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DIVERSIFICATION OF FINANCE RESOURCES FOR TRANSPORT
DEVELOPMENT IN VIETNAM

Luu Hoai Son

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Diversification of finance resources for transport development in Vietnam
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Abstract

Vietnam's transport sector has made good progress over the last decade in responding to the demand of rapid economic growth and the need to connect the most remote communes. The Vietnamese Government has invested 1.8-2.5 percent of GDP in transport development which is mainly contributed by the state budget and ODA funds. However, the large amount of future expenditure in transport sector and the current budget constrains pose an immediate question about the sustainable financing sources for transport development in the future. This policy paper focuses on the financing policies for transport sector, provides the analyses of future budget needs, estimates the level of budget constrains and suggests the solutions to overcome the shortage of domestic financing sources. It is followed by some recommendations.

Luu Hoai Son
Young Leader Program (YLP)
National Graduate Institute for Policy Studies (GRIPS), Tokyo, Japan
Email: MEY05116@grips.ac.jp

1. Introduction

Vietnam's transport sector has made good progress over the last decade in responding to the demand of rapid economic growth which is mainly due to the increasingly export orientated, and the need to connect the most remote communes.

The development of transport infrastructures has significantly contributed to both poverty reduction and growth. Over the last decade, the Vietnamese government has invested around 9-10 percent of GDP for infrastructure development and the one fourth of that amount spent on transport sector. This investment has helped the country to obtain GDP growth rate of 7.2 percent per annum, and reduces hunger and poverty from 58 percent to 29 percent. The expenditure in transport was mainly funded by ODA sources and state budget. However, these financing sources are likely inadequate in comparison with the actual demand. According to Ministry of Finance, in 1999-2005 period the state budget and ODA covered for 70 percent of investment needs only while 30 percent remaining on government debt. In the next decade, Vietnam must increase its investment in infrastructure to 11-12 percent of GDP in order to maintain growth and to meet the future transport demand¹. The budget constrains poses the serious concerns which may create the obstacles to transport development. Therefore, the care needs to be taken to ensure that to create the sustainable financing sources to meet the huge expenditure requirements in transport sector in the future.

This paper focuses on the financing policies for transport development in order to suggest the measures for diversifying of the financing sources and to enhance the efficiency in utilizing the scarce budget. The first section provides an overview of the public expenditure in transport sector in the last few years. The second section estimates the future financing requirements based on the domestic transport demand, and compares with average expenditure for transport of other East Asian countries. The third section presents the current obstacles in financing scheme for transport development of Vietnam, analyses the financing policies for transport development in Japan, and identifies the appropriate experiences of Japan in order to get useful implication for Vietnam's financing policies for transport. The final section provides the summary of recommendations.

2. Overview

Between 1999 and 2004, the demand for freight transport increased about 11 percent per annum in term of ton-km while the demand for passenger transport growth 9.4 percent per annum. Comparing the freight transport mode among sub-sectors, road is dominant mode which accounts for nearly 70 percent of tons moved but coastal shipping accounts for 72 percent of ton-km due to its dominant in long-distance transportation mode and remaining 28 percent was shared with railways, aviation and other modes (Table 1).

Table 1. Domestic Volume 1999 – 2004

Mode	1999				2004				Annual increase ton-km %
	1000 ton	%	mil ton-Km	%	1000 tons	%	mil ton-Km	%	
Freight Transport									
Railways	5,146.0	2.7	1,445.5	3.6	8,829.4	3.1	2,790.8	4.1	14.1
Roads	132,137.3	69.4	7,159.8	17.8	192,562.5	67.6	10,305.5	15.3	7.6

¹ The Vietnam Socio-economic Development Plan 2006-2010, Ministry of Planning and Investment.

Mode	1999				2004				Annual increase ton-km %
	1000 ton	%	mil ton-Km	%	1000 tons	%	mil ton-Km	%	
Freight Transport									
Inland-water									
ways	39,887.2	21.0	3,967.8	9.8	59,071.4	20.7	5,591.8	8.3	7.1
Maritime	13,006.1	6.8	27,619.6	68.5	24,363.6	8.6	48,335.9	71.9	11.8
Aviation	42.5	0.02	105.5	0.3	102.5	0.0	237.9	0.4	17.7
Total	190,219.1	100.0	40,298.2	100.0	284,929.4	100.0	67,261.9	100.0	10.8
Passenger Transport	mil. Pass	%	mil pass-km	%	mil pass	%	mil pass-km	%	Annual increase pass-km %
Railways	9.3	1.3	2,722.0	8.8	12.8	1.1	4,378.0	9.0	10.0
Roads	588.4	81.0	22,053.3	71.3	999.7	84.4	31,730.7	65.4	7.5
Inland-water									
ways	125.7	17.3	2,109.7	6.8	166.2	14.0	3,440.0	7.1	10.3
Aviation	2.7	0.4	4,042.0	13.1	5.6	0.5	8,948.0	18.5	17.2
Total	726.1	100.0	30,927.0	100.0	1,184.3	100.0	48,496.7	100.0	9.4

