

**THE STUDY
ON
MEASURING THE POSSIBILITY
OF
PRIVATE INVESTMENT IN EXPRESSWAY PROJECTS
IN
SOUTHERN VIETNAM
FINAL REPORT**

Volume I (Five Expressways in Southern Vietnam)

June 2011

Japan International Cooperation Agency (JICA)

Study Team constituted by

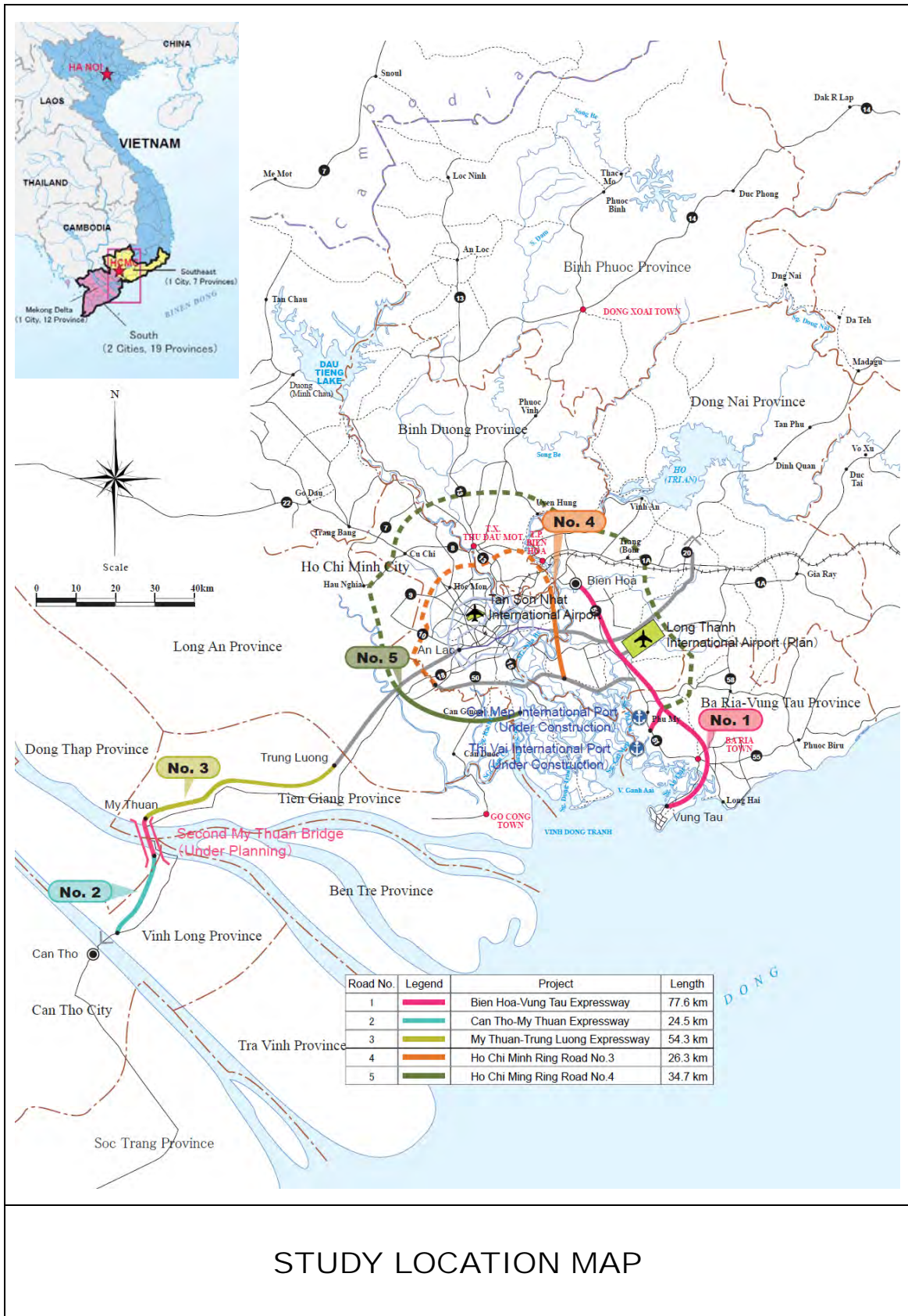
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STUDY LOCATION MAP

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LIST OF ABBREVIATIONS

ADB	Asian Development Bank
B/C	Cost Benefit Ratio
BEDC	BIDV Expressway Development Company
BIDV	Bank for Investment and Development of Vietnam
BOD	Biochemical oxygen demand
BOT	Build Operate Transfer
BOTA	Build Operate Transfer Agreement
BT	Build Transfer
BTO	Build Transfer Own
BVE	Bien Hoa- Vung Tau Expressway
BVEC	Bien Hoa- Vung Tau Expressway Company
CAPEX	Capital Expenditure
DD	Detailed Design
D/E	Debt and Equity
DPI	Department of Planning and Investment
DRVN	Directorate for Roads of Vietnam
DSRA	Debt Service Reserve Account
DSRC	Dedicated Short Range Communications
ECA	Export credit agency
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EPC	Engineering, Procurement and Construction
EPC	Engineering, Procurement and Construction
Equity IRR	Equity Internal Rate of Return
F/C	Foreign Currency
FDI	Foreign Direct Investment
FIRR	Financial Internal Rate of Return
F/S	Feasibility Study
FX	Foreign Exchange
GDP	Gross Domestic Product
GGU	Government Guarantee and Undertaking
GRDP	Gross Regional Domestic Product
HCMC	Ho Chi Minh City
IC	Investment Certificate
IC	Interchange
IDC	Interest During Construction
IDICO	Vietnam Urban and Industrial Zone Development Investment Corporation
IFI	International Financial Institution
IRR	Internal Rate of Return
JBIC	Japan Bank for International Cooperation
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency
JPY	Japanese Yen
JSC	Joint Stock Company
L/A	Loan Agreement
L/C	Local Currency
LLC	Limited Liability Company
LOS	Level of Service
METI	Ministry of Economy Trade & Industry

MOF	Ministry of Finance
MOJ	Ministry of Justice
MOT	Ministry of Transport
MPI	Ministry of Planning and Investment
NEXI	Nippon Export and Investment Insurance
NGOs	Non-Governmental Organizations
NH51	National Highway 51
NPV	Net Present Value
NPV	Net Present Value
OCR	Ordinary Capital Resources
O&M	Operation and Maintenance
ODA	Official Development Aid
OPEX	Operational Expenditure
PCU	Passenger Car Unit
PM	Prime Minister
PMU	Project Management Unit
PMUMT	My Thuan Project Management Unit
PPP	Public and Private Partnership
PPTA	Project Preparatory Technical Assistance
PQ	Pre-qualification
Project IRR	Project Internal Rate of Return
PSIF	Private Sector Investment Finance
SB	State Bond
SBV	State Bank of Vietnam
SKEZ	Southern Key Economic Zone
SOE	State Owned Enterprise
SPC	Special Purpose Company
Super-T	Super Tee Girder
TEDI	Transport Engineering Design Incorporated
USD	United States Dollar
VAT	Value Added Tax
VEC	Vietnam Expressway Company
VGf	Viability Gap Funding
VITRANSS	The Comprehensive Study on the Sustainable Development of Transport System in Vietnam
VOC	Vehicle Operation Cost
VRA	Vietnam Road Administration
WACC	Weighted Average Cost of Capital

CHAPTER 1 INTRODUCTION

1.1 Background of the Study

Road plays an important role in the transportation system in Vietnam. According to transport statistics on different transport modes (road, railway, inland water transport, coastal service, air service) in 2008, road transportation accounts for 69.8% of all freight transport and 90.8% of all passenger transport. However, existing road network is not sufficient to accommodate rapid increase in traffic volume, generated by the recent economic growth in the country. The Government of Vietnam (GOV) gives priority transport infrastructure development as the most important subject in "the 8th social economic development 5-year plan (2006-2010)". Accordingly, development projects on large-scale transport infrastructures such as airports, seaports, expressway, urban railways, have been implemented.

As for the expressway, "Expressway Development Plan (master plan)" established by Ministry of Transport (MOT) was approved by the Prime Minister (PM) in December 2008. In the master plan, implementation plan of 39 sections (5,873 km in total) of expressways were established, while 2,235 km of 5,873 km were planned to be completed before 2020. Also, Vietnam Expressway Corporation (VEC), dealing with the development of expressway and its corresponding investment, was established in 2004. Subsequently, VEC has tried to formulate a model of commercial-based transportation system.

In this way, GOV has strengthened its effort for expressway development, especially for the North-South Expressway development. The North-South Expressway connects the capital city of Hanoi and Can Tho City, which is the commercial center of Mekong Delta, along National Highway No.1. On its length of 3,226 km, the implementation priority is given to sections near big cities (Hanoi, Ho Chi Minh City or HCMC, Da Nang, Can Tho).

In accordance with the present status and development policy for the transport infrastructure development mentioned above, Japan International Cooperation Agency (JICA) conducted "The Comprehensive Study on the Sustainable Development of Transport System in Vietnam (VITRANSS 2)"(November 2007 – May 2010) to support the development of the overall transport sector master plan covering all transportation sectors in Vietnam. For the expressway development sector, VITRANSS 2 supported the formulation of "North-South Expressway master plan". Consequently, its preliminary feasibility study was carried out.

As a result of the preliminary feasibility study by VITRANSS 2, necessary budget for the development of North-South Expressway network was estimated to be about USD 66 billion. Projects for implementation which has been approved by GOV are estimated to be about USD 12 billion and most of the required funding needs support from ODA of Japanese government, World Bank, ADB and so on. The rest of the USD 54 billion should be secured from various financial sources. Since it is difficult for the project to be subsidized only by the public funds from GOV and ODAs, it is strongly expected to mobilize private sector investment.

For the introduction of private sector investment, it is necessary to study the case of 100% private investment (Build-Operate-Transfer or BOT) and public-private-partnership (PPP) investment. VITRANSS 2 suggested the possibility of implementing many projects through PPP, and emphasized that further detailed study is necessary in order to materialize a concrete business model of PPP and its practical implementation process.

In connection with the above, GOV and project implementation authorities requested JICA to support important expressway projects in southern Vietnam, such as Bien Hoa – Vung Tau Expressway project, Can Tho – My Thuan Expressway project, My Thuan – Trung Luong Expressway project, HCMC Ring Road No. 3 and No.4, through the development and

application of PPP project delivery scheme. It is especially noted that Bien Hoa – Vung Tau Expressway project and HCMC Ring Road No. 3 are prioritized as the most important projects, and their early implementation is necessary. These projects, which were planned as BOT scheme projects, have already selected the implementing bodies long time ago. However, there has been insufficient money collected, considering the absence of provision for appropriate investment model for PPP, and the lack of information for the general investor’s to decide on investment such as legislation of related law, system of concession grant, road development condition.

This study will (i) examine possibility of 100% of private investment for five projects mentioned above, and consider other schemes under PPP finance system if 100% private investment is not possible (ii) carefully review the feasibility study for Bien Hoa – Vung Tau Expressway project being prepared by Bien Hoa – Vung Tau Expressway Development Company (BVEC), in order to enable application of PPP model.

1.2 Objectives of the Study

The objective of the study is to realize expressway development project, utilizing private investment. In order to achieve the objective, collection and analysis of basic information regarding expressway PPP projects, expressway development in Vietnam, expressway projects of target five routes, and establishment of project implementation plan will be conducted. These are also intended to measure the possibility of private investment in expressway projects.

Target projects were selected in consideration of (i) strong request from Vietnamese governmental agencies, (ii) rapid increment of freight and passenger traffic volume in and around HCMC, and (iii) many private investments are expected in and around HCMC.

The selected five expressway projects in southern Vietnam and around HCMC are Bien Hoa – Vung Tau Expressway, Can Tho – My Thuan Expressway, My Thuan – Trung Luong Expressway, HCMC Ring Road No. 3 and No.4.

1.3 Study Area

During the first study in Vietnam in January 2011, scope of the study was updated for HCMC Ring Road No.3 and Ring Road No.4 as shown in Table 1.3.1 through discussion with BVEC.

Table 1.3.1 Updated of Scope of Study

No.	Route Name	Original	Updated	Remarks
1	Bien Hoa – Vung Tau	77.6km	77.6km	
2	Can Tho – My Thuan	24.5km	24.5km	
3	My Thuan – Trung Luong	54.3km	54.3km	
4	HCMC RR3	90.6km	26.3km	Tan Van – Nhon Trach Component
5	HCMC RR4	151km	34.7km	Ben Luc – Hiep Phuoc Component
Note: Trang Bom – Phu My Component (45km) was listed by PMU My Thuan during the meeting on 20 January 2011. However, this segment was eliminated because there is no available traffic data and EIRR/FIRR.				

Source: JICA Study Team

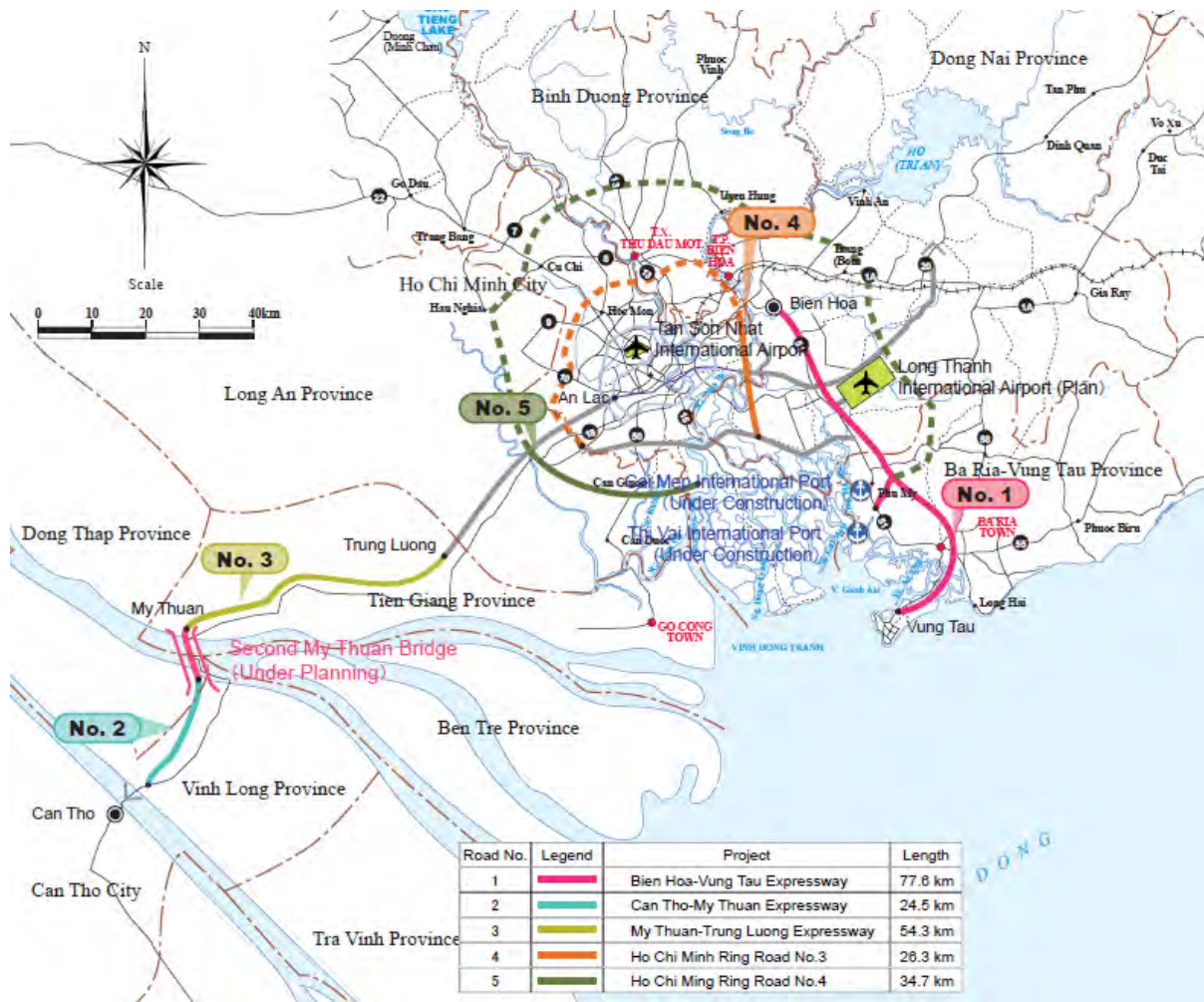
Updated present condition of each expressway project in relation to the project purpose, project outline, project plan, and status of implementation with reference to “The Review Survey of Transportation Infrastructure Projects in the Socialist Republic of Vietnam (hereinafter referred to as “The Review Survey”) are summarized in Table 1.3.2.

Updated locations of five projects for the study are as shown in Figure 1.3.1.

Table 1.3.2 Updated Outline of Subject Project under the Study (Updated)

Project	Bien Hoa – Bung Tau	Can Tho – My Thuan	My Thuan – Trung Luong	Ring Road 3 (HCMC)	Ring Road 4 (HCMC)	
				Tan Van – Nhon Trach	Ben Luc – Hiep Phuoc	
Implementation Agency	BVEC	PMU My Thuan	BEDC	PMU My Thuan	PMU My Thuan	
Length	77.6km	24.5km	54.3km	26.3km	34.7km	
Feasibility Study (F/S)	On-going	Approved (BOTBasis)	Approved (BOTBasis)	Pre F/S in 2010	F/S ongoing Draft Final Report in June 2011	
EIA	On-going	Approved (BOTBasis)	Approved (BOTBasis)			
Basic Design	On-going	Completed March 2009	Completed March 2009			
Present Status (May 2011)	F/S	Not Approved	Construction Suspended D/D on-going	ADB PPTA commenced in April 2011		
Project Scheme	BOT	PPP	BOT	BOT/PPP	BOT/PPP	
Open Year	2015	2015	2014	2016	2016	
Highway Classification	Expressway A Class120	Expressway A Class120	Expressway A Class120	Urban Expressway	Urban Expressway	
Design Speed	120 km/h	120 km/h	120 km/h	80-100 km/h	80-100 km/h	
Forecasted Traffic	2015	21,697pcu/d	-	-	-	
	2020	46,399pcu/d	37,432pcu/d	58,088pcu/d	47,486-55,865pcu/d	36,566-54,855pcu/d
	2025	54,931pcu/d	42,722pcu/d	73,654pcu/d	-	-
	2030	-	48,759pcu/d	93,392pcu/d	69,977-82,325pcu/d	53,886-83,893pcu/d
Nos of Lane	Open	4	4	4	6	6
	Ultimate	6 (After 2015)	6 (After 2030)	6 (After 2030)		
Width	Thru way	22.5-27.5m	25.5m	25.5m	34.5m	34.5m
	ROW	33.0-35.0m	33.0m	33.0m	68.5m	68.5m
Major Structure	Bridge	49	21	34	15	20
	Interchange	13	3	4	11	16
	Other	Softground	Softground	Softground		
Traffic Management	Center					
	Toll Gate		2			
	SA/PA		2PA			
Investment Cost	Total	15,757Bil.VND (808Mil.USD)	8,495Bil.VND (436Mil.USD)	19,841Bil.VND	41,616Bil.VND (2.13Bil.USD)	61,501Bil.VND (3.16Bil.USD)
	Construction	8,782Bil.VND (450Mil. USD)	5,570Bil.VND (283Mil. USD)	13,024Bil.VND	31,840Bil.VND (1.63Bil. USD)	46,762Bil.VND (2.39Bil. USD)
EIRR	19.38%	12.50%	-	-	-	
FIRR	7.30%	6.00%	-	-	-	

Source: Infra Review Survey



Source: JICA Study Team

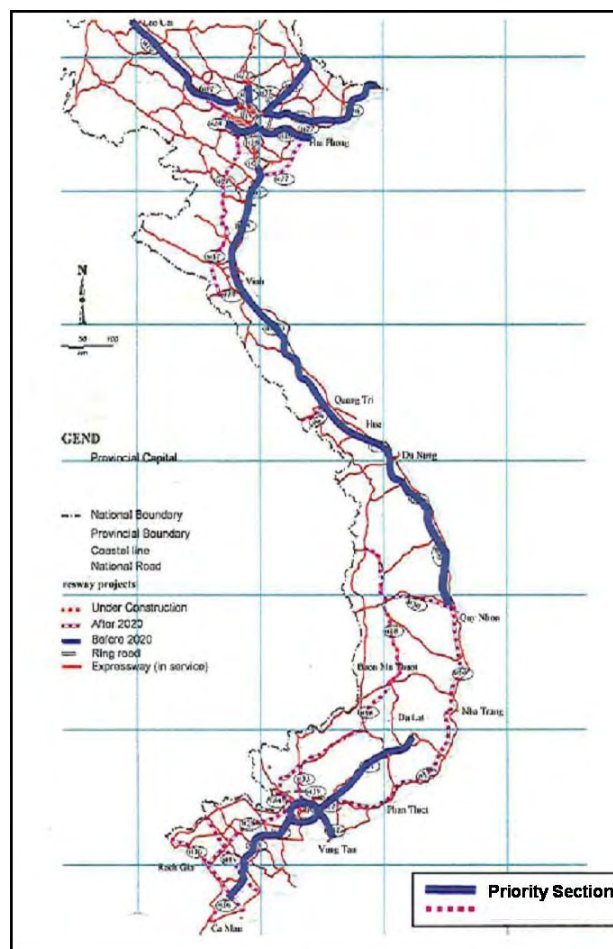
Figure 1.3.1 Study Area (Updated)

CHAPTER 2 PRESENT STATUS OF EXPRESSWAY DEVELOPMENT IN VIETNAM

2.1 Present Status of Expressway Development in Vietnam

2.1.1 Status of legislation on expressway development

The expressway development plan, issued through Prime Minister Decision No.1734/QĐ-TTg dated 1st December 2008, is shown in Figure 2.1.1. Outline of the approved expressway development plan is as follows.



