRANSPORTATION SYSTEM

The Government of Indonesia (GOI) recognizes the need for developing and implementing a more comprehensive and integrated long-term multi-modal plan, which is considered vital for providing direction leading toward a future long-term transport development for DKI Jakarta and the Jabotabek region as a whole. Such integrated multi-modal plan has been expected to comprise the following major elements:

1. An integrated railway master program, comprising a Mass Rapid Transit system (MRT), heavy rail transport (HRT) and double-double tracking on selected routes;
2. An integrated road master program, comprising arterial road network development in the Jakarta integration area, and the Development of the Jakarta-West Java tollway system;
3. An integrated policy and strategy for urban areas addressing the regulatory frameworks, institutional development and co-ordination issues, the integration of urban transport sector planning and policy, urban road infrastructure development, urban traffic management, issues relating to urban public transport services, mass transit system development, road traffic safety and urban environmental control; and
4. The Jabotabek structure plan, the land use plans, and the respective local structure plans.

Question: In the absence of a definitive Transportation Master Plan (which will be prepared in Phase 2 Study), the Study Team has proposed a **Conceptual Transportation Master Plan** that provides for a platform to determine short-term implementation projects. With regard to the above four major elements, the panelist is expected to comment on the conceptual master plan, and to give suggestions on how the conceptual master plan could be developed further as an integrated transportation master plan which fully integrate land use and transport as well as integrate different modes of transport, with close linkages to pertinent community interests including the prevailing transition to democratization of public life.

ISSUE NO. 2 - INTEGRATED RAILWAY/MRT AND LAND USE SYSTEM

In order to reinforce the city structure in a manner that pays close attention to the preservation of the urban environment, urban railway or MRT construction must not only address the technical master plan for the railway network, but it must also consider the overall master plan for city development. It is necessary to take a long-term view and make a consistent plan. Finally, it is crucial to recognize the synergistic effects of creating a network of urban railway lines, with links to other transport modes that increase user convenience.

It is well known that integration the transportation system with the current and most effective development of land use and is crucial in order to use transportation system efficiently. In the relationship between these two aspects of planning, regulation and development has been long recognized as key elements in the sustainable structural development of major urban complexes. This, and the more recently recognized interaction with changing modes of intensified economic, cultural and social activity need to be explored and responded to in an evolutionary macro level interaction between planning and community development. At the same time the particular needs for achieving early viability and effective service levels for the transportation service investments need to be kept in clear focus. For instance, and in particular, high density of population or work places surrounding the stations is required to make most use of the railway system, because accessibility to the railway stations is one of the more significant factors on modal choice, and the rapid development of business and residential hub communities.

However, until recently, the railway network has not been developed for passenger travel within urban areas. Currently, the land use surrounding the railway stations is not appropriate for railway transport system. In order to attract rail passengers, it is preferable if highly dense urban facilities were located in the walking distance from the stations. However, at present high-rised office buildings and commercial facilities are seldom found in their vicinity. The present land use nearby the stations is often occupied by low-class housing in urban areas. Often this type of housing is associated with a population heavily focus on the 'local' and informal economy. Consequently, sufficient passenger demand for the railway cannot be expected from the existing urban land use.

Recognizing that there are three practical responses to this for railways to play a major urban passenger movement role:

- promotion of redevelopment of areas around the existing major stations;
- development of highly effective incentives and feeder systems to those stations;
- change and augmentation of the station network;

each raises complex policy and practical issues that panelists are asked to respond to:

Question: How do you perceive this issue for the case of Jabotabek railway? If intensive land development around railway stations is desired, what approach should be applied to support this measure?

In order to increase expected passenger demand for MRT, the Study Team suggests some enhancement measures, including intensive land use development around some potential MRT stations (e.g. Fatmawati, Blok M, Dukuh Atas, and Monas). Through this measure, commercial and office buildings are developed and thus total floor area increased. These additional work places would result in additional potential for MRT market.