Source: Government Statistical Office (www.gso.gov.vn)

According to the Ministry of Finance (MOF), total nominal public expenditure in transport increased at almost 21 percent per annum between 1999 and 2002 reached 3.5 percent of GDP in 2002 versus an average of 2 percent in the late 1990s. Table 2 shows the proportion of the state budget directly allocated to the local government which has increased significantly from 44 percent in 1999 to 56 percent in 2002 but the recurrent expenditure while having a large increase in 2000 has dropped back close to its 1999 level.

Table 2. Overview of Transport Sector Expenditure (Nominal Figure)

(Billion VND, unless otherwise indicated)

	1999	2000	2001	2002	Growth per annum %
Total Transport Expenditure	10,616	11,375	14,985	18,721	20.8
- Total Exp. by Central Gov.	5,901	6,391	6,582	8,305	12.1
- Total Exp. by Local Gov.	4,715	4,984	8,403	10,416	30.2
Transport Exp. as % of GDP	2.7	2.6	3.1	3.5	
Transport Exp. as % of Total Public Exp.	12.5	11	12.5	13.8	
Local Exp. as % of Total Transport Exp.	44.4	43.8	56.1	55.6	
Total Recurrent Expenditures	723	1,319	1,404	1,331	22.6
- Total Central Recurrent Exp.	331	792	799	580	20.6
- Total Local Recurrent Exp.	392	527	605	751	24.2
Recurrent Exp. As % of Total Exp.	6.8	11.6	9.4	7.1	

Source: Ministry of Finance

Table 3. Transport Expenditure Levels as Percentage of GDP of East Asian Countries

Country	Transport Investment as % of GDP	Annual Economic Growth Rate % (2000-2005)
Malaysia	1.9	4.3
Korea	1.8	6.3

Thailand	1.7	4.1
Singapore	1.3	3.1
Vietnam	2.2	7.5

Source: Ministry of Transport, IMF statistics

In the period 1999-2004, the average expenditure per annum in transport was estimated at around 2.2-2.5 percent of GDP which is generally higher than that of other East Asian countries such as 1.9 percent in Malaysia, 1.8 percent in Korea and 1.7 percent in Thailand (Table 3). The reason is that these countries are at more advanced stages of their economic development and have reached a more developed state of transport infrastructure. Some of these economies such as Indonesia and the Philippines have arguably been under-investing in their transport sector².

The Vietnam Transport Development Plan up to 2020 submitted by MOT to the Prime Minister on December 2002 estimated the average investment demand between 2002 and 2020 at \$US 7 billion per year, with almost 60 percent of that budget allocated for rail way and urban transportation. Such an amount is 6 times over the transport expenditures in 2002 and would account for about 14 percent of GDP of the year 2005 (Table 4).

The total expenditure estimated by the MOT is five times higher than the investment requirements proposed by the VITRANSS³ and includes additional expenditure for urban transport, local transport, expressways and railways. According to the VITRANSS, the total budget investment up to 2010 is estimated about \$US 11.5 billion which excludes the investment for expressways, ports and urban transport.

Table 4. Investment Demand for Transport Infrastructure (\$US Million)

	2002 - 2010 period		2011 - 2020 period		Total period 2002-2020		Annual average
Total	50,125	100.00%	84,352	100.00%	134,477	100.00%	7,078
Road (in which:)	15,609	31.14%	20,846	24.71%	36,454	27.11%	1,919
<i>Expressway</i>	3,589	7.16%	10,059	11.93%	13,648	10.15%	718
<i>National</i>							
<i>Highways</i>	8,846	17.65%	7,931	9.40%	16,778	12.48%	883
<i>Provincial Road</i>	3,173	6.33%	2,855	3.39%	6,028	4.48%	317
Rural Transport	5,489	10.95%	4,940	5.86%	10,428	7.75%	549
Railway (in which:)	13,874	27.68%	24,973	29.61%	38,848	28.89%	2,045
<i>Express Railway</i>	12,944	25.82%	22,938	27.19%	35,882	26.68%	1,889
<i>Normal Railway</i>	930	1.86%	2,035	2.41%	2,966	2.21%	156
Maritime	1,294	2.58%	4,124	4.89%	5,418	4.03%	285
Inland Waterways	297	0.59%	286	0.34%	582	0.43%	31
Civil Aviation	1,135	2.26%	2,305	2.73%	3,440	2.56%	181
Urban Transport (Hanoi & Hochiminh City)	12,429	24.80%	26,878	31.86%	39,307	29.23%	2,069