- Number of planned route : 22
- Total length of planned route : 5,873 km (including 120 km operated sections. About 2,512 km will be constructed until 2020, and 3,241 km will be constructed after 2020.)
- Project costs : USD 20.6 billion until 2020; USD 23.5 billion after 2020.

After Decision No. 71, subsequently Decision No. 35 (2009), Decision No.1327 (2009), and Decision No.140 (2010) have been issued and thus, development of expressways is actively conducted in Vietnam.

Source: No.1734/QĐ-TTg dated 1 December 2008

Figure 2.1.1 Expressway Development Plan (Decision 1734)

JICA conducted VITRANSS 2 to support the development of the master plan covering the transportation sectors in Vietnam. As for the expressway development sector, VITRANSS 2 supported the formulation of “North-South expressway master plan” with corresponding preliminary feasibility study carried out.

The legislation of related law about expressway development in Vietnam is shown in Table 2.1.1, based on updated status obtained in the Study.

Table 2.1.1 Related Laws on Vietnam Expressway Development Plan

No.	Related Laws of Vietnam Expressway Development Plan		Date of Issue
1	Decision No.140/2010/QĐ-TTg	Detailed Plan of North-South Expressway in the East, Expressway from Hanoi to Can Tho province	2010/01/21
2	Decision No.1327/2009/QĐ-TTg	Road Transportation Development Plan by 2020 and vision toward 2030	2009/08/24
3	Decision No.35/2009/QĐ-TTg	Transport Development Strategy up to 2020 and Vision toward 2030	2009/03/03
4	Decision No.1734/2008/QĐ-TTg	Expressway Network Developing and Planning until 2020 and View for after 2020	2008/12/01
5	Decision No.344/2005/QĐ-TTg	Transport Development Plan of Mekong River Delta up to 2010 and vision toward 2020	2005/12/26
6	Decision No.1290/2007/QĐ-TTg	List of Projects Calling for Foreign Investment during 2006-2010	2007/09/29
7	Decision No.412/2007/QĐ-TTg	Investment of Transport Infrastructure Construction Projects Making Important Role until 2020	2007/04/11

Source: JICA Study Team

2.1.2 Present Status of Development of North-South Expressway

Cooperation for the North-South Expressway was agreed between Vietnam and Japan in October 2006. Since then, the master plan was developed and approved. Consequently, Decision No.140/QĐ-TTg was issued on 21 January 2010. Several design consultants namely, TEDI and TEDI South, are conducting the detailed survey on the basis of 1:10,000 topographic survey. It is confirmed that most of the coordination among the stakeholders are being completed for the whole of 1,817 km.

The present status of the development was updated in this Study as shown in Table 2.1.2.

Table 2.1.2 North-South Expressway Development Plan (No.140/2010/QĐ-TTg)

No	Section	Length (km)	Nos of lanes	Cost (Bil. VND)	Finance	Project Owner	Status (as of Dec 2010)	Cost (Bil. VND)		
								Short Term (-2015)	Medium Term (-2020)	Long Term (-2030)
1	Phap Van - Cau Gie (Widening)	30	6	1,350	N/A	VEC	F/S			
2	Cau Gie - Ninh Binh	50	6	9,650	SB, CB	VEC	U/C	9,650		
3	Ninh Binh - Thanh Hoa (Nghi Son)	126.8	6	32,012	PPP(WB)	PMU1/DRVN	F/S	32,012		
4	Thanh Hoa - Ha Tinh (Hong Linh)	97	4-6	20,000	N/A	PMU6/DRVN	F/S	20,000		
5	Ha Tinh - Quang Binh (Bung)	145	4	25,362	N/A	N/A	P F/S		10,145	15,217
6	Quang Binh - Quang Tri (Cam Lo)	117	4	12,051	N/A	N/A	P F/S		4,820	7,231
7	Quang Tri - Da Nang (Tuy Long)	182	4	24,591	N/A	N/A	P F/S		24,591	
8	Da Nang - Quang Ngai	130	4-6	25,035	ODA (WB+JICA)	PMU85/VEC	F/S	25,035		
9	Quang Ngai - Binh Dinh	170	4	29,750	N/A	N/A	P F/S		29,750	
10	Binh Dinh - Nha Trang	215	4	35,905	N/A	N/A	P F/S		35,905	
11	Nha Trang - Phan Thiet	226	4	35,708	N/A	PMU6/DRVN	P F/S	15,870	19,838	
12	Phan Thiet - Dau Giay	98	4-6	16,170	PPP(WB)	BITEXCO	F/S	16,170		
13	Dau Giay - Long Thanh	43	6-8	16,340	ODA (ADB+JICA)	VEC	U/C	16,340		
14	Long Thanh - Ben Luc	58	6-8	22,620	ODA (ADB+JICA)	VEC	D/D	18,096	4,524	
13	Ben Luc - Trung Luong (Widening)	37	8	14,970	BOT	BDEC	U/C	14,970		
14	Trung Luong - My Thuan - Can Tho	92	6	26,700	BOT	BIDV (IDICO)	F/S	26,700		
Total		1,817		348,214				194,843	129,573	22,448

Notes: F/S = Feasibility Study; PF/S = Pre-Feasibility Study; D/D = Detailed Design; U/C = Under Construction

SB = State Budget; Gov = Government Budget; CB = Construction Bond; ODA = Official Development Assistance; BOT = Build-Operation-Transfer

Source: Decision No. 140/2010/QĐ-TTg

2.2 Expressway Development Projects in Southern Vietnam

2.2.1 Development Status of Southern Vietnam

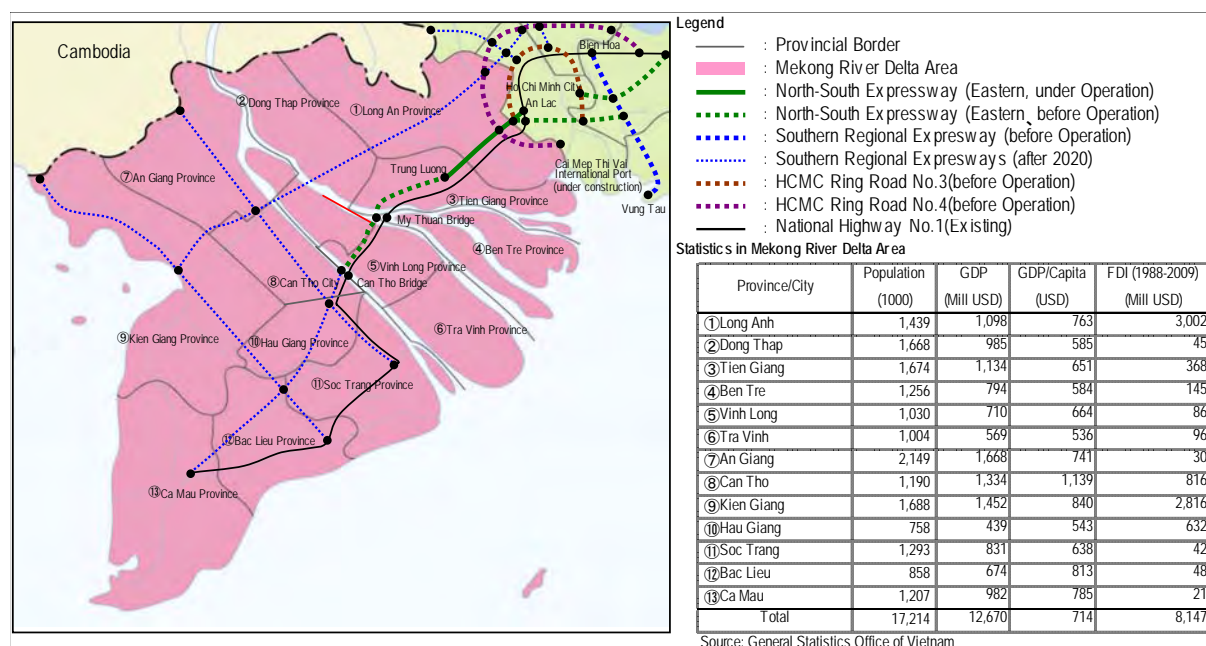
The on-going socio-economic development strategy (2006-2010) sets the national development orientation as “Finish low-income country in 2010, Jump to Industrialized country in 2020”. To realize the five-year rolling program, infrastructure development is given the highest priority. This policy was confirmed in the 11th Communist General Meeting in January 2011, and has been transferred to a new strategy (2011-2020). The new five-year rolling program (2011-2015) has drafted and promotes the development of remote areas in order to increase employment opportunities and raise their income.

Southern Vietnam comprises of two cities and 19 provinces with 30 million people, which is 35 % of the country’s population. About 57% of GDP (2008) and 51% of foreign direct investment (FDI) in 2009 are produced in this region. Especially, HCMC and its neighboring areas are being developed remarkably and the extents are spreading to every direction. However, the Mekong Delta (consists of one city and 12 provinces) produce only 4% of FDI although its population 20 million. In order to develop this frontier region, necessary infrastructure should be timely provided, road network in general, and expressway in particular.

2.2.2 Present Status of Expressway Development in Southern Vietnam

The master plan stipulates 15 routes with a total length of 1,226 km, including HCMC Ring Road No.3 and No.4. Among these, five expressways were requested to JICA for mobilization of Japanese ODA. These include: i) Bien Hoa – Vung Tau Expressway, ii) Can Tho – My Thuan Expressway, iii) My Thuan – Trung Luong Expressway, iv) HCMC Ring Road No. 3, v) HCMC Ring Road No. 4.

Especially, Bien Hoa – Vung Tau Expressway and HCMC-Ring Road No. 3 are the highest priority projects and their early realization is strongly expected.



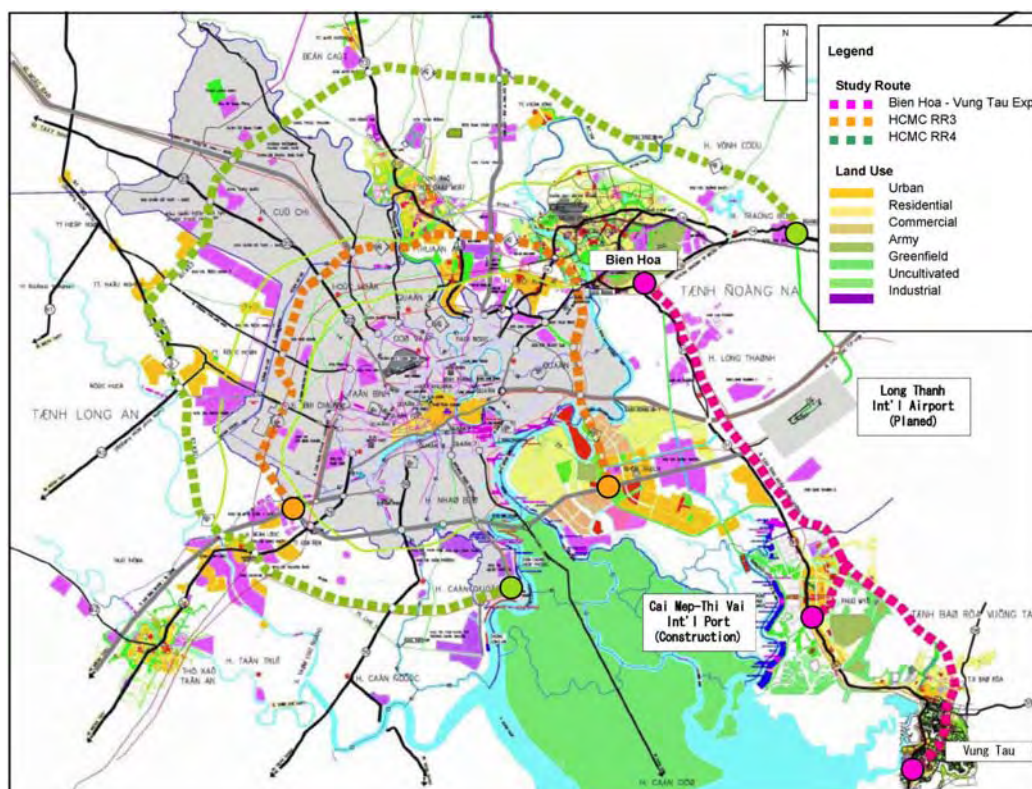
Source: JICA Study Team

Figure 2.2.1 Expressway Development Plan in Southern Vietnam

2.2.3 Expressway Developments around HCMC

(1) Urban Development Master Plan of HCMC (2020)

Urban development master plan (2020) of HCMC has been established in 2005. Many transport sector projects are being listed as the highest priority. Bien Hoa – Vung Tau Expressway and HCMC Ring Road No. 3 and 4 are also listed as the top priority projects in the master plan.



Source: HCMC Master Plan 2020

Figure 2.2.2 Urban Development Plan of HCMC (2020)

(2) Developed and ongoing expressway projects

Expressway development projects in and around HCMC are shown in Table 2.2.1.

Table 2.2.1 Developed / Ongoing Main Trunk Roads Including Expressways

No.	Project name	Present condition	Completed year	Note
1	East – West Highway	Completed	2008	JBIC(JICA)
2	Thu Thiem Bridge	Completed	2008	HCMC
3	Phu My Bridge	Completed	2008	BOT
4	Ring Road No.2 (East Part)	Under Construction	2008	HCMC
5	Ho Chi Minh – Trung Luong expressway	Completed	2010	SB
6	Ho Chi Minh – Dau Giay expressway	Under Construction	2014	JICA
7	Ben Luc – Long Thanh expressway (RR3 South section)	D/D ongoing	2015	ADB+JICA
8	Bien Hoa – Vung Tau expressway	BOT F/S ongoing	2015	BOT
9	My Thuan – Trung Luong expressway	BOT-F/S approved	2014	BOT
10	Can Tho – My Thuan expressway	F/S completed (Not Approved)	2015	Undecided
11	Ho Chi Minh Ring Road No.3	Pre-F/S done	2016	Undecided
12	Ho Chi Minh Ring Road No.4	Pre-F/S done	2016	Undecided

Source: JICA Study Team

2.2.4 Importance of Bien Hoa – Vung Tau Expressway in the Southern Key Economic Zone

The Southern Key Economic Zone (SKEZ) consisting of eight localities (HCMC, Binh Duong, Dong Nai, Ba Ria-Vung Tau, Binh Phuoc, Tay Ninh, Long An and Tien Giang provinces) is considered to be the engine of growth for Vietnam. The average annual economic growth in SKEZ is around 12 percent, accounting for 60% of the country's industrial production by value, 70 percent of the country's export revenue and 40% of the country's gross domestic product (GDP). Per capita GDP in HCMC was USD 2,850 in 2010, which was 2.4 times the national average.

SKEZ has been a principal area for investment. Over the past 20 years, 54% of the country's investment capital was invested in SKEZ. Although FDI flow in year 2009 decreased to one-third of that in the previous year, due mainly to world financial crisis, SKEZ attracted FDI in Vietnam in 2009. Baria-Vung Tau was the top province attracting USD 6.73 billion, followed by Binh Duong (USD 2.5 billion; ranked third). HCMC meanwhile ranked seventh. Japan ranked fourth among the top 20 foreign investors in Vietnam in terms of total investment capital during 1990-2010. However, the year 2009 earmarked decline of Japan's investment, down to the ninth ranking of FDI in the country. Nevertheless, Japan's FDI resurged in the year 2010. At present, the members registered in the Japan Commerce Association of Ho Chi Minh account for 423 enterprises. Japanese companies invested in SKEZ, including the members of the Japan Commerce Association of Ho Chi Minh, which are reported to be around 700.

The Japan External Trade Organization (JETRO) recently updated a comprehensive map showing the major infrastructure and industrial parks in HCMC including neighboring localities, shown in Figure 2.2.3. Industrial parks are scattered in the provinces of Binh Duong, Tay Ninh, HCMC, Tien Giang, Long An, Dong Nai and Ba Ria - Vung Tau. These provinces account for 98 industrial parks.

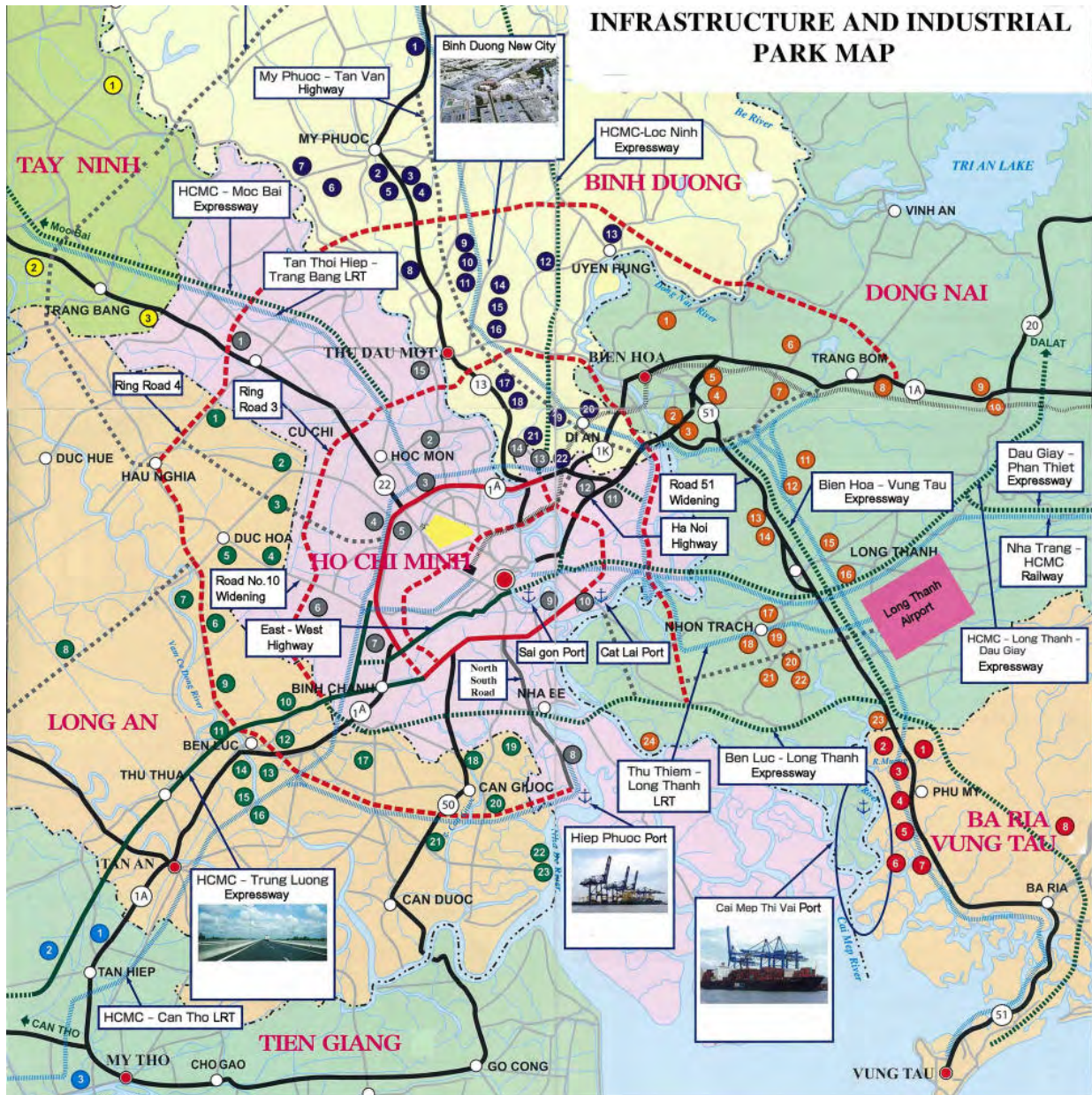
Table 2.2.2 Industrial Parks in SKEZ

Provinces	Industrial parks	Remarks
Dong Nai	24 parks are scattered along Road 51 and 1. Those are concentrated in Bien Hoa, Nhon Trach and Long Thanh.	About 830 companies are operating in 24 parks, where 81 Japanese companies are operating.
Ba Ria Vung Tau	8 parks are scattered in Phy My area along the Road 51. These in Phy My, adjacent to Cai Mep Thi Vai Deepwater Ports are featured by resource based industry such as processed steel products.	About 170 companies are operating in 8 parks, where 4 Japanese companies are operating.
Ho Chi Minh	15 parks are located in the city. Industrial parks in the City are almost in a saturated condition. Japanese companies concentrate on Tan Tuan Export Processing Zone.	JETRO statistics cover 7 parks. About 620 companies are operating in 7 parks, where 68 Japanese companies are operating.
Binh Duong	22 parks are scattered along the Road 13. Parks are used to be constructed in the provincial capital (Thu Dau Mot). Binh Duong New Town recently attracts construction of industrial parks.	About 1,640 companies are operating in 15 parks, where 160 Japanese companies are operating.
Tay Ninh	There exist 4 parks in Tay Ninh Province, with two parks located along the Road 22. Linh Trung EPZ is the biggest park in Tay Ninh.	There are 128 companies including 3 Japanese firms operating in Linh Trung EPZ.
Long An	There exist 23 parks in Long An Province, which has been less attractive for Japanese companies because transportation to Saigon Port or Cai Mep Ports has to pass through Ho Chi Minh.	JETRO statistics cover 11 parks. About 100 companies including 10 Japanese firms are operating.

Source: Industrial Parks Survey (JETRO, 2011)

Strategic importance of the Bien Hoa-Vung Tau Expressway is closely linked to Cai Mep - Thi Vai Deepwater Ports. These recently attracted highly interested private transportation sectors including forwarders, marine shipment and trucking service companies. Because of the high level of saturation of cargo handling capacity at Saigon and Cat Lai ports, the role of Cai Mep - Thi Vai Deepwater Port will be increasingly highlighted as a trans-shipment hub port. Enterprises in industrial parks located in Ba Ria-Vung Tau, Dong Nai, Binh Duong, Tay Ninh and part of them in parks located in Ho Chi Minh would use the Bien Hoa-Vung Tau Expressway to transport finish products/materials from and to Cai - Mep Thi Vai Deepwater Port. About 2,770 companies including 240 Japanese firms in parks located in the provinces of Dong Nai, Ba Ria Vung Tau, Binh Duong and Tay Ninh will benefit from using the Bien Hoa-Vung Tau Expressway in the future. The likely cross border trucking service to Cambodia through Cai Mep Thi Vai Deepwater Port and further planning of industrial parks in SKEZ would accelerate the use of the Bien Hoa-Vung Tau Expressway as well.

Long Thanh International airport in Dong Nai Province, 50 km northeast of HCMC, and 70 km west of the off-shore petroleum base city of Vung Tau, will handle long-distance international passengers and cargoes. Tan So Nhat Airport has recently accounted for nearly two thirds of the international arrivals and departures in all of Vietnam's airports. Long Thanh International Airport will compliment Tan So Nhat Airport in international arrivals and departures. The Bien Hoa-Vung Tau Expressway will be the main route for passengers and cargo traffic between Long Thanh International Airport and Dong Nai, Binh Duong, Tay Ninh and Binh Phuoc.



Source: Industrial Parks Survey (JETRO, 2011)

Figure 2.2.3 Industrial Development in SKEZ

CHAPTER 3 PRESENT STATUS OF BOT/PPP PROJECTS IN EXPRESSWAY DEVELOPMENT IN VIETNAM

3.1 Present Status of Legal Framework for BOT/PPP Scheme in Vietnam

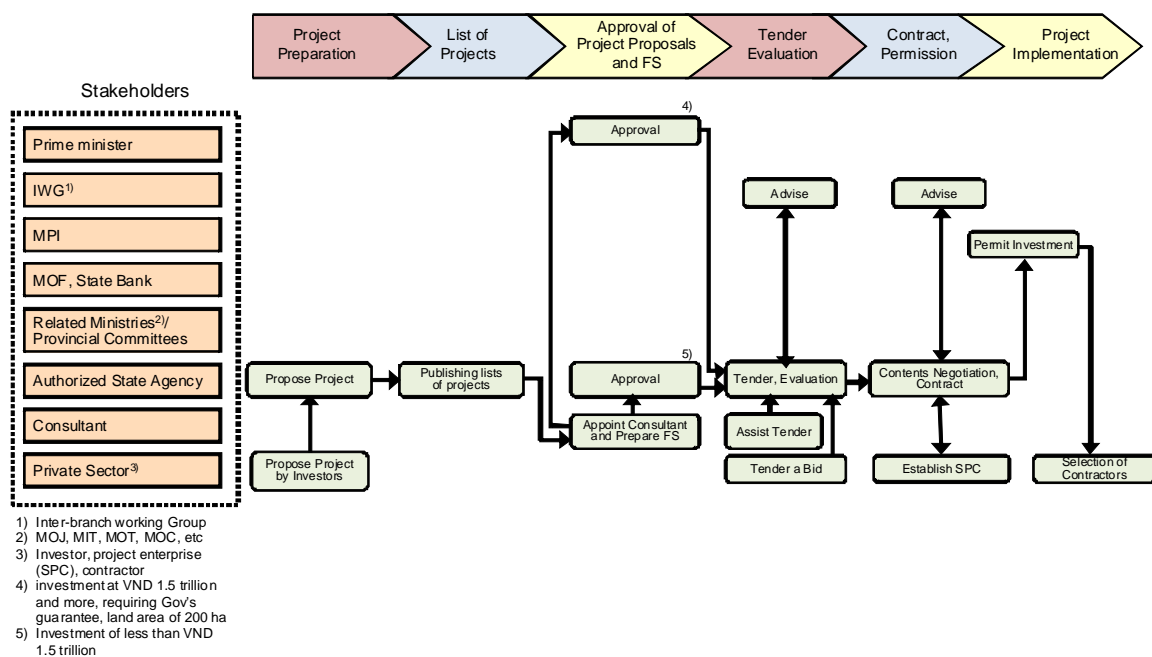
3.1.1 Existing Laws for BOT/PPP Scheme

(3) BOT Law

Vietnam first enacted regulations for BOT projects in 1994 within the framework of the Foreign Investment Law (FIL). These initial regulations left many questions unanswered, especially in the area of financing. In August 1998, the GOV issued Decree 62 to regulate the implementation and financing of BOT projects. Partly in response to concerns raised by foreign investors and lenders after the Asian financial crisis, the GOV further liberalized the BOT regime by issuing Decree 02 in January 1999, amending Decree 62. The FIL, Decree 62 and Decree 02 are the first components of Vietnam BOT law.

Then, the government issued a decree on “Investment on the Basis of Build-Operate-Transfer (BOT), Build-Transfer-Operate (BTO), and Build-Transfer (BT) Contracts”, which is called Decree No.78 enacted in 2007. The said decree consists of i) General Provisions, ii) Formulation and Publication of Lists of Projects, iii) Selection of Investors for Project Contract Negotiation, iv) Negotiation and Signing of Project Contracts, v) Implementation of Projects, vi) Transfer of Facilities and Termination of Project Contracts, vii) Investment Incentives and Guarantees in respect of Investors and Project Enterprises, and viii) Implementation Provisions. Decree 78 is the first BOT Law enacted in Vietnam, stipulating i) definitions of BOT/BTO/BT schemes, ii) conditions and regulations required for state contribution and equity-debt ratio, iii) procedures from project preparation to implementation, and vi) incentives such as income tax and export/import duties.

Nevertheless, Decree 78 needed to be improved and clarified for private investors in respect of conditions and regulations for state contribution and equity-debt ratio, procedure and requirements (who does what). The government initially intended to supplement Decree 78 in the form of a circular, but instead decided to issue the new Decree 108, which was enacted in 2009. The latter decree which is on investment in the form of BOT, BTO and BT Contracts (No.108) comprised of i) General Provisions, ii) Establishment and Announcement of Project Lists, iii) Selection of Investors for Contract Negotiation, iv) Project Contract, v) Procedures to Issue Investment Certificates and Project Implementation, vi) Transfer of Works and Termination of Project Contracts, vii) Incentives and Investment Security for Investors and Project Enterprises, and viii) State Management for Investment Projects for BOT/BTO/BT Schemes. Decree 108 was improved and clarified in the light of the procedure and requirements (who and what). Its procedure is illustrated in Figure 3.1.1.



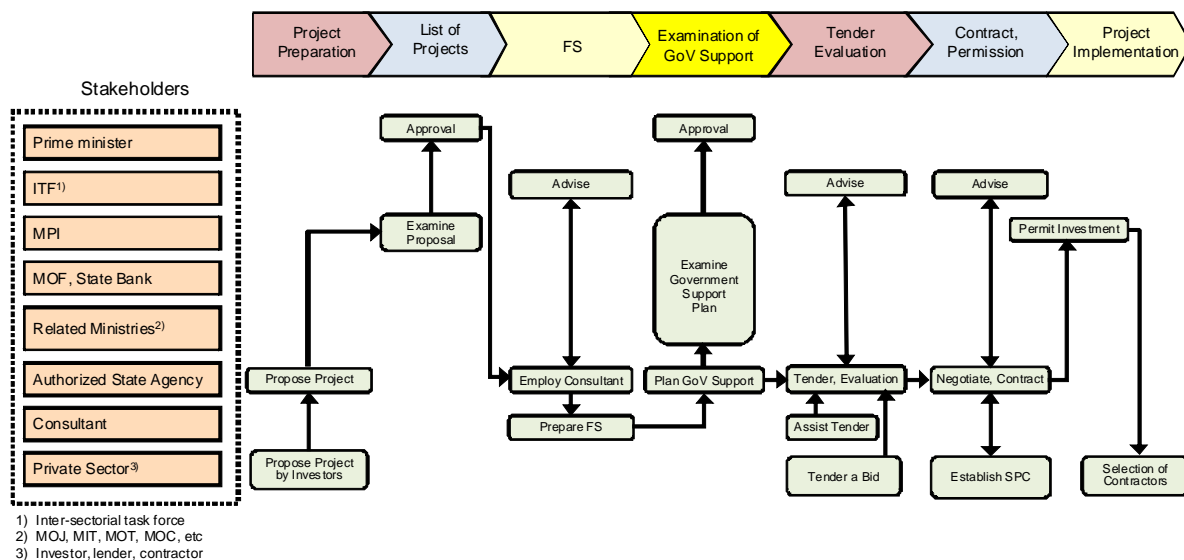
Source: JICA Study Team

Figure 3.1.1 Procedures based on Decree 108

The authorized state agency (i.e. the Ministry of Transport for expressway development project) is primarily responsible for the entire procedure from project preparation to project contract. The Prime Minister's approval is needed for projects costing more than VND 1.5 trillion at the stage of F/S report preparation. Ministry of Planning and Investment (MPI) is liable for the issuance of Investment Certificate (IC) to investors/project companies after a project contract is made. Further amendment of Decree 108 will be issued in the form of Circular No.03.

(4) PPP Regulation

Vietnam recently paved the way for a pilot PPP legal framework. The pilot PPP legal framework took the form of Prime Minister Decision 71 on the regulation for pilot Investment under PPP scheme. Decision 71, issued in 2010, is not a law but a pilot regulation subject to amendment. It is almost identical with the BOT law in terms of procedure and contents. Decision 71 comprised of i) General Provisions, ii) Public Participation, iii) Project Preparation, iv) Selection of Private Partners, v) Project Contract, vi) Investment Certificate and Project Implementation, vii) Financial Statement and Transfer of Project Work, viii) Incentives and Guarantee of Investments, and xv) Organization of Implementation. Procedure based on Decision 71 is illustrated in Figure 3.1.2.



Source: JICA Study Team

Figure 3.1.2 Procedure based on PM Decision 71

Decision 71 empowers authority to MPI, say, virtual approval of list of projects before Prime Minister’s approval, and MPI initiative-based inter-sector task force that gives advice to approval of the F/S, selection of investors (tender evaluation) and project contract. The chapter on public participation is highlighted, stipulating a maximum ratio of 30% of the state capital contribution. The PPP regulation became effective in January, 2011; however, it is just intended for pilot PPP projects and thus, a comprehensive PPP framework would be adopted upon pilot projects’ post-implementation phase.

3.1.2 Legal Support for Private Fund Mobilization

The government has suffered from a chronic shortage of public funds. Thus, reduction of state capital contribution on infrastructure development has now a categorical policy shared among the government sectors. Under such circumstance, private fund mobilization will be the key approach to infrastructure development in Vietnam. There is a question raised on the newly launched PPP legal framework, if such is supportive to private fund mobilization. Table 3.1.1 shows a comparison of the PPP Regulation and the BOT Law (Decree 108).

Table 3.1.1 Comparison between Decision 71 and Decree 108

	Regulation on pilot investment under PPP (PM Decision 71/2010/QD-TTg)	Decree on investment in BOT, BTO and BT (No 108/2009/ND-CP)
Business method	PPP	BOT, BTO and BT
State capital	Not exceed 30% of total project investment cost (Article 9) and included in total investment cost (Article 2).	For the urgent and important projects. Not exceed 49% of total investment cost and is not included in total project investment cost (Article 6).
Use of state capital	Auxiliary facilities, compensation cost, land acquisition, clearance, resettlement and others	The same as PM71
Equity/debt ratio	30% of the total private sector's investment at least and the remaining financed by commercial and other sources of fund without government guarantee (Article 3).	1) A project capitalized at up to VND 1.5 trillion: not lower than 15% of the total private investment. 2) A project capitalized at more than VND 1.5 trillion: not lower than 15% of capital up to VND 1.5 trillion and not lower than 10% of capital over VND 1.5 trillion (Article 5).
Investment area	Road, railway, <u>urban transport</u> , airport, water supply, power plant, <u>hospital</u> , <u>disposal treatment plant</u> (Article 4). The underlined is the new investment area.	Road, railway, airport, water supply, power supply, others
Project portfolio and feasibility report	A list of projects is monitored and evaluated by MPI and decided by PM (Article 14). A feasibility report is submitted to PM to consult public participation and guarantee and approved by MPI in cooperation with MOF (Article 18). Cost of feasibility study is to be financed by the state (Article 6).	A list of projects is monitored/evaluated/decided by the relevant state agencies. PM may approve feasibility reports of projects requiring investment of more than VND 1.5 trillion, land area of more than 200 ha and government guarantee (Article 12). Feasibility study of projects to be financed by private sector itself (Article 8).
Land acquisition		Compensation/land acquisition/resettlement costs to be financed by private sectors except for projects in Article 6 (Article 30)
Toll rate	To be determined based on cost, profits, users and the state policy, and adjusting of toll rate to be noticed to the state agency (Article 37)	The same as PM 71 (Article 33). The government support for toll revenue (Article 34).
Preferential treatment	Preferential taxes for corporate income and import duties, and exemption of land use fees for the area controlled by the state (Article 41)	The same as PM 71 (Article 38).

Source: JICA Study Team

The comparison between Decision 71 and Decree 108 is summarized as follows.

- 1) State capital contribution is 30% at the maximum for the PPP regulation while Decision 108 allows state contribution to finance 49% of investment cost at the maximum. Further state contribution is not counted in project investment cost in BOT projects.
- 2) The PPP regulation does not allow private investors to apply the government guarantee while Decision 108 paves the way for government guarantee.
- 3) The PPP regulation imposes a fixed equity-debt ratio (30:70) while Decree 108 gives a flexible ratio, 15% at the maximum depending on scale of investment.

As a whole, the PPP regulation appears to be veering away from adopting a business-friendly scheme compared to the existing BOT Law. Further review of the PPP regulation is needed from the viewpoint of private fund mobilization.

The Circular No.90 issued in 2004 is a regulation on toll rates and has not been amended yet. Although amendment of toll rates can be stipulated in a project contract (Decree 108 and

Decision 71), toll rates are virtually regulated by Circular No.90. If tariff does not increase according to tariff amendment stipulated in a project contract, a project enterprise could not gain toll revenue expected. The Ministry of Finance (MoF) currently examines a fund mobilization method, particularly a private fund. Toll revenue is an important fund source for project finance. Amendment of Circular 90 expected in 2011 will be supportive to the mobilization of private investment and financing for BOT/PPP projects (as of March 2011).

3.2 Present Status of BOT/PPP Projects in Expressway Development

After the issuance of the BOT Law (the Decree 78) three years ago, several BOT expressway projects have been identified on the list of MOT's projects. Nevertheless, there is only one project (the Trung Luong-My Thuan expressway) that concluded a BOT contract with MOT. On the other hand, most PPP projects are currently at the stage of project preparation. So far, no expressway project has been proposed under a PPP scheme.

According to "Public-Private Partnership (PPP) in the Road Sector (September 2008)" by World Bank, the following are identified as BOT/PPP projects in expressway development:

Projects in operation

- a) Hanoi - Cau Gie Expressway Toll Collection

Projects being implemented

- a) Cau Gie - Ninh Binh Expressway
- b) Hanoi - Hai Phong Expressway
- c) HCMC - Trung Luong Expressway
- d) Trung Luong - My Thuan-Can Tho Expressway
- e) HCMC-Long Thanh - Dau Giay Expressway
- f) Noi Bai - Lao Cai Expressway

CHAPTER 4 **STUDY ON RISK AND SECURITY PACKAGE IN GENERAL ASPECT**

4.1 **Synthesis of Risks Involved in Expressway Development (General)**

One of the fundamental elements of private investor and lender's project feasibility assessment is to analyze the risks involved in the project. Table 4.1.1 describes the general categories of risks involved in large infrastructure projects. In this section, the general risks involved specifically for Expressway Development is synthesized. Subsequently in Section 8.4, preliminary assessment of risks involved in Bien Hoa - Vung Tau Expressway Project will be described.

The four large categories of risks are:

1. Project design/construction/operation and maintenance (O&M) risks
2. Project finance risks
3. Market risks
4. Project external risks

4.1.1 **Project Design/Construction/O&M Risks**

Land acquisition risk: Land acquisition cost will be a risk factor, especially if the cost will be borne by the private sector. In general, land prices along the expressway can experience price hikes due to speculative land transactions. Typically, the government freezes land transaction along the alignment to prevent such phenomenon. Also, the implementation of land acquisition (typically by the local government) can take time due to compensation and resettlement plan negotiation gridlocks. This could lead to delays in construction, which is a large cost factor for the private investor.

Environment/ Social risk: This is about fulfilling EIA requirements and other environment/social related guidelines involved in expressway project. The project must comply with regulations set by the country as well as guidelines of donors and other related stakeholders. The procedures on obtaining appropriate approvals could trigger delays or sometimes require changes to the plan of the project.

Technical risk: This gets into the engineering areas of the project. In general, structures such as tunnels and bridges require extra attention, because there are more potential technical factors that can cause delays in these areas.

Project completion risk: This is about construction management and supervision. In general, quality, cost, delivery and safety features require tight control for expressway projects. If any of these dimensions are off track, these pose as risks to the completion of the project.

O&M risk: This is about the O&M of expressway after its operation commenced. Requirements for expressway O&M will be different from ordinary road. Therefore, a dedicated organization with the right sets of skills and experience will be required. Otherwise, there will be risks leading to poorly managed expressway or cost overruns.

4.1.2 **Project finance risks**

Sponsor Risk: Expressway project is structurally difficult to attract investors that are genuinely interested in long-term returns from toll revenues. Therefore, there are general risks on whether a

reliable sponsor could be found. Sometimes, there are investors that look for other financial benefits and may not fully commit to long-term expressway business.

Financing risk:

Expressway projects can very often stall because of investor's difficulty in reaching financial closure with the lender. Concession agreement maybe signed but the investor may fail to convince the lender on project profile and security aspects.

4.1.3 Market Risk

Traffic demand risk: Traffic demand risk is related to whether the demand forecast levels of traffic can be achieved under a certain road network and tariff scenario. This is also a function of how to make assumptions on the future traffic needs of industrial users, as well as general road users along the alignment.

Tariff risk: Tariff levels and adjustments have extremely high sensitivity to the Project IRR. Therefore, if tariff adjustments are not made according to agreed scenario, it will have huge consequences on the revenue and profitability of the project. Investors and lenders are extremely cautious about public infrastructure, especially when it involves tariff risks, which are out of their control.

Network Risk: Expressway is a network business. Other roads and expressway either supplement each other or compete with each other. Therefore, scenario changes to the network plan can significantly affect the traffic for a given expressway. In general, the network plans are written in the BOT contract with the line ministry that will be responsible for the plans of other network nodes.

4.1.4 Project External Risks

FX Risk: The revenue base of expressway project will be based on local currency tariff. Therefore, for overseas investors and lenders, the FX risk will be an important element to consider. In general, long-term movement of FX rates should be driven by the long-term outlook of economic fundamentals of the country. FX risk cannot be managed and therefore it is a matter of risk allocation and hedging between investors, lenders and government.

Interest Rate: The project's cost of debt will be subject to changes in interest rate, for the portion that is linked to market interest rate movements. Investors will need to take this into account when they plan for equity return.

Currency Conversion: Overseas investors and lenders would want to convert local currency to hard currency and send cross borders. Some countries change guidelines related to the restriction of such monetary movements.

Regulatory Risk: Expressway projects are implemented under various legal structures, including the BOT/PPP law, expressway construction regulations, tariff regulations and O&M regulations. Changes in these regulations can sometimes negatively affect the profitability of the project. Hence, investors will typically discuss this matter in detail with the local government.

Political risk/Force majeure: This is related to labor disputes, political instability, natural disasters and other unforeseen events that may negatively affect the project. Typically, export credit agencies (ECAs) provide basic guarantee packages in hedging this type of risk.

Table 4.1.1 List of Risks

	Name	Description
Project design/construction/O&M risks	Land acquisition risk	<ul style="list-style-type: none"> • Land acquisition cost exceeds estimated budget • Land acquisition is delayed
	Environment/Social risk	<ul style="list-style-type: none"> • Project is denied/delayed due to environmental/social impact
	Technical risk	<ul style="list-style-type: none"> • Project is delayed due to technical bottleneck
	Project Completion risk	<ul style="list-style-type: none"> • Project is delayed due to mismanagement of construction • Project construction cost exceeds budget • Project is delayed or has cost overrun due to design defects
		O&M risk
Project finance risks		Sponsor risk
	Financing risk	<ul style="list-style-type: none"> • Qualified lender cannot be found • Loan amount is not sufficient
		Market risks
Tariff risk	<ul style="list-style-type: none"> • Tariff adjustments are not made according to agreed formula 	
Network risk	<ul style="list-style-type: none"> • Traffic demand is lower due to alternative road development and/or delays in adjacent feeder connections 	
Project external risks	FX rate risk	<ul style="list-style-type: none"> • FX rate fluctuation negatively affects project return
	Interest rate risk	<ul style="list-style-type: none"> • Interest rate fluctuation negatively affects project cost of debt
	Currency conversion, overseas transaction risk	<ul style="list-style-type: none"> • Currency conversion and/or overseas transaction cannot be made
	Regulatory risk	<ul style="list-style-type: none"> • Changes in regulation negatively affects project (e.g. permits)
	Political risk	<ul style="list-style-type: none"> • Project is negatively affected due to political instability • Terrorism or labor strike
		Force majeure

Source: JICA Study Team

4.2 Risk Management/hedge Approach (General)

In general, investors and lenders will manage/hedge above risk types through the following process:

4.2.1 Risk allocation

Allocate each risk to organization that can best control and manage risks. In this way, projects can establish fundamental basis in minimizing the total sum of project risks. The process methodology for this is to start with the identification all organizations involved in expressway development, including government contracting agency, sponsor, lender, Special Purpose Company (SPC) and contractor. Allocate risks to each identified organization. Allocation of market risk is the most important point to consider. For this, there are cases allocated to both the private and/or government. It could be argued that from a control point of view, government is in a much better position to control tariff and network risk because this is a government's decision matter. However, not many governments realize this point and try to allocate risks to the private sector.

4.2.2 Risk management

Enhance risk mitigating actions taken by each organization responsible in managing risk. This action includes policy/regulatory improvements, high quality F/S implementation, qualified contractor deployment and other project management measures. If each organization takes appropriate mitigating actions, then, the total sum of project risk is minimized. It is very important to differentiate this with (1) or (3). This is not zero-sum. Management of risk can be a win-win situation for all parties involved.

4.2.3 Risk insurance/guarantee

Risks will remain even after risk mitigation is executed. The residual risks can however be shared among organizations such as the international agency, ECA and private insurance company. Also, contractual negotiation will allow balancing of risks among organizations involved in the project. For expressway, tariff guarantee will be an important element for private investor. Furthermore, it is noted that minimum revenue guarantee scheme has been quite effective in Korea. There is also a movement to use the “breach of contract” guarantee against BOT contract. It is realized that obtaining this from the government will have positive impact in terms of attracting private investors.

4.3 Consideration of Security Package for Lender (General)

4.3.1 Overview of Security Package

Security is typically given by way of the following.

- A mortgage of land use rights and structures on land if permitted. The law prohibits the granting land mortgages to foreigners. In the past, there have been exceptions to allow land mortgages to foreign lenders for projects that are of national importance. However recently, the GOV seemed reluctant on this issue.
- A mortgage of the shares or capital in the project company. Because there is no security under Vietnamese law which can be taken over all the assets of the project company, foreign lenders typically require security over sponsors’ interests in the project company.
- A mortgage over plant and equipment.
- Security over key project contracts and insurances with consent from relevant counterparties in typical form.
- A project account structure which ensures net revenues are held offshore in USD accounts, together with security over both onshore and offshore project accounts. The account structure would often be supported by a conversion bank agreement under which mechanisms for conversion of VND to USD would be agreed.
- The government guarantees obligations of the Vietnamese participants in the project company, and government supports other issues such as conversion and convertibility of the project company’s revenues into foreign currency, provision of infrastructure facilities, no nationalization, stability of laws, etc.
- A guarantee given by the sponsors until completion of the project and other sponsors’ undertakings – such as to contribute capital.
- A Ministry of Justice (MOJ) legal opinion.
- Political risk insurance.
- International Financial Institutions (IFI) and ECA support.

Note that in the absence of a charge over all the assets of the project company (which is not a feature of the Vietnamese law), there will be some assets over which security cannot be taken (e.g. licenses). Hence, security over the shares or capital in the project company is important.

In addition, it is worth noting a few ancillary points. Security over assets in Vietnam should be registered in order to ensure priority. This is done with the National Register of Security Interests.

Foreign loans of more than 12 months must be registered with the State Bank of Vietnam (SBV). This is important because otherwise, remitting the proceeds of security enforcement out of the country will likely be impossible.

Since security taken over assets in Vietnam is assumed by an onshore security agent (not as trustee), it is likely that if the bank syndicate changes, this requires changes to the documents and the registrations. The benefits of the security trusteeship, which include the ability to replace lenders from time to time while the security trustee continues to hold all the securities on behalf of the lenders, are difficult to replicate in Vietnam. Consequently, it is best if all lenders are on board at the time the documentation is signed.

4.3.2 Security over Key Project Contracts and Insurances

In any infrastructure project, there are project contracts where without such, the project is not bankable. For example, a turnkey construction contract with a reputable contractor with appropriate provisions on liquidated damages and indemnities, etc. is a basic requirement for a green fields project. Depending on the nature of the project, there could be supplier or offtake contracts. There will invariably be insurance policies for property damage.

The lenders will want security over the project company's rights under these project contracts. Depending on the jurisdiction wherein these contracts are likely to be enforced, security might be taken over such contracts in a number of ways, including by way of mortgage, charge or assignment. In addition to the security itself, it is conventional for the lenders, the project company and the counterparty to the contract (e.g. the construction contractor) to enter into an agreement sometimes called a "Consent Deed" or a "Tripartite Agreement". The purposes of this agreement are to ensure the counterparty consents to the security being taken and to suspend certain rights (e.g. the right to terminate the contract) while the lenders attempt to enforce or remedy a problem. If the contract has defects, which are rendered unbankable, these can be remedied in this agreement.

Insurance policies have been seen to be dealt with in this way. However, more commonly, the lenders will be made a loss payee subject to conditions concerning the uses to which proceeds may be put. The loan documentation would include basic requirements as to the terms of the policies designed to protect lender interests, and an insurance consultant to the lenders would normally check compliance with these requirements.

4.3.3 Support by Vietnamese Government

Government support to projects of this type comes in three broad categories:

- Incentives provided under an Investment Certificate (IC);
- Incentives available under the laws; and
- Government guarantees

If possible, above three items should be addressed while the project company is being established. This is the time of greatest influence for the project sponsors. It is sometimes difficult to extract concessions once the project company has been established.

Investment incentives are those granted to the company on its establishment and appearing in its constituent documents, mostly in the IC. These may include statements on tax holidays, provision of infrastructure, rights to land, etc. Note that some incentives are granted by law (i.e. the project receives them whether or not they are written into the project company's constituent documents). Nevertheless, it tends to be the practice where sponsors prefer confirmation of

these incentives. Moreover, due to the ambiguity of the laws, the sponsors usually prefer those incentives in the laws further clarified in the government guarantees. Sometimes, the laws only provide principles, whereas the project sponsors require that the procedures on how to obtain the incentives be stated in a bilateral contractual arrangement in a project document, such as BOT Contract or a "Government Guarantee and Undertaking" (GGU). These two types of contract documents so far used to record agreements with the state in some very large-scale infrastructure investments (mostly energy-related) in Vietnam.

(1) Incentives Provided under an IC

Subject to (i) applicable law relating to change in law and (ii) any binding agreement that may have been made with the state in relation to change in law, sponsors will be entitled to the incentives specified in the IC.

The Law on Investment (LOI) states that where a newly issued law contains more favorable treatment than those that the sponsors are enjoying, the sponsors are entitled to the more favorable treatment.¹

Where a new law or policy changes adversely affects the sponsors, the sponsors will still be able to continue enjoying the incentives as stipulated in the IC.² In case of discontinuance in granting such incentives, the article provides that one or more of the following measures should be applied:

- (a) Continuation of enjoyment of benefits and incentives;
- (b) Deduction of the loss from taxable income;
- (c) Change of the operational objective of the project; and
- (d) Consideration shall be given to payment of compensation in certain necessary circumstances.

The article also states that the government will provide specific provisions on guarantee of interests of sponsors in the case where a change in law or policy affects adversely the interests of sponsors. It is noted however that no such regulations have been enacted. The only mention of change in law in the government's Decree 108 dated 22 September 2006, which implements the LOI (Decree 108 on LOI) is in relation to the measure specified in (d) above. Decree 108 on LOI merely states that the interchange issuing body will recommend to the Prime Minister to issue a decision on guarantee of the investor's interests as a consequence of the change in law or policy affecting adversely the interests of such investor. Thus, there is no certainty of outcome in case of adverse change of law.

In approximately five large-scale infrastructure projects, the sponsors overcame this uncertainty in relation to change of law by putting it clearly in the contract with the Government in a GGU for suitable protection, including compensation.

In current projects, the Government is resisting any such certainty as the subject of contractual arrangements.

(2) Incentives Available under the Laws Applying to Different Investment Structures

1) LOI

The incentives provided for in the LOI apply to all investment structures: investment in the form of a BOT project, a BT project, a PPP project or an ordinary company in the form of a limited

¹ The LOI, Article 11.1.

² The LOI, Article 11.2.

liability company or a shareholding company.

2) Decree 108 on LOI

Decree 108 on LOI provides specific provisions on incentives stipulated in the LOI. However, basically it is just a repetition of the incentives stated in the LOI.

3) Decree 108 on BOT Contracts

Decree 108 of the Government dated 27 November 2009 on BOT, BTO and BT projects provides for the incentives applicable to these projects.

4) Decision 71

Decision 71 of the Prime Minister dated 9 November 2010 promulgating regulations on pilot PPP projects reiterates the incentives stipulated in Decree 108 on BOT Contracts.

Note that from a technical legal perspective, these regulations may be invalid as being ultra vires of the Prime Minister.

5) Incentives Provided

Under aforementioned applicable laws, a project company is entitled to several incentives such as:

- Preferential treatment depending on sectors and localities;
- Tax incentives;
- Incentives on land use;
- Extension of Incentives;
- Government guarantees;
- Right to mortgage assets and land use right;
- Assurance of provision of public services; and
- Protection of capital and assets from expropriation/ nationalization.

6) Ad hoc contractual government guarantees

In about six cases, the government has signed a GGU (or BOT Contract) in support of specific issues such as:

- Availability of foreign currency, convertibility of local currency, and remittability of foreign currency;
- Performance (payment) guarantees of state enterprises such as electricity offtakers and coal suppliers;
- Stability of law including tax law (change in law provisions);
- Compensation for nationalization; and
- Provision of land and infrastructure facilities.

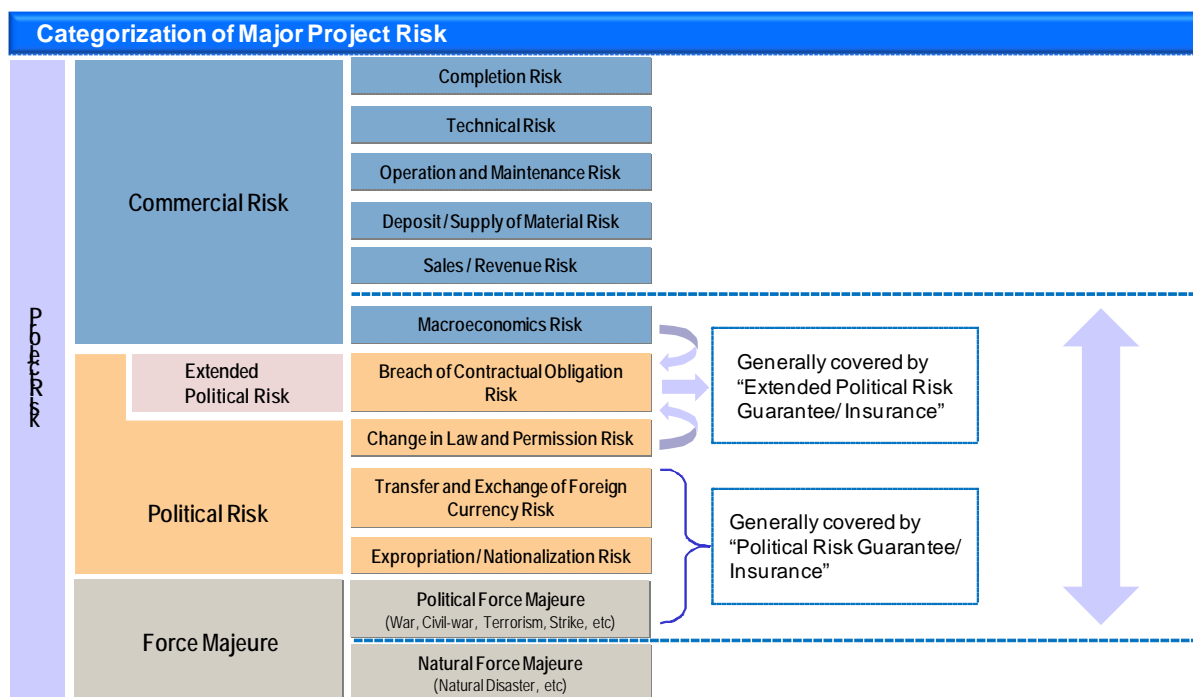
As indicated in Item 2) above, some incentives are already stipulated in Decree 108 on BOT Contracts. However, how these incentives are applied in practice is unclear. In the past, in large-scale infrastructure projects as well as projects under negotiation, sponsors have tried to clarify the incentives that the BOT company and the sponsors are entitled to under the law, and put them in the GGU for more certainty. Recently, the government has been resisting such attempts.

4.3.4 Support by IFI and ECA

(1) Risks covered by IFI and ECA

1) Overview of the Categorization of Project Risks

General categorization of project risks is described in the following figure. The risks covered under programs by IFI and ECA are explained in detail in the following sections.



Source: JICA Study Team

Figure 4.3.1 Categorization of project risk

2) Macroeconomic-Related Risks

Macroeconomic-related risks categorized in commercial risks can be covered indirectly by IFI and ECA programs, through the following “breach of contractual obligation” cover. Risks of fluctuation of interest rate, inflation, and foreign exchange rate are included in this category.

3) Political Risks

a) **Breach of Contractual Obligation**

This is a risk that government of the project host country or the governmental organizations might breach obligations stipulated in project contracts. This is called the “extended political risk” in some IFI and ECA programs.

b) **Change in Law and Permission by authority**

Government or the governmental organizations might change the laws related to the project or withdraw the permission once issued.

c) **Transfer and Exchange of Foreign Currency**

Government or the central bank of the project host country might promulgate regulation for exchange of the project cash flow in local currency to foreign currency such as US dollars, or transfer of the project cash flow to offshore accounts.

d) **Expropriation or Nationalization of the Project**







Government of the project host country might expropriate or nationalize the project owned by the project sponsor.

e) Political Force Majeure

Procurement of materials of the project or product and service provision might be directly or indirectly affected by occurrence of war, civil-war, terrorism, strike, and so on.

(2) Major IFI and ECA and Their Program

The following table shows the major IFI and ECA, and their program briefly. The coverage of risks depends on the IFI/ECA and the program.