However, it is well questioned whether such enhancement measure conflicts with land use plan (Jabotabek Master Plan 2015), which states that over-concentration of urban functions in Jakarta should be avoided by enhancement of urban centers and urban functions for cities in surrounding areas. It may also be argued that development intensity along the MRT corridor would attract more cars to the area, and therefore may even worsen traffic condition along Jl. Fatmawati – Blok M – Jl. Sudirman – Jl. Thamrin corridor.

Also this raises the question of whether the concentrations are additional, or competitive with the existing development of private and public capitals (buildings, infrastructure, and a whole hierarchy of interlocking private and public services). In the latter case the efficiency in economic gains that appeared to accrue to the railway system need to account for the public and private sector losses in relation to underutilised capital and lost business and social opportunity in these areas.

Question: In the viewpoint of integrated land use and transportation system, how do you perceive this issue? If such conflict exist, how to resolve it? In relation to this question it is of course important to look at the relationship of land use and transportation systems with existing economic and lifestyle patterns; but we also need to be cautious about the sensitivity to changes in those patterns, which are now rapid, but still little understood. Rail and station investments that are large and long-life in nature are dependent on very long-term impacts for their viability. It is important that the positive interaction between transportation and land use, economic and lifestyle changes does not gradually become a cause of rigidity with long-term major negative impacts.

ISSUE NO. 3 - INTEGRATED PLANNING IN THE ERA OF AUTONOMY

It is argued that planning integration is important for a mega city like Jabotabek. Considering the nature of the Jabotabek region, well-communicated integrated development is crucial. The Jabotabek region is considered to be more inter-dependent than other regions because transport interaction occurs significantly across the administrative boundaries. An integrated transport master plan for Jabotabek that is in line with the Jabotabek Spatial Plan (Jabotabek 2015) is needed.

On the other hand, autonomy, through Law 22/1999 and Law 25/1999, gives higher freedom for local governments to develop their regions. Without proper coordination, disconnected and ill-matched planning can be expected. The Study has identified ill-matched land use and transportation plans prepared on a sub regional basis within Jabotabek. In the near future, the Jabotabek region will cross over three provinces, namely DKI Jakarta, West Java, and Banten. Even at present, coordination between DKI Jakarta and West Java is complicated and a lot of inconsistencies in planning are found between DKI and other local governments.

Question: To what extent planning integration for Jabotabek is desirable from the viewpoint of the greater good of the whole, and likely to be desired by stakeholders recognising more specific and more local interests? What would be appropriate institutional arrangements to enhance coordination among the regions? What are the strategies to support the local governments' compliance with and proactive support to the land use and integrated transportation master plan?

Topic: Review on Public Transport Improvement Plans

ISSUE NO. 1 - REFORMATION OF BUS OPERATING REGIME

The improvement of bus transport is of great importance as a short-term transportation policy measures since it can be carried out without huge investment. Enhancement of bus transportation systems would also contribute to augment the service level of overall public transport system by complementing the rail-based system.

The Study team recommends reform of the bus operation regime through changing the bus operation licensing scheme. The service level of bus services should be carefully monitored through bus location system and relevant bus operation reporting system. Bus fare collection system perhaps also should be improved by introducing off-bus fare collection system where applicable.

However, at present the level of bus service is low in many aspects. For instance there is a lack of punctuality, unexpected breaks in service, long waiting times, poor passenger security on board, and unpleasant interiors. One of the root causes of unreliable and uncomfortable bus operation has been found to be in the bus rental system. Another cause is weak capability in bus route planning, and a lack of sufficient incentive and enforcement for bus operators to respond and comply .

Question: The panelist is expected to discuss the above proposal on bus transport improvement, focusing on reforming the bus operation regime, in particular:

- How to reform bus operation and improve service level of bus services
- How to enhance the monitoring system on bus operations
- How to collect bus fares properly

ISSUE NO. 2 - PRIORITY MEASURES FOR BUS OPERATION

The local governments can support the bus operations by giving more priority to bus operations through extensive installation of busway or bus lane on major arterial streets. In Jakarta there are several arterial streets with three lanes or more for one direction, which provides scope for bus priority treatments.