Source: Vietnam Transport Development Strategy up to 2020 (Ministry of Transport, 2002)

² Vietnam Managing Public Expenditure for Poverty Reduction and Growth, World Bank 2005, p.38.

³ Vietnam Transport Strategy Studies was conducted by Japan International Cooperation Agency (JICA) in 1999 providing a technical assistance for the Vietnamese Government to establish the National Transport Development Strategy up to 2020 and to design the National Transport Development Master Plan up to 2010.

The MOT's plan seems to be unrealistic and should be reviewed taking account for the availability of the budget resources. In 5 years from 1997 to 2002, the actual amount investment in transport sectors accumulated only Vnd 47,488 billion (\$US 3.013 billion) or equals to 1.8 percent of GDP. In addition, the MOT's annual report of the 2005 shows the total investment in 2005 accounted for Vnd 16,701 billion (\$US 1.057 billion) or equivalent to 2.2 percent of GDP only⁴ and it is the highest level of the public expenditure in transport sector over the whole period in term of absolute number. These actual levels of expenditure in transport shows that it is much lower than the level proposed by the MOT.

3. The Future Expenditure Requirements in Transport Sector

Over the last decade, the Vietnamese government has intensively invested in transport sector which is accounted for one fourth of the total public expenditure in infrastructure or equivalent to 1.8-2.5 percent of GDP. Although Ministry of Transport suggests that the future investment need to be increased to 3.5 percent of GDP but it seems to be unrealistic regarding to the availability of the state budget. This section suggests the possible level of the expenditure in transport with reference to the experiences of other Southeast Asian countries and the current condition of Vietnam.

3.1. Overview of the expenditure in transport sector of the East Asian countries

The experience of the East Asian countries shows that in general the total amount of public investment for infrastructure was reached 7 or 8 percent of GDP where the large part of public investment was usually allocated in transport sector. For example, in between 1957 and 1973, the Japanese government accelerated investment in transport infrastructure, quickly exceeding 2 percent of GDP and remaining between 2.0 and 2.5 percent ever since⁵. Korea and Taiwan (China) have also made large investments in infrastructure. Korea infrastructure rates have been at or above 8 percent in many years in the past few decades while expending in transport shared about 2-3 percent of GDP. In Taiwan (China) investment rates have been around 3-4 percent which includes investment in telecommunication⁶. Hong Kong, Malaysia, and Singapore had investment rates at the same scale which is around 1.5-3 percent of GDP⁷.

In period 1999-2005, Vietnam investment rate in transport has been at 1.8-2.5 percent of GDP which is much similar to Japan's investment rates between 1957 and 1973. Table 5 shows an overall pattern of the expenditure in transport development in East Asian countries. For convenience of comparison, the different periods cross over time were selected in order to ensure that these countries are similar patterns in term of economic development. For example, in the selected period these countries are the same level of growth rates at 6-8 percent per annum and the rates of GDP per capita at \$US 600-1000. In general, Table 5 shows the average investment rates in transport have been at 2-2.5 percent of GDP.

⁴ Ministry of Transport, Annual Report 2005.

⁵ Ashoka Mody, Infrastructure Strategy in East Asia: The Untold Story, World Bank 1997, p.xiii

⁶ Ibid, pp.3-11

⁷ Thomas R. Leinbach and Chia Lin Sien, Southeast Asian Transport: Issue in Development, Oxford University Press 1998, p.22.

Table 5. Comparison of Transport Expenditure Levels in East Asian Countries

Country (period)	Transport Investment as % of GDP	Total Public Investment in Infrastructure (% GDP)
Japan (1957-1973)	2.0-2.5	6.0-8.0
Korea (1983-1991)	2.1-3.0	5.3-8.2
Taiwan-China (1970-1992)*	2.1-4.0*	8.1-13
Malaysia (1973-1983)*	6*	7.3
Thailand (1973-1983)*	6-7*	6.9
Vietnam	1.8-2.5	7.5

Source: World Bank 1994a, World Bank 1996, MoF Vietnam.

* Investment in both Transportation and Telecommunication.

3.2. The expenditure in transport sector in Vietnam

Investment in transport sector in the last five years was massively contributed by the ODA source, especially there are nearly 70 percent of expenditure in road sub-sector was funded by the ODA⁸. In the future, the financing sources for transport may face to serious budget constraints because of declining the ODA inflows. On one hand, the statistical data shows the global trend of ODA has continuously declined over the few decades and that may also influence to the Vietnam in the future. On the other hand, suppose that the donors could not provide more ODA to Vietnam in the future because the country shall obtain the GDP per capita at \$US 1000 in 2010 and it could not be seen as the underdeveloped country to get the preferential treatment of the donors.

Moreover, the Vietnamese government could not increase the budget on transport because of increasing investment needs in the other sectors. In the period 2006-2010 the average expenditure needs per annum for the electricity, telecommunication and urban infrastructure are required about \$US 3 billion, \$US 2.4 billion and \$US 3 billion, respectively, or equivalent to 12% of GDP⁹.

Table 6. The Prediction of ODA mobilizing in between 2006-2010

Sectors	Amount of ODA as the agreements (2001-2005)		Estimate the total amount of ODA will be signed under agreements		Estimate the ODA committed (2005-2010)
	\$US billions	% allocation	\$US billions	% allocation	\$US billions
Agriculture and Poverty reduction	1,6	14,6%	2,2-2,5	18%	2,9-3,3
Industry and Energy	2,1	18,7%	1,9-2,2	16%	2,6-2,9
Transport, Telecommunication and Urban Infrastructure	2,9	26,3%	3,6-4,1	30%	4,8-5,5
Health, Education and Social infrastructure	4,5	40,4%	4,3-4,9	36%	5,8-6,6

⁸ UNDP, Vietnam Development Cooperation Report, UNDP 2005, p.24

⁹ World Bank, Vietnam's Infrastructure Challenges, World Bank 2006; and The Vietnam Socio-economic Development Plan 2006 – 2010, Ministry of Planning and Investment.

Total	11,1	100%	12,0-13,6	100%	16,0-18,2
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Source: The data summarized by author based on resources from Ministry of Agriculture and Rural Development, Ministry of Energy, Ministry of Transport and Ministry of Planning and Investment.

Table 6 shows the availability of ODA sources for infrastructure based on the data from various ministries. The data shows that it is an optimistic scenario if the ODA sources for transport and telecommunication can attain \$US 4 billion in next five years. If it materializes, the portion of ODA for transport could not exceed \$US 3 billion compares to portion shares between two sectors in the last decade. In the best case the ODA to be allocated for transport sector is about \$US 700 million per annum or equivalents to 1.2 percent of GDP. So far, the ODA could fund a haft of transport investment needs only.

As the foresaid, the total expenditure was suggested by the MOT¹⁰ seems to be ambitious since it estimated the expenditure per annum at \$US 7 billion or equivalent to 14 percent of GDP of 2005. Through the MOT's plan has listed out all the project needs under the investment program but it needs to consider the availability of financing sources. Importantly, the measures to ensure the sustainable financing sources for transport development are necessary.

Feasibly, there are three different possible scenarios of the expenditure in transport sector up to 2010 are suggested. Suppose that the total investment in transport sector could vary from 1.8 percent to 3 percent of GDP, I suggest three scenarios of the expenditure plan which estimates the annual expenditures at 1.8 percent, 2.5 percent and 3 percent of GDP, respectively, from lowest to highest scenarios. Regarding to the economic growth rate averages at 7.2 percent over the decade, it is realistic to assume that in the next five years the GDP growth rate should move from 6.5 percent to 8.5 percent, respectively, from low case to high case. Table 7 shows the details.

Table 7. Estimated the Total Investment to be able Allocation for Transport Sectors

	Total Investment in Transport Sector (\$US billion)		Average Investment per annum (\$US billion)	
	Low	High	Low	High
Total GDP 2006-10	311.36	315.72		
Scenario I (1.8% GDP)	5.60	5.68	1.12	1.14
Scenario II (2.5% GDP)	7.78	7.89	1.56	1.58
Scenario III (3% GDP)	9.34	9.47	1.87	1.89

Source: Estimated by author

- GDP in 2005 is about \$US 50.6 billion

- Low (GDP growth at 7%); High (GDP growth at 8.5%)

Having considered the expenditure trend in transport sector over the last decade, I suggest that the future expenditure should possibly be scenario II which estimates the annual expenditure at 2.5 percent of GDP. The total expenditure in the period 2006-2010 equals to \$US 8 billion that is much lower than the amount proposed by MOT as present in Table 4.

¹⁰ The Vietnam Transport Development Plan up to 2020, Ministry of Transport, 2002.

Table 8. The Future Expenditure Requirement in Transport
(US\$ billion)

	1999	2000	2001	2002	2003	2004	2005	Total 1999- 2005	% of total exp.	2006-2010*	
										Low	High
										Total GDP	25.38
Total exp.	0.51	0.53	0.74	0.86	0.92	0.97	1.08	5.60	100.0	7.78	7.89
- State budget	0.15	0.18	0.15	0.29	0.33	0.30	0.37	1.76	31.4	2.18	2.21
- ODA	0.22	0.23	0.27	0.24	0.35	0.39	0.42	2.12	37.8	3.00	3.00
Outstanding commitment	0.14	0.13	0.32	0.33	0.25	0.28	0.29	1.73	30.8	2.60	2.68

Source: Ministry of Finance, Government Statistical Office

* *Estimated by the author*

As present above, suppose that about \$US 3 billion of ODA could be mobilized for transport which is accounted for 40 percent of the investment needs. In addition, if the state budget allocated for transport sector remains at 0.7% of GDP¹¹ as it was then, totally, both state budget and ODA are not meet the investment needs as show in Table 8. It is estimated that about 33 percent of expenditure need is outstanding commitment. Obviously, the Vietnamese government needs to introduce the new financing sources to bridge the budgetary shortage, otherwise budget constraint clearly occurs.

4. Mobilizing the Financial Resources for Transport Sector

The rapid growth in transport infrastructure and its services over the past decade has created new demands and challenges for transport sectors. The rapidly economic growth has generated high rate of traffic demands, rapid urbanization, and the large increase in preservation requirements to meet the fast expansion of transport assets. As foresaid, while the expenditure in transport sector was mainly funded by the state budget and ODA in the past, the future investment needs may occur an obstacle because of budget constrains. In order to ensure the sustainable financing sources for transport, the diversification of financing sources is the only countermeasure.

4.1. Current issues

In order to meet the huge investment needs in the future, the government must make full use of not only the domestic budget but also other funding sources. In addition to ODA sources, mobilization of private financing sources from both overseas and domestics is necessary. There are two remaining issues need to be improved. First, the rigidity of the financing scheme prevents the government from expanding its financing sources for transport development. The expenditure in transport infrastructure was mainly funded by the state budget and ODA which accounted for more than 90 percent of investment requirement, while the remaining provided from other sources such as the government bonds and private sector. There is not any other financing modality than these ones in transport sector.

The second, the current financing policies in transport sector are unfriendly toward the private participation in infrastructure (PPI), particularly in transport sector. There are only

¹¹ Estimated by the author based on data from Government Statistical Office of Vietnam, www.gso.gov.vn

two foreign investors operating in port services and four State-owned Enterprises (SOEs) participated in toll roads as Build-Operate-Transfer (BOT) projects. In order to encourage the private sector's capital to participate in transport sector, the incentive policies should be introduced. The next section provides further information related to these issues.

Public Bonds

The government has been issuing bonds with a 5 – 10 years maturity to partly finance shortage of budget expenditure. The bonds are part of government's plan aiming to accumulate \$US 4 billion by 2010, mainly funding for infrastructure projects including transport sector. This is the third major financing source following by two main sources of state budget and ODA.

These bonds are considered as the off-budget sources to comply with the State Budget Law which set strict limit on the budget deficit including amortization less than 5 percent GDP. Although these bonds are off-budget, the interest payment of these bonds will be on-budget. Bonds of five years maturity have coupons of around 8.4 percent of interest. In 2004, the bonds is to sell about VND 8.2 trillion equivalent to \$US 600 billion. The main buyers of government bonds are state-owned commercial banks and Vietnam insurance company. Although the interest rate has been marginally higher than the deposit rates offered by the banks for similar maturities, the government bond was still not appreciated by the private sector and the public. The main reason may stem from its long-term frozen capital and it was viewed as the low liquid asset in capital market.

Private Participation in Infrastructure (PPI)

The government has emphasized the mobilization of the private finance for a number of years. However, there are very few projects funded by private sectors and it was mainly formed as BOT's contract. Since BOT regulations were enacted, currently referred to Decree 77 of 1997 for domestic investments, and Decree 62 of 1998, as amended by Decree 2 of 1999, for foreign investments, Ministry of Transport has entered in a few domestic BOTs, contracted out to SOEs under the ministry. Despite of these projects in form of BOT projects, the project cost was mainly funded by the state budget through providing loans for the SOEs.

The PPI has been more proactive in other infrastructure sectors such as electricity, energy and telecommunication than in the transport sector. The low incentives of PPI was mainly stemmed from the projects completed have been undertaken on an ad hoc basis, without any clear evidence of a policy designed to encourage the private participation in infrastructure. As such, there are still no replaceable models for PPI projects in Vietnam which can provide investors the assurances that future transactions can be completed in a transparent and timely manner. The reasons for this are complexity which varies from sector to sector, but three general points are worth noting.

First, some sectors such as airports, strategic ports, and railway are excluded the private sector from ownership and management.

Second, there are a number of other restrictions on the ability of non-nationals to invest in the infrastructure sectors. The time consuming tendering procedures for selecting contractors for a BOT project have long been criticized by many foreign investors. As such, with extremely limited financial and technical capacity in the purely domestic private sector, little or no development has taken place.

Third, the general business environment, while slowly improving the infrastructure projects usually required the investment in long-term and the capital investment in infrastructure are highly risky for both private sponsors and lenders. For example, foreign investors often complain about the difficulty of negotiating projects with multiple layers of Vietnamese bureaucracy and the unnecessary expenditure of time and money dealing with different authority Departments.

4.2. The financing policies for transport: The Japan's experiences and its implications

Infrastructure development in East Asia has critically contributed to economic growth which is, obviously, led by the crucial role of the government. Reflecting their heavy involvement in infrastructure development, the governments of the East Asian countries have promoted many creative plan centres on its financing issues. Direct funding from government budgets has played a determinant role but the governments have also established mechanisms for bringing commercial discipline to the financing and operations of infrastructure. In addition, many ways of diversification financial resources have also been introduced such as establishing the special accounts, charging service fees, introducing taxes, decentralizing local fund and so forth. This section focuses on the Japan's experiences of diversification financing sources in transport sector, in order to get useful implication for Vietnam.

The Diversification of Funding Sources.

In order to fully mobilize domestic sources for infrastructure, Japanese government has diversified configuration of financing sources of central government, local government and public corporations. To alleviate the burden on general tax revenues, the Japanese government has introduced several measures such as public bonds issued by both central and local governments, created public corporations that charged user fees and issued corporate bonds, and established several special accounts for major infrastructure projects that were financed by user fees and earmarked taxes. The diversification of financing allowed the Japanese government to play a pivotal role in infrastructure development to support Japan's economic growth at high rate from the 1950s through the 1980s.

The Fiscal Investment and Loan Program (FLIP) has been a major role device for financing Japanese infrastructure. The program takes fund from the postal saving and social security pensions and funnels them to public corporation and private sector investment as interest bearing loan. By introducing this program, the Japanese government is able to stimulate investment in infrastructure without directly increasing taxes and to provide the incentives to private sector to expand its capital investment through government financial institutions.

The Japanese government's bonds were also the one of important financing sources in early development stage of 1950s. The fiscal discipline is expressed in the public finance law, which is set limit on the issuance of government bonds in order to ensure without hyperinflation and the rapid accumulation of government debt¹². For decade after the start of economic expansion in 1955, the government was able to avoid issuing deficit financing bonds. However, under the pressure of public investment needs in 1960s, the Japanese government has urged the Japanese Diet enacted Exceptional Law on bond issue each year. By doing so, the government was permitted to promote the issuance of deficit financing bonds. Although such kind of law was meant to be temporary, financing by this method

¹² Ashoka Mody, Infrastructure Strategy in East Asia: the Untold Story, World Bank 1997, p.85

become an important channel financing for infrastructure which is reached Y 14,170 billion per annum by 1980¹³. The Japanese experiences showed that the issuance of deficit financing bonds has not caused serious economic problem if there is high level of saving in the private sectors. Table 9 shows the mechanism of Japanese financing sources in comparison with the Vietnam.