Major Support Programs by ECAs for Infrastructure Development Project in Developing Countries							
	Name of the Organization	Category	Support Program				
			Equity	Loan	Investment Insurance	Loan Guarantee /Insurance	Coverage of guarantee/insurance
	Asian Development Bank	International Financial Institutions	○	○	○	○ (Guarantee)	◆ Political risk guarantee and partial credit guarantee ◆ Political risk guarantee covering four major political risk (*)
	Multilateral Investment Guarantee Agency	International Financial Institutions			○	○ (Guarantee)	◆ Political risk guarantee covering four major political risk (*)
	International Finance Corporation	International Financial Institutions	○	○		○ (Guarantee)	◆ Partial risk guarantee
	Overseas Private Investment Corporation	Export Credit Agencies (US)		○	○	○ (Insurance)	◆ Political risk insurance ◆ Covering political violence, expropriation/nationalization, regulation on transfer or exchange of foreign currencies, generally
	Japan Bank for International Cooperation	Export Credit Agencies (Japan)	○	○	(**)	○ (Guarantee)	◆ Political risk guarantee is common in project finance. ◆ Covering four major political risk
	Nippon Export and Investment Insurance	Export Credit Agencies (Japan)			○	○ (Insurance)	◆ Loan insurance covering credit risk in addition to political risk ◆ Covering four major political risk

(*) ①Political violence such as War and Civil-war (although coverage depends on agencies), ②Expropriation/nationalization, ③Regulation on transfer or exchange of foreign currencies, ④Breach of contract (whose coverage depends on agencies)

(**) As for the equity back finance, "Political risk immunized" loan program is available which indulgence of loan repayment when nonpayment of dividend occurs.

Source: JICA Study Team

Figure 4.3.2 Support Program by IFI and ECA

(3) Expectation on the Resumption of Private Sector Investment Facility (PSIF) by JICA

JICA used to have a program for funding to private sector (PSIF) in order to contribute in resolving development challenges in developing countries. However, the Government of Japan decided to freeze PSIF, which has not been applied to new projects since 2002.

The Government of Japan officially formulated the "New Growth Strategy" in June 2010 which mentions PSIF. According to said strategy "it is intended that JICA's private sector funding scheme should resume in order to prioritize the most needed development projects which have difficulties in securing funding from existing commercial financial institutions". For the resumption of PSIF, it is necessary to build a system for analyzing and managing risk, based on enough study and evaluation of existing successful and failed projects that PSIF applied in the past.

Thus, once resumed, PSIF, the JICA scheme, should also be considered as one of the funding channels.

4.4 Potential Structure for Road Projects in Vietnam

The risk management/hedging actions and security package structure for Vietnam would be the essence of project scheme design for expressway project. Here, design structures for specific scenario considerations are provided in Chapter 8.

The design structure would be in the following three categories.

4.4.1 Subsidy from Vietnamese Government

Attractive Project IRR will be the basis of assessment for both investor and lender. Therefore, subsidy structures are quite important to bring up the project IRR to acceptable levels. There is several subsidy potential for Vietnam.

- First, there is land cost subsidy. This can be considered part of a basic plan for road project structure. It was learned that there were several cases where land cost subsidy has been approved.
- Second, there is potential subsidy for supporting facilities of expressway such as the intersection surroundings and potential parking area/service area developments. In BOT Decree 108, it states the potential subsidy approval for high priority projects. This can be considered an advanced menu of subsidy required if project IRR cannot reach target levels after land subsidy.
- Third, there is the main construction cost subsidy. This is not easy to obtain and should be considered as last resort. However, Decree 108 can provide up to 49% subsidy, which means it is not against the law. Also, there are discussions inside MPI on Viability Gap Funding scheme. Variations could be considered by a leasing model, which is for the government to develop part of the expressway and lease the portion to private at fixed subsidized fees.
-

4.4.2 Guarantee from Vietnamese Government

This is the area of contingent support. Here, there are several categories to be further designed.

- First, there is a minimum revenue guarantee. This scheme has been successful in South Korea and Chile. Based on our research, there are 13 cases in South Korea and more than 10 cases in Chile. For example, Incheon International Airport Expressway has set minimum revenue line at 80% and maximum revenue line at 110%. Recently, Brazil, Mexico, Argentina and African countries have introduced this scheme as well. It is becoming increasingly common in developing country PPP toll road. We have also learned that Route 51 also has a similar guarantee clause included. Based on preliminary discussions, this could be considered part of basic plan to attract investment.
- Second, ways to design tariff guarantee should be considered. Multi-year approvals to adjust tariff based on a pre-defined formula could be obtained. Also, tariff guarantee could be considered in the form of breach of BOT contract.
- Third, discuss “buy-out” guarantee by government could be discussed. In this way, lenders could minimize downside risk in case of SPC default.
-

4.4.3 Security between sponsor/contractors:

- First, there is a basic security package to be included in the project contract. This includes step-in rights for lenders to take control of operations. Also, there are contract clauses to ensure mortgage of land use rights, fixed assets, shares or capital in SPC. This also includes clause to ensure security over onshore and offshore accounts.
- Second, additional security from shareholders can be considered. This is to obtain shareholder commitment on the long-term success of expressway business. For example, setting up escrow account by the shareholders could be discussed. This account will act as the liquidity buffer just in case the SPC reaches working capital shortage in the initial stages of operation.

CHAPTER 5 NECESSITY FOR RESUMING PSIF

In the “North-South Expressway master plan” for which JICA supported to formulate, necessary budget for development of North-South Expressway network was estimated about 66 billion USD. Projects which has been approved its implementation by GOV are estimated about 12 billion USD, and most of its finance will be needed to be financed from ODA of Japanese government, World Bank, ADB and so on. The rest of 54 billion USD should be secured from various financial sources. It’s difficult to be supplied by only public fund of Vietnam government and ODAs, it is strongly expected to mobilize private sector investment and the GOV has addressed the same policy.

To facilitate private sector investment in the sector, it is necessary to provide appropriate financing to the private sector based on the knowledge and experience of the country and the sector. In this context JICA has an competitive advantage in providing JICA’s PSIF to the private sector based on its substantial knowledge and experience in the country and especially in the expressway sector. JICA-PSIF is a financial support system for promoting LDC’s economic and social development through finance (loan/equity) to private sector as illustrated in the following figure.

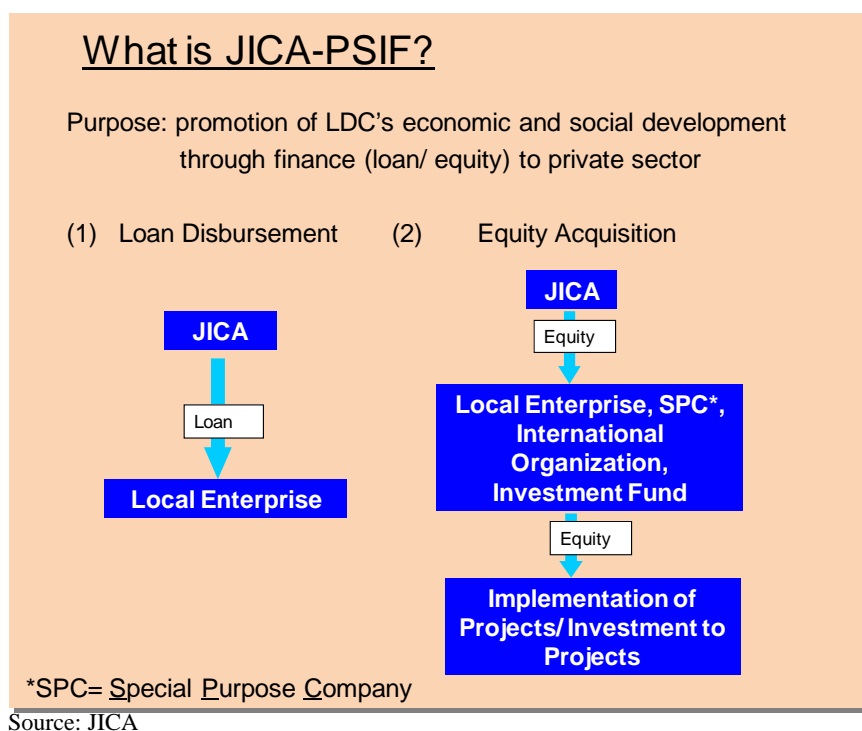


Figure 5.0.1 Purpose of JICA-PSIF

5.1 Project Facilitation for Foreign Investors

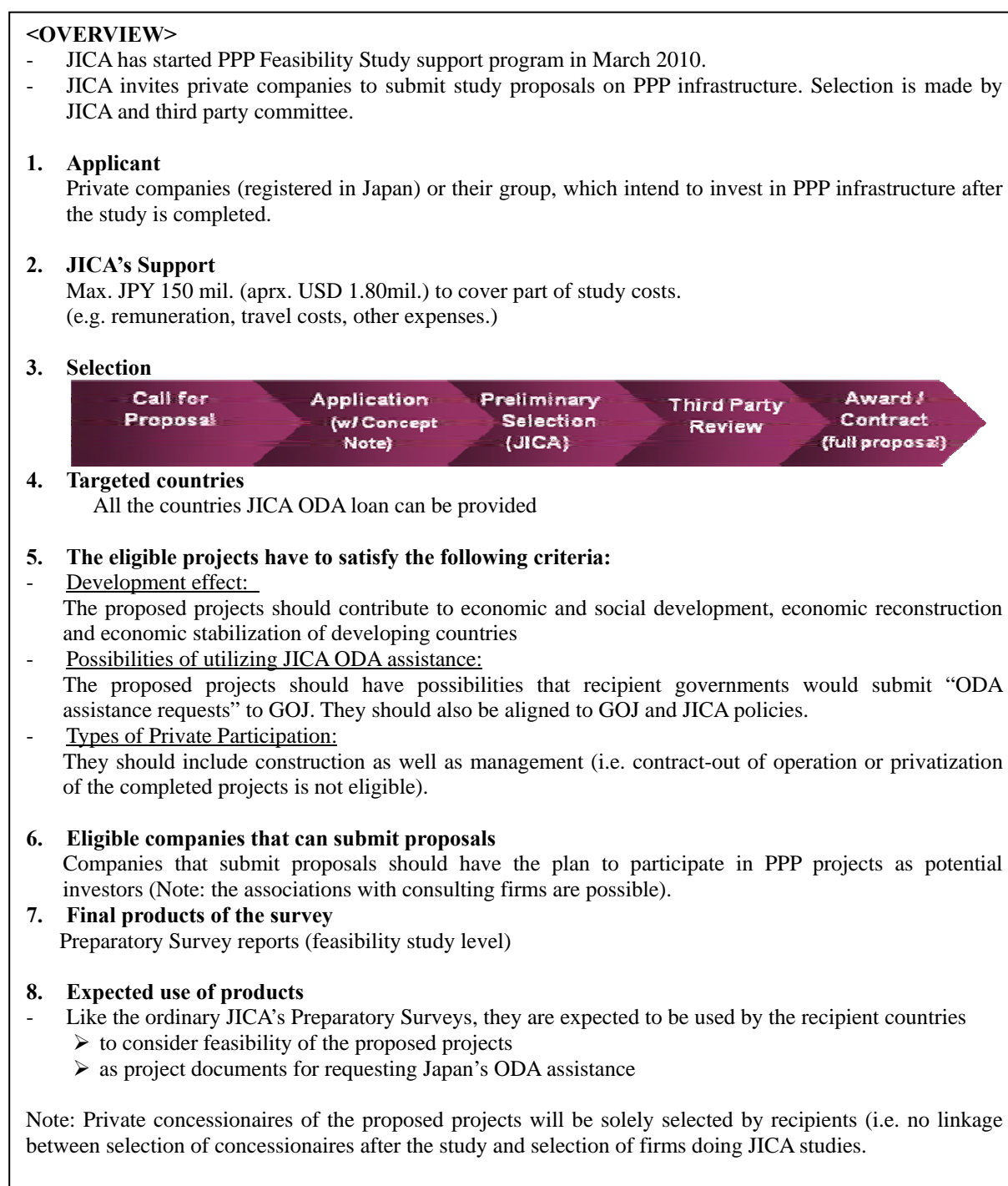
5.1.1 Implementation of PPP Preparatory Survey

Together with JICA-PSIF, JICA has a system called “Preparatory Survey Scheme for PPP Infrastructure”. The purpose of this survey is to promote the identification and preparation of PPP infrastructure projects that are candidates for JICA’s ODA assistance including Japanese Yen Loan and PSIF.

JICA has two roles in the implementation of a PPP infrastructure project in developing countries, namely, as “project promoter” and “lender”. This preparatory survey scheme is very important for

JICA to play the role of the project promoter as it has sector and policy expertise in the subject country and would serve as a coordinator among relevant government agencies during the course of this PPP preparatory survey. This role is especially valuable as participation of foreign investors in the subject countries could be enhanced; hence, the country could benefit from various resources including financial, which the foreign investors could bring about.

The following is the outline of the PPP preparatory survey scheme:



Source: JICA

Figure 5.1.1 Outline of PPP Preparatory Survey Scheme

5.1.2 Coordination with GOV

JICA has a mandate to contribute to economic development of developing countries as a development agency. It has strong relationships of trust and networks with governments of developing countries by providing continuous assistance such as TA (master plan, F/S, institutional reform, capacity building) and Japanese yen loan. By utilization TA and ODA loans, JICA-PSIF is able to add more value to projects. For example, as a form of assistance to PPP infrastructure projects, JICA supports institutional and legal framework, if target countries lack the rules and regulations related to PPP projects.

5.1.3 Coordination with Investors

JICA-PSIF shares project risks with private companies by participating in projects with equity investment in case of PPP infrastructure projects. JICA reduces performance risks of governments of developing countries by participating in negotiations with the government through policy recommendations or PPP policy planning. In addition, JICA monitors the overall implementation of major PPP projects. JICA could play a significant role as a coordinator when potential investors are Japanese.

5.1.4 Coordination with Other Stakeholders

JICA-PSIF could have a co-financing arrangement with other financing institution such as World Bank and ADB. It could also play a catalytic role in orchestrating the loan syndication with various development agencies, international financial institutions and commercial banks.

5.2 Risk Sharing as Investor

5.2.1 Risk Sharing by Equity Investment

As described earlier, JICA-PSIF has a facility of equity investment. Although its equity injection is limited to one quarter of the total equity, JICA could share project risks with other private sector investors and could play an important role as project promoter, by discussing with GOV and mitigating policy related risks and performance risks of government related agencies. JICA could also play an important role in facilitating discussions with the investor consortium especially between the local investors and Japanese investors. This is intended in order to form a working group in the consortium and start discussions with relevant government agencies for securing necessary government supports and guarantees for the project, before establishing a SPC.

The following is the outline of PSIF- equity finance.

<p><TENTATIVE></p> <p>EQUITY FINANCE</p> <ul style="list-style-type: none"> - Investees JICA invests in commercially viable projects (or fund) e.g. PPP infrastructure project company (SPC), individual project sponsors (Japanese/non-Japanese, J/Vs or single entity) - Share JICA cannot take majority stakes. - Exit Policy Pre-arrangement of exit plan required for successful transition to sustainable private business.
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Source: JICA

Figure 5.2.1 Outline of PSIF - Equity Finance

5.2.2 Provision of Expertise and Experiences in Vietnamese PPP and Expressway Sector

JICA has conducted VITRANSS 2 from 2007 to 2009 in which the master planning of expressway in the country was executed, the expressway administration set up was reviewed and the PPP and privatization policies in the transport sector was reviewed. JICA has also experience in funding expressway projects in the country such as the HCMC – Long Thanh – Dau Giay Expressway and the Hanoi – Thai Nguyen Expressway. These are all relevant and important expertise and experiences for implementing the Bien Hoa – Vung Tau Expressway Project. JICA is in a strategic position of providing such expertise and experience to promote and implement said expressway project.

5.3 Provision of Long-Term Soft Loan as Lender

5.3.1 Provision of Ultimate Long-Term Soft Loan

JICA-PSIF loan has similar terms and conditions as Japanese ODA yen loan, which are described in the following outline.

<p><TENTATIVE></p> <p>DEBT FINANCE</p> <ul style="list-style-type: none"> - Fixed rate (Base rate :GoJ Bond plus)*, JPY-denominated*, Long Tenor (up to approximately. 20 yrs) with grace period <p>* Future possibilities to provide other currencies, variable rate loans.</p>
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Source: JICA

Figure 5.3.1 Outline of PSIF - Debt Finance

JICA-PSIF loan would help the both domestic and foreign private sectors in financing the project in the LDC's where long term and low interest rate loan is not available, which is in most cases are the critical funding sources for a PPP infrastructure project. Unlike ODA loan, PSIF loan would not require sovereign guarantee from GOV and would be managed in the same manner as limited recourse project finance.

5.3.2 Impact of PSIF Loan

Impact of JICA-PSIF loan could be considered as interest rate is very low (Government of Japan Bond rate plus risk premium including foreign exchange depreciation risk) as compared to the current interest rate of long-term commercial borrowing in Vietnam, say 15-year tenor loan is more than 15% per annum. Long term tenor (as much as 30 years including grace period) of PSIF loan would also offer good matching with long-term investment recovery of an expressway project. JICA PSIF loan has dual effects for both the investor and government. Application of JICA-PSIF loan would raise project profitability for private investor, namely equity IRR of the project. At the same time, from the view point of the government, it could reduce the amount of subsidy which the government would need to assume to make the project afloat. Specific effects of the application of JICA PSIF for Bien Hoa – Vung Tau Expressway project loan are analyzed and assessed in Chapter 8 of this report.

CHAPTER 6 STUDY ON BOT/PPP SCHEME FOR FIVE EXPRESSWAY DEVELOPMENT PROJECTS IN SOUTHERN VIETNAM

6.1 Present Status of Five Expressway Development Projects for BOT/PPP Scheme Study

6.1.1 Stakeholders for Five Expressway Development Projects

(1) Bien Hoa-Vung Tau Expressway Development Joint Stock Company (BVEC)

BVEC was established in 2008 as the company developing the Bien Hoa-Vung Tau Expressway. The major shareholders are i) Vietnam Urban and Industrial Zones Development Investment Corporation (IDICO), ii) Bank of Investment and Development of Vietnam (BIDV), and iii) Song Da Corporation. The rates of capital contribution from the shareholders are 49% from IDICO, 30% from Song Da Corporation, and 21% from BIDV. BVEC was also given the business license to upgrade and widen National Highway 51 (NH51) and made a concession contract with MOT (the state contracting agency). Widening of NH51 is currently on-going and BVEC imposes a toll on vehicles using the NH51. For the Bien Hoa-Vung Tau expressway, BVEC acts as the investor and is going to establish a project company for said expressway (as of April 2011).

(2) BIDV Expressway Development Company (BEDC)

BEDC was established in 2007 as the company managing HCMC-Trung Luong-My Thuan – Can Tho expressway. BEDC is a joint stock company invested by eight shareholders of which BIDV is the biggest shareholder holding 25% of equity capital. BEDC was given the toll collection right on HCMC-Trung Luong section (about 40 km) which was constructed by MOT. It is expected to repay the investment cost (VND 10,000 billion) to MOT through its toll revenue for 25 years. BEDC was also given the business license over construction and toll collection on Trung Luong-My Thuan expressway section, which awaits its construction (as of April 2011).

(3) Project Management Unit My Thuan (PMUMT)

PMU My Thuan (PMUMT) is the project management unit under MOT responsible for My Thuan-Can Tho Expressway, Ring Road No. 3 and No.4. PMUMT plans to become a corporation and submitted its corporatized plan to MOT for approval. PMUMT will become the company called Cuu Long Corporation for Investment, Development and Project Management of Transport Infrastructure (Cuu Long CIPM) (as of April 2011).

6.1.2 Study Method

(1) Bien Hoa-Vung Tau expressway project

Study on BOT/PPP scheme for Bien Hoa-Vung Tau expressway project is carried out as shown in Table 6.1.1. Since this project is given the highest priority, several times of intensive discussions were held with BVEC. In addition, we had meeting with MOF, MOT, MPI, BIDV in Hanoi in order to confirm investment environment of this project.

Table 6.1.1 Study Method for Bien Hoa-Vung Tau expressway project

No.	Item	Study Method
1	Present Status	<ul style="list-style-type: none"> - Discussion with BVEC - Field Investigation - Review of F/S report - Review of other relevant documents
2	Technical	<ul style="list-style-type: none"> - Field Investigation - Supplemental Traffic Survey - Review of F/S report - Discussion with TEDI for F/S - Review of other relevant documents
3	Environmental	<ul style="list-style-type: none"> - Field Investigation - Review of F/S report - Discussion with TEDI for F/S - Review of other relevant documents
4	Investment	<ul style="list-style-type: none"> - Discussion with BVEC - Field Investigation - Review of F/S report - Discussion with TEDI for F/S - Review of other relevant documents - Discussion with MOF/MOT/MPI/BIDV - Discussion with local law offices - Interview with Japanese companies in Vietnam
5	Other	<ul style="list-style-type: none"> - Workshop (23April 2011)

Source: JICA Study Team

(2) Trung Luong-My Thuan expressway project

Study on BOT/PPP scheme for Trung Luong-My Thuan expressway project is carried out as shown in Table 6.1.2.

Several times of discussion was held with BEDC through the study period. BEDC provided to the study team a CDROM which, was used for calling of investors, contains project information for investors(March 2011).

Table 6.1.2 Study Method for Trung Luong-My Thuan expressway project

No.	Item	Study Method
1	Present Status	<ul style="list-style-type: none"> - Discussion with BEDC - Review of other relevant documents
2	Technical	<ul style="list-style-type: none"> - General review
3	Environmental	<ul style="list-style-type: none"> - General review
4	Investment	<ul style="list-style-type: none"> - Discussion with BEDC - Review of other relevant documents - Interview with Japanese companies in Vietnam

Source: JICA Study Team

(3) My Thuan-Can Tho expressway and Ring Roads of No.3 and No.4 projects

Study on BOT/PPP scheme for My Thuan-Can Tho expressway and Ring Roads of No.3 and No.4 projects is carried out as shown in Table 6.1.3.

Several times of discussion was held with PMU My Thuan (PMUMT) through the study period. PMUMT provided to the study team several documents for each component time to time.

Table 6.1.3 Study Method for My Thuan-Can Tho expressway and Ring Roads of No.3 and No.4 projects

No.	Item	Study Method
1	Present Status	- Discussion with PMUMT - Review of other relevant documents
2	Technical	- General review
3	Environmental	- General review
4	Investment	- Discussion with PMUMT - Review of other relevant documents - Interview with Japanese companies in Vietnam

Source: JICA Study Team

6.1.3 Status Quo and Issues of Five Expressway Projects

(1) Bien Hoa-Vung Tau Expressway project

The Bien Hoa-Vung Tau expressway project is now under F/S subcontracted to TEDI (the transport engineering consulting company). It is expected to complete at the end of March, 2011 and will be reviewed by the JICA Study Team until June 2011. Finally the F/S report will be submitted to the prime minister for his approval (as of May 2011).

The Bien Hoa-Vung Tau Expressway is proposed to be a BOT project subject to Decree 108. BVEC plans implementation schedule of the project as: Phase I (Bien Hoa-Phu My, 46km): design and construction from 2013-2016, operation from 2017, and Phase II (the remaining section, 22 km): operation from 2027. The project would take the form of a joint venture between Japanese and Vietnamese capital, and may be the first case of receiving direct lending of JICA (PSIF) loan. Two issues are primarily expected. One is that land acquisition including EIA and RAP clearing the JICA guidelines is to be implemented over a short period. The other is a financial plan on equity and debt involving investors and lenders based on due diligence. It would take time to finalize such a financial agreement among stakeholders. Accordingly, a comprehensive implementation schedule encompassing the tasks required will be urgently needed for the project.

(2) Trung Luong-My Thuan Expressway project

The Trung Luong-My Thuan Expressway section is currently at the stage of temporary suspension of construction work due to shortage of fund. The total paid-in capital so far is VND 30 billion for F/S and basic design while the remaining capital (VND 18 trillion) required is so large that BEDC plans to change the project scheme from BOT (BEDC already made a BOT contract with MOT) to PPP. Nevertheless, whether a PPP scheme would attract private fund is quite questionable because of regulations stipulated in Decision 71 (as of May 2011).

BEDC may have an alternative choice of requesting the government to finance construction cost of the Trung Luong-My Thuan Expressway section as MOT did for the expressway section between HCMC and Trung Luong. BEDC is entitled to operate the HCMC-Trung Luong section based on an O&M concession contract and is scheduled to repay USD 500 million to MOT through the toll revenue collected. The same method would be applied to the Trung Luong-My Thuan section (as of March 2011).

(3) My Thuan-Can Tho Expressway project

The My Thuan-Can Tho Expressway project is currently nominated in project list in ADB. It was informed that PPTA by ADB will be carried out soon. The My Thuan-Can Tho section is part of the southern expressway from HCMC to Can Tho. Accordingly, this section is constrained by the implementation progress of the other sections such as Trung Luong-My Thuan. The project scheme of said expressway is still unknown and subject to further study. The PMUMT is

planning to raise its investment fund on a mortgage of fee revenue collected from the Can Tho Bridge and OCR loan from ADB. Those funds will be the source of equity capital and lending money to a project enterprise for the expressway. Further step to detailed design and construction of My Thuan-Can Tho expressway depends on the resumption of the construction of Trung Luong-My Thuan expressway section (as of April 2011).

(4) Ring Road No.3 and No.4

Both Ring Road No.3 and No.4 were examined under the previous JICA study entitled “The Review Survey of Transportation Infrastructure Projects in the Socialist Republic of Vietnam” (as of October 2010).

Tan Van-Nhon Trach section (26.3km) in Ring Road No.3, Ben Luc-Hiep Phuoc section (37.4km) and Trang Bom-Phu My section (45km) in Ring Road No.4 are being studied by PPTA of ADB from April 2011.

Although priority on ring roads in the transport network in HCMC is high, however their implementation will be expected to be at the same timing of the southern expressway from HCMC to Can Tho.

6.2 Evaluation of Five Expressway Development Projects (MCA)

To assess investment priority for five expressway projects mentioned above, required validity measures are examined. Evaluation criteria applied in VITRANSS2 include demand, EIRR, FIRR, network connectivity, environmental burdens, maturity and consistency of upper level plan.

In this study, to expand evaluation aspects, Multi-Criteria Analysis (MCA)³ which is recommended by Public-Private Infrastructure Advisory Facility (PPIAF)/WB, is adopted. Criteria which are adopted in this method are financial feasibility/fiscal support (FIRR), readiness and risk, socio-economic benefit (EIRR), regional development/contribution to GDP, sector network role/importance in sector plan, national security/national integration, land acquisition, environmental impact (a)/involuntary resettlement (b), impact in export earnings, safety, project cost, demand growth (a)/traffic volume (b) as explained in the following table.

Evaluation effort about items for review of this study such as land acquisition, environmental impact /involuntary resettlement, project cost, demand growth/traffic volume are implemented based on collaboration with concerned engineers of the study team and TEDI.

³ Multi-Criteria Analysis has started in late 1990's in UK as a complementary method for evaluating public sector projects. It has been widely adopted in UK and Holland using its own evaluation manuals. Nevertheless, it is normally used to complement the cost-benefit analysis. The method is said to have a tendency to reflect arbitrariness of assessor in terms of weighting, therefore in this survey, the weighting of criteria is simplified to have only two grades. The criteria themselves are based on the ones for the Multi-Criteria Analysis adopted in PPIAF (Public-Private Infrastructure Advisory Facility) of World Bank.

Table 6.2.1 Evaluation Criteria and Scoring Rule (MCA)

<i>Multi-Criteria Analysis: Scoring Rule</i>					
	Criteria/assessment Score: 10 to 0	High score Score: 10 to 8	Moderate score Score: 7 to 4	Lower score Score: 3 to 0	Weighting (Average: 10)
1	Financial feasibility/ fiscal support	Highly viable: FIRR>20% No fiscal support	Likely viable: FIRR; 20-14% No fiscal support	Not viable: FIRR<14% High fiscal support	15
2	Readiness and risk	Few major issues/risks and project 'ready'	Identified risks but largely can be mitigated and project can be made 'ready'	Many risks, few can be mitigated sufficiently and project not ready	15
3	Socio-economic benefits	EIRR>15% Major macro impact	EIRR; 12%-15% Moderate macro impact	EIRR<12% Minor macro impact	10
4	Regional development/ Contribution to GDP	Impact on low GRDP provinces	Impact on low-medium GRDP provinces	Impact on high GRDP provinces	10
5	Sector network role/ importance in sector plan	Forms integral part and already included	Part of sector plan	Ad-hoc project, but not in conflict with sector plan	10
6	National security/ national integration	Strengthens national security/integration	Medium impact	Low impact	10
7	Land acquisition	Most land acquired (say over 80%)	Some land acquired (25%-80%)	Little land acquired (< 25%)	15
8	Environmental impact (a)/ involuntary resettlement (b)	Few issues: a. low impact b. few affected	Some issues: a. mid impact b. mid affected	Many issues: a. sever impact b. many affected	15
9	Impact in export earnings	Major overseas trade and/or tourism impact	Limited overseas trade and/or tourism impact	Little overseas trade and/or tourism impact	10
10	Safety	High safety focus	Moderate safety focus	Low safety focus	10
11	Project cost	>US\$ 100m	US\$ 100m-US\$ 50m	<US\$ 50m	10
12	Demand growth (a)/ traffic volume (b)	a. >15% pa b. >20,000 vdp	a. 15%-5% pa b. 10-20,000 vdp	a. <5% pa b. <10,000 vdp	15

Source: JICA Study Team

Table 6.2.2 Evaluation of Five Expressway Development Projects (MCA)

Multi-Criteria Analysis: Application to expressway projects In Southern Vietnam																					
Project	Bien Hoa - Vung Tau				Can Tho - My Thuan				My Thuan - Trung Luong				Ring Road 3 (HCMC)				Ring Road 4 (HCMC)				
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Criteria	Score in words	Score	Weight (Average 10)	Score X weight/14.5	Score in words	Score	Weight	Score X weight/14.5	Score in words	Score	Weight	Score X weight/14.5	Score in words	Score	Weight	Score X weight/14.5	Score in words	Score	Weight	Score X weight/14.5	
1	Financial feasibility/fiscal support	Med	5	15	5.2	Low	2	15	2.1	Low	2	15	2.1	Low	2	15	2.1	Low	0	15	0.0
2	Readiness and risk	Med	7	15	7.2	Med	5	15	5.2	Med	7	15	7.2	Low	3	15	3.1	Low	3	15	3.1
3	Socio-economic benefits	High	9	10	6.2	Med	4	10	2.8	Med	4	10	2.8	High	8	10	5.5	Med	5	10	3.4
4	Regional development/Contribution to GDP	High	8	10	5.5	Med	7	10	4.8	Med	7	10	4.8	Med	7	10	4.8	Med	6	10	4.1
5	Sector network role/ importance in sector plan	High	9	10	6.2	High	8	10	5.5	Med	6	10	4.1	Med	7	10	4.8	Med	7	10	4.8
6	National security/national integration	High	8	10	5.5	Med	4	10	2.8	Med	4	10	2.8	Med	4	10	2.8	Med	4	10	2.8
7	Land acquisition	Low	0	15	0.0	Low	0	15	0.0	Low	0	15	0.0	Low	0	15	0.0	Low	0	15	0.0
8	Environmental impact (a) /involuntary resettlement (b)	Med	5	15	5.2	Med	7	15	7.2	Med	6	15	6.2	Med	5	15	5.2	Med	4	15	4.1
9	Impact in export earnings	Med	7	10	4.8	Low	2	10	1.4	Med	4	10	2.8	Med	4	10	2.8	Med	4	10	2.8
10	Safety	Med	5	10	3.4	Med	5	10	3.4	Med	5	10	3.4	Med	5	10	3.4	Med	5	10	3.4
11	Project cost	High	10	10	6.9	High	10	10	6.9	High	10	10	6.9	High	10	10	6.9	High	10	10	6.9
12	Demand growth (a) /traffic volume (b)	High	9	15	9.3	High	9	15	9.3	High	9	15	9.3	High	9	15	9.3	High	9	15	9.3
	Total score (out of 100)				65.5				51.4				52.4				50.7				44.8

Note:

- (1) Safety: Scored Med (5 points) for criteria as there is no information for all the projects
- (2) Please refer to evaluation criteria table for scoring rules
- (3) EIRR and FIRR for My Thuan - Trung Luong are unknown and assumed same level as the Can Tho - My Thuan project

Source: JICA Study Team

6.3 Investment Priority of Five Expressway Development Projects

Based on the MCA evaluation shown in Table 6.2.2, the scores of five expressways development projects were determined as shown in the following table.

It is evaluated that Bien Hoa – Vung Tau Expressway project is the first investment priority followed by My Thuan – Trung Luong Expressway project.

Table 6.3.1 Investment Priority of Five Expressway Development Projects

Expressway	Score	Ranking
Bien Hoa - Vung Tau	65.5	1
Can Tho - My Thuan	51.4	3
My Thuan - Trung Luong	52.4	2
Ring Road 3 (HCMC)	50.7	4
Ring Road 4 (HCMC)	44.8	5

Source: JICA Study Team

6.4 Tentative Implementation Plan for Can Tho - My Thuan Expressway

6.4.1 General

Project profile of Can Tho - My Thuan Expressway is as follows:

- Total length: Approximately 31km
- Stage 1: 4 traffic lanes, 2 emergency parking lanes, design speed 120 km/h, with connector road design speed of 80 km/h
- Stage 2: Expansion to six lanes; design speed 120 km/h
- Total investment for stage 1: Estimated to be around USD 441 million
- Breakdown of investment cost: Construction + Equipment: USD 286 million, Other Costs: USD 29 million, Land Acquisition: USD 37 million, Contingencies: USD 90 million.

Currently, PMUMT is trying to develop a feasible funding plan to implement the project. They are however open to suggestions. In this context, the study team held several discussions with PMUMT on potential capital structure and organization for BOT/PPP scheme. On May 19, 2010, MOT submitted the Statement No.3183/BGTVT-TCCB to the Prime Minister for the establishment of Cuu Long CIPM (CLCIPM) as a key enterprise for management, investment and development, and operation organization for the southern economic zone in order to fulfill development requirements of the transport infrastructure. The decision by the Prime Minister is expected to be issued within the first quarter of 2011. CLCIPM will establish an SPC for the Project.

6.4.2 Capital Structure Plan

(1) Capital Structure Plan Prepared by PMUMT

Discussions on capital structure were held with the assumption that SPC will be formed as an entity for project implementation. Table 6.4.1 below describes SPC's hypothetical capital structure prepared by PMUMT. This structure is based on the limitation described in the PM Decision No.71 for the state capital contribution of up to 30% of the total project cost. Differentiation is made only between state capital and private capital with no assumption on debt and equity structure.

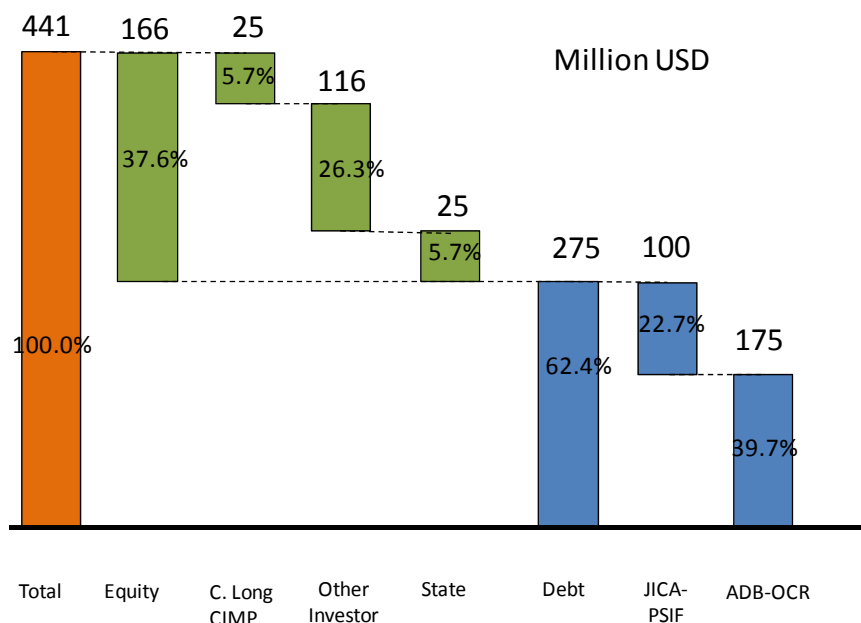
Table 6.4.1 Composition of Capital Structure prepared by PMUMT

Unit: Thousand USD (1USD=20,865 VND)

No	Items	Capital Sector	Total Cost		State Capital		Private Capital	
			Value	%	Value	%	Value	%
1	Civil Work and Equipment	State + Private	286	64.8	79	17.9	207	46.9
2	Land Acquisition	State	37	8.3	37	8.3	0	0
3	Consultant for F/S	State	0	0.1	0	0.1	0	0
4	Consultant for DD and Supervision	State	15	3.3	15	3.3	0	0
5	Management Project	State	2	0.4	2	0.4	0	0
6	Other Costs	Private	12	2.7	0	0	12	2.7
7	Contingency	Private	90	20.4	0	0	90	20.4
	Total		441	100.0	132	30.0	309	70.0

Source: PMUMT

Figure 6.4.1 shows debt and equity capital structure prepared by PMUMT; however, there is some confusion on the notion of equity, debt and subsidy.

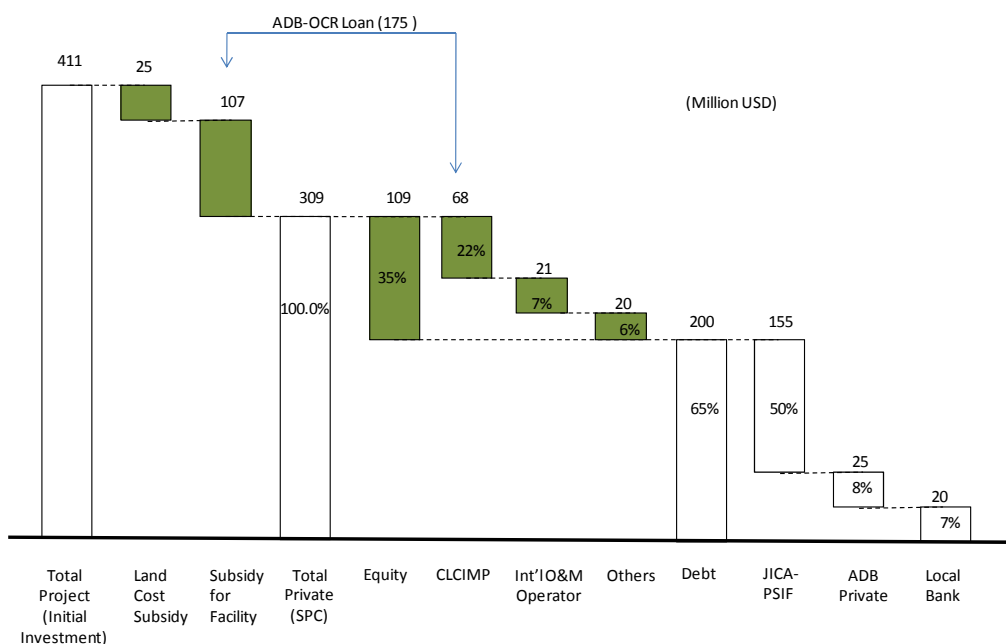


Source: PMUMT

Figure 6.4.1 Hypothetical Capital Structure prepared by PMUMT

(2) Recommended Option for Capital Structure (One Example)

Therefore, based on the discussion held with PMUMT, recommendation is made on the capital structure option as shown in Figure 6.4.2 below. The values in the figures are all tentative and should be considered to possibly vary.



Source: JICA Study Team

Figure 6.4.2 Recommended Capital Structure

Usage of ADB-OCR Loan: According to PMUMT, commitment of USD 175 million of OCR loan has been already made by ADB for this project. The intention of PMUMT is to use the funding for the capital grant from GOV (MOF) injected to CLCIMP. The suggestion to inject large sum of capital grant from GOV to a SOE is inconsistent with the current government policy, and that the funding should be used for a part equity injection to CLCIMP from GOV. The subsidy for facility construction is illustrated in Figure 6.4.2 above.

Government subsidy: According to PMUMT, GOV has already agreed in principle the provision of land cost subsidy to CLCIMP, which would be around USD 25 million. Part of facility construction cost would be covered as a subsidy utilizing the ADB OCR loan. This funding would be an OCR loan from ADB to GOV and in turn capital subsidy from GOV directly extended to the SPC. The total subsidy amount from GOV to the SPC would be around 30% of the total project cost.

Equity: After the subsidy injection, total project cost to be funded by the private sector is about USD 307 million, of which 35% is financed by the equity and 65% by debt. More than 60% of the equity would be held by CLCIMP and the balance by other investor such as international O&M operator. The equity to be injected by CLCIMP would be financed by the ADB OCR loan which is to be on-granted by GOV to CLCIMP.

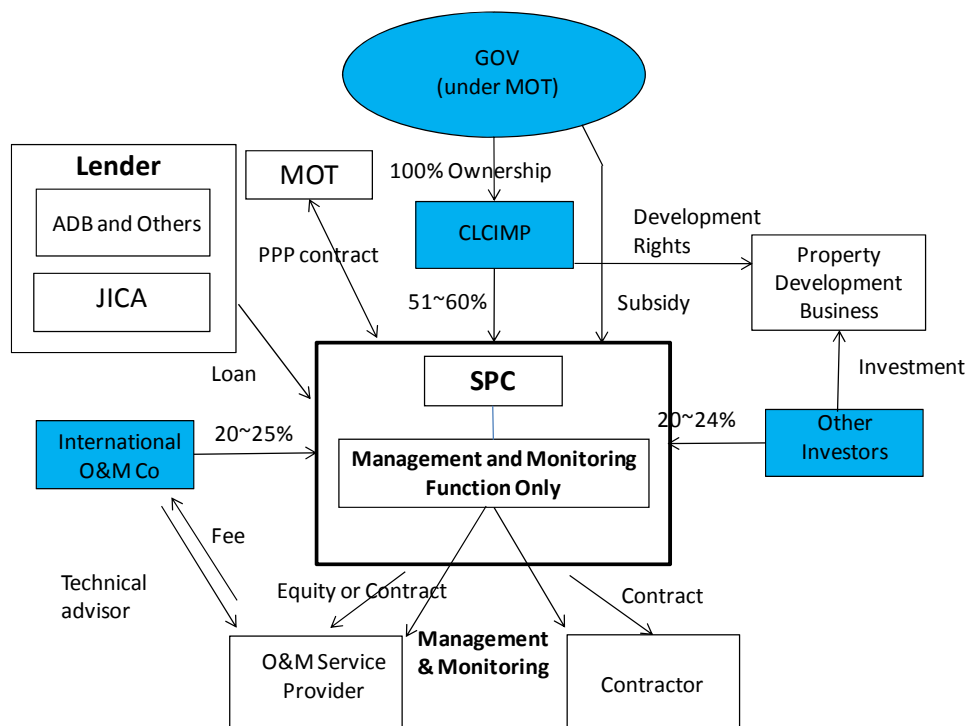
Debt: The debt portion is 65% of the private sector investment. Majority of this would be financed by JICA PSIF loan, and the rest by ADB private sector loan and others.

6.4.3 Organization Plan

Figure 6.4.3 describes the organization structure discussed with PMUMT. It was confirmed that expressway development rights would shift to SPC upon its establishment. Necessary legal arrangements will need to be further clarified in order to move forward.

In terms of O&M, PMUMT was open to discuss “in-house” versus “outsource” option. It was confirmed that the investor should choose whichever option provides the most efficient solution.

In terms of development rights, such as property development, this is positioned outside the SPC’s business scope to ensure consistency with JICA PSIF guidelines. Development rights could be discussed separately but packaged discussion, depending on the needs of potential overseas investor, should be initiated.



Source: JICA Study Team

Figure 6.4.3 Organization Structure (Hypothetical)

6.4.4 Key Issues and Consideration Points

In order to move forward, it is suggested that the following key issues and consideration points be verified:

Structurally low project IRR: It is viewed that project IRR would be relatively low given the high cost structure stemming from alignment on soft ground. This will need to be reviewed with top priority to assess the degree of subsidy required from the government.

Behavior of heavy truck user segment: Revenue attractiveness will heavily depend on whether heavy truck users will select the expressway over Route 1. One could argue that heavy truck users prefer to cut down on travel time, given the increasing trend of just-in-time commercial delivery requirements. This should be verified by analyzing the traffic profile of adjacent section (Ho Chi Minh-Trung Luong), which will start toll operation soon.

Usage of ADB OCR loan: Possibility of using the ADB OCR loan for the purpose of CLCIMP's equity injection to the SPC and the subsidy from GOV could be one of the critical elements in structuring this PPP project. It is recommended that thorough assessment of the recommended structure should be conducted in the forthcoming ADB PPTA.

6.5 Tentative Implementation Plan for Trung Luong - My Thuan Expressway

6.5.1 General

Project profile of Trung Luong-My Thuan Expressway is as follows:

- Total length: Approximately 54 km
- Stage 1: 4 traffic lanes, 2 emergency parking lanes, design speed 120 km/h
- Stage 2: Expansion to 6 lanes, design speed 120 km/h
- Total investment for Stage1: Estimated to be around VND 19,200 billion

Currently, BEDC is trying to develop a feasible funding plan to implement the project. These are however open to suggestions. In this context, the study team held several discussions with BEDC on potential capital structures and organization for BOT/PPP scheme. For the purpose of discussion, it was tentatively agreed to round the total investment figure to around USD 1 billion.

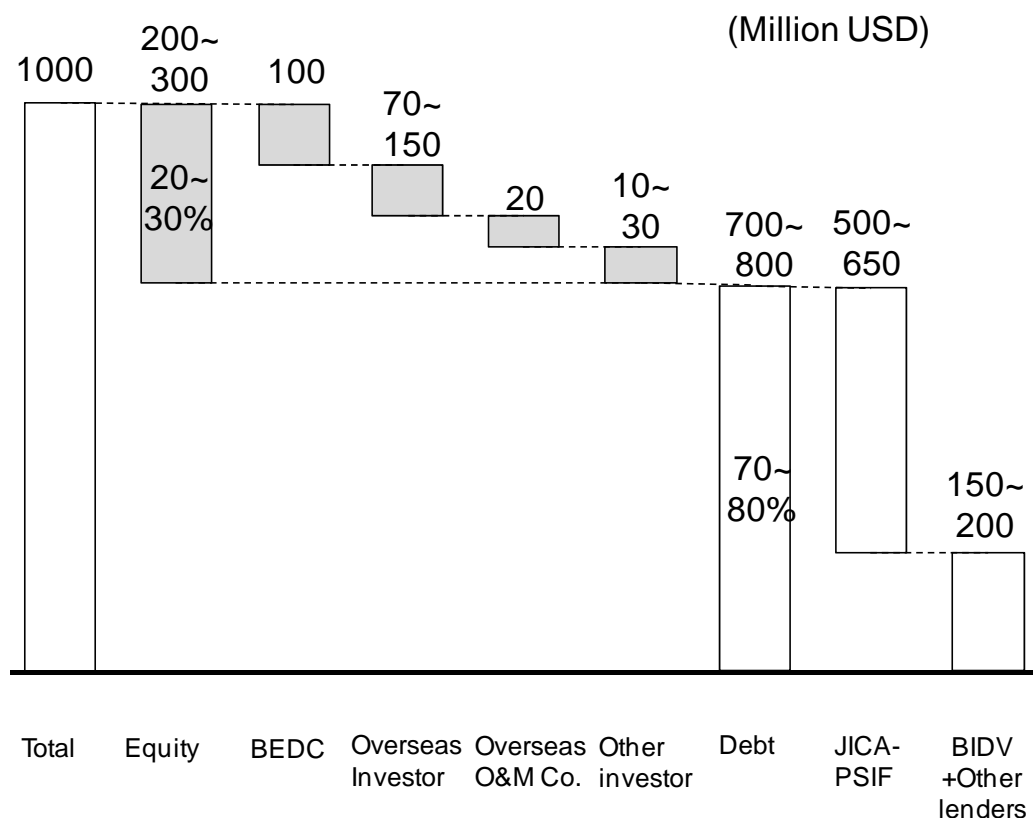
6.5.2 Capital Structure Plan

Discussions were held regarding capital structure, with the assumption that SPC will be formed as an entity for project implementation. Figure 6.5.1 describes SPC's hypothetical capital structure used for discussion purposes.

Equity: BEDC plans to provide equity for approximately 10% of the total investment. As BEDC's major shareholder, BIDV will be indirectly placing considerable amount of equity into the project. Although the BOT law requires equity only slightly higher than 10%, it was discussed that a total of 20~30% equity portion would be desired for a balanced capital structure. BEDC's preference would be to retain majority shareholding. However, it was acknowledged that this will need to be discussed with other investor candidates. Considering other investment, BEDC is in the process of inviting other local investors. Result of F/S will then be discussed with them to speed up the discussion. BEDC is also open to inviting overseas investors. This could be an overseas O&M stakeholder and/or Japanese trading company.

Debt: BEDC's original plan was to receive all debt financing from BIDV. In this original plan, BIDV would source the fund from various other banks (including ODA on-lending) and re-loan to BEDC. BEDC is now looking for an alternative debt structure, which could potentially involve JICA's PSIF as a direct loan to SPC. In this option, BIDV would be the co-lender. BIDV has committed to provide a minimum of 15% of total investment as their loan portion.

Phasing: In Figure 6.5.1, the total investment amount of approximately USD 1 billion translates into asking the major investors to commit close to USD 100 million in equity. It was discussed that this could be too big, especially for a toll road BOT project. It was then discussed the possibility of reducing the project scope by phasing into two sections: Phase1: Trung Luong- Cai Be (30 km) and Phase2: Cai Be-My Thuan (24 km). In this way, the total investment amount could be reduced by 30-40%. Trung Luong-Cai Be section would serve as a natural extension to the existing Ho Chi Minh-Trung Luong expressway. Route 1, which runs parallel to the expressway, will be quite close to the Cai Be exit. This allows expressway users to conveniently use Route 1, while waiting for the completion of phase 2 section.



Source: JICA Study Team

Figure 6.5.1 Capital Structure (Hypothetical, Without Phasing, Without Subsidy)

The BOT scheme was also discussed in case the project IRR does not reach the feasible level. Since this expressway passes through soft ground, requiring soft ground treatment and additional civil structures, it was assumed that project IRR would likely be low compared to other lines of similar demand profile.

Figure 6.5.2 was used as a framework to discuss options in improving project attractiveness from an investor's point of view.

Government subsidy: Historically, the government's method of providing subsidy has been limited to granting extension of concession period. While this has a positive effect on investor's return, the actual sensitivity to project IRR is not that high. Therefore, the possibility of requesting for direct cost subsidy in areas such as land and ancillary facilities was discussed. Moreover, it was also discussed about the possibility of receiving subsidy for soft ground treatment. BEDC has indicated its willingness to propose various subsidy options to MOT.

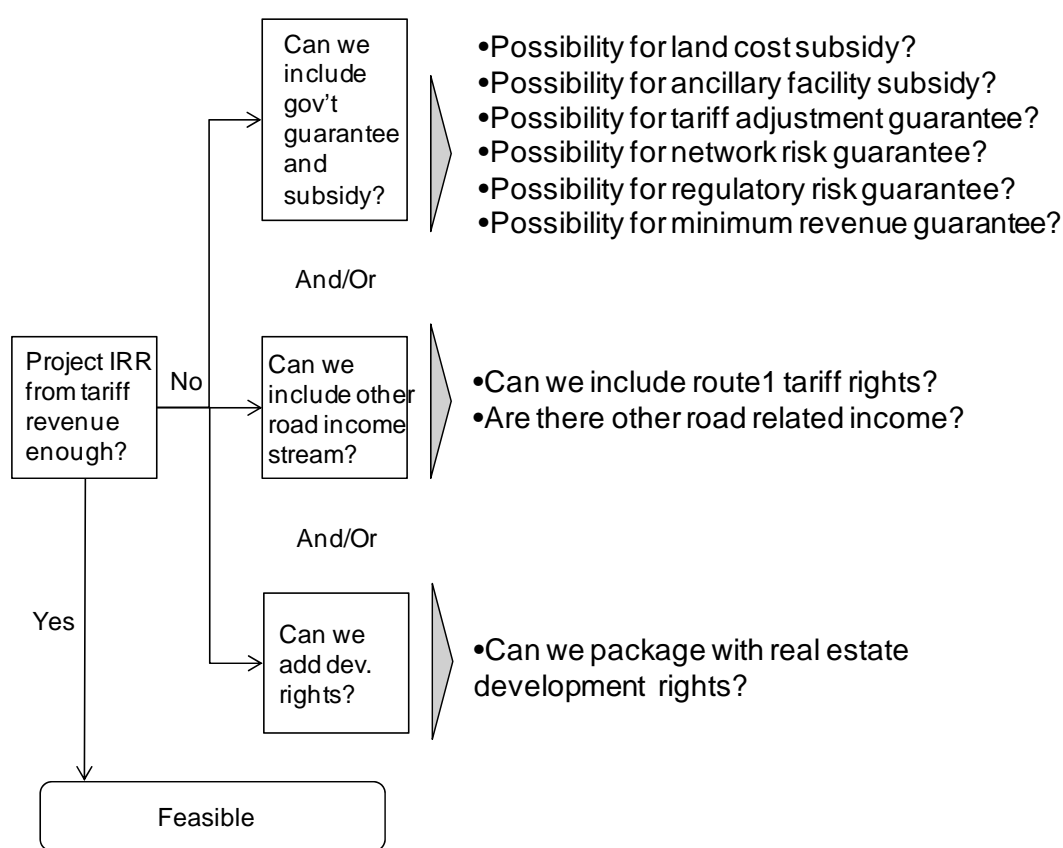
Government guarantee: It was acknowledged that tariff, demand and network risks would be of large concerns to the investor. The potential for tariff adjustment guarantee, which is for government to compensate for losses due to government's delay in adjusting tariff levels, was discussed. Tariff is scheduled to increase by 30% every 5 years. The potential for minimum revenue guarantee was also discussed. Its aim is for the government to pay for the gap with minimum level of revenue (e.g. to pay for debt service) in case SPC's actual revenue falls short. BEDC also mentioned the possibility of including a non-compete clause as part of the BOT contract.

Other road income streams: SPC may need other forms of income stream to become profitable.

BEDC has mentioned that tariff right for Route 1 (for section between Trung Luong-My Thuan or Trung Luong-Cai Be, in case of phasing) was originally designed to fund the expressway. Therefore, it seemed as a viable option to include in the BOT scheme. Also, it is important to mention that this arrangement will reduce the network risk significantly from the investor’s view point. This is because SPC will be able to capture the total revenue of the section, regardless of the driver’s choice between Route 1 and expressway.

Adding development rights: The option to include real estate development rights and other rights along the expressway was also discussed. This was acknowledged to be one of the options for further discussion.

Key Questions



Source: JICA Study Team

Figure 6.5.2 BOT/PPP Scheme Discussion Framework

Based on above discussion, the study team summarized the capital structure implications, including phasing and subsidy. Figure 6.5.3 provides the hypothetical structure. It is assumed that phasing can reduce the investment amount by USD 300-400 million, and subsidy amount would be USD 100-200 million USD. This includes land, ancillary and potentially soft ground treatment cost. This brings down the total investment amount to USD 400-600 million.

It is deemed that this capital structure, combined with additional revenue streams, development rights and various government guarantees, could potentially set the basis for a constructive discussion with potential overseas investors and lenders.

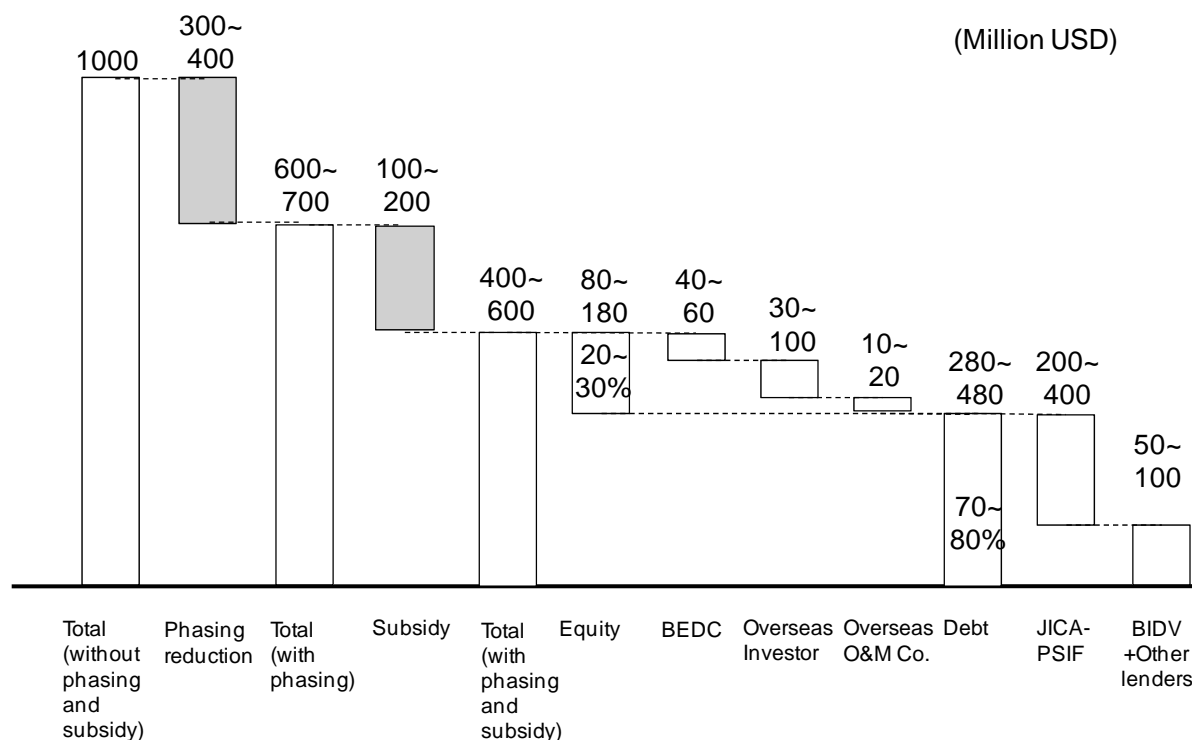


Figure 6.5.3 Capital Structure (Hypothetical, With phasing and Subsidy)

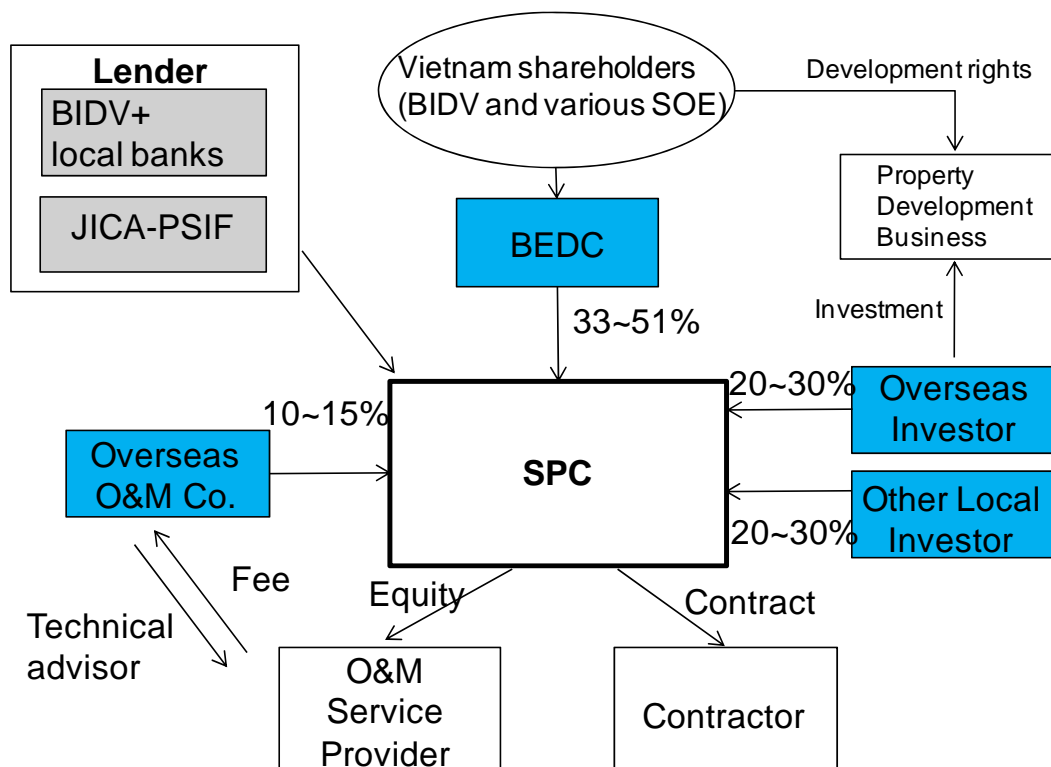
6.5.3 Organization Plan

Figure 6.5.4 describes the organization structure discussed with BEDC. It was confirmed that expressway development rights, which currently belongs to BEDC, would shift to SPC upon its establishment. Necessary legal arrangements will need to be further clarified to move forward.

In terms of O&M, BEDC was open to discuss the “in-house” versus “outsource” option. It was confirmed that the investor should choose which option will provide the most efficient solution.

In this organization, BIDV plays the role of both lender and shareholder. It was confirmed that this was written in the support policy, which was agreed with the government.

In terms of development rights, such as property development, this was positioned to be outside of SPC’s business scope. This is to ensure consistency with JICA PSIF guidelines. Development rights could be discussed as separately but packaged discussion, depending on the needs for potential overseas investor, should be initiated.



Source: JICA Study Team

Figure 6.5.4 Organization Structure (Hypothetical)

6.5.4 Key Issues and Consideration Points

In order to go forward, the following key issues and consideration points to be verified were suggested:

Structurally low project IRR: It is viewed that project IRR would be relatively low given the high cost structure stemming from alignment on soft ground. This will need to be reviewed with top priority to assess the degree of subsidy required from the government.

Behavior of heavy truck user segment: Revenue attractiveness will heavily depend on whether heavy truck users will select the expressway over Route 1. One could argue that heavy truck users prefer to cut down on travel time, given the increasing trend of just-in-time commercial delivery requirements. This should be verified by analyzing the traffic profile of the adjacent section (HCMC-Trung Luong), which will start toll operation soon.

Packaging with route 1 tariff rights: As mentioned above, expressway and Route 1 will compete for the same traffic demand. Fluctuation in the relative tariff gap between expressway and Route 1 may swing the traffic demand. If SPC can also receive revenue from Route 1, this will significantly reduce the demand/network risk. The government's policy for this should be verified with high priority.

BIDV plan: Given the latest external factors surrounding local banking sector, BIDV's plans for funding may change. It is quite important to clarify this both from an investor's perspective as well as lender's perspective.

6.6 Tentative Implementation Plan for Ring Road No.4 - Ben Luc – Hiep Phuoc Component

6.6.1 General

Project profile of Ring Road No. 4 – Ben Luc-Hiep Phuoc Component is as follows:

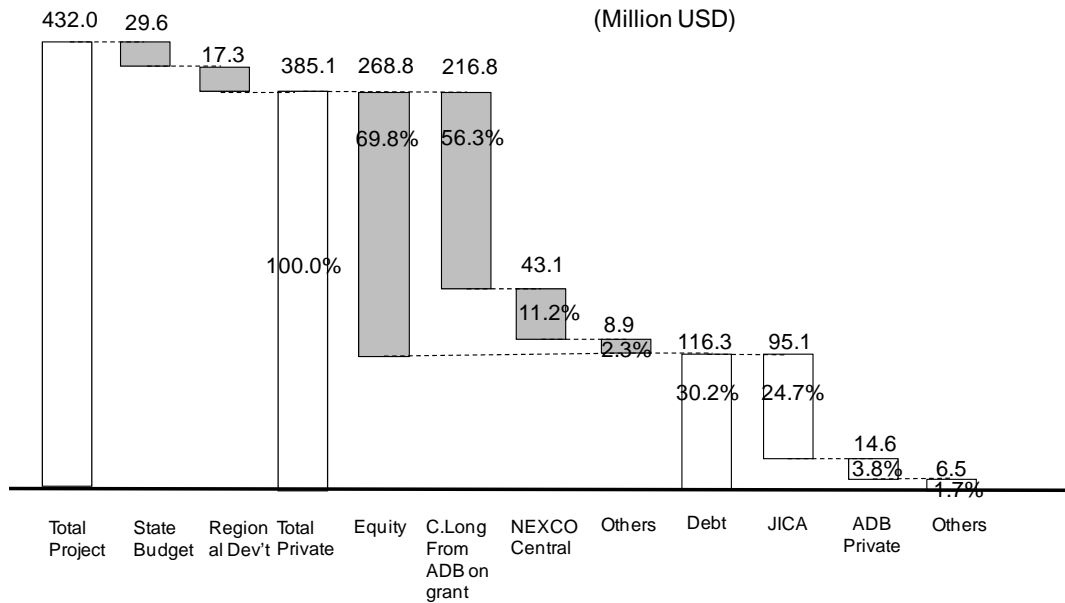
- Total length: Approximately 34.7 km
- 4 traffic lanes, 2 emergency parking lanes, design speed 120 km/h
- Total investment : Estimated to be around USD 422 million
- Breakdown of investment cost: Construction + Equipment: USD 293 million, Other Costs: USD 44 million, Land Acquisition: USD 47 million, Contingencies: USD 38 million.

Currently, PMUMT is preparing an F/S by its own funding and is trying to develop a feasible funding plan to implement the project. These are however open to suggestions. In this context, the study team held several discussion sessions with PMUMT on potential capital structure and organization for BOT/PPP scheme. On May 19, 2010, MOT submitted the Statement No.3183/BGTVT-TCCB to the Prime Minister for the establishment of CLCIPM as the key enterprise for management, investment and development, and operation organization for the southern economic zone, in order to fulfill development requirements for transport infrastructure. The decision by the Prime Minister is expected to be issued in the first quarter of 2011. CLCIPM will establish an SPC for the Project. PPTA by ADB has been conducted from April 2011.

6.6.2 Capital Structure Plan

(1) Capital Structure Plan Prepared by PMUMT

Discussions were held on capital structure with the assumption that SPC will be formed as an entity for project implementation. Figure 6.6.1 shows the debt and equity capital structure prepared by PMUMT; however, there is some confusion on the notion of equity, debt and subsidy.

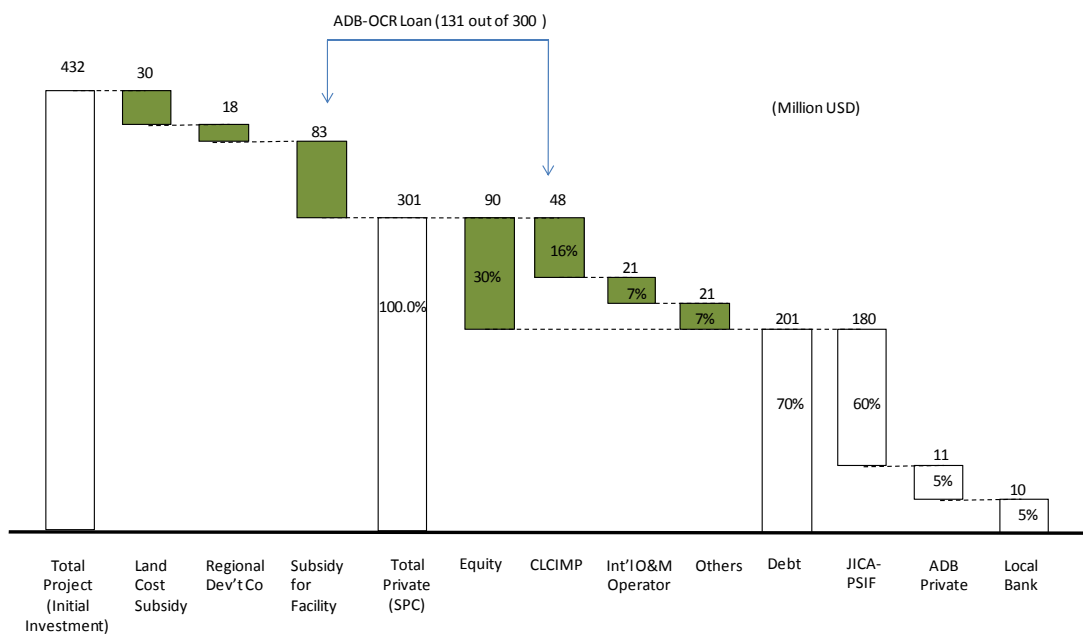


Source: PMUMT & JICA Study Team

Figure 6.6.1 Hypothetical Capital Structure prepared by PMUMT

(2) Recommended Option for Capital Structure (One Example)

Based on the discussion held with PMUMT, recommendation was therefore made for the capital structure option as shown in Figure 6.6.2 below. The values in the figure are all tentative and should be considered to possibly vary.



Source: JICA Study Team

Figure 6.6.2 Recommended Capital Structure

Usage of ADB-OCR Loan: According to PMUMT, commitment for USD 300 million OCR loan has been already made by ADB for this project. PMUMT intends to use the funding for the capital grant from GOV (MOF) injected to CLCIMP. It is suggested that the injection of large sum of capital grant from GOV to a SOE is inconsistent with the current government policy, and that the funding should be used for a part equity injection to CLCIMP from GOV, and subsidy for facility construction as illustrated in Figure 6.6.2 above.

Government subsidy: According to PMUMT, GOV has already agreed in principle, on the provision for land cost subsidy to CLCIMP. This would be around USD 30 million, together with the land cost sharing to be done by the regional development company, which would collaborate with CLCIMP for specific property development. Part of facility construction cost would be covered as a subsidy, also utilizing the ADB OCR loan. This funding would be an OCR loan from ADB to GOV and in turn, capital subsidy from GOV directly extended to SPC. The total subsidy amount from GOV to SPC would be around 30% of the total project cost.

Equity: After the subsidy injection, total project cost to be funded by the private sector is about USD 301 million, of which 30% is financed by equity and 70% by debt. More than 50% of the equity would be held by CLCIMP and the balance by other investor such as international O&M operator and local investors. The equity to be injected by CLCIMP would be financed by the ADB OCR loan, which is to be on-granted by GOV to CLCIMP.

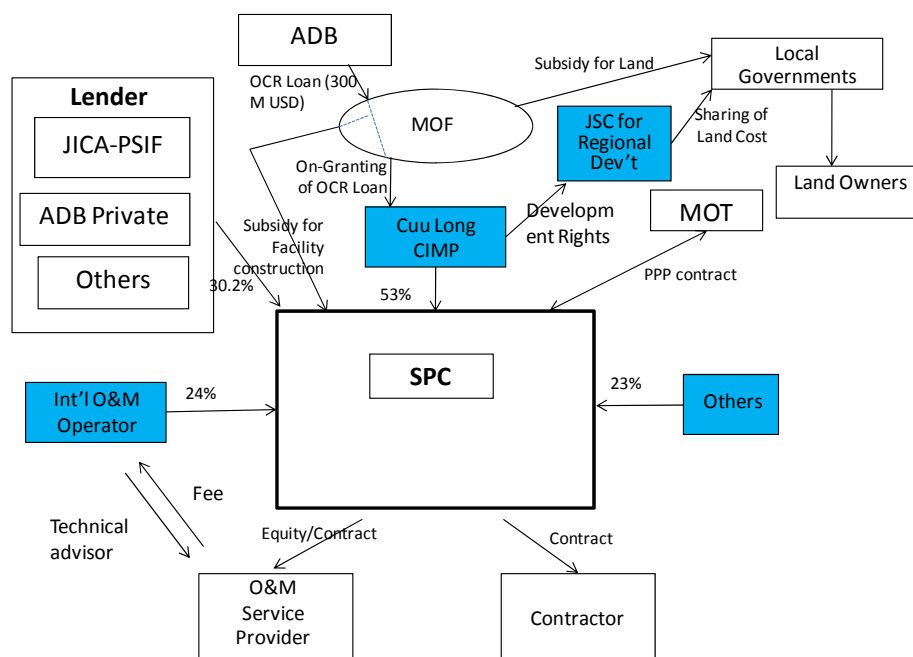
Debt: The debt portion is 70% of the private sector investment, of which majority would be financed by JICA PSIF loan and the rest by ADB private sector loan and others.

6.6.3 Organization Plan

Figure 6.6.3 describes the organization structure discussed with PMUMT. It was confirmed that expressway development rights would shift to SPC upon establishment of SPC. Necessary legal arrangements will need to be further clarified in order to go forward.

In terms of O&M, PMUMT was open to discuss the “in-house” versus “outsource” option. It was confirmed that the investor should choose which option will provide the most efficient solution.

In terms of development rights, such as property development, this to be positioned outside of SPC’s business scope. This is to ensure consistency with JICA PSIF guidelines. Development rights could be discussed separately but packaged discussion, depending on the needs of potential overseas investor, should be initiated.



Source: JICA Study Team

Figure 6.6.3 Organization Structure (Hypothetical)

6.6.4 Key Issues and Consideration Points

In order to go forward, the following key issues and consideration points to be verified are suggested:

Structurally low project IRR: It is viewed that project IRR would be relatively low given the high cost structure stemming from alignment on soft ground. This will need to be reviewed with top priority to assess the degree of subsidy required from the government.

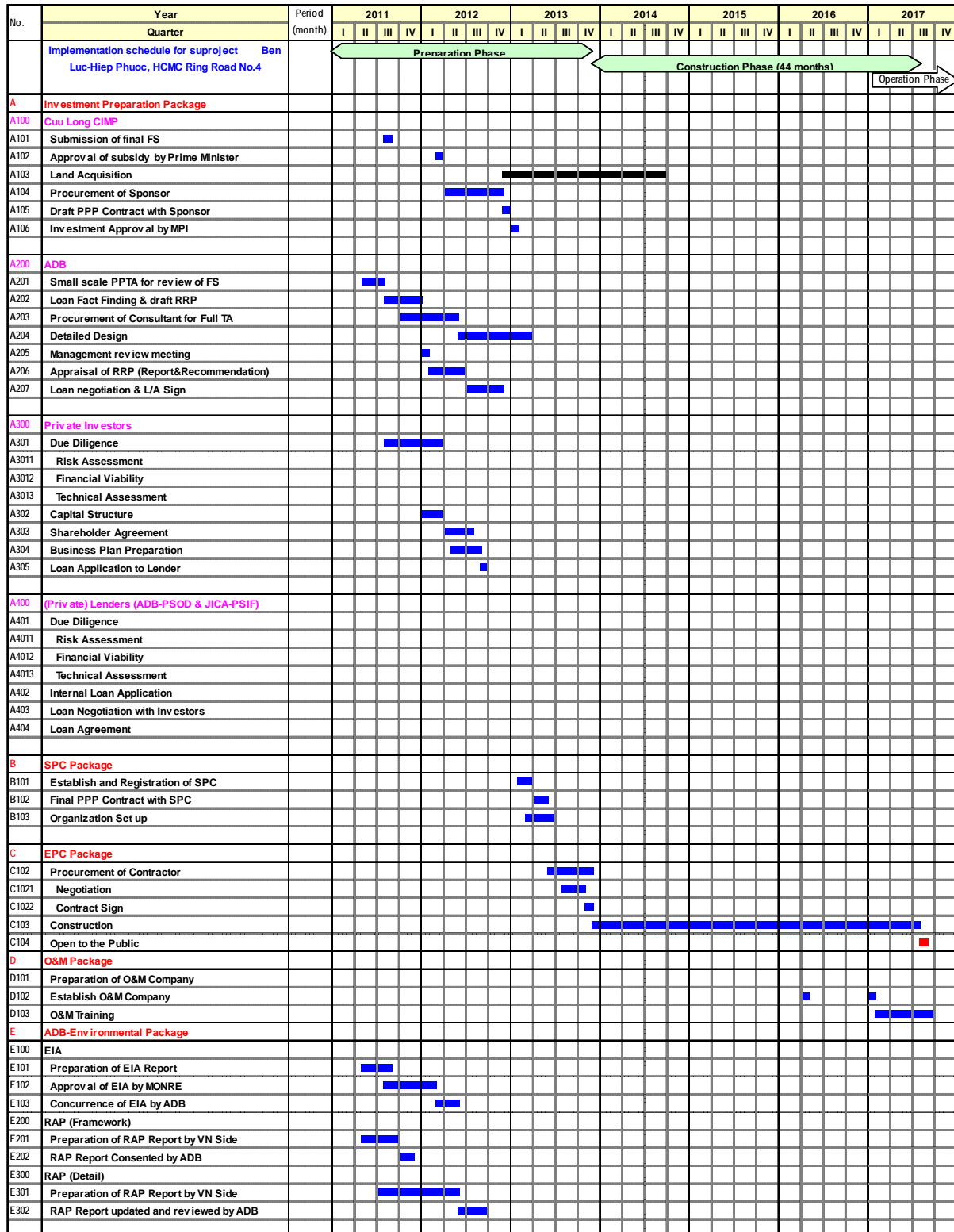
Behavior of heavy truck user segment: Revenue attractiveness will heavily depend on whether heavy truck users will select expressway over Route 1. One could argue that heavy truck users prefer to cut down on travel time, given the increasing trend of just-in-time commercial delivery requirements. This should be verified by analyzing the traffic profile of adjacent section (HCMC-Trung Luong), which will start toll operation soon.

Packaging with route tariff rights: As mentioned above, expressway and Route 1 will compete for the same traffic demand. Fluctuation in the relative tariff gap between expressway and Route 1 may swing the traffic demand. If SPC can also receive revenue from Route 1, this will significantly reduce the demand/network risk. The government's policy for this should be verified with high priority.

Usage of ADB OCR loan: Possibility of using the ADB OCR loan for the purpose of CLCIMP's equity injection to SPC, and the subsidy from GOV could be among the critical elements in structuring this PPP project. It is recommended that thorough assessment of the recommended structure should be conducted in the forthcoming ADB PPTA.

6.6.5 Tentative Implementation Program

Tentative implementation program of Ben Luc-Hiep Phuoc section (37.4km) in Ring Road No.4 was provided by PMUMT as shown in Figure 6.6.4.



Source: PMU MT

Figure 6.6.4 Tentative Implementation Program (RR4 : Ben Luc-Hiep Phuc Section)