If preferential public transport policy were not taken, shifts from public transport to private modes of transport would be inevitable and result in worse traffic congestion.

Several bus priority lanes have been introduced in the past, but the effectiveness of such priority treatment was quite low due to inappropriate design and lack of enforcement, with the exception of contra-flow bus lanes. Furthermore, in introducing bus priority, strong objection from car users is expected, since introduction of busway or an exclusive bus lane takes one lane from private car use and reduces the apparent existing road capacity.

Question: What would be the most effective ways to give priority to bus transport?

ISSUE NO. 3 - BUS DEMONSTRATION PROJECT

DLLAJ DKI is currently preparing the Bus Demonstration Project and the Study Team supports such a project. Through implementation of the demonstration project, "best practice" for bus operation could be sought. Responses from bus passengers as well as car users and the unexpected problems could also be examined.

After the economic crisis, purchase of spare parts imposed an additional financial burden on bus operators and they cannot afford to replace or maintain bus fleets properly. Bus operators claimed that they suffered from the low fare set by the government, particularly when debt servicing costs were high, though the actual operating cost of bus operation was never transparent.

Question: The panelist is expected to comment on the bus demonstration project and to discuss how collaboration among the key stakeholders (i.e. the regulatory agency, bus operators, bus drivers, bus passengers, and other roadway and roadside users) could be best achieved.

ISSUE NO. 4 - IMPROVEMENT OF RAILWAY TRANSPORT

The existing railway facilities need improvements to secure transport safety and increase of service level. In short term, improvement of the railway system should be emphasized to make most beneficial use of the existing railway facility for passenger transport. Furthermore passenger transport capacity should also be augmented by increasing frequency of train operation on the existing lines.

Although total demand on the Jabotabek railway has been increasing steadily, the share of railway traffic is still low and accounts for merely two percent of the total person trips made by motorized modes of transport in Jabotabek. The low passenger demand is partly attributed to low level of service such as low frequency, lack of punctuality, poor station facilities, insufficient station plazas and access roads, as well as security, hygiene and other service and status related aspects.

Question: The panelist is expected to comment on the railway transport improvement plan proposed by the Study Team and the likely impact of the improvements on both the service provider and other stakeholders.

ISSUE NO. 5 – THE NEED FOR AN MRT SYSTEM IN JABOTABEK

The Jakarta metropolitan area will grow and the population in Jabotabek will reach thirty million persons in 2015. Although at one time traffic demand decreased for a couple of years after the economic crisis, traffic congestion has already returned on the streets. In line with the increasing population and revitalizing economy in the future, it is expected that traffic situation in the region will worsen. It is urgently required to promote public transport usage, and traffic reduction measures, otherwise the road network in Jabotabek will not be able to cope with the increasing traffic demand.

In general, when compared to the other modes of public transport, a Mass Rapid Transit system is intended to serve the four goals of efficient urban passenger transport: high capacity, high speed, reliability (stick to a time table), and environmental preservation and

safety. These factors indicate how an MRT system is able to bring about various benefits not only to passengers but also to the overall region where they are located. Therefore, it seems advisable to construct an MRT system in order to realize these benefits.

However, the development of an MRT system, and feeder systems requires huge amounts of social and capital investment (the project base cost for the MRT project is Rp. 13,683 billion), and financially is not viable in itself. Therefore, public involvement in and support for the construction of an MRT system is a necessity.

Also, that huge amount of investment, much of which is of a 'fixed' nature needs to be carefully considered in terms of its beneficial as well as potential negative effects on the structural, economic and social development of the urban communities.

Question: Considering the limited Government's budget, especially during the economic crisis, the panelist is expected to comment on the idea of developing an MRT system in Jakarta. On the one hand, Jakarta needs a public transport system that posses various benefits mentioned above, but on the other hand, the Government is faced with limited budget as well as poor service level of the conventional public transport (bus and commuter railway) that could not cope with the growing passenger demand. Which action is deemed better, to modernize the existing public transport modes or to build an MRT system?

AFTERNOON SESSION:
"REVIEW ON THE JAKARTA MRT PROJECT"

Topic: Review on Financial and Economic Analysis

ISSUE NO. 1- MRT RIDERSHIP ASSUMPTIONS : MARKET POOL FOR MRT AND "ENHANCEMENT MEASURES" TO INCREASE RIDERSHIP

The main sources of MRT ridership are expected to come from former bus users as well as private vehicle users. As discussed in Section 3.2. the following assumptions were taken :

(i) With regard to bus users, an appropriate market pool must be determined prior to the modal shift calculation. The actual number of passenger shifted to MRT, however, is analyzed through modal choice mechanism embedded in the model. The Study argues that the *market pool* from former bus users depends on *tariff level*. Thus if tariff is set around or more than Rp. 2,500 then only Patas AC users would form the market pool. On the other hand, if the tariff were comparable to (or contain a service level comparable to) the regular bus fare (currently around Rp. 700), all bus users would become the market pool.

(ii) Enhancement measures are necessary to increase MRT ridership especially from former private vehicle users. It is estimated that "*Push*" strategies which encourage private vehicle users to shift to MRT coupled with limitation of competition with bus routes running parallel with MRT as well as intensive land use development around potential MRT stations could double the MRT ridership.

Question: The panelist is expected to review the appropriateness of these assumptions. Enhancement measures require extra efforts from local government to gain consensus from

the society. Since this entails certain uncertainties as to the extent and timing to implement such measures, the panelist is expected to discuss the potential risks (from the point of view of financial and economic viability) inherent to the assumptions taken and suggest possible ways to manage the risks.

ISSUE NO. 2 - MRT FUNDING: SHARE OF CENTRAL GOVERNMENT FUNDING

The economic internal rate of return (EIRR) analysis shows the economic feasibility of the MRT project at a rate of over 13%-14% with enhancement measures of the MRT ridership. The financial viability can be confirmed only when the government guarantees to provide about 80% of the initial investment cost.

There are various views pertaining to MRT funding. One might argue that the 80% share of central/local governments would be too high in the face of decentralization era. However, as found in several practices in developed countries, it is not unusual to see that the central/local governments fully finance the MRT system.

Question: Given the cost and revenue streams indicated by the Study, the panelist is expected to review and comment on the proposed investment scenarios, particularly the reasonable funding share between the central/local governments and the operating entity.

Topic: Operator's Perspectives

ISSUE NO. 1 - GENERAL OPERATOR'S PERSPECTIVES

Most MRT systems currently in operation all over the world are not financial success stories. Due to the nature of mass rapid transit projects that need high capital investment but yield low financial rates of return, the development of an MRT system requires that a high percentage of the investment be treated as sunk cost. Furthermore, it is not uncommon that the MRT's revenue still cannot cover costs during operation that it requires subsidies.

In terms of sunk cost, the Jakarta MRT Project is not an unusual case. In order to get a positive financial rate of return, around 80% of the initial capital investment cost should be treated as sunk cost. Whether subsidies during operation are required or not, depends greatly on the expected passenger demand and investment scenarios. Without implementing traffic restriction policies, bus route restructuring and balanced intensive land use development measures and feeder systems, the revenues alone could not fully cover all directly operations related investment costs.

Question:

- What are PT KAI's comments on the investment scenarios proposed by the Study Team?
- If PT KAI were asked to become the operator of the MRT system, what requirements would PT KAI request to the Government, in order to be able to become the operator for the system in a sound business and professional condition?

- If the MRT system were operated by an entity other than PT KAI, what kind of investment scenario would PT KAI recommend to the Government, in order to maintain the sustainability of the MRT system operation? Would PT. KAI regard the MRT as a competitor and if so, what would be the positive and negative significance of that competition?

ISSUE NO. 2 - ON-LENDING ISSUE

One of the recommendations proposed by the Study Team is that the central government may on-lend funds to the operating entity at as low a rate as possible, say around 5% p.a.

The Study Team also tests cash flow and debt service capability of the implementing entity for five combined passenger demand and investment scenarios. Demand scenario 3 (with all enhancement measures) and investment scenario 2 (i.e. operations related initial investment cost and with all life cycle investments into new rolling stock and replacement investments maintained in the capital cost stream) results in ROI of 7.06 %. Hence, this case is considered realistic as an implementation scenario.

Question: If PT KAI were asked as the operator of the MRT system, how would PT KAI respond on the on-lending issue?

Topic: Social Impacts of the Jakarta MRT Project

ISSUE NO. 1- REGIONAL INEQUALITY

All previous studies have confirmed the need for an MRT system in Jakarta, as a metropolis in which commercial, financial, administrative, diplomatic and other economic activities at international, national and regional levels are located in an intensive and large-scale manner. The traffic demand along the initial MRT corridor(s) has already exceeded the road capacity, and the traffic congestion is expected to significantly worsen in the near future. The development of the MRT would help alleviate traffic congestion in this corridor and, in turn, would reduce pollution as well as other economic losses. Consequently it will support economic activities in the capital city.

However, MRT's viability can be confirmed only when the government guarantees to provide about 80% of the initial investment cost. If around 80 percent of initial costs were provided by the Central Governments, it would imply that the project be covered by tax paid by all the citizens of the country. Since some argue that historically DKI Jakarta was supported by the central government by receiving higher portion of financial assistance than other provinces, is it still acceptable from the viewpoints of regional equality in the era of decentralization?

Question: The panelist is expected to discuss the burden which the society would bear for the MRT development.

ISSUE NO. 2 - PUBLIC'S ATTITUDE TOWARD PROPOSED MRT ENHANCEMENT MEASURES

To strengthen the financial sustainability of the MRT, "enhancement measures" such as traffic restraints and bus route restructuring need to be adopted to divert the private car users to MRT for alleviation of traffic congestion and to increase MRT ridership. With the application of such measures, total MRT passenger might be doubled.

However traffic restraint schemes such as road pricing are prone to public objection. Similarly, addition or deletion of bus routes often time resulted in severe protest from bus operators and crews.

Question : In the era of democratization, what is the better way of introducing the proposed enhancement measures to gain wider public acceptance?

ISSUE NO. 3 - VANDALISM, CRIME, LOITERING

The MRT project is deemed as a vital element of transport system in DKI Jakarta and the Jabotabek region that will establish the first modern public transport system in Jakarta, thereby making a significant contribution to de-congestion as well as the promotion of public transport sector use.

The Study has recommended an average fare level of Rp. 2600, which is the optimum fare for MRT, based on the financial analysis. This tariff level generates maximum revenue for the operating entity, and therefore would be the one that is most likely to maintain sustainability of the MRT system operation. However, it implies that lower income people may not be able to afford the MRT fare.

The general condition of public transport in Jabotabek is characterized by an alarming level of vandalism and crime. The public's sense of ownership of public transport facilities is relatively low. This has brought about inconvenience in public transport usage. With regard to MRT tariff affordability, there is a concern that if lower income people could not use the new public transport system, they would feel as being treated unfairly and could, in its most extreme case, tamper on MRT facilities and disturb its operation.

Furthermore, MRT station area and access passages may become potential loitering places for homeless people.

Also other taxpayers, who do not directly benefit from the MRT's service and impacts may be concerned about the high opportunity cost and low benefits they perceive from this huge investment.

Question: The panelist is expected to give insight on this issue, particularly anticipating the possible friction with society groups that could not utilize the MRT facilities.

Topic: POSSIBILITIES FOR Private Sector PARTICIPATION

ISSUE NO. 1- POSSIBILITIES FOR PRIVATE SECTOR INVOLVEMENT

In general, there are two purposes for private sector involvement in an MRT project: (1) reduction of the financial burden to the public sector (i.e. central and local government); and (2) introduction of the efficient private management skills.

Patterns of private sector involvement projects depend on the degree of private sector involvement such as procurement and construction of MRT facilities, ownership and operation of facilities, management of facilities, etc. These patterns are classified as follows: Build Own Operate (BOO), Build Own Transfer (BOT), Build Lease Transfer (BLT), and Design, Build, Operate and Maintain (DBOM). The latter pattern applies separation of infrastructure facilities, such as track and civil structures, from operating facilities. Under this pattern, the government constructs the civil infrastructure and procures all the facilities for operation, then entrusts, by concession, operation and management of the railway to the private sector. The benefits of using this pattern include the profitability of the MRT business management and the promotion of efficient management.

Question: Among these possible schemes, if there were a chance for your firm to be involved in the MRT project development, which scheme would you prefer? Please elaborate your arguments. Under your preferred scheme, how would you propose structuring and managing risk-sharing arrangements?

Topic: Central Government and Central Legislative Perspectives

ISSUE NO. 1- REGIONAL INEQUALITY AND AUTONOMY

It is generally understood that the development of MRT is urgent and important to ease transport problems in DKI and Jabotabek that are brought about by rapid expansion of overwhelmingly private vehicle transport in combination with inadequate public bus and rail transport. The MRT is expected to help ease serious traffic congestion particularly on major road corridors of Jakarta's CBD.

However, the development of MRT requires huge amount of money, amounting to around Rp. 13,683 billion. Such an immense transportation infrastructure investment in Jabotabek, particularly in DKI Jakarta, would likely increase regional development disparities among regions in the nation. It should be noted that around 80% of the initial capital investment cost is treated as sunk cost that will be borne by the Government.

Question: In the viewpoints of Central Government and Central Legislative of DKI, how to reconcile those arguments? Also, in the era of autonomy, is it appropriate for the Central Government to provide such amount of budget for infrastructures that will primarily be enjoyed just by DKI in particular.

ISSUE NO. 2 - CENTRAL GOVERNMENT BUDGET

In the current shortage of Central Government budget, offers from the Government of Japan in the form of Special Yen Loan (SYL) for the Jakarta MRT project may be seen as an opportunity to get a soft loan (SYL interest rate: 0.75% p.a. for 40 years repayment with 10 years grace period) to fund the development of this project in timely manner. The project base cost for the MRT project is Rp. 13,683 billion.

On the other hand, the outstanding Government debts have increased dramatically since the time of economic crisis. The government debt service amounted in FY 1996/97 to 23% of GDP, but it has drastically increased since then to 60 to 70% during the economic crisis of the fiscal years 97/98 and 98/99. In the fiscal year 99/00 it is estimated to increase as much as 90%, due to increase in domestic debt for bank restructuring. Total government debt service payment has been projected to account for about 40% of tax revenue. This situation has forced the Central Government to reduce outstanding debt as much as possible, as the State Policy Guidelines pointed out the importance of controlling government debt and external borrowing.

Question: Considering the urgency of the MRT project development on the one hand, and the central Government budget condition in the short as well as long run on the other hand, how should we respond on the SYL offer to develop this project?

ISSUE NO. 3 - SUNK COST AND SUBSIDY CONSEQUENCES

Most MRT systems currently in operations in all over the world are not financial success stories. Due to the nature of mass rapid transit projects that needs high capital investment but with low financial rate of return, the development of an MRT system requires that a high percentage of the investment be treated as sunk cost. Furthermore, it is not uncommon that the MRT revenue could not fully cover costs during operation.

In terms of sunk cost, the Jakarta MRT Project is not an unusual case. In order to get a positive financial rate of return, around 80% of the initial capital investment cost should be treated as sunk cost. Whether subsidies during operation required or not, depends greatly on the expected passenger demand and investment scenarios. Without implementing traffic restriction policies, bus route restructuring and intensive land use development measures, the revenues alone cannot fully cover all directly operations related investment costs.

Question: How would the Central Government and Central Legislative respond on the sunk cost issue? Can the Central Government, through APBN, bear the possible costs for subsidizing the MRT during operation, or should the costs be passed to the Local Government of DKI?

ISSUE NO. 4 - SPECIAL YEN LOAN (SYL): EFFECTIVE INTEREST RATE & ON-LENDING MECHANISM

According to the analysis conducted by the Study Team, MRT project needs financial support from the public sector due to its moderate EIRR but low FIRR. It is quite essential for the central government to procure a very soft loan with "best available" terms and condition, and on-lend these resources to the operating entity at an as low as possible on-

lending rate. The SYL provides generous loan condition (i.e. interest rate: 0.75% p.a. for 40 years repayment period including 10 years grace period).

However, the following points should also be considered:

(i) The SYL is a kind of "tied" loan that requires the usage of at least 51% resources of Japanese-origin. This might impose an additional burden on project viability.

(ii) The original SYL lending rate is very low, but the key factor is on-lending rate to the operating entity. An on-lending rate of around 5% p.a. would be most preferred. Higher on-lending rate would mean higher requirement for the central government to increase its share in the initial capital investment and/or future additional investment.

Question:

- Given the SYL loan condition, would the resulting "effective" interest rate still be attractive compared to ordinary commercial loans?
- What is the general practice for on-lending mechanism? What is the reasonable on-lending rate from central government to the operating entity?

Topic: Local Government and Local Legislative Perspectives

ISSUE NO. 1- PROJECT CAPITAL INVESTMENT, SUBSIDY CONSEQUENCES

Most MRT systems currently in operation all over the world are not financial success stories. Due to the nature of mass rapid transit projects that nees high capital investment but yield low financial rates of return, the development of an MRT system requires that a high percentage of the investment be treated as sunk cost. Furthermore, it is not uncommon that the MRT revenue could not fully cover the costs during operation that it requires subsidies. The Jakarta MRT system requires the project base cost of Rp. 13,683 billion.

In terms of sunk cost, the Jakarta MRT Project is not an unusual case. In order to get a positive financial rate of return, around 80% of the initial capital investment cost should be treated as sunk cost. Whether subsidies during operation required or not, depends greatly on the expected passenger demand and investment scenarios. Without implementing traffic restriction policies, bus route restructuring and intensive land use development measures, the revenues alone could not fully cover all directly operations related investment costs.

It is proper for local government institutions to play an active role in an MRT construction since the MRT will produce primarily local benefits. These benefits include: (a) Benefit received by the MRT users, (b) Benefit to road traffic users, (c) Benefit to station area property owners and corresponding tax increases collected by the Local Government, (d) Benefit to station area property developers and corresponding property and transactions tax increases collected by the Local Government (e) Benefit attributed to regional economy and society, including reduction of environmental pollution. (f) Avoidance of the financial and economic costs of less effective means to cope with traffic.

Question:

- While the Study Team suggests that around 80% of the initial capital investment cost be borne by the government, it is well argued that since the MRT will produce primarily local benefits as mentioned above, it is the Local Government (principally DKI's) responsibility to bear all the project capital costs as well as possible subsidy consequences during operation of the MRT system (in case the real passenger demand is lower than the projected demand). How would the Local Government and Local Legislative of DKI respond to this argument?

- If initial investment cost should be borne by both Central and Local Governments, what is the reasonable sharing arrangement?

- If the Local Government could not afford such high investment through APBD, is it possible to apply "Two-step loan" mechanism, where the Central Government procures foreign loan, and then on-lends the loan to the Local Government at low interest rate?

ISSUE NO. 2 - LOCAL GOVERNMENT'S READINESS TO IMPLEMENT MRT ENHANCEMENT MEASURES

To strengthen the financial sustainability of the MRT, "enhancement measures" such as traffic restraints and bus route restructuring need to be adopted to alleviate traffic congestion by diverting private car users to MRT and to increase MRT ridership. With the application of such measures, total MRT passenger could be doubled.

Local Government should lend its best effort to implement the enhancement measures, particularly in gaining consensus from various stakeholders impacted by such measures. Traffic restraint scheme such as road pricing is prone to public's objection. Similarly, bus route addition or deletion often time resulted in severe protest from bus operators and crews.

Question : In the era of democratization, what is the better ways of introducing the proposed enhancement measures to gain wider public acceptance? How ready is the Local Government of DKI to implement such measures? What are the countermeasures to anticipated and potential rejections from society on traffic restraint measures?

ISSUE NO. 3 - INTENSIVE LAND USE DEVELOPMENT

In order to increase expected passenger demand for MRT, the Study Team suggests some enhancement measures, including intensive land use development around some potential MRT stations (e.g. Fatmawati, Blok M, Dukuh, and Monas). Through this measure, commercial and office buildings are developed and thus total floor area increased. These additional work places would result in additional potential for MRT market.

However, it is well questioned whether such an enhancement measure conflicts with land use plan (Jabotabek 2015), which states that over-concentration of urban functions in Jakarta should be avoided by enhancement of urban centers and urban functions for cities in surrounding areas. It may also be argued that development intensity along the MRT corridor will attract more cars to the area, and therefore may even worsen traffic condition along Jl.

Fatmawati – Blok M – Jl. Sudirman – Jl. Thamrin corridor, further reducing the economic efficiency of the community as a whole.

Question: How would the Local Government and Local Legislative of DKI perceive this measure in relation to the Jakarta 2010, as well as the current trend of spreading of business districts over the region? How quickly such intensive land use development can be implemented?

Topic: UserS' Perspectives

ISSUE NO. 1- MRT FARE AND MARKET POOL

The average Rp. 2600 is estimated to be the optimum fare for MRT, based on the financial analysis made by the Study Team. This tariff level generates maximum revenue for operating entity, and therefore would be the one that most likely to maintain sustainability of the MRT system operation. The Rp. 2600 average fare is comparable to Patas AC tariff, hence the current Patas AC users would become the most potential market pool of MRT. Care would be needed to overcome further difficulties ensure that an effective service to the lower income earners would continue and improve.

As explained in Section 3.2(c), the application of lower tariff could indeed attract more users of MRT (including those currently using regular buses) but would mean lower revenue to the operating entity, which could in turn increase government's obligation to provide financial support. In addition to that, an overcrowded MRT may discourage private vehicle users to shift to the MRT. If this happens, the important objective of developing MRT, i.e. to divert car users to public transit system and subsequently reduce traffic congestion along the MRT corridor, could not be achieved.

While a major portion of the initial investment cost (around 80%) is treated as covering sunk cost borne by the Central Government or Local Government, it might be questioned why this investment could not be directly enjoyed by low-income people. Although, low-income people that use regular those bus routes that have not been restricted will indirectly get positive impacts in form of less congested traffic, as it is assumed that the introduction of MRT will divert some car users to MRT.

Question: How does YLKI perceive this issue? How might the current regular bus users be expected to respond on this tariff setting?

ISSUE NO. 2 - USERS' ATTITUDE TOWARD PROPOSED MRT ENHANCEMENT MEASURES

To strengthen the financial sustainability of the MRT, "enhancement measures" such as traffic restraints and bus route restructuring need to be adopted to increase MRT ridership. With the application of such measures, total MRT passenger could be doubled. Traffic restraint measure could be implemented in the form of road pricing, increases of parking fee in the CBD area, etc. Bus route restructuring is intended to limit competition between the MRT and buses, mainly by restructuring/omitting routes for buses that currently pass the

MRT corridor. With this measure, bus users who want to enter the MRT corridor should change their mode to the MRT at MRT stations.

Traffic restraint scheme such as road pricing is prone to car users' objections. Similarly, bus route restructuring may bring about complaints by current bus users, who, after the implementation of this measure, have to change their mode to MRT in order to enter the MRT corridor. This may be seen as reduction to travel convenience and may results in higher travel cost. A viable but different service level would need to be either included within MRT or within essentially equivalent origin destination services to provide a basic service to ensure the lower income earners are not excluded.

Question: How would YLKI respond on these issues? In the era of democratization, what is the better way of introducing the proposed enhancement measures to gain wider public acceptance?

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