Table 9. The comparison of diversification of funding sources between Japan and Vietnam

Entity	Sources	
	Japan	Vietnam
National Government	General account	Yes
	Special account (user fees and earmarked taxes, transfer from several accounts)	No
	National bonds	Yes. (but it was not appreciated by private sector)
	FLIP	No
	Other (Public stocks sales)	No
Local government and private financial institutions	National government	Yes
	Local bonds (FLIP)	It was promoted as a pilot project for urban transport in Hochiminh City.
	Local taxes (general account and earmarked taxes)	No. The local investment usually funded through state budget.
Public corporation	General account	Yes. The Vietnam Expressways Corporation established in 2004, how ever stills heavy dependence to the MOT.
	Corporate bonds	No
	FLIP	No
	Bonds and loans from private financial institutions	No

Special Account for Transport Sector

The Japanese government established the special accounts for infrastructure from 1950s including special account for transport development such as road improvement in 1958, harbor improvement in 1961¹⁴. These special accounts effectively enabled the government to target fees and taxes at major projects. For example, the major sources of revenue earmarked for road expenditures include gasoline tax for road improvement and three-quarters share of an automobile weight tax for road construction, these two categories make up more than 90 percent of national budget for the road sector¹⁵. User fees are also to introduce to the construction and maintenance of certain infrastructure facilities. Moreover, imposing fees on consumer is an important measure of deterring over use.

¹³ Ashoka Mody, *Infrastructure Strategies in East Asian: the Untold Story*, World Bank 1997, pp.85-86

¹⁴ Yuzo Akatsuka and Tsuneaki Yoshida, *System for Infrastructure Development: Japan's Experiences*, Japan International Cooperation Publishing, 1999. pp.106-10, website of Ministry of Land, Infrastructure and Transport <http://www.mlit.go.jp>

¹⁵ Ashoka Mody, *Infrastructure Strategies in East Asia: The Untold Story*, World Bank 1997, p.85

Japan has successfully used the special account for infrastructure investment, using the public corporations, financed in the early stage by the government bonds and later on by the revenues from fuel tax and user fees from the early projects. Vietnam needs to consider for the model which is the most appropriate to its conditions.

In context of Vietnam, the special account could be introduced for the roads as the first priority. The reason is that first, expenditure in road was accounted for the largest portion of the total expenditure in the transport sector and second, road sector is able to create the pay back through user fees and gasoline tax. The Vietnam Road Administration, an official agency, is responsible for operation and maintenance the national highway network could be the most appropriate agency for management of the road special account.

The user fees and gasoline tax could be the possible financing sources to bridge the gap of financing shortage. According to the Ministry of Finance (MOF), the state revenue from gasoline taxes, fees and charges in 2003-2005 is stable at 1 percent of GDP. If the license taxes are included, the total of this revenue could be reached 1.3-1.5 percent of GDP. The table 10 shows that there are \$US 3.2 billion could be mobilized from gasoline tax and user fees. Obviously, if it could be specifically allocated for transport infrastructure, the financing sources for transport should be met the future needs. The second best case is the government should review the priority list of projects and the second priority projects should be eliminated from the public investment plan. Doing so, these revenues can be shifted to invest in the other sectors such as electricity, telecommunication and urban infrastructure.

Table 10. The Possibility Revenue Sources

Revenues	2003	2004	2005	(\$US billion)	
				2006 – 2010 *	
				Low	High
Gasoline tax	0.204	0.230	0.271	1.61	1.63
Fees and Charges	0.209	0.205	0.268	1.56	1.58
Sub total (1)	<i>0.413</i>	<i>0.435</i>	<i>0.539</i>	<i>3.17</i>	<i>3.21</i>
License tax	0.116	0.166	0.182	1.03	1.04
Sub total (2)	<i>0.529</i>	<i>0.601</i>	<i>0.712</i>	<i>4.19</i>	<i>4.25</i>

Source: Ministry of Finance; * *estimated by the author.*

The Public Corporations

To alleviate the burden budget facing to the centre and local governments, Japan established public corporations to assume some of the burden for financing and constructing infrastructure. The early public corporation included The Japan Highway Public Corporation (nihon dōro kōdan) established in 1956 and Tokyo Expressway Public Corporation in 1959. Public corporations could issue their own bonds and borrow from the private sector. Under the guidance and supervise of the state, these special corporation implement activities in pursuit of the policy objectives set down by the central government. As needed, they receive the financial support and loans under preferential conditions. They may monopolize certain their business.

The difference between Japanese corporation and Vietnamese SOEs is their incentives. Because the Japanese corporations have to repay the loan with interest, they are forced to pursue profitability. In Vietnam, the state-owned enterprises are tightly managed by the Ministry of Transport. They have rarely taken their own autonomy responsibilities and accountabilities since SOEs are fully sponsored by the MOT. Hence, they have low

incentives in promoting their own business and taking profit. Even in reality, some Japanese corporations have failed to meet their accountabilities because of unprofitable projects. However, by promoting public corporations, Japanese government can improve the effectiveness of budget usage.

It is suggested that the MOT should establish some public corporations which is road sector could be selected as a pilot project. From 2006, the Vietnamese government launched the National Expressways Development Program which is a potential profitability program. Such a kind of projects should be considered to introduce to the public corporation.

The Public-Private Financing Partnerships

There are two infrastructure projects, the Tran-Tokyo Bay highway and the Kansai International Airport, are the example of the willingness of Japanese government to combine the public and private resources in financing for the huge infrastructure projects. The construction of the Trans-Tokyo Bay Highway is a prime example of how private and public entities can together develop social capital for development of the huge infrastructure base. In 1986 the Trans-Tokyo Bay Highway Corporation (TTB) was established as a joint stock company consisting of government capital (from Japan Highway Corporation), local government and private corporations. In order to collect the extremely huge construction cost is about Y 1,428.4 billion, more than 80 percent of financing source has been mobilized through bond issues, loans from government, and a part from private financial institutions. Upon completion, the TTB will turn over the asset to the Japan Highway Corporation, which is responsible for managing major toll road, while the TTB will engage in maintenance activity.

There are some key points which is worth noting as follow.

First, the huge financing sources requirements for transport sector could not be satisfied with only budget from the public sector. Obviously, transport sector, because of its huge budget requirement, needs to attract significant private financing to co-sponsor a large expenditure. In 1986, Japan had become the second largest economy in the world but the public budget couldn't cover of all investment needs.

Second, the friendly business climate needs to be created as a necessary to attract the private financing. There is also need to develop other funding modalities and or concession of public infrastructure assets. It is recommended that the MOT and related agencies take action to address of some key issues inhibiting private sector investment such as legal and regulatory framework. For example, referred to Decree 77 of 1997 for domestic investments in the public infrastructure required the private partner must provide at least 30 percent of project cost as the first priority for entering the BOT contract. Regarding to the huge cost requirement in transport sector, the regulation seems to be unrealistic and become a barrier to private participation in the sector. The flexible financing mechanism could be seen as an appropriate solution, where the financing shares bearing by the private should be considered case by case through the negotiation process.

Last but not least, the Public-Private risk sharing is the most concern of both foreign and domestic private partners since the experience showed that the risk normally rest with the private sector. The MOT is under process to amend the Decree 77 and it is recommended that the risk-sharing principles are need to serious attention.

5. Conclusions

The investment needs in the transport sector will be required a large amount in the future estimating about 2.5 percent of GDP. The expenditure needs could be even larger than that of amount if the maintenance cost for the existing assets, investment in transport means and services and expenditure for urban transportation are fully accumulated.

The existing estimation of the future expenditure needs in transport sector could be met only by a combination of public and private finance. The previous estimation of future expenditure requirements in the National Transport Development Plan produced by MOT in 2002 should be re-assessed due to its ambitious expenditure requirements. The MOT's plan should be based on a stronger forward realistic planning framework which addresses budget and recurrent expenditure requirement in line with the Vietnam Socio-economic Development Plan and consistent with a sustainable budget constraint.

The diversification of financing sources for transport sector should be strictly considered as an only possible solution to fill a gap between the state budget constraints and the large expenditure requirements.

It is necessary to establish the special account for transport sector. Particularly, the MOT should implement a pilot project in road sector. The budget for the highway special account could be loaned from state budget and government bonds. The future revenue from user fees and facilities charges could be used as a pay back sources to highway special account.

To enhance the effectiveness of using investment sources in transport is necessary as an immediate measure. It is suggested that MOT should establish the public corporations that are responsible for each special sub-sectors such as expressways, highways, railways, shipping and ports and so forth. The public corporation should borrow a loan from special account or private sector and it will pay back with interest. Under the pressure of profit driving forces, the public corporation has a vehicle for monitoring the quality and efficiency of using budget.

As foresaid, it is clear that the transport sector needs to attract financing from private sector to expand the existing budget constraints. The Vietnamese government should consider opening up the barrier that inhibited private sector investment such as airports, railway and ports. It is also important to provide government support measures to private sector such as to ease the administration procedures in concession process and to establish clear risk-sharing principles.

Considering the limitation of financing sources of the domestic capital market, the government should repeal the clause that required private has to share at least 30 percent of total investment cost in BOT contract. Moreover, the government should encourage foreign investor participation by creating transparent and consistent PPI policy.