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Peer Review and Capacity Building on APEC Infrastructure Development and Investment: Viet Nam

APEC Policy Support Unit

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KEY ABBREVIATIONS

BCC	Business Cooperation Contract
BLT	Build–Lease–Transfer
BOO	Build–Own–Operate
BOT	Build–Operate–Transfer
BT	Build–Transfer
BTL	Build–Transfer–Lease
BTO	Build–Transfer–Operate
O&M	Operation and Maintenance
ODA	Official Development Assistance
PDF	Project Development Funding
PPP	Public–Private Partnership
VfM	Value for Money
WSC	Water Supply Company

EXECUTIVE SUMMARY

This project supports the implementation of the mechanism known as 'Peer Review and Capacity Building on APEC Infrastructure Development and Investment'. The objectives of this project are to:

i. Conduct a peer review on policies and practices, including relevant laws, regulations and guidelines, relating to the planning, selection and implementation process of infrastructure projects

ii. Identify the capacity-building needs of the reviewed economy through the peer review and suggest capacity-building activities based on the identified needs.

This report focuses on Viet Nam. As part of the review, Viet Nam is also benchmarked against a peer group to identify where it stands. The peer group is drawn from the membership of the Association of Southeast Asian Nations (ASEAN).

The findings from the review form the basis for recommendations on further steps that Viet Nam can take to make public–private partnership (PPP) projects more attractive and easier to develop and execute. This is the second economy profiled, the first being the Philippines.

Legal Framework

Viet Nam recognises PPP as a legal concept. PPP is included in its 2013 Bidding Law, 2014 Public Investment Law, 2014 Construction Law and 2014 Investment Law.

Further, standard PPP modalities such as Build–Operate–Transfer (BOT) for sections of the north-south expressway or Build–Own–Operate (BOO) for bulk water supply installations are defined in Decree 15 on PPP investment and Decree 30 on investor selection, both issued in 2015. These decrees stipulate a clearer, more structured PPP framework that is closer to international practice.

However, the layers of laws, ordinances, decrees, orders, decisions, circulars, guidelines and ministerial decisions that make up the legal system in Viet Nam present complications in developing and implementing PPP projects. For instance, PPP activities are managed under a series of decrees. However, within the legal system in Viet Nam, laws take precedence over decrees. Thus, if the official responsible for a PPP activity believes that a modality under a decree (availability payments for instance) conflicts with restrictions under the budget or public debt law, then that modality will not be used. As of date of writing, there is not yet a standalone PPP law.

Institutional Framework

The institutional framework for PPP activities in Viet Nam include the following:

- **PPP Steering Committee** established and managed by decision of the prime minister
- **Competent government authorities** (ministries and provincial People's Committees), which sign contracts and execute PPP projects
- **PPP units** at the provincial or ministry level, which manage PPP operations

- **PPP Office** under the department of bidding management of the Ministry of Planning and Investment, which coordinates the development of the PPP investment programme.

PPP projects related to road infrastructure come under the purview of the Ministry of Transport. Water and sanitation infrastructure involves a number of government ministries and departments, including the Ministry of Construction; the Ministry of Agriculture and Rural Development; the Ministry of Natural Resources and Environment; and the Ministry of Health.

Evaluating Infrastructure Development and Implementation Standards

An analysis using the APEC Quality of Infrastructure Development and Investment questionnaire reveals several gaps and areas for improvement:

- Some areas of the legal framework are incomplete; other areas, while they do exist, are not being implemented in a way that will directly support improvements in the PPP process in Viet Nam. For example, the lack of a standalone PPP law limits the strength of the framework because decrees are secondary laws. Within the current Decree 15, provisions are allowed for Build–Lease–Transfer (BLT), which are essentially availability payments; but they are not implemented because of counter-balancing concerns over budgeting.
- The government seems reluctant to enter into any level of risk sharing that includes revenue guarantees or availability payments to private investors.
- The tax law needs to be reformed to accommodate the circumstances of PPP investors. At the moment the tax law is silent on PPP and specific provisions such as those related to international investment or accelerated write-off of costs are not addressed.
- Collection of sewerage fees can be confusing because of overlapping laws. Decree 80 stipulates that a locality that collects wastewater charges should not also collect environmental protection fees. Because these charges are based on separate decrees, the municipalities are not sure how to deal with them. This creates confusion as these fees are allocated to different funds and functions.
- While PPP units exist, they are passive and do not fulfil the role of overall programme manager for PPP activities despite having the mandate to play a coordinating role (the role is also unclear).
- Given the many laws, decrees and orders that may apply to PPP projects, the units responsible for PPP are often uncertain as to what the modality should be and how it can be implemented. Creative support in this area is lacking and could significantly enhance the PPP process.
- The perceived level of corruption in public or public-managed procurement and project implementation is a strong disincentive for international investors. This leads to a PPP process that tends to be driven by links to state-owned enterprises.

Benchmarking against a Peer Group

In the period 2005 to 2010, the magnitude of transport investment in Viet Nam was largely similar to that of Indonesia and the Philippines. However, Indonesia and the Philippines

appear to have pulled away from Viet Nam since 2011. To attract more private investment in infrastructure, Viet Nam should benchmark its PPP programme against similar economies. It could learn from economies that have shown progress on this front such as the Philippines, Malaysia and India. Helpful information on other developed economies could also be obtained from the International Transport Forum at the Organisation for Economic Co-operation and Development (OECD), which provides comparative transport statistics for 59 member economies.

Key Issues and Recommended Improvements

1. Institutional Support

A central PPP unit should be tasked with providing independent review of PPP projects, particularly at the project preparation stage. This is particularly useful from a finance perspective. The financial implications of a project, particularly the risks to the government due to default by the investor, are not yet well studied.

To be effective, the institutional framework for PPP implementation should be able to directly engage support at whatever political level is required to resolve problems and remove obstacles in a timely manner. For larger PPP projects, the implication is, in most cases, that the institutions charged with implementing the projects should be seen to act with the support, and the ultimate authority, of the minister or the prime minister.

Institutional capacity could be strengthened through training in key areas such as the PPP process and project cycle; PPP modalities and financial contract structures (what makes a project bankable and acceptable to creditors and investors?); and project funding strategies and risk allocation between the government and the investor.

2. PPP Legal Structure

There remain a number of inconsistencies among the various documents that together define the PPP legal structure in Viet Nam. The most important of these is the status of the key decrees that are currently the highest legal documents regulating PPP. While these legal documents are primarily designed to regulate investment in pure public-initiated projects, they also have a profound impact on PPP and what other investor-initiated PPP projects can and cannot do. Given these concerns, a new PPP law is much needed, to clarify the ambiguities in the current legal framework, and to define more clearly the different PPP modalities and the requirements for managing and coordinating PPP project implementation.

3. Financing Challenges

The following are the key financing challenges:

- Funds for the key steps in establishing a PPP project are often available but are not used by sponsors. For instance, sponsors do not seem to be taking advantage of project development funding (PDF) from international donors. Inadequate funding for project preparation could affect the implementation of a project further down the line.
- Build–Transfer (BT) projects have inadequacies that affect the interests of the government. For example, land value, assets and compensation cannot be accurately assessed because Viet Nam does not have a transparent housing market and the capacity of organisations to

evaluate and develop compensation plans remains weak. Particularly in non-competitive PPP contracts, it is not uncommon for investors to reduce long-term operational risk by overcharging for the initial capital construction cost.

- Viability gap financing invested by the government to increase financial feasibility, and attract investors, lacks clear procedures for planning, identifying and approving the funding.
- The legal, institutional and policy environment for PPP investment in Viet Nam is not yet fully developed, and the involvement of state-owned enterprises in PPP projects reduces bidding competitiveness and transparency, hence reducing international interest.
- Availability payment modalities are not being used. Five-year and annual budget plans submitted to the Ministry of Planning and Investment for appraisal and for submission to the prime minister and the National Assembly for approval are not compatible with PPP budget plans which often last 20 to 30 years or more.
- The lack of standardised PPP contracts is another issue. A number of BOT road projects were changing their capital structure continuously during the implementation phase, resulting in government capital investment running as high as 50 percent to 70 percent, which is not compatible with usual BOT standard agreements.

4. Linkage between Central and Provincial Governments

Responsibility for water and sewerage management is allocated on a province-by-province basis, which essentially ignores the movement of the water through river systems. Effluent from one province can become the input water source for the downstream province. Water management by water corridors is therefore both sensible as well as good public policy. The central government should review the process of allocation of responsibility for water and sewerage management and move toward a watershed management approach as opposed to a strictly decentralised provincial approach. At the moment, investors in water treatment do not have a say in the treatment of the water in upstream jurisdictions, which may increase treatment cost in the downstream installation.

5. Risk Sharing in PPP Investments

Viet Nam does not have many cases of successful transport or water sector international-standard PPPs. Those that are in place are based on direct assignment to specific companies and a number of those are having financial difficulties. The lack of a clear risk-sharing mechanism currently limits international investor interest. However, the option of design/build/operate/transfer/sell is viable. Investors are more interested in an opportunity if it can be shown to generate a consistent stream of revenue and where the operating costs are well defined. Risk sharing can also be improved by using availability payment projects.

6. Coordination Mechanism

PPP projects often require coordination between, for instance, the Ministry of Transport and the Ministry of Planning and Investment and the Ministry of Finance. The Ministry of Planning and Investment and the Ministry of Finance play the most important role in the preparation and development of PPP projects throughout the lifecycle of the project. The lack of a clear coordination mechanism among these ministries adversely affects the effectiveness of the ministry’s work and could lead to longer lead times and other unnecessary problems.

1 OVERVIEW

1.1 INTRODUCTION

This project supports the implementation of the mechanism known as 'Peer Review and Capacity Building on APEC Infrastructure Development and Investment'. The objectives of this project are (i) to conduct a peer review on policies and practices, including relevant laws, regulations and guidelines relating to the planning, selection and implementation process of infrastructure projects; and (ii) to identify the capacity-building needs of the reviewed economy through the peer review and suggest capacity-building activities based on the identified needs.

This project also aims to benchmark Viet Nam against a peer group to identify where it stands and to use that information to recommend further steps that it can take to make PPP projects more attractive, easier to develop and execute. This is the second of these benchmarking reviews, the first being the Philippines.[1] The peer group economies were selected from within the membership of the Association of Southeast Asian Nations (ASEAN).[2]

1.2 THE VIETNAMESE LEGAL SYSTEM

The Vietnamese legal system is complicated and the interaction and overlap of elements in the system have a strong impact on the process of developing and implementing public–private partnership (PPP) projects across Viet Nam. We therefore begin this benchmark activity with an overview of the structure of the Vietnamese legal system so as to provide a context to understand the points that follow.

The Vietnamese legal system features a socialist structure built on top of a French system. To follow the relationship of the elements in the system and to understand the hierarchy of legal instruments, it is helpful to review the overall framework. The prime law-making body is the National Assembly and the Standing Committee of the National Assembly when that body is not in session. Under that prime level is an array of other legal instruments that either elaborate on the prime laws or indicate how they will be upheld. The highest legal document in Viet Nam is the Constitution, which was passed by the National Assembly in 2013.

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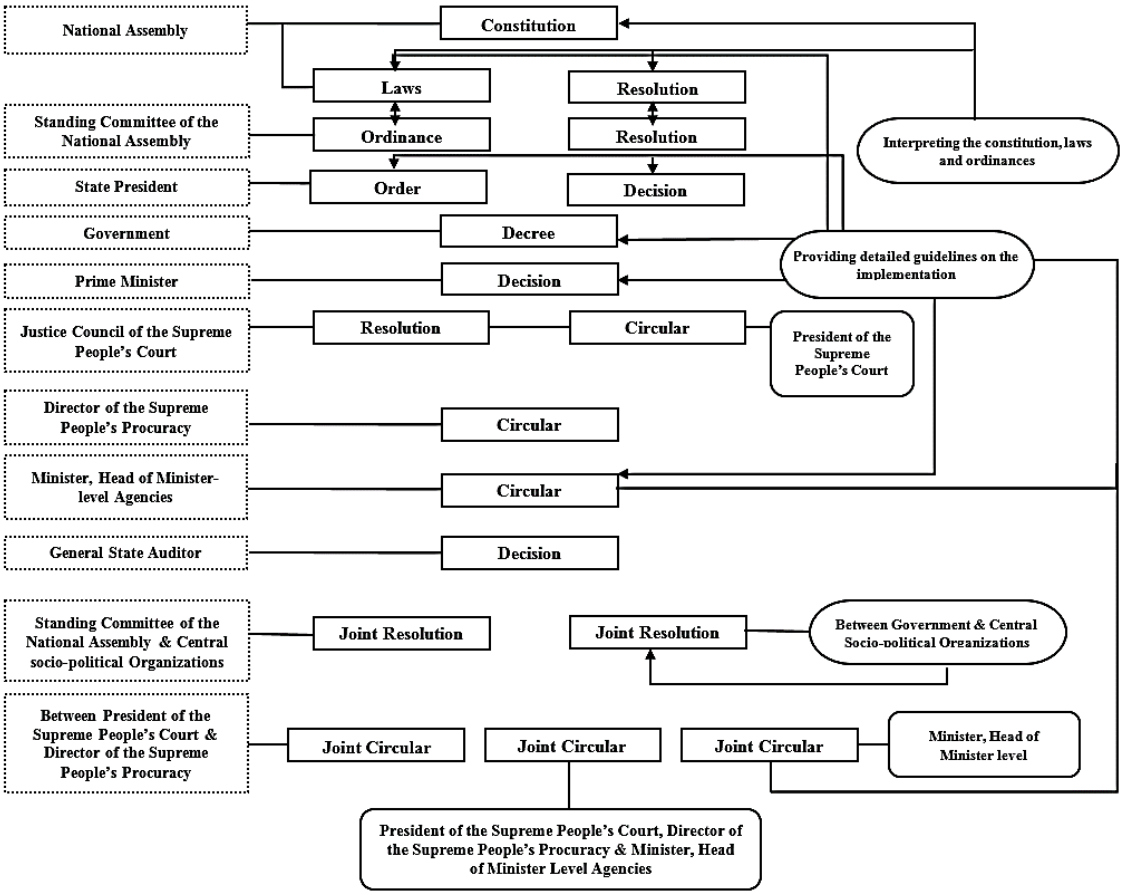
[1] APEC Policy Support Unit, *Peer Review and Capacity Building on APEC Infrastructure Development and Investment: Philippines* (Singapore: APEC, April 2017).

[2] The economies selected as comparators are the Philippines; Indonesia; and Malaysia. The Philippines is a good comparator since we just finished a similar analysis for the Philippines and a significant body of comparative information was developed during that review (see footnote 1). Indonesia was chosen because it is a relatively sophisticated economy which has seen its road and water sector infrastructure grow over the past decade, with these infrastructure mainly delivered through state-owned enterprises. It also has a number of institutional features that are similar to those found in Viet Nam. Malaysia was chosen because of its having reached upper-middle income status in the past 15 years and its successful use of PPP as a delivery method for infrastructure.

Figure 1.1: The structure of the legal system in Viet Nam



Source: Adapted from 'Structure of Legal Documents in Vietnam', https://envietnam.org/library/Law%20articles/Structure_of_legal_docs_in_VN.pdf [accessed 23 April 2017]

The structure of the legal system in Viet Nam is as shown in Figure 1.1 and described as follows:

i. **Laws** are passed by the National Assembly and are the highest form of legal direction. All other legal documents are subsidiary to laws, and in the case of conflicting interpretations, the law takes precedence.

ii. **Ordinances** are passed by the Standing Committee of the National Assembly when the Assembly is not in session.

iii. **Decrees** are passed by the government (signed by the prime minister) and normally implement laws and ordinances which are often supplemented by more detailed regulations.

iv. **Orders** are issued by the president on the passing of laws or ordinances.

v. **Decisions** are issued by the prime minister on the implementation of laws or regulations.

vi. **Circulars** are issued by individual ministries (or joint circulars among ministries) and provide advice on how the ministry will implement a law, ordinance, decision or decree.

vii. **Guidelines** are not legal instruments but are signed by the prime minister and set out the intention of the government to establish a committee to consider an issue.

viii. **Ministerial decisions** are issued by the minister and define regulations in the fields administered by that ministry.

PPP has now been recognised as a legal and coherent concept in the Vietnamese legal framework. It has been included in Bidding Law No. 43/2013/QH13 dated 26 November 2013, Public Investment Law No. 49/2014/QH13 dated 18 June 2014, Construction Law No. 50/2014/QH13 dated 18 June 2014 and Investment Law No. 67/2014/QH13 dated 26 November 2014.

1.2.1 Centralised organisational responsibilities

The public entities involved in PPP activities in Viet Nam include:

- **PPP Steering Committee**: This is established and managed by decision of the prime minister.
- **Competent government authorities** (public service corporations, or PSCs): These sign contracts and execute PPP projects. They are ministries or provincial People's Committees.
- **PPP units**: These are provincial and ministry-level units that manage PPP operations.
- **PPP Office** under the department of bidding management of the Ministry of Planning and Investment: This entity plays a coordinating role in the development of the PPP investment programme and supports the Ministry of Planning and Investment in providing guidelines for the development and implementation of PPP projects.

1.2.2 Transport sector framework

The Ministry of Transport is the ministerial-level agency that manages the implementation of PPP projects in the transport sector. It issues the circulars and decisions that guide the implementation of PPP projects in the transport sector.

The Ministry of Transport's PPP unit is the PPP Department led by a Director General. This department is responsible for advising the ministry on all issues related to the development of the PPP programme at the ministry.

Apart from the Ministry of Transport, the various People's Committees in the provinces or large municipalities are also allowed to enter into PPP arrangements for development of infrastructure, for delivery of services or for contracting in the areas of transport for which they are beneficially responsible. These include subnational roads, terminals, operations controls, and operation and maintenance (O&M) contracts.

In some cases, the provincial People's Committee may act in concert with the Ministry of Transport. For instance, in the inland waterway sector, the waterway itself is managed by the Ministry of Transport but the terminals and wharves may be provided, operated and managed by the province or by the municipality. Many areas of joint responsibility exist which require coordination between the relevant central and provincial responsible organisations.

1.2.2 Water and sanitation sector framework

The overall structure of the water and sanitation sector in terms of PPP generally follows the same structure as for transport. The same basic laws cover both sectors. The differences between the sectors relate to the main bodies responsible for PPP projects in the sector.

In the water and sanitation sector, a number of central government ministries and departments hold responsibilities that impact on the supply, management and pricing of water supply and sanitation:

- The **Ministry of Construction** is responsible for government management functions related to water supply, drainage and wastewater treatment activities in urban areas and industrial parks nationwide.
- The **Ministry of Agriculture and Rural Development** is responsible for government management functions related to water supply in rural areas. Basically, it mirrors the role of the Ministry of Construction but with a focus on rural water supply and wastewater.
- The **Ministry of Natural Resources and Environment** is responsible for government management functions related to environmental protection, water resources management, river basin management, and pollution control for water drainage and wastewater discharge.
- The **Ministry of Health** is responsible for government management functions related to public health, issuing standards for clean water for domestic use, and inspecting and supervising the implementation of clean water standards in Viet Nam.

As with the road sector, provincial People's Committees have significant responsibility. Since water supply and sanitation services are ultimately local, the role of the provincial People's Committee is more extensive in the water and sanitation sector than it is for roads. Provincial People's Committees at all levels are responsible for organising and developing water supply and drainage, and wastewater treatment services for different needs according to their management areas, in line with community development and participation in the master plan of the drainage basin/region, when there is demand for water supply and sewage treatment. Pricing and competition are also largely local and depend on local conditions. Many non-financially viable projects are carried out by local state-owned enterprises.

The water supply process can be divided into three stages: (i) exploitation and production of water; (ii) water transmission; and (iii) water distribution to users. Similarly, urban drainage and wastewater treatment can also be divided into three stages: (i) wastewater and water collection; (ii) transportation of wastewater to treatment plants and rainwater to the receiving ends; and (iii) wastewater and sludge treatment. Each of these stages may be treated differently under a PPP approach.

1.3 APPLICATION OF LEGAL STRUCTURE TO PPP IN VIET NAM

Government policy documents to guide PPP activity have existed since 1996. However, formal regulation began in Viet Nam only in 2010 with **Decree 108/2010/ND-CP** to cover the various types of build–operate–transfer (BOT), build–transfer (BT) and build–transfer–operate (BTO) style agreements. The decree was not sector-specific and was meant to cover all BOT-style PPP projects. However, the decree was limited in scope and did not describe and mandate an international-standard PPP mechanism.

In 2015, with support from the World Bank, the Asian Development Bank and the government of Viet Nam, a more comprehensive PPP framework was established: **Decree 15/2015/ND-CP** on PPP investment and **Decree 30/2015/ND-CP** on investor selection. These decrees stipulate a clearer, more structured PPP framework that is closer to international practice. These decrees also set out an official PPP procedure (Figure 1.2). The full range of PPP modalities were enabled under this decree, and importantly, the decree also introduces the concept of viability gap funding for demand-based PPP projects where the financial risk is high and profitability is questionable without government input. The decrees also require all PPP projects to be implemented under international competitive bidding.

Figure 1.2: PPP procedure in Viet Nam

Following the promulgation of the new decrees, new initiatives were undertaken by the government to further develop a PPP-friendly framework with the help of international donors. To date, the following key policies apply to the transportation and the water and sanitation sectors:

- Transportation and other PPP projects
  - Tariffs for roads, railways, waterways and ports are allowed to enable investors to price for services and generate solid revenue streams based on demand.
  - Guidelines for project screening are defined, including financial analysis by the Ministry of Finance where necessary.
  - Guidelines for preparation of a feasibility study are outlined.
  - PPP contract samples are developed and made available.
  - A PPP screening framework is in place.
- Water and sanitation PPP projects
  - Market-based water pricing is enabled.
  - Market-based charges for wastewater is also mandated but as yet not well implemented at the provincial level based on observed results.

In 2017 an update of Decree 15 was prepared and presented for approval. The updated decree offers a number of suggested improvements:

- The Updated Draft Decree provides for the removal of the requirements for investors to obtain an investment registration certificate (IRC) for a PPP project. This provision will need to be carefully coordinated with the provisions of the Law on Investment

which still require the issuance of an IRC for foreign investors. As noted above, decrees are subsidiary to laws and thus laws take precedence in rulings.

- The equity capital to be maintained by PPP investors shall be at least 15 percent of the total investment capital with respect to projects of national importance and Group A projects, and at least 20 percent of the total investment capital with respect to Group B and Group C projects.
- Investors and client agencies are required to publicise key details on the project (including project name; contract signing date; contract term; identity and particulars of the investors; project implementation location; total investment capital; prices and fees of goods, services and other revenues, etc.).
- Contracts for O&M projects are not required to have a feasibility study report (but there must be a financial plan in the project proposal to provide the basis for investor selection and negotiation of the project contract).
- For PPP projects involving technical and technological requirements, the feasibility study is to be prepared by the investor(s) themselves after being selected, instead of being prepared by the ministries or provincial People's Committees. More details on how the categories are defined is needed.
- Ministries shall coordinate with the Ministry of Planning and Investment to provide detailed guidelines on model project contracts that cover the detailed contents prescribed under Article 35.1 of the modified decree.
- The Updated Draft Decree sets out a number of more stringent requirements that must be satisfied in order for investors to be able to assign their rights and obligations in project contracts to their lender(s) or to other investors.

However, it is not yet clear how the new amendments will address the imbalance in legal structure. The recent improvements in the PPP legal framework are based on the Decree 15 and Decree 30, as noted above. The issue is that these are decrees and are not passed by parliament. As such, any inconsistency between a law and the decree sees the parliamentary law prevail. This becomes a problem in some applications such as availability payments where the budget law and forward debt commitment limits make such payments problematic.

The Guidelines on Investor Selection of the Law on Bidding deal in some detail on the rules of bidding for PPP projects. It clarified for PPP investors the implications of the Law on Bidding No. 43/2013/QH13 dated 26 November 2013. For instance, the PPP bidding should be competitive. The agency soliciting the bid should not own more than 30 percent of any of the bidding agencies. The consultant/contractor conducting the feasibility study must be different from the evaluator of the bid. Limits on incentives are prescribed.

Together the two decrees and the parallel laws on bidding and the control of contracts under the updated Civil Code provide a strong basis for any PPP project. The various forms of contracts covered by Decree 15 are outlined below.

1.3.1 Types of PPP contracts

This section deals with the various types of PPP contracts available in Viet Nam. Each modality is briefly assessed in terms of the coverage, implementation and effectiveness. Where appropriate, recommendations are also provided. It should be noted that while Decree 15 covers the standard modalities, many investors and clients negotiate arrangements that do not fit neatly into these definitions. That is a healthy development for PPPs in any economy.

1.3.1.1 Build–Transfer (BT)

Definition

The BT contract is signed between an authorised government agency and the investor developing the infrastructure, in which the investor transfers the infrastructure to the government agency and receives payment either in the form of land to conduct another project according to the regulations defined in Decree 15 (item 3, article 14; item 3, article 43) or according to the terms in the BT contract.

Contract Implementation

The BT contract had been popular for road projects before 2015. Now, as the land available for exchange for roads diminishes, there are very few new BT projects.

The BT contract was also applied in several water supply projects (for example, the Bac Ninh Surface Water Plant, constructed by Long Phuong Limited Company) and wastewater treatment plant projects (for example, the Yen So wastewater treatment plant, constructed by Gamuda Land Viet Nam Limited Company).

Evaluation

The BT contract has the advantage of being able to mobilise public capital to develop urgent public service structures. However, the government remains responsible for arranging the funding or finding another project for the investor to recover costs. The number of contracts under this type has gradually declined due to the limited land bank. Thus far, under this type of contract, the operation responsibility is not tied to the project.

Recommendation

BT contracts could be improved by including a linking mechanism to cover operation responsibility such as requesting the investing company to initially manage operations or to guarantee the operation according to the investment cost (based on the bidding plan) when it is difficult to find an independent operator.

1.3.1.2 Build–Operate–Transfer (BOT)

Definition

The BOT contract is signed between an authorised government agency and the investor developing the infrastructure. After the infrastructure is built, the investor has the right to operate the structures for a specific period of time, after which the investor transfers the structures to the authorised government agency.

Contract Implementation

The BOT contract is predominantly used for road projects. There are more than 70 BOT contracts for such projects, from widening roads such as National Highway 1 to building higher capacity roads near major cities.

Evaluation

In addition to reducing government budget expenditures, BOT contracts limit the financial risk for the government as the capital comes from the private sector. Also, projects under BOT contracts normally employ modern operating and management systems. Another advantage of the BOT contract is the strict investor selection process, in which the government agency has to create, appraise and approve the investor selection plan; issue and appraise the tender; and then propose, appraise and approve the selection and inform investors of the result. Investors have to clearly define the technical and financial plan in the bidding participation documents.

The negotiation procedure of a BOT contract is also stringent. Investors have to prove their financial capacity to implement the project. As such, the success rate of a BOT contract is moderately high. The operation responsibility is linked to the contract, so the investors pay attention to the progress and the construction quality (the foundation of operation quality) in order to create favourable conditions for the business operation phase.

However, the stringent procedures involved in preparing bidding documents and selecting investors are challenging for investors. BOT contracts also usually require large investment outlays; and the production price needs to be estimated at the bidding phase even though the inflation rate and materials pricing in Viet Nam can fluctuate greatly.

Recommendation

Pre-selecting the business plan sometimes causes financial risk and becomes an obstacle for the contract negotiation. The limited operation period (20–25 years) means that there has to be quick amortisation of plants, equipment and pipe. Therefore, to ensure the profit for the investors, as an example, the water price and the pricing plan are usually increased, making the service more expensive for the beneficiaries.

1.3.1.3 Build–Transfer–Operate (BTO)

Definition

The BTO contract is signed between an authorised government agency and the investor developing the infrastructure. After the infrastructure is built, the investor transfers it to the authorised government agency and the investor operates the structures for a specific time period.

Contract Implementation

BTO contracts are seen in projects in which the water supply companies (WSCs) invest using official development assistance (ODA) funds re-borrowed from the Ministry of Finance. An example is the Tay Ninh water supply project by the Tay Ninh Water Supply and Drainage Limited Company. After the project implementation, the properties are recognised in the company's equity (owned by the government). The company then operates the property and pays the loan principal and interest.

This method is also used in cases where the government determines it can reduce the cost of a project by borrowing ODA funds or commercial bank funds which offer lower interest rates. This allows the government to essentially finance the investment at a rate lower than could be done by the private sector and thereby save money in the longer term.

Evaluation

BTO contracts help poor regions through ODA loans but increase the burden on the government budget and raise public debt.

1.3.1.4 Build–Own–Operate (BOO)

Definition

The BOO contract is signed between an authorised government agency and the investor developing the infrastructure. After the structures are built, the investor owns and reserves the right to operate the structures for a specific time period.

Contract Implementation

BOO contracts have been applied in 14 water supply projects. Examples include the BOO Thu Duc Water Plant in Ho Chi Minh City (investor: BOO Thu Duc Company) and the BOO Dong Tam Water Plant in Tien Giang Province (investor: BOO Phu Ninh Water Joint Stock Company).

Evaluation

BOO contracts can mobilise public capital, reduce the burden on the government budget, grant autonomy to the enterprise, and link the operation responsibility to the investment progress. Therefore, this type of contract ensures benefits for three parties: people, government and enterprise.

However, BOO contracts have the same disadvantages as BOT contracts: the stringent investor selection procedure could become obstacles and risks for investors, potentially creating the non-favourable Request–Grant mechanism.[3] Moreover, in this contract type, enterprises bear the full investment cost so the monitoring role of the government is often taken lightly.

1.3.1.5 Build–Transfer–Lease (BTL)

Definition

The BTL contract is signed between an authorised government agency and the investor developing the infrastructure. After the structures are built, the investor transfers them to the authorised government agency and obtains the right to provide service on the basis of managing the structures for a specific period. The authorised government agency leases the service and pays the investors according to the regulations in item 2 article 14 of Decree 15/2015. This is often called an availability payment BOT. It may or may not involve direct user charges but often it does not.

Contract Implementation

This model is applied in projects where the revenue collected from end-users is insufficient to cover the investment cost and bring profits to the investors or in projects where it is difficult to collect the fee from the end-users.

[3] After being invited to bid ('request'), the investor would be carefully screened before the contract is awarded ('grant'). Because many Vietnamese companies do not have much experience, this modality is not often used.

Evaluation

The BTL contract is not popular since it does not ensure long-term benefits for investors. Investors are concerned about payment from the government budget as this is usually delayed; and requires annual pricing and budget approval.

Also, government departments are aware that public investment laws limit government budget periods to five years, making longer-term contract commitments unfeasible. This discourages them from entering into longer-term lease contracts of six years or more. This is an instance where the provision of a decree is countered by the financing and budget law.

1.3.1.6 Build–Lease–Transfer (BLT)

Definition

The BLT contract is signed between an authorised government agency and the investor developing the infrastructure. After the structures are built, the investor obtains the right to provide services on the basis of managing the structures for a specific time period. The authorised government agency rents the structures from the investor, paying the investor according to the regulations defined in item 2 article 14 of Decree 15/2015. After the service period, the investor transfers the structures to the authorised government agency.

Evaluation

This model is not popular for the same reasons as the BTL contract. Without the benefit of longer term contracts, investors are subject to vagaries in the payment for the infrastructure and the risk of early termination of the agreement.

1.3.1.7 Contract for operation and management (O&M) rights

Definition

This type of contract is signed between an authorised government agency and the investor selected to operate a part of or the entire structure for a specific period of time.

Contract Implementation

This type of contract is often used in the road transport sector as a contract maintenance agreement for a specific time period. It is also the end part of a BTO contract. This type of contract has not been applied in the water supply and drainage industry.

Recommendation

While O&M contracts have not been used in the water supply and drainage sector, there is potential for it to be considered for the water transmission network in Hanoi and Ho Chi Minh City. The government should research and develop guidelines on how to apply this model in the water industry.

1.3.1.8 Summary

These categories that are individually defined in the law cover most of the modalities normally used. But recently, in many jurisdictions, innovative variations on these modalities are being developed. These include various types of risk sharing between the investor and the client and the use of revenue trigger points to require further investment in capacity by the investor. This suggests that a more progressive approach to defined modalities is to not define

them rigidly or to allow for user definition to fit the needs and constraints of the investor and the client.

Over the past three to five years, PPP transactions have become more flexible and transactions have become more market responsive. The potential to develop a mix of the various types of currently classified PPP arrangements has increased. Risk analysis and allocation is then conducted for the specific transactions and varies based on the transaction that is eventually designed. Availability payment transactions, for example, are no longer solely funded by the private sector but by a mix of funding from the government and the private sector.[4] The law of Viet Nam would do well to allow for this kind of flexibility and designation and allocation of risk based on the actual design of the transaction.

The Viet Nam legal system is complex. Many laws and subsidiary legal documents define the requirements and limits of laws related to PPP. Under the current laws and decrees, there do not appear to be many areas that are not covered adequately. However, the problems come during implementation. Implementing agencies often lack flexibility and have limited capacity in understanding the range of contract types and how they can function. As a result, even fairly simple types of contracts (for example concession contracts) may not be used. Moreover, many investors perceive the possibility of corruption in the contracting and service delivery steps.

A more detailed summary of the legal framework defining PPP activities is provided in Appendix B.

1.4 INFRASTRUCTURE FINANCING IN VIET NAM

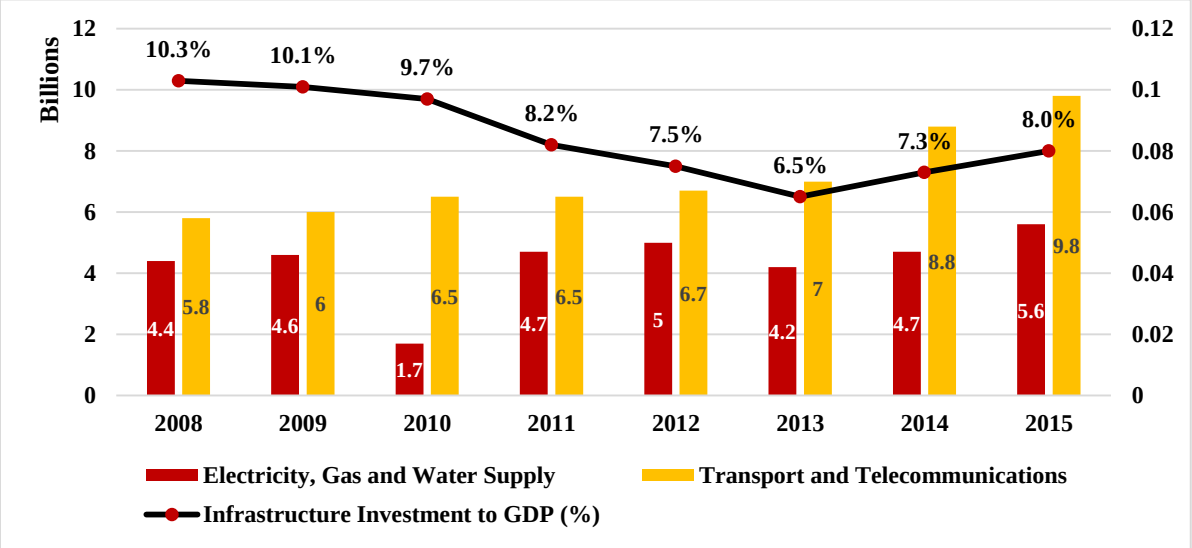
Figure 1.3 illustrates the time series of overall infrastructure investment in Viet Nam. As the overall absolute value of the investment has increased with gross domestic product (GDP), the relative value has fluctuated, with a high of 10.3 percent in 2008 and reaching approximately 8.0 percent in 2015.

Figure 1.4 illustrates the sources of infrastructure finance in Viet Nam in 2002 and 2010. Over the period 2002 to 2010, private investment in infrastructure increased significantly. This also maps against major changes in the degree of direct public control over infrastructure and the gradual allocation of infrastructure to 'private state-owned enterprises'[5] or full private investors. ODA investment and government investment as a proportion also seem to have fallen.

[4] Queensland Australia Toowoomba Expressway features a mix of government funding at 70 percent and private-sector funding at 30 percent wrapped as an availability payment transaction.

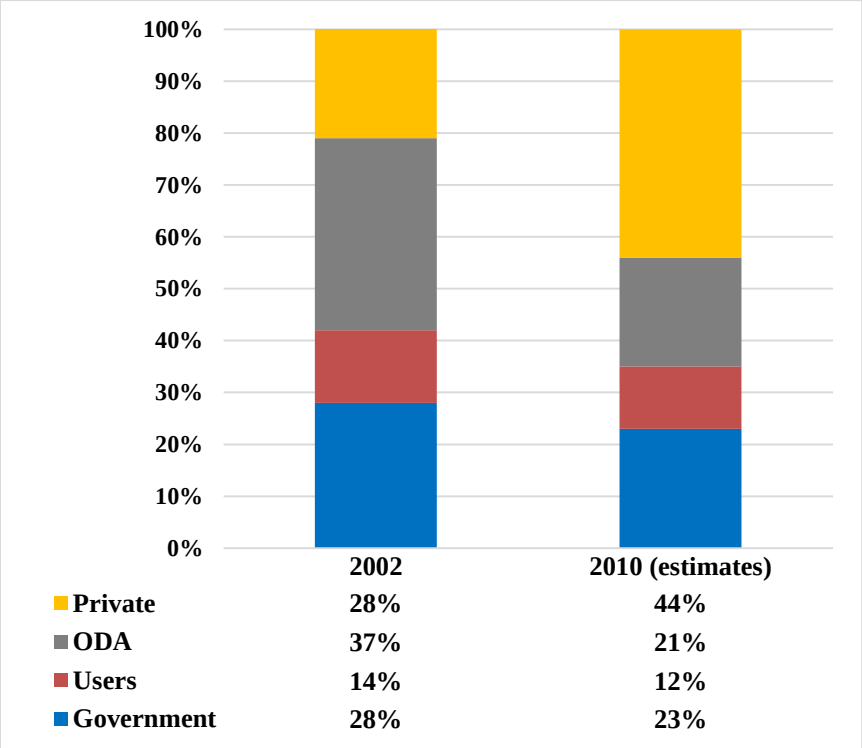
[5] These are companies where the majority ownership remains with the government but with varying degrees of private investment. Under Decree 15, 'state-owned enterprises' are defined to be those companies with 100 percent government capital.

Figure 1.3: Infrastructure investment in Viet Nam, 2008–2015



Source: Adapted from United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), 'Infrastructure Financing Strategies for Sustainable Development in Viet Nam' (national study/paper, UNESCAP, 2017), Fig. 3, http://www.unescap.org/sites/default/files/20170915 National Study - Infrastructure Financing - Viet Nam.pdf

Figure 1.4: Sources of infrastructure finance in Viet Nam, 2002 and 2010



Source: Reproduced from World Bank, *Viet Nam's Infrastructure Challenge – Infrastructure Strategy: Cross-sectoral Issues* (Washington, DC: World Bank, 2006).

1.4.1 WTO legal commitments

According to Viet Nam's list of services committed to the World Trade Organization (WTO), the following services are open to foreign investment capital:

- Transport systems and operations
- Installation of water supply system (CPC 56120[6]): 100% foreign capital
- Wastewater treatment services (CPC 9401): 51% foreign capital within the first year after signing, followed by no restriction
- Water supply and wastewater: not committed

Currently there are no foreign investments in the road transport sector. Some commercial investments are found in the marine sector. Some foreign-invested enterprises are involved in the water supply and drainage sector in Viet Nam, among them 100 percent foreign-owned enterprises participating in wastewater treatment services and foreign-invested enterprises participating in water production in the form of a Business Cooperation Contract (BCC) and BOO. On general principle, when Viet Nam does not commit specific areas to WTO rules, it is understood that the participation of enterprises having foreign investment capital will comply with Vietnamese law.

1.4.2 Private investment in infrastructure

In recent years, Viet Nam has issued many laws to create policies on investment and competition. The laws are designed to support economic development and also comply with Viet Nam's commitment to international treaties. In general, Viet Nam's investment and competition policies reflect a commitment to international economic integration, equality and fair competition among enterprises of all economic sectors. These policies are reflected in Enterprise Law 2014, Competition Law 2004 and Investment Law 2014.

The policies aimed at restructuring the market and enterprises are expressed through three policy groups: state-owned enterprises equitisation policy, investment encouragement policy and PPP policy.

1.4.2.1 Equitisation policy

Over the years, the government of Viet Nam has adopted policies to limit the size of government monopoly enterprises and remove some administrative measures related to state-owned enterprises. Evidence of this is a series of important economic policies such as the 'equitisation' of state-owned enterprises in the 1990s, the promulgation of Competition Law 2004 and Enterprise Law 2005, and active integration into the world economy through free trade agreements, ASEAN, WTO and the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (the revised version of the Trans-Pacific Partnership, or TPP), among others.

In line with the equitisation of state-owned enterprises, policies that create equality between state-owned enterprises and the private sector have been enshrined in the law, through

[6] United Nations' Central Product Classification (called CPC code). The WTO schedule of commitments to open markets is categorised by CPC.

Enterprise Law 2014; Investment Law 2014; and the Law on Management and Use of Government Capital in Investment, Production and Business 2014. These laws were made effective 1 July 2015.

According to these laws, before 1 July 2015, businesses were only allowed to do business as permitted by the government (called 'opt for'), but after that date, businesses may provide any service not prohibited by the law (called 'opt out'). The change of mindset, from opt-for to opt-out, in Investment Law 2014 is aimed at exercising citizens' freedom of doing business. According to article 6 of Investment Law 2014, companies may not provide services in only six industries deemed to be of national interest.

Unlike businesses in the private sector that have the flexibility to do what the law does not prohibit, state-owned enterprises are more limited in their scope. (State-owned enterprises are enterprises with 100 percent of their charter capital owned by the government. This terminates the status of joint-stock companies in which the government holds 51 percent or more of the charter capital.)

Enterprise Law 2014 and the Law on Management and Use of Government Capital in Investment, Production, and Business in Enterprises 2014 also specify that the government shall only invest capital in four areas:

- Enterprises providing public products and public services essential to the society
- Enterprises providing direct services for security and defence
- Enterprises operating exclusively in the field of natural monopoly
- Enterprises applying high technology and big investment, and creating fast motivation for other branches and fields of the economy

In summary, the new laws allowed the private sector to freely engage in a much wider range of business activities, while at the same time narrowing what is considered a state-owned enterprise and delineating what the government may invest in.[7] These limitations on investment by the government are the basis and orientation for the restructuring and rearrangement of existing enterprises, concentrating the government's resources on the economic functions of the government, promoting equality and encouraging private-sector participation in business investment.

1.4.2.2 Incentives

The government also adopts policies to encourage and support investment incentives. For PPP construction projects supported by the government, companies may be contracted for infrastructure works outside the fences such as power supply and roads; ground compensation and ground clearance in urban areas; and site clearance and construction work when deploying water supply projects in areas with difficulties such as water access, ethnic minorities, mountainous areas and islands.

[7] While this provides limits for both the state-owned enterprises and the private sector, the definition of a 'state-owned enterprise' to be only those companies with 100 percent government capital diminishes the restrictions significantly.

Companies could also enjoy priority in the use of preferential financial sources for PPP investment projects, irrespective of the users. Priority is also given to post-investment interest subsidies for PPP projects using commercial loans.

For water supply units, incentives include exemption from land use fees and land rental for water supply works. These range from water exploitation and treatment, to water pipelines and water distribution pipelines. This type of incentive covers companies/resources supporting the management and operation of water supply systems, such as administrative houses, management and operation houses, workshops, warehouses and equipment.

In the area of water supply and drainage and urban wastewater treatment, the government supported a project to restructure the construction sector to improve quality, efficiency and competitiveness in the 2014–2020 period.[8] The project has the following targets for 2020:

- The coverage of clean water supply services from centralised water supply systems in urban areas of grade IV or higher will reach 95 percent, and in grade V urban areas, 80 percent, with the per capita water supply standard of 120 litres per day and water quality up to technical regulations.[9]
- Investment in the construction and development of systems to produce clean water supply, drainage networks and treatment of wastewater. These will use technology and equipment suitable to Vietnamese conditions, with priority given to the selection of advanced technologies and equipment, using economical and environmentally friendly materials and fuel.
- Develop mechanisms and policies to attract resources for the development of urban technical infrastructure and services, especially non-government ones; and exploit and rationally use ODA and preferential loans in the field of urban development.
- Promote the equitisation of construction enterprises to fully apply the modern governance framework, ensuring enterprises operate under the market mechanism and compete with the private sector on an equal footing.
- Restructure small- and medium-sized enterprises with specialisations to improve their capacity and competitiveness; and develop a network of enterprises specialising in providing constituents of construction products (such as human resources, machinery, equipment, raw materials, technological solutions, and management models) to enhance professionalism and management efficiency.
- Study and select suitable models of public-utility service providers such as water supply and drainage, to ensure conformity with Viet Nam's practical conditions.

[8] Decision No. 2502/QD-TTg dated 22 December 2016 issued by the prime minister.

[9] According to the Law on Urban Planning, urban centres are classified into six grades: Special Grade and Grades I, II, III, IV and V.

1.4.2.3 Competition with state-owned enterprises

The above analysis shows that the current restructuring policies strive to create equal and fair competition between the government and the private sector and promote private-sector investment by:

- restructuring state-owned enterprises through equitisation
- allowing the private sector to deliver any business activity not prohibited by law, while state-owned enterprises may only operate in areas regulated by the law
- changing the definition of 'state-owned enterprises', from enterprises where the government owns more than 50 percent of the charter capital under Enterprise Law 2005, to enterprises where the government owns 100 percent of the charter capital under Enterprise Law 2014 (an important innovation in the policy of equality between government enterprises and private companies as this change allows state-owned enterprises with less than 100 percent of the charter capital to be considered as private companies).

While the intent is correct, in practice many of characteristics of the statist approach remain in place. Generally, there is still a gap between policy and implementation. State-owned enterprises remain 'preferred' by the government and still receive government incentives. However, the dominance of state-owned enterprises appears to be diminishing in recent years as the private sector has been able to compete, and in some cases, win contracts from the government. State-owned enterprises are therefore challenged to transform themselves or otherwise gradually lose market share to the private sector.

1.4.2.4 PPP funding source

Funding sources for PPP projects in Viet Nam are limited to investor's equity, commercial bank loans and forms of support such as ODA and the government budget. PPP finance is limited to local banks (mainly government-owned banks), usually with low tenor (from 10 to 12 years for project finance). The current PPP framework is not attractive enough to overcome the project risks perceived by foreign investors.

While Decree 15 specifies that the government may also support PPP projects through gap funding or other means, this approach is more commonly seen in the water sector than in the road sector. In part, this is affected by the hard debt ceiling imposed on all projects which has the effect of limiting the ability of the government to offer direct support or to accept contingent liability.

Commercial lending and bond financing are illustrated in Table 1.1 and Table 1.2.

The problems over PPP project financing are:

- Viet Nam has difficulty matching the loan tenor with the investment period.
- International investors rely on the financial return of the project for capital recovery and profit under competitive bidding. The low average internal rate of return (IRR) in Vietnam compared to the international IRR standards is a problem. In many cases, Vietnamese investors can negotiate contracts with inflated cost. The profit comes from the construction, and the IRR through operations viability is of less concern.

Table 1.1: Commercial loan lending rate for PPP projects, 2015/16

Key financial parameter	Viet Nam	International
1. Investor/Contractor		
Required internal rate of return (IRR)	12–15%	19%
2. Funding from commercial banks		
Tenor	10–15 yr	15 yr +
Grace period	3–5 yr	5 yr +
Commercial lending rate (with repayment guarantee, no FX guarantee)	9–10.5%	12.12% (World Bank estimate 2015)
Commercial lending rate (with repayment and FX guarantee)	NA	4.92–5.5%

Source: Data compiled by consultant.

Table 1.2: Asian bond market, 2013

	Domestic Interest Rates [a] %	10 Yr Gov't Bond Yield [b] %	Average Fund Tenor %			
			1-3 Yrs	3-5 Yrs	5-10 Yrs	>10 Yrs
Indonesia	6.5	7.58	34	40	26	0
Malaysia	3	3.96	17	15	36	32
Philippines	3.5	3.43	21	22	54	3
Singapore	0.03	2.23	20	21	38	21
Thailand	2.5	3.9	33	20	38	9

Note: [a] Short-term rate June 2013.
[b] Asian Development Bank, *ABMI Market Watch* (Manila: Asian Development Bank, August 2013).
Source: Asian Development Bank, *Asian Bond Markets Initiative Monitor* (2013).

1.4.2.5 Alignment of Risk

In parallel, donors have tried to promote international standards to PPP, but have been rebuffed repeatedly due to investor concerns over risk and also because many viable projects were already allocated to domestic BOT or to ODA finance, leaving only the most unviable projects available for international investment. The allocation of risk for PPP projects in Viet Nam is outlined in Table 1.3.

Table 1.3: Allocation of risk among participating parties

Risk	Investor	Government	Multilateral
Design and Finance	For BOT projects, generally this risk is assumed by the investor.	For BTO or BT projects, this risk is assumed by the government.	PDF
Construction and cost	Investors assume the risk for most PPP projects except for O&M projects.	Land or resettlement cost is usually borne by the government.	ODA funding in some cases may include gap financing.
Performance and operation	Project delivery and operation (for BOT and O&M projects) is the responsibility of the investor who then carries the performance risk.	The government bears the risk for some O&M projects without a clear performance-based contract (usually in the wastewater sector) or BT projects.	
Revenue	Usually the revenue risk is borne by the investor. In recent cases investors requested minimum revenue guarantees but did not receive them from the government.	In most cases, the government can extend the duration to share some of the revenue risk with the investor.	
Debt repayment	100% to 0% depending on project type.	0% to 100% in cases of project collapse and default.	Some default risk if loans are not covered by sovereign guarantee.

BOT = Build–Operate–Transfer; BT = Build–Transfer; O&M = operation and maintenance; ODA = official development assistance; PDF = project development funding; PPP = public–private partnership
Source: Study team expert assessment.

2 VIET NAM'S ROAD SECTOR

2.1 OVERVIEW OF THE SECTOR

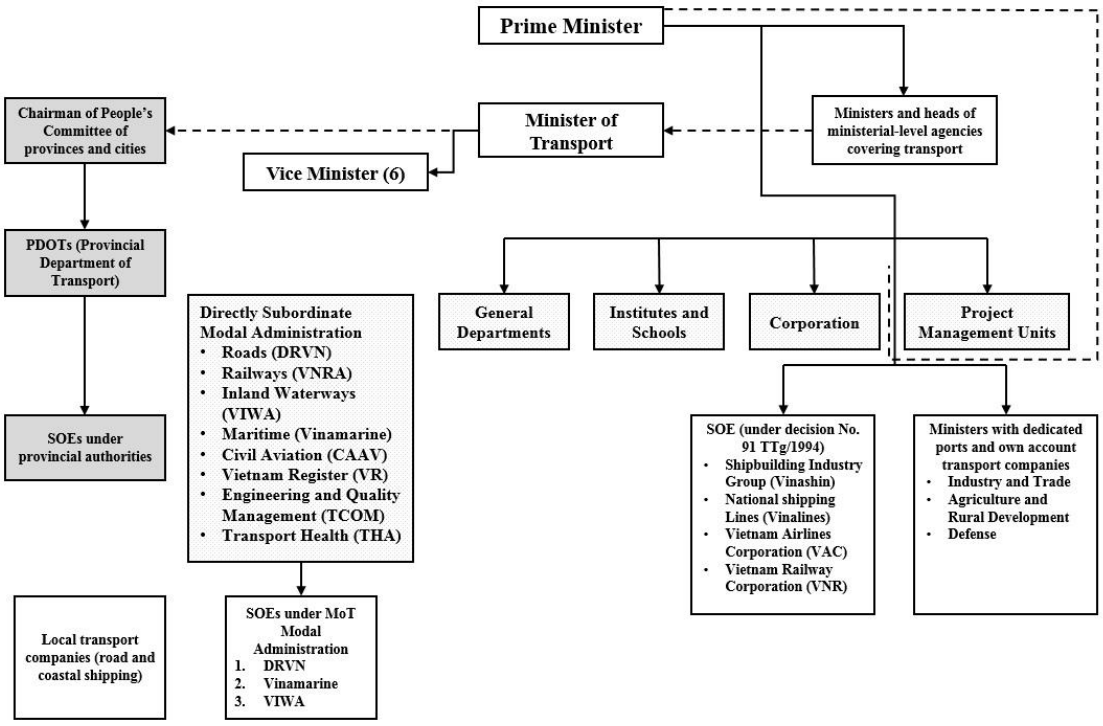
The geographical structure of Viet Nam defines strongly how its transport sector is formed and how it functions. Geographically, Viet Nam is two large economic units separated by about 1,000 kilometres of a relatively thin belt of land between the mountains and the sea. The two clusters at each end of the economy are similar in structure to other economies in the region such as Cambodia or Thailand while the section through the centre is quite different and dominated by longer distance transport, particularly the road and rail systems.

Both ends of the economy are served by a significant waterway system, in the north by the Red River and in the south by the Mekong River. Both are transport channels, with the Mekong in the south being more important as a transport corridor in that it links Viet Nam to other Southeast Asian economies and China and Myanmar in the northwest.

2.2 INSTITUTIONAL RESPONSIBILITY

The transport sector and specifically the road sector falls under the combined authority of the central and provincial governments. The overall structure of the Ministry of Transport is as indicated in Figure 2.1.

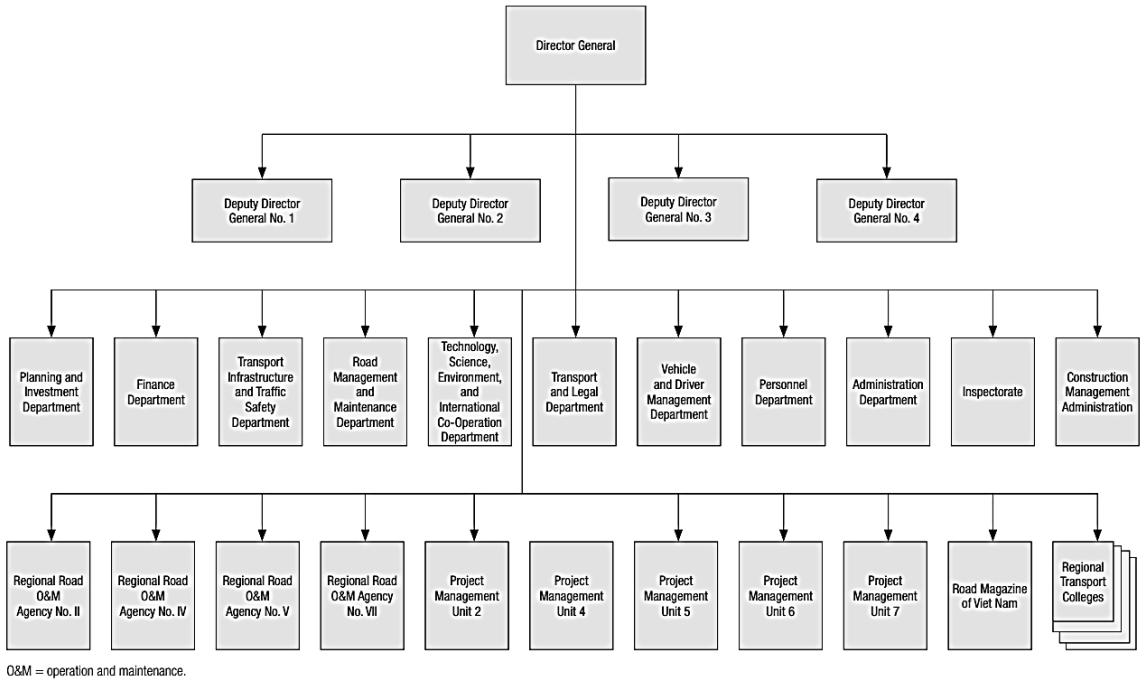
Figure 2.1: Structure of the Ministry of Transport of Viet Nam



MoT = Ministry of Transport; SOE = state-owned enterprise.
Source: Developed from Figure 2.4 in Luis C. Blancas, John Isbell, Monica Isbell, Hua Joo Tan and Wendy Tao, *Efficient Logistics: A Key to Vietnam's Competitiveness. Directions in Development* (Washington, DC: World Bank, 2014).

Within that overall structure, the Viet Nam Roads Authority is one of the largest units and carries a large allocation of budget, both directly and through the road fund. The structure of the Viet Nam Roads Authority (Directorate for Roads) is shown in Figure 2.2.

Figure 2.2: Organisation structure of the Viet Nam Roads Authority



DG = Director General; O&M = operation and maintenance
Source: Developed from Asian Development Bank, *Vietnam: Transport Sector Assessment Strategy and Roadmap* (Manila: ADB, 2012), Appendix 4.

The road system is extensive and is organised into the three classic levels of national, provincial and local roads. Each level has its own administrative structure based on the Ministry of Transport, the provincial People's Committees and the municipal People's Committees.

The central government, through the Viet Nam Roads Authority, is responsible for financing and constructing all national roads and bridges, including expressways, and for providing funding as needed to the provinces and larger municipalities for provincial and local roads.

The provincial People's Committees through the provincial transport department manage the provincial/municipal roads, and through the local People's Committees, the rural road network.

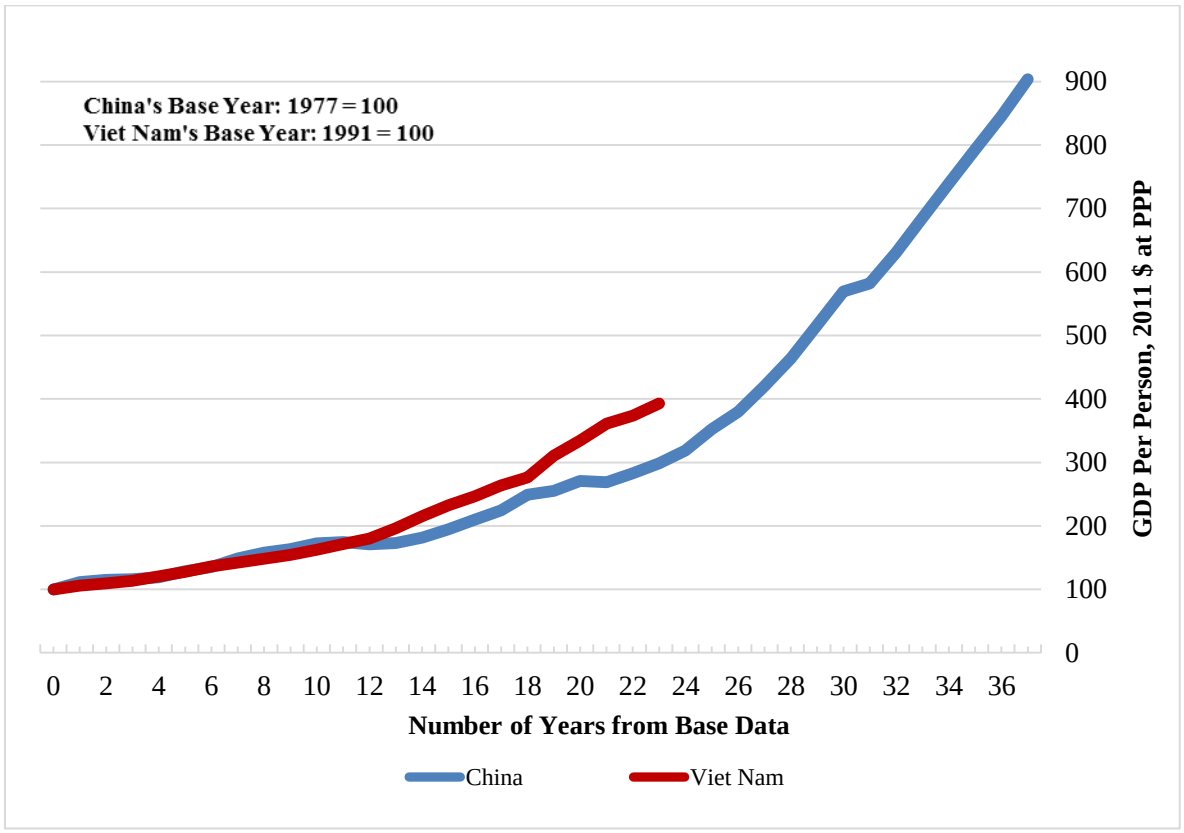
Most of the budget for roads comes from the central government appropriation. In 2013 the government imposed a vehicle registration fee that was earmarked for road maintenance. Sixty-five percent of the revenue is allocated to national roads and thirty-five percent to subnational roads. A national road fund office was established, with subnational offices set up through the provincial People's Committees. However, the road fund only pays for about two-thirds of the cost of road maintenance; the balance is funded through normal government budgets.

Over the past 10 years, increased focus has been directed to private-sector investment in roads. This investment is controlled under the legal framework of decrees. However, standard forms of openly procured internationally competitive contracts have not yet been widely used because of international reluctance to assume the full financial risk for the first few years of operation without revenue guarantees. The government has so far been reluctant to provide such guarantees.

While some of the private investment has gone to national roads and expressways, the provinces are also significant players in the PPP marketplace. Significant investment has been made in infrastructure over the past 25 years, but sustaining the pace of growth will require continued improvement in all forms of infrastructure.

Figure 2.3 shows the trajectory of GDP per capita increase in Viet Nam from 1991 to 2014 compared to the increase achieved by China after its decision to open to the rest of the world in 1977. The critical factor in the growth experienced by China during the past 30 years has been a single-minded commitment to infrastructure investment, roads, railways, terminals and logistics. Such focus on road and other transport infrastructure is one of the most pressing policy and investment supply issues facing Viet Nam.

Figure 2.3: GDP per capita from base year for China and Viet Nam



Source: Data from Penn World Table, Groningen University, calculated by the APEC Policy Support Unit.

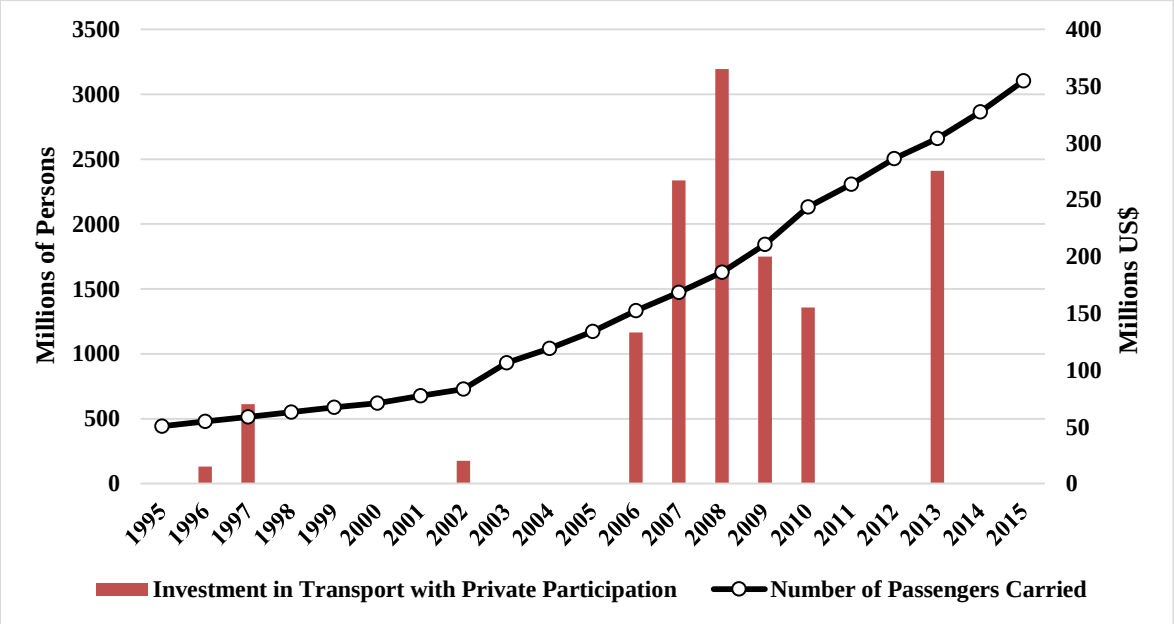
While Viet Nam's infrastructure investment over the past 20 years has been impressive, it is not likely to match the experience of China. Broad-ranging PPP investment is not yet seen due to issues such as lack of availability payment mechanisms, risk sharing with the private sector, and government funding. Deficiencies in the legal framework for PPP and the absence of a formal PPP law also play a role. Investors also see the lack of transparency as an

impediment. Without addressing these critical areas, the service provision in the road sector will be unlikely to provide the same level of GDP stimulus that drove China's growth.

2.3 INVESTMENT NEEDS

On evaluation of Figure 2.4, it can be seen that the patronage of roads in Viet Nam has steadily increased between 1995 and 2016. However, investment in transport infrastructure has fluctuated, with a significant decrease in investment noted between 2008 and 2010.

Figure 2.4: Road usage and transport investment in Viet Nam, 1995–2015



Source: General Statistics Office, Viet Nam; World Bank, World Development Indicators.

A study by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) published in 2017 projects that, between 2016 and 2020, Viet Nam's road investment needs are USD 29 billion or USD 5.8 billion per annum.[10] Similarly, the Global Infrastructure Hub estimates that the gap between required and projected road infrastructure investments by Viet Nam is set to increase further between 2018 and 2040. It notes that should GDP be assumed to grow at a rate of 5.2 percent, demand for road infrastructure is set to reach USD 4.93 billion by 2025.[11]

Apart from evaluating the quantity of investment in road infrastructure, it is also important to investigate the quality of roads in Viet Nam. Figure 2.5 shows that while road quality improved between 2010 and 2016, a slight drop was noted in 2017.[12] As such, given both the

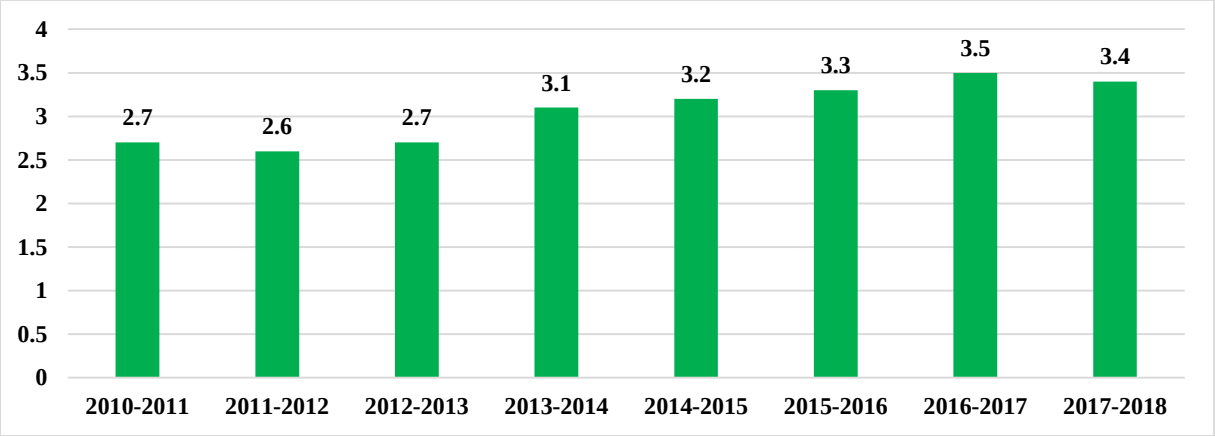
[10] United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP), 'Infrastructure Financing Strategies for Sustainable Development in Viet Nam' (national study/paper, UNESCAP, 2017), http://www.unescap.org/sites/default/files/20170915 National Study - Infrastructure Financing - Viet Nam.pdf

[11] Global Infrastructure Hub, 'Global Infrastructure Outlook: Forecasting Infrastructure Investment Needs and Gaps', https://outlook.gihub.org/ [accessed 14 May 2018]

[12] World Economic Forum, *Global Competitiveness Reports.*

current state of the road infrastructure in Viet Nam and the future requirements, there is significant demand for infrastructure investment in the road sector.

Figure 2.5: Quality of roads in Viet Nam, 2010–2018



Note: 1 = extremely poor (among the worst in the world); 7 = extremely good (among the best in the world).
Source: Data from World Economic Forum, *Global Competitiveness Reports*.

2.4 PPP IN THE ROAD SECTOR

From 1990 to the end of 2016, Viet Nam had approximately 80 road projects implemented under the PPP modality (mostly BOT). The funds raised from investors and banks for these projects reached more than USD 10 billion. This remarkable development increased the infrastructure ranking of Viet Nam by 29 points during the 2010–2015 period, reaching a global rank of 74 globally, according to the World Economic Forum. However, to date no project has successfully attracted foreign investors under competitive bidding.

In the maritime sector, since joining the WTO in 2007, most ports have been privatised with foreign direct investment (FDI) and Vietnamese private equity. Total investment has reached USD 7 billion. For inland ports, FDI and private equity reached USD 1 billion. However, only three BOT projects have been used for maritime and inland waterway projects. For airports and railways, PPP projects have been slow to develop because of the complexity and heavy capital requirement.

In the five years from 2011 to 2016, as seen from Table 2.1, the Ministry of Transport mobilised about VND 171,308 billion of investment in roads, of which PPP accounted for VND 154,481 billion, representing 90.2 percent of total investments. So far, 55 BOT projects have been completed and put into operation, amounting to an investment capital of VND 137,819 billion.

In 2016/17, the Ministry of Transport invested in 15 BOT projects with a total investment of VND 60,042 billion (government budget is about VND 5,070 billion), of which the road sector has 13 BOT projects with a total investment of VND 58,682 billion (government budget is about VND 5,048 billion).

Table 2.1: Investment in roads in Viet Nam, 2011–2016

	Total Investment 2011–2016 (billion VND)	Private-sector or PPP Investment (billion VND)	Total Number of Projects	Percentage of Total	In Operation
Roads	171,308	154,481	57	90.2	55

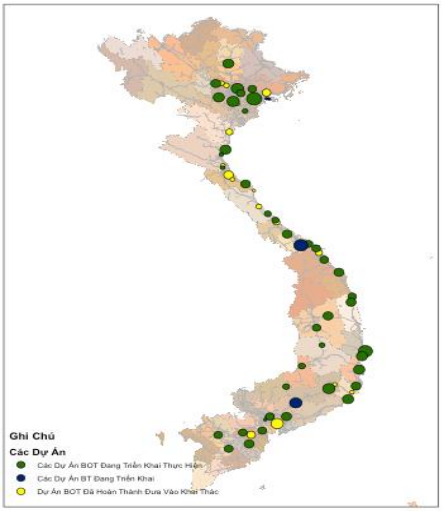
Source: Direct communication with the PPP Department of the Ministry of Transport, Viet Nam.

Viet Nam has employed BOT, or more specifically domestic BOT, in a significant way in the past 10 years, particularly in response to the Politburo requirement to complete the widening of National Highway 1 between Hanoi and Ho Chi Minh City by 2016. It has been highly successful in implementing a large volume of infrastructure construction and mobilising commercial bank capital. This has however left a legacy of issues which have become increasingly public in the last two years as the government bank, government auditor, government inspectorate and the Ministry of Finance have tightened regulations, announced the results of the findings of inspections, specified the penalties and repayments to be made, and revised the duration of concession periods.

2.5.1 Selected cases

While the extent of the road sector PPPs is illustrated in Figure 2.6, the lack of a standardised selection process and the ad hoc nature of the government's dealings with PPP companies leave many problems unresolved. The distribution of completed or in-process road sector PPPs is quite widespread (Figure 2.6), yet problems remain attracting international investors, as outlined below.

Figure 2.6: PPP road projects in Viet Nam (2016)



Build–Operate–Transfer (BOT) underway
Build-Transfer (BT) underway
BOT complete and being used
Source: Prepared by local consultants for the PPP unit of the Ministry of Transport, Viet Nam.

Dan Giay-Phan Theit Expressway

The Dau Giay-Phan Thiet expressway was a project that was opened for international competitive bidding under the PPP modality. However, the attempt to establish a PPP was unsuccessful, with one of significant factors being the issue of government guarantees.

The World Bank initially provided gap financing support for the expressway, with Binh Minh Import-Export Production and Trade Company Limited (BITEXCO) leading the development and pending additional private-sector investment.

The expressway was presented to over 100 potential investors through road shows and 26 companies expressed interest. But, because the project was new and traffic levels, particularly in the early years, were uncertain, all the prospective investors asked for a revenue risk-sharing arrangement between the client and the developer. Investors suggested to the government that when revenue falls below 80 percent of the estimated revenue, the government would provide a subsidy to maintain the minimum 80 percent level. For revenue above 120 percent of the estimated revenue, the government would receive the additional funds. The client rejected this arrangement and it did not move forward.

The subsequent withdrawal of BITEXCO resulted in a revised project plan. The project has now been split, with the first phase of 36 kilometres funded by the government budget and the International Development Association (IDA) under the World Bank. The second phase of 62 kilometres is pending.

Thai Nguyen-Bac Can Expressway

The Thai Nguyen-Bac Can expressway is another example of a PPP that did progress. To make the project viable, the government allowed the investor to add an additional tollgate on National Highway 3 (QL3), an old road built by the government. This created difficulties and public dissatisfaction.[13] The standard principle in Viet Nam is to only add tolls to roads with a free alternative route, which the new tollgate violated.

These types of issues continue, and considerable scope remains for improvement of road sector PPP opportunities in Viet Nam.

2.5 BENCHMARKING AGAINST PEERS IN THE REGION

2.6.1 Road expenditure to GDP

As a general assumption, economies within the Organisation for Economic Co-operation and Development (OECD) spend between 1 percent and 6 percent of GDP on transport infrastructure.[14] Expenditure on roads falls within the definition of transport infrastructure. Thus, road expenditure by the economy as a whole as a percentage of GDP was chosen as a measure to indicate the commitment of economies to a developed road plan. Data from the OECD for eight APEC economies (Table 2.2) show that road investment ranges from approximately 0.4 percent to 1.3 percent of GDP. Typically, the road share of the transport

[13] See: http://www.baomoi.com/tram-thu-phi-bot-chua-hoat-dong-dan-da-ram-ram-phan-doi/c/21768783.epi [accessed 14 May 2018]

[14] Data from OECD, International Transport Forum (ITF) Investment in Transport Infrastructure questionnaire.

budget is the largest of the transport modes, mainly because roads permeate to all levels of development.

A shortage of data exists for expenditure on transport as a whole. The World Development Indicator database maintained by the World Bank shows only one year (2011) with expenditure on transport as a percentage of GDP. This is shown in Table 2.3.

Table 2.2: Road expenditure to GDP, 2012–2015

Economy	2012	2013	2014	2015
	% of GDP	% of GDP	% of GDP	% of GDP
Australia	1.323	1.17	0.966	0.96
Canada	1.04	0.944	0.38	0.396
Japan	0.773	0.853	NA	NA
Korea	1.133	1.153	1.025	1.057
Mexico	0.432	0.457	NA	NA
New Zealand	0.487	0.534	0.63	0.723
Russian Federation	0.549	0.586	0.531	0.497
United States	0.513	0.497	0.496	0.526

Note: Despite substantial research, no indicator from an authoritative source was found for 'national road expenditure as a percentage of GDP' for the comparator economies. The data remain irregular even for those economies and are current up to 2014 only for some.
Source: Data from OECD, International Transport Forum (ITF) Investment in Transport Infrastructure questionnaire.

Table 2.3: Transport spending to GDP, 2011

Economy	2011
	% of GDP
Indonesia	4.0
Malaysia	7.1
Philippines	7.9
Thailand	8.7
Viet Nam	4.8

Source: Created from the International Comparison Program (ICP) 2011, in World Bank, World Development Indicator database.

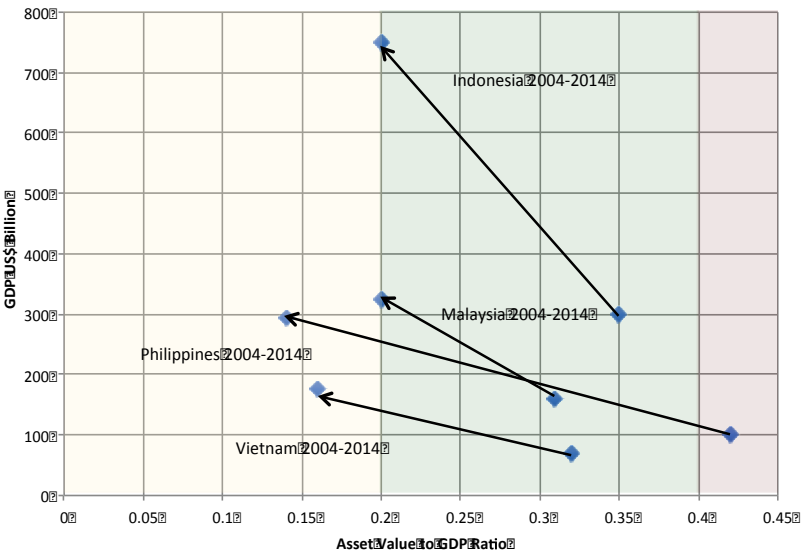
In Viet Nam, road transport expenditure as a percentage of GDP has varied from 5.9 percent in 2008 to 5.1 percent in 2015.[15] This remains in the lower band of expenditure compared to other Asian economies at similar levels of development, as shown in Table 2.3. Indonesia and, to a lesser extent, Viet Nam, were lagging in 2011 compared to their peers in the region. However, the current five-year plans in Indonesia and Viet Nam commit to higher levels of spending.[16] The most recent data from Figure 1.3 show transport expenditure holding above 5.0 percent.

2.6.2 Road asset value to GDP

The road networks of the comparator economies can be presented as road assets to GDP using base-level road network statistics. This measure is useful because of its link to affordability. If the investment in road-system assets is very high, above 40 percent, then the ability of the economy to afford to maintain those assets is in question. For instance, a developing region with low GDP could have either the larger parent-economy budget or international funding provide sufficient capital to develop a substantial road network; but that region would likely not have the funds to maintain that network. Examples of this affordability problem exist in the provinces of southern Philippines and eastern Indonesia, and in smaller economies like Lao PDR or the mountainous regions of Viet Nam.

The relationship of road assets to GDP for the comparator economies and the change from 2004 to 2014 is shown in Figure 2.7.

Figure 2.7: Road asset value to GDP, 2004–2014



Note: Please also refer to Appendix A: Impact of Exchange Rate on Calculation of Road Asset Value.
Source: Prepared from public sources by consultant team.

[15] UNESCAP, 'Infrastructure Financing Strategies for Sustainable Development in Viet Nam'.
[16] See Indonesia's National Medium Term Development Plan (RPJMN) 2015–2019 and Viet Nam's Five-Year Socio-economic Development Plan 2016–2020.

Ratios of road asset value to GDP have been determined empirically to be most robust in the range of 20 to 40 percent of GDP. This is shown in the green band in Figure 2.7. If the assets are greater than 40 percent of GDP, it will be difficult to maintain those assets, and in most cases, the network degrades, parts begin to fail and the condition drops below the long-term sustainable usable target of approximately 80 percent good to fair roads.

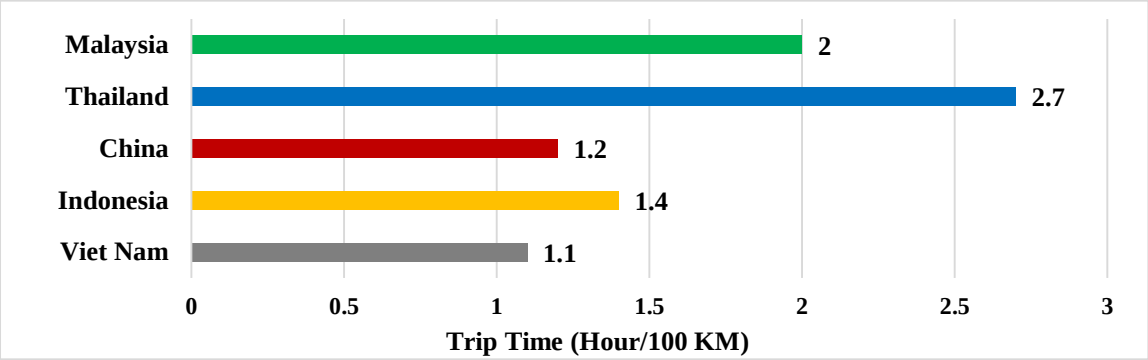
At the opposite end of the scale, those jurisdictions with assets valued at less than 20 percent of GDP do not have sufficient roads to adequately serve the needs of the economy. A good example of this is the road network in high-density jurisdictions like Jakarta, Indonesia, where high-capacity urban freeways are not available and where the resulting road system is unable to serve the needs of the economy. Trips of three to four hours are not uncommon in moving from one side of the city to another during normal working hours. The ratio of road assets to GDP in Jakarta is very low – less than 10 percent. Economic growth and efficiency is hampered by the lack of high-capacity urban roads.

The current (2014) ratios in Figure 2.7 indicate that both the Philippines and Viet Nam have now moved into an area of modest undersupply of roads. The road network in both economies needs to expand to serve the growing economies. Both Malaysia and Indonesia sit on the 20 percent line and are therefore in the stable range, although at the lower end of that range.

The road networks in all economies will need to expand at a rate consistent with the growth of the economy to maintain adequate accessibility for the economy. In the Philippines and Viet Nam, a rate a bit higher than the GDP rate will be needed to bring the road assets back into the green range.

Figure 2.8 illustrates the impact of road capacity on travel time. As capacity is squeezed, travel time increases. This becomes a significant cost to businesses and significantly reduces effectiveness and efficiency.

Figure 2.8: Capacity and travel time



Source: Directorate General of Highways, 'Indonesia Road Sector Development' (presented at the Japan Road Congress, Tokyo, October 2015).

2.6.3 Road condition and quality

The data in Figure 2.9 are taken from the annual Global Competitiveness Reports prepared by the World Economic Forum. The data are developed from a self-assessment questionnaire which asks the relevant responsible bodies, 'What is the quality of roads in ___?' The direction of the movement of the data is a good indicator of the health of the road network.

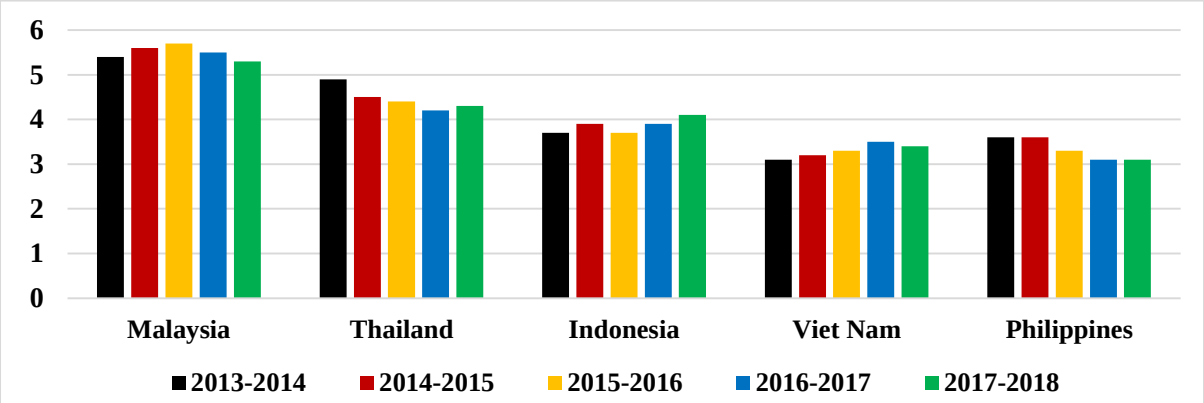
In Malaysia, the network quality is largely balanced. This means that both the size of the network and the condition of the network are responding to the demand at a consistent rate

and quality. In Malaysia's case, the overall world ranking of its infrastructure is 25 out of 144 economies, and it is consistently better than all other comparator economies in its class.

The quality of roads in Thailand and the Philippines is falling. This means that a combination of the extent of their networks and the condition is becoming less effective over time. The data indicates that added investment is needed in the road network or improved maintenance or both.

For the two other economies (Indonesia and Viet Nam), the quality of roads is improving. The data illustrate that their road infrastructure falls into the category where increased investment in infrastructure is needed, but not dramatically so.

Figure 2.9: Quality of roads, 2013–2018



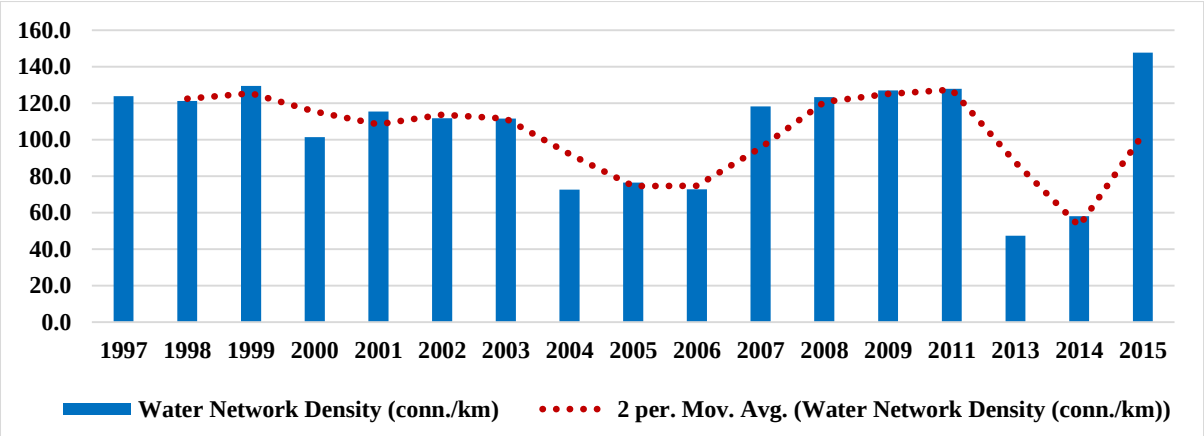
Note: 1 = extremely poor (among the worst in the world); 7 = extremely good (among the best in the world). The data are based on perceived travel time, not empirically measured travel time.
Source: Data from World Economic Forum, *Global Competitiveness Reports*.

3 VIET NAM'S WATER SUPPLY AND SEWERAGE SECTOR

3.1 OVERVIEW OF THE SECTOR

An analysis of the extent of Viet Nam's water infrastructure is illustrated in Figure 3.1. It shows Viet Nam's water network density fluctuating within the period 1997–2015. A significant increase is noted between 2013 and 2015 with water network density peaking at 147.8 connections per km. While data for sewerage coverage are limited, it was noted to be at 45.6 percent as of 2015.[17] Despite the progress, there is still much room for improvement.

Figure 3.1: Water network density in Viet Nam, 1997–2015



conn. = connections
Source: International Benchmarking Network for Water and Sanitation Database.

Based on data provided by the World Health Organisation (WHO) and the United Nations Children's Fund (UNICEF), Viet Nam's investment in water and sanitation has been found to have brought access to approximately 91.2 percent (for drinking water) and 78.2 percent (for sanitation) of the population as of 2015.[18] Furthermore, investment in water and sanitation infrastructure amounted to USD 88,900,000 for the year 2016, with limited private-sector investment. Should private-sector investment be present, they have primarily taken the form of BOT contracts.

3.2 INSTITUTIONAL RESPONSIBILITY

Water supply in cities and some larger towns is provided by state-owned provincial water supply companies (WSCs). Provincial WSCs evolved from a centralised water supply organisation during the 1990s. Their autonomy is still limited. Key decisions such as budgets, staff salary and benefits, and senior management appointments require approval by the provincial government. Assets are owned by the province, not the WSC.

[17] International Benchmarking Network for Water and Sanitation Database.
[18] Data from *WHO/UNICEF JMP*, https://washdata.org/ [accessed 25 April 2018]

In 2009 the government moved to establish water companies that were autonomous utilities through Prime Minister Instruction 854/2009. These utilities would have financial autonomy and a revenue stream in order to finance their operations through commercial banks.[19]

There is no contractual relationship between a province and the WSC serving it (most state-owned water companies do not sign any water supply contract with provincial governments despite being required to do so under Decree 117). Some WSCs are public service enterprises, while others have converted to private-law enterprises on the basis of Enterprise Law. Some WSCs only operate the water systems, while others also design or even build them. Some even manufacture equipment. Some WSCs are active outside their geographical jurisdiction.

The supply side of both water and sanitation services in Viet Nam has improved and continues to improve with water supply availability moving from 40 percent of people using water in 1987 to the current level of 78 percent, with a target of 90 percent by 2020. The Philippines is at 70 percent, and both Indonesia and Cambodia are equal to or above Viet Nam.

Sewerage and wastewater treatment in cities is the responsibility of provincial Urban Environmental Companies. In some provinces they provide only sewerage and wastewater treatment, while in others they have other responsibilities such as solid waste collection. Still in other provinces, WSCs are also in charge of sewerage.

At 45 percent, the sewerage connection rate is high in Viet Nam, above all of its comparable neighbours.[20] Clearly the equitisation effort has had a positive impact on the provision of wastewater collection and treatment. Private-sector participation in urban water supply is limited to BOT contracts for drinking water treatment plants. In Ho Chi Minh City, a Malaysian firm has been operating the Binh An plant since 1994. The Thu Duc 2 treatment plant in Ho Chi Minh City and a raw water pumping station supplying water to Hanoi, including a transmission main from Hoa Binh, are owned and operated by joint-stock companies.

3.2.1 Ministry level

Public management responsibilities are generally implemented by the government and relevant ministries and localities in accordance with the Law on Organization of the Government 2015 and the Law on Local Government Organization 2015.

The **Ministry of Construction** is responsible for performing the public management of water supply, drainage and wastewater treatment activities in urban areas and industrial parks nationwide, which includes studying and establishing mechanisms and policies on water supply and drainage; promulgating regulations, standards, and economic and technical norms; and guiding, directing and inspecting urban and industrial water supply and drainage activities nationwide.

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[19] Asian Development Bank, 'Viet Nam Water and Sanitation Sector Assessment, Strategy and Roadmap' (Manila: Asian Development Bank. June 2010), pp. 2–14.

[20] International Benchmarking Network for Water and Sanitation Database.

The **Ministry of Planning and Investment** is involved in studying and formulating mechanisms and policies to encourage and mobilise domestic and foreign investment capital sources for water supply and drainage and wastewater treatment projects. It also acts as a focal point for mobilising ODA capital sources for investment in water supply and drainage development in accordance with the priority orders that have been already approved by the prime minister.

The **Ministry of Finance** unifies the financial management of ODA capital sources for investment in water supply and drainage development. It coordinates with the Ministry of Construction and the Ministry of Agriculture and Rural Development in guiding the principles and methods of determining clean water consumption prices, promulgating clean water price brackets and organising the inspection and supervision of the implementation thereof nationwide.

3.2.2 Provincial level

Provincial People's Committees perform government management of water supply, drainage and wastewater treatment activities in their respective localities. They define the functions and tasks and decentralise the management of water supply and drainage activities for the specialised agencies and People's Committees at all levels under their management. Under the People's Committees are various administrators such as the Construction Services Department responsible for water supply and drainage in urban centres and industrial parks and the Department of Agriculture and Rural Development (DARD) responsible for rural water supply and sanitation in localities.

3.2.3 Pricing for water and wastewater supply

Water: Decree 117/2013/ND-CP regulates the authority to set the domestic water tariff frame and price. The Ministry of Finance promulgates the daily-life clean water price bracket for application across the whole economy. Provincial-level People's Committees promulgate clean water price brackets in their respective localities, in line with the price bracket promulgated by the finance minister. Water supply units shall themselves decide the prices of clean water used for other purposes, ensuring their conformity with the water price schemes already approved by provincial-level People's Committees. Clean water wholesale prices are agreed upon by water supply wholesale units and water supply retail units. In case of failure to reach agreement, either party (or both parties) may request the organisation of negotiations on prices according to the law.

Wastewater: Wastewater service price is not mentioned in the Law on Price 2012 but only in Decree 80/2014/ND-CP, Circular 02/2015/TT-BXD and other related documents. Decree 80 regulates wastewater service prices; it sets out the principle for determining water drainage costs, the methods of pricing water drainage services, and the determination of wastewater volumes. The decree also establishes the authority responsible for approving drainage/sewerage price and drainage tariff adjustment.

However, many provinces are still building wastewater services so they have not initiated the wastewater service price in line with Decree 80; and the management and operation of the drainage/sewerage system still follows the direct assignment method. Because the wastewater service price has not been used widely, many households are not yet paying the appropriate

wastewater service price but are still paying the older environmental protection fees for wastewater.

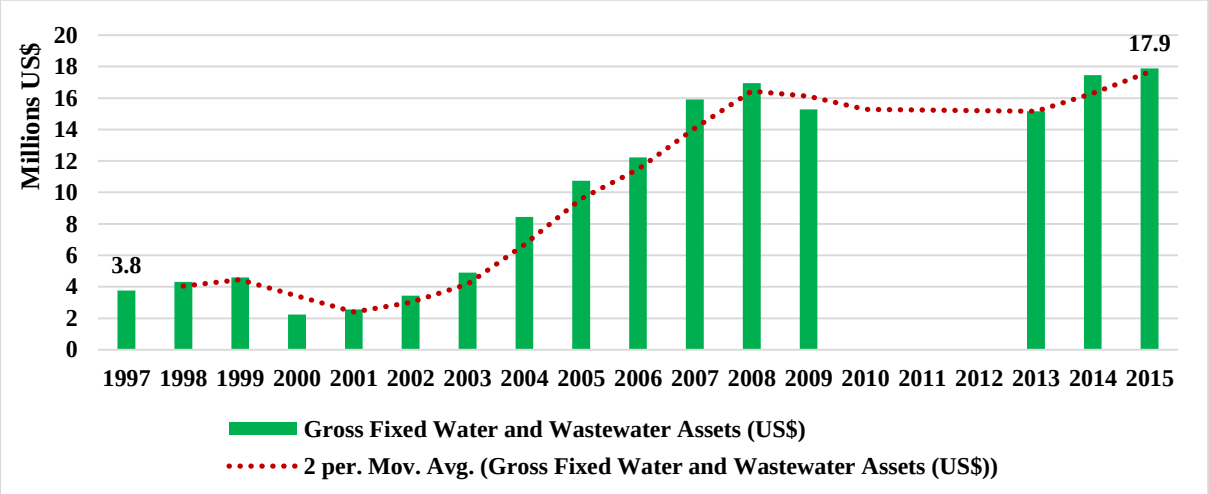
The application of the service price for wastewater has not been fully implemented. So far, more than 20 provinces and cities have collected wastewater charges. Once the wastewater charges have been collected, no environment fees will be collected.

The regulations on environmental protection fees for wastewater should also be reviewed. Decree 80 stipulates that when localities apply and collect wastewater tariffs, households will not be charged environmental protection fees. In other words, environmental protection fees are charged only when the price of drainage service is not applied. The environmental protection fees go toward the Environmental Protection Fund of the locality; and is used for environmental protection tasks and not for wastewater collection and treatment. Therefore, the two decrees are confusing, and amendments should be made to the relevant decrees and regulations.

3.3 SERVICE PROVISION

Figure 3.2 illustrates the investment made into water and wastewater infrastructure across time. A significant increase in fixed assets has been noted, from USD 3,770,156 in 1997 to USD 17,881,677 in 2015. In general, Viet Nam has increased its investment into its water and wastewater infrastructure.

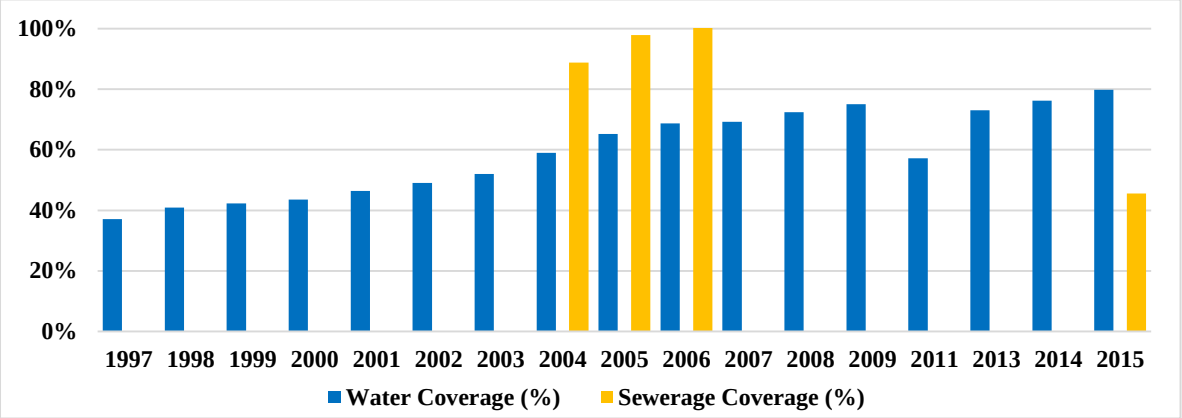
Figure 3.2: Gross fixed assets (water and wastewater) in Viet Nam, 1997–2015



Source: International Benchmarking Network for Water and Sanitation Database.

Figure 3.3 shows the degree of coverage for water supply and sewerage in Viet Nam. In general, water coverage has increased across the period and peaked in 2015 at 79.9 percent. As previously noted, data for sewerage coverage are limited but can be seen to have declined from approximately 100 percent in 2006 to 45.6 percent in 2015.

Figure 3.3: Coverage of water and sewerage in Viet Nam, 1997–2015



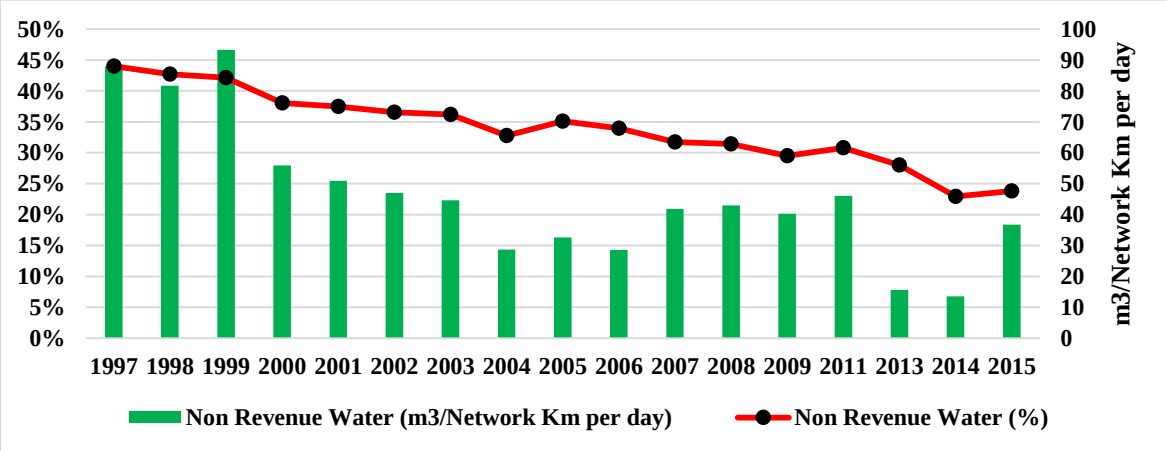
Source: International Benchmarking Network for Water and Sanitation Database.

The government aims to provide 90 percent of the urban population with access to safe drinking water and to collect and treat 100 percent of the urban wastewater by 2020. The latter goal had been set for 2010 as part of the Viet Nam Development Goals but was not achieved. As indicated above, the 2020 target for sewerage cover has now been met and, as of 2014, 78 percent of households have access to piped water supply.

Furthermore, the government aims to reduce non-revenue water to 15 percent by 2025, to provide 120 to 150 litres of water per capita per day, and to make water companies financially self-sustaining by 2025. The latter target had also been set for 2010, but it was not met.[21]

The percentage of lost water is shown in Figure 3.4. The current losses from the water system are 23.79 percent as of 2015, indicating the significant improvements required to reach the target of 15 percent by 2025. Even so, Viet Nam's recent improvements as seen from the decline in lost water in the last five years have been impressive.

Figure 3.4: Lost water in Viet Nam, 1997–2015

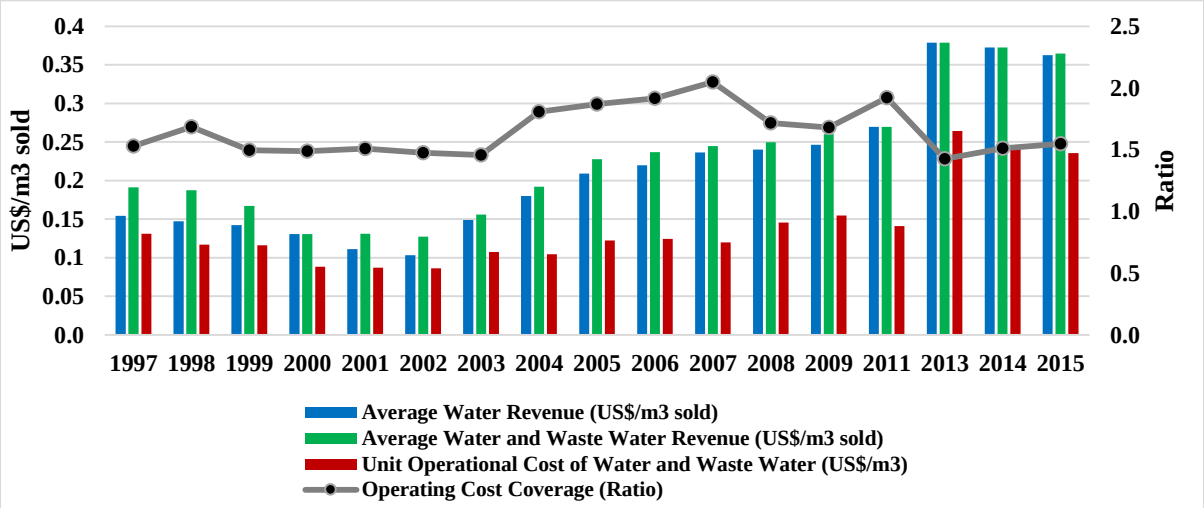


Source: International Benchmarking Network for Water and Sanitation Database.

[21] International Benchmarking Network for Water and Sanitation Database.

As of 2015, revenue was sufficient to cover operating cost by approximately 1.55 times which is a slight improvement from the coverage of 1.53 noted in 1997 (Figure 3.5). Peak coverage was achieved in 2007 at 2.05 times. While the current level at 1.5 is a reasonable revenue return, it would normally not allow for full payment of interest on debt as well as the capital cost. In those cases, normally the government must subsidise the capital repayment cost. As a fully commercial activity, full cost recovery for water supply is on average not viable. Average water revenues reached USD 0.36 per cubic metre in 2015 which is a slight fall from the peak reached in 2013 of USD 0.38 per cubic metre. Despite revenue having declined between 2013 and 2015, operating cost coverage ratio has seen an increase. This can be largely attributed to the declining unit operation cost of water and wastewater within Viet Nam.

Figure 3.5: Revenue and cost coverage for the water sector in Viet Nam, 1997–2015



Source: International Benchmarking Network for Water and Sanitation Database.

3.4 INVESTMENT NEEDS

Data on water networks and annual investment over total asset are limited. Only three years of data is available for Viet Nam as shown in Table 3.1. An evaluation of available data shows water networks and annual investment over total assets increasing between 2013 and 2014. Using population growth as a proxy for the demand for basic water infrastructure, an undersupply in infrastructure can be noted in 2015 where annual investment over total assets decreased by 2.5 percent while population growth increased.

Table 3.1: Viet Nam's water network renewal and water investment over total assets, 2013–2015

	2013	2014	2015
Water Network Renewal (%)	2.4	6.5	3.9
Annual investments over total assets (%)	2.3	2.5	0.0
Population Growth Rate (%)	1.06	1.07	1.08

Source: International Benchmarking Network for Water and Sanitation Database; World Bank, World Development Indicators.

According to the UK Department for International Trade, by 2020, demand for water in Viet Nam may reach 9.4 to 9.6 million cubic metres per day (with 44 million urban population), which requires an investment support of around USD 3.3 billion (USD 0.6 billion per annum). Other estimates from the World Bank put the required water investment at USD 6 billion by 2020: USD 2.4 billion in Hanoi; USD 2 billion for Ho Chi Minh City; and the remaining USD 1.6 billion in other cities such as Danang, Hai Phong, Can Tho and Nha Trang.[22]

For wastewater, the UK Department for International Trade report notes the potential USD 10 billion market opportunity by 2025, which will include the following infrastructure facilities (among others):[23]

- 21 municipal wastewater treatment plants with combined capacity of 1.2 million m^3/day by 2020 in Hanoi
- 12 drainage basins and 12 municipal wastewater treatment plants with combined capacity of 2.9 million m^3/day in Ho Chi Minh City
- 13 municipal wastewater treatment plants with combined capacity of 188,000 m^3/day in the Mekong Delta
- 17 industrial wastewater treatment plants with combined capacity of 240,000 m^3/day.

3.5 PPP IN THE WATER SECTOR

Viet Nam has 17 PPP projects in the water sector, under the BOO and BOT forms, with a total supply of 1.4 million cubic metres per day (17.2 percent of the total water supply capacity). Some projects have foreign investors such as Thu Duc Boo Company (Manila Water holds 49 percent equity) and Kenh Dong Joint Stock Company (Manila Water holds 47 percent equity). These types of investment have attracted both domestic and foreign investors, since they ensure sustainable benefits for all three parties, namely, the government, the investor and the user.

Newly-invested water supply projects typically involve the private sector through PPPs. Typical projects are BOO Thu Duc and BOT Kenh Dong (both in Ho Chi Minh City) and the BOO Cau River water plant (Bac Ninh). Some projects are under the management of government WSCs, and some projects are implemented with WSCs as shareholders. The Hanoi Water Company, a public utility, has entered into joint ventures with the private sector. Two of its major projects are the Red River Water Project and the Duong River Water Project. Private investors have contributed 70 percent of the capital for these projects. In Ho Chi Minh City, most of the water supply and delivery companies in the area are joint ventures with a capital contribution from the Saigon Water Company. Specifically, the Saigon Water Company has contributed 20 percent of the capital for the Kenh Dong Water Plant (BCC), 60 percent for the Thu Duc Water Plant and 30 percent for the Tan Hiep Water Plant.

For wastewater, there are 10 PPP projects in the form of BOT, BT and BTO (mainly for wastewater treatment plants). There are 10 O&M contracts signed between a local government and the private sector to operate wastewater treatment plants. Phu Dien, a private

[22] UK Department for International Trade, 'Vietnam Water Sector Briefing 2017' (London: Department for International Trade, 2017).
[23] Ibid.

company, is operating about 15–17 wastewater treatment plants, accounting for 70 percent of the total capacity nationwide.

3.5.1 Project performance

According to a report by the Ministry of Construction on the Development of Policy to Increase Private Participants in Water Sector,[24] BOT water companies tend to perform better compared to government companies in terms of water price and water quality. The BOT Thu Duc and BOO Binh An projects for example have achieved lower production cost compared to government water supply projects (and they are selling at a lower price to the Saigon Water Company). Private WSCs are generally financial viable as they have a stable source of revenue (usually through water sales contracts signed with government-owned utilities or through water supply agreements with provincial committees). However, such private water supply facilities are also dependent on water consumption from the water supply utility company (usually state-owned enterprises). Therefore, the investment into and expansion of the scale of such PPP water projects are usually limited by the needs of the utilities. For example, BOT Thu Duc wants to double its capacity but the Saigon Water Company is not likely to purchase additional capacity as it gives preference to its subsidiary water manufacturers even though they may sell to it at a higher water price.

In the case of wastewater treatment plants, there are no currently operating BOT projects (a few BOT projects are under construction). For BT projects, there are various operation problems. For example, the wastewater treatment plant in Vinh City financed by the city was built by the InfraVi (Vinh Urban Infrastructure Investment and Development JSC), but operated by SFCU.[25] Operation remains a problem with ongoing environmental damage from the discharge of poorly treated wastewater and resulting complaints from residents. Similarly, the wastewater treatment plant in Can Tho is not operating effectively, and the city is considering inviting a private company, Phu Dien, to assume operational control.

There are currently 15 to 17 BT plants that have been transferred to private operators for operation to leverage the private sector's capacity. In privately operated projects, operating costs decrease significantly. At the Gamuda Wastewater Treatment Plant in Hanoi, the contractor is able to operate the plant at two-thirds of the estimated operating cost, or VND 86 billion. This compares to VND 120 billion by a city-run operation. Projects that include collection systems have also attracted interest from the private sector, such as the Suoi Nhum, Nam Vien and Canh Doi wastewater treatment plants. However, for these projects to continue to attract investors, an appropriate and transparent framework for wastewater tariffs and financial mechanisms is essential.

Table 3.2 provides a summary of the number of PPP projects in the water sector by type as of 2016.

[24] The policies are mentioned in the 'Scheme on mobilization of resources for construction of water supply and drainage system and solid waste treatment' promulgated by Decision No. 1196/QD-TTg dated 23/07/2014 of the prime minister.

[25] The SFC Group is an internationally active group of companies in the field of environmental technology.

Table 3.2: Types and number of water and wastewater PPPs in Viet Nam, as of 2016

Contract Type	Water Supply	Wastewater	
		Wastewater Collection	Wastewater Treatment Plants
Build–Own–Operate (BOO)	15		2
Build–Operate–Transfer (BOT)	2		2
Design-Build-Lease (DBL)	2		
Build–Transfer (BT)	1		3
Build–Transfer–Operate (BTO)	2		3
Utility Order Contract		63 (100% provinces/cities)	24
Operation and Maintenance (O&M) Contract			11

Source: International Benchmarking Network for Water and Sanitation Database, provided by the Management Board of Technical Infrastructure Development Projects of the Ministry of Construction, Viet Nam (MABUTIP), and compiled by the consultant team.

3.6 BENCHMARKING AGAINST PEERS IN THE REGION

The international benchmarking network provides a standardised database for the water supply and sanitation status of many economies. Unfortunately, the data are not consistent in terms of each year's availability and population coverage (please refer to Appendix C), limiting a full peer-to-peer and time-series comparison. The status of water and sanitation services in some of the comparator economies is illustrated in Table 3.3. These represent the most recent data from the Philippines, Cambodia and Indonesia. Data for Malaysia are unfortunately missing; data for Indonesia and Cambodia are also now comparatively old.

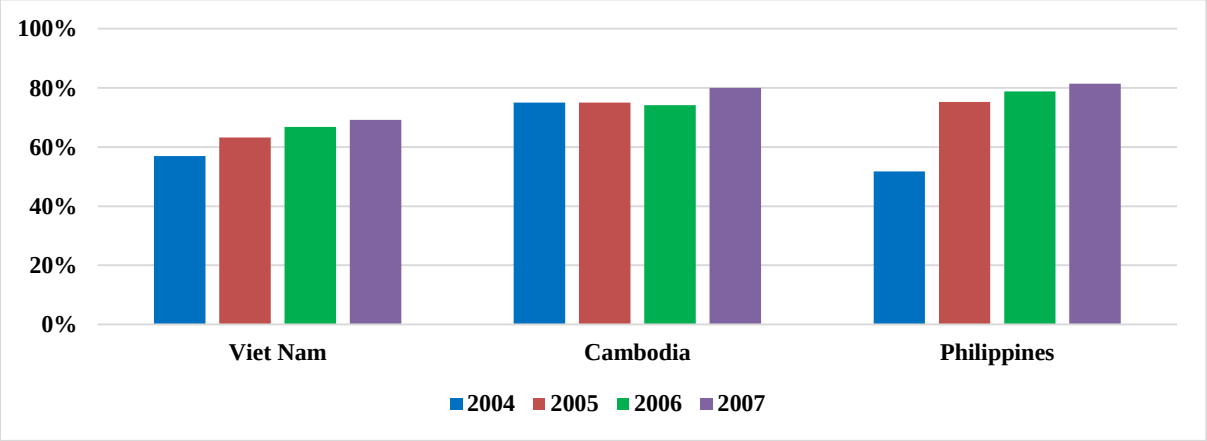
Table 3.3: Benchmark for water and sewerage metrics

	Proportion of Population Served by Database	Water Coverage	Sewerage Coverage	Operations Cost Coverage	Water Losses
Philippines (2009)	37.8%	77.4%	8.11%	2.4	43%
Indonesia (2004)	1.9%	75.9%	31.6%	1.4	30.4%
Cambodia (2013)	66.1%	91.8%		2.6	6.7
Viet Nam (2015)	97.3%	79.8%	45.6%	6	23.8%

Note: Data are not consistent in terms of each year's availability and population coverage (please refer to Appendix C).
Source: International Benchmarking Network for Water and Sanitation Database.

Figure 3.6 shows all the economies (Viet Nam; Cambodia; and the Philippines) experiencing improvements in water coverage between 2004 and 2007. As of 2007, Viet Nam had the lowest water coverage (household connections) at 69.2 percent while the Philippines boasted the highest coverage of 81.4 percent.

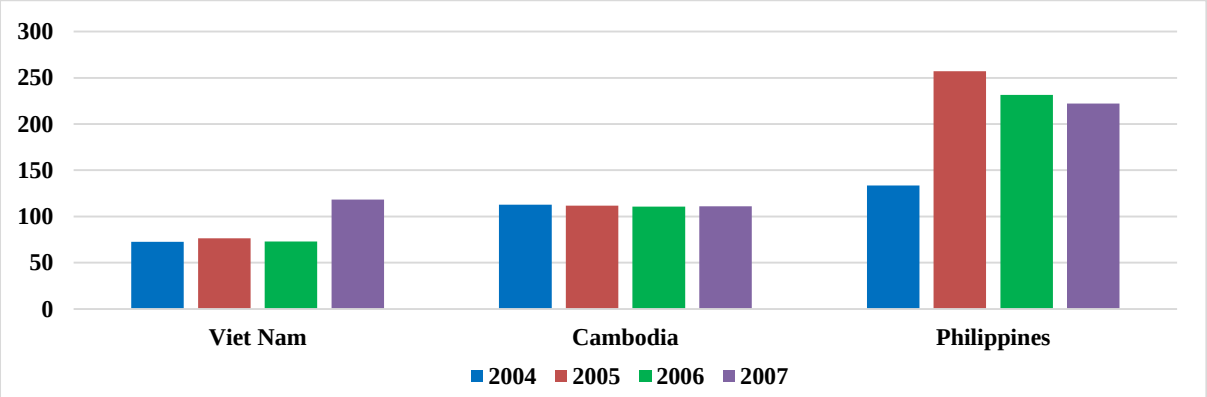
Figure 3.6: Water coverage – household connections (%) in Viet Nam, 2004–2007



Source: International Benchmarking Network for Water and Sanitation Database.

As shown in Figure 3.7, among the three economies, only Viet Nam experienced an increase in water network density between 2004 and 2007. In general, both Cambodia and the Philippines showed a decline in water network density across the period. Despite the positive trends for Viet Nam, which had a network density of 110.9 connections per km in 2007, it continues to trail the Philippines.

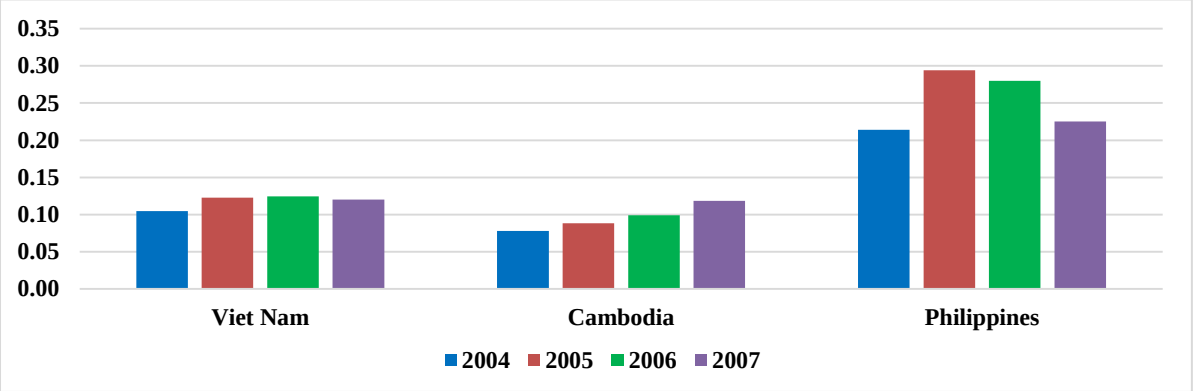
Figure 3.7: Water network density (connections/km), 2004–2007



Source: International Benchmarking Network for Water and Sanitation Database.

In 2007, unit operational cost of water and wastewater was relatively low in Viet Nam (USD 0.12 per cubic metre sold) as compared to the Philippines (USD 0.23 per cubic metre sold). Viet Nam's unit operational cost has continued to decline between 2004 and 2007 while its peers such as Cambodia have seen an increase.

Figure 3.8: Unit operational cost for water and wastewater (US$/m^3 sold), 2004–2007



Source: International Benchmarking Network for Water and Sanitation Database.

Although the data comparison is incomplete (as the database may not have the complete coverage of water companies) and the lack of consistency in the data and the age of the data are an issue, a broad assessment can be made as follows:

- The Philippines has made strong improvement in cost recovery but its sanitation services lag behind.
- Water and wastewater losses in the Philippines are declining but remain high.
- Coverage is improving in Indonesia but cost recovery remains low.
- Water coverage is improving rapidly in Cambodia and cost recovery is high.
- Viet Nam has a high coverage level for both water and sewerage, and losses are low, but cost recovery is poor.

In comparison to its peers, Viet Nam is doing reasonably well on many of the metrics. First to be noted is the quality of its data, which is up-to-date and informative. However, many of the planned benefits of its current push toward improved water management have not been realised by the subnational governments (as explained above) so work remains to be done.

4 BENCHMARKING THE INFRASTRUCTURE SECTORS

4.1 REGIONAL INFRASTRUCTURE INVESTMENT

The level of investment in both the transport sector and the water and sanitation sector is listed in the annual World Development Indicators report prepared by the World Bank. The investment summaries in Table 4.1 are extracted from the 2017 tables.

Table 4.1: Investment including private funding by period

	Transport (USD million)		**Water and Sanitation (**USD million)	
Year	**2005–2010**	**2011–2016**	**2005–2010**	**2011–2016**
Indonesia	1731.5	2450.5	20.2	155.0
Malaysia	2219.3	NA	NA	NA
Philippines	1021.9	3953.3	530.5	667.1
Viet Nam	1020.0	280.0 [a]	92.0	NA

Note: [a] The data appear to lack recent figures.
NA = Not available or data insufficient.
Source: World Bank, World Development Indicators, 2017 tables.

Based on the information in Table 4.1, for Indonesia; the Philippines; and Viet Nam, the magnitude of transport investment in 2005–2010 is largely similar. However, both Indonesia and the Philippines appear to pull away from Viet Nam in the period since 2011. The data for Malaysia are incomplete.

Water and sanitation is much less well funded. Depending on the economy and the period, the difference between transport investment and water and sanitation varies greatly – ranging from at best 50 percent in the Philippines to a low of 2 percent in Indonesia. Because water and sanitation is by nature local, it may be that the figures available are less robust than they are for the transport sector.

4.2 COMPARISON OF PRIVATE-SECTOR FINANCE AND PPP TRANSACTIONS

The following observations cut across the two sectors, roads and water:

- Viet Nam's investment from the private sector is limited. Out of USD 10 billion raised for BOT projects since 1990, 80 percent is received from banks (government banks account for more than 60 percent of the credit).
- Lack of competitive bidding has led to uncompetitive pricing in the road sector. Almost no project has been successfully implemented via competitive bidding. There have been attempts by the World Bank and other donors to encourage an international PPP project but that effort has not been successful.

- There are a number of complaints from users regarding high fees and unreasonable policies.

In relation to private-sector finance and PPP transactions, the benchmarking comparison shows:

- The historic linkage of the Vietnamese government to companies with more than 50 percent government ownership allows for negotiated contracts and with that the tendency toward a lack of transparency. This situation of preferential treatment for state-owned enterprises and lack of transparency makes it difficult to see how major steps forward are possible, irrespective of the degree of sophistication of the legal framework.
- The mechanisms created in the Philippines are having a beneficial impact on the scope and degree of PPP transactions. The number of successful PPPs in operation and the drafting of the new PPP law indicate a consistent commitment to supporting PPP activities. However, the 'Build Build Build' strategy of recent administrations is deviating (but not completely) from private-sector financed arrangements and from developing a process of turnkey projects paid using ODA loans and constructed by the private sector. O&M concessions with revenue share to the government to pay out the ODA loan are instituted. Availability payment standards are signalled to apply to these concessions to increase quality of service delivery and maintenance. Nothing is in place yet to test this transaction structure.
- Malaysia is a mature market and has been operating PPP arrangements for approximately 20 years. It has a level of sophistication in providing quality infrastructure and operating its tollroad system that is not reached by neighbouring economies.

As recommended for the Philippines,[26] Viet Nam should continue to constantly benchmark its PPP programme against other similar economies. The Philippines has made some progress recently. Malaysia is a long-standing success and Viet Nam can learn much from Malaysia. Also India should be kept as a comparator. The different regions in India have different approaches to PPP and virtually all levels of sophistication can be found in one economy when comparing region to region. Gujarat is often held as the gold standard for India. Madhya Pradesh and Haryana are also useful comparator regions. The Indian models of successfully introducing availability payment schemes offer useful guidance for Viet Nam. In addition helpful information can be obtained from the International Transport Forum at the OECD, which provides comparative transport statistics for 59 member economies.

One concept explored and well used in India is the single-window facility or agency. The newly created PPP units in the Ministry of Planning and Investment and the Ministry of Transport can have a significant impact by acting as agents to investors. In Viet Nam, delays are often seen during the approvals process, and in most jurisdictions, approvals require multiple signatures from more than one ministry. The approach in India was to reduce that burden by either providing approval directly from the PPP unit in the defining ministry or by using the PPP unit as the agent for the applicant. Both approaches increased efficiency and reduced delays significantly.

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[26] See: APEC Policy Support Unit, *Peer Review and Capacity Building on APEC Infrastructure Development and Investment: Philippines*.

4.3 COMPARISON OF REGIONAL CHANGES IN PPP FRAMEWORK

The comparison in

Table 4.2 is taken from the Philippines benchmark review conducted in 2017[27] updated somewhat to reflect the current state of PPP in Viet Nam.

Table 4.2: Changes in the PPP framework by economy

Economy	PPP Progress
Philippines	The PPP framework is embedded in the 2011–2016 Development Plan.[a] The restructuring of PPP arrangements from 2010 to 2014 includes the creation of a PPP Centre.[b] Three successful tenders of toll roads from 2012 to 2015. PPP guidelines are in place. The current BOT law has been reviewed and a draft PPP law has been prepared to modernise the government's approach to PPP transactions.
Indonesia	Presidential regulation No. 38/2015 serves as the legal framework for PPP cooperation and infrastructure provision. Indonesia has implemented two successful PPP toll roads since 2004. Most are procured by state-owned enterprises. New laws in 2014 for broader PPP options including the availability payment scheme. Government investment mechanisms are in place through PT Sarana Multi Infrastruktur and PT Indonesia Infrastructure Finance. Project guarantee arrangements are in place through PT Penjaminan Infrastruktur Indonesia.
Viet Nam	PPP Decree 15 and Decree 30 define the approach to PPP. PPP Decree 15 has been updated with amendments pending. Inconsistency in application of different levels of the law causes some limitations. Current activity is largely focused on domestic assigned contracts with as yet no successful international PPP investment. PPP units have been established in the Ministry of Planning and Investment and in the Ministry of Transport.
Malaysia	New Social Services PPP plan launched in July 2015. The 9th Malaysia Plan of 2009 provides the legal background for implementing PPP projects. Malaysia is a mature market of around 20-plus years for PPP. Numerous toll roads are in place. Interoperation systems and PPP guidelines are in place.
Thailand	The Private Investments in State Undertakings Act of 2013 aims to streamline project approval. The draft for the current 2015–2019 strategic plan on PPPs is pending legislative approval. As of August 2015, 57 projects were in progress under the new Act.

Note: [a] Deutsche Bank Research, 'Asian Infrastructure Financing', *Current Issues* (Frankfurt: Deutsche Bank, 8 January 2016).
[b] The former BOT Centre was renamed the PPP Centre in 2010. The Executive Order establishing the PPP Centre was issued on 9 September 2010.

[27] Ibid.

5 DEFINING QUALITY INFRASTRUCTURE STANDARDS

5.1 KEY CHALLENGES

Appendix B reviews the questions prepared in the APEC Quality of Infrastructure Development and Investment questionnaire. The reader is directed to that appendix for the full, completed APEC questionnaire. In most cases, the legal framework exists for the questions raised, but in some cases, the framework is incomplete or poor implementation may limit their impact on private participation in infrastructure investment. The summary in Table 5.1 highlights only the areas where problems have been identified.

Table 5.1: Identified gaps and challenges for quality infrastructure in Viet Nam

Focus of the Evaluation		Criteria	Current Draft Status	Specific Issues for Road or Water
1. General	**Public procurement**	Is there a legal system in place on public procurement?	• Procurement Law 43/2013/QH13 dated 26/11/2013	While provisions are made in the law and PPP decrees for international procurement, little has occurred in either the road or water sector. Largely this is an issue of risk sharing where international investors are wary of the risks imposed by uncertain demands from officials and the lack of risk-sharing agreements with the sponsoring agencies.
	Legal system related to PPP	Is there a legal system in place related to PPP?	• Investment Law 67/2014/QH13 dated 26/11/2014 • Construction Law 50/2014/QH13 dated 18/6/2014 • Decree 15/2015/NĐ-CP dated 14/2/2015 on investment in the form of PPP • Decree 30/2015/NĐ-CP dated 17/3/2015 includes guidelines for some articles on investor selection in the Law on Bidding. • Some other legal documents	The key PPP Decree 15 was updated in 2017 to clarify the types of PPP activities covered and provisions for dealing with participation by state-owned enterprises in PPPs.
	Tax law	Is there a tax law in place?	• Yes, Enterprise Income Tax and Personal Income Tax Law	There is no specific tax law in place that addresses PPP issues.

Focus of the Evaluation		Criteria	Current Draft Status	Specific Issues for Road or Water
	Environmental and social assessment	Are there laws and guidelines in place that stipulate the implementation of an environmental and social assessment for implementing infrastructure projects?	• Yes, under the Land Law • Decree 47/2014/ND-CP dated 15/5/2014 on compensation, support and resettlement upon land expropriation by the government • Decree 18/2015/ND-CP dated 14/2/2015 on environmental protection planning, strategic environmental assessment, environmental impact assessment and environmental protection plans • Some other legal documents	In wastewater management, provision exists for local collection of environmental protection fees for wastewater. To date, around 20 provinces collect wastewater fees rather than the outdated charge based on water usage. However, some confusion remains on the applicable decrees and the lack of political will to increase tariffs limit the application of the price mechanism.
	Funds	Is there a structure in place for providing funds (e.g. funds for conducting a feasibility study) for infrastructure projects?	The Asian Development Bank is helping to create a Project Development Fund under the Ministry of Planning and Investment under Decree 15/2015/ND-CP. However, this has been going on for the last five years but is not yet implementable.	The government's debt ceiling provision is severely limiting public investment of any type. In 2017, only one project with international financial institution (IFI) support was initiated. The reason is the lack of counterpart funding for IFI supported projects. Domestic projects are also affected.
		Is there a structure in place for providing the funds necessary for promoting PPP projects and for providing government guarantees?	• Yes, under Decree 15/2015/ND-CP	In practice however minimum revenue or shared profit and loss provisions are not accepted by Viet Nam. International bidders are not interested in moving forward in Viet Nam without some form of risk sharing.

Focus of the Evaluation		Criteria	Current Draft Status	Specific Issues for Road or Water
	Structure for project promotion	Are there organisations in place for promoting infrastructure projects or PPP projects?	Yes, under Decree 15/2015/ND-CP, there are some units in place, including: • Steering Committee under the prime minister • PPP units under ministries and provincial People's Committees	A PPP unit exists in the Ministry of Transport but it is largely an information exchange unit. It has not progressed to become a 'one-stop shopping' assistance unit similar to what is found in jurisdictions such as India.
		Are there laws and guidelines in place for preventing bribery and corruption?	Yes, quite substantial, but not effective	The Ministry of Transport is preparing a set of manuals for the Inspectorate Department. But recommendations for practical improvement to laws and procedures that could limit corruption are not incorporated in the new manuals.
2. Project planning	**Risk management**	Are the following stipulated? • Appropriate identification of risks assumed for individual projects • Method for prioritising identified risks • Measures against identified risks	Not so clearly under the current regulation. Some of this might be reflected in the PPP contract sample. General coverage provided in Decree 15/2015/ND-CP on investment in the form of PPP	Risk sharing is one of the key impediments in opening up PPP to international investors. The perception of Viet Nam as prone to corruption makes investors nervous and in turn they ask for revenue guarantees, particularly in the early years. This is offset by profit sharing in later years. Viet Nam has not as yet agreed to this model.
4. Procurement	**Procurement in general** **Pre-qualification**	In confirming the evaluation criteria, does the ordering party systematically accumulate a database of past records (preferable to have a database set up)?	Not yet. Some support has been provided to do this.	

Focus of the Evaluation		Criteria	Current Draft Status	Specific Issues for Road or Water
		Are there evaluation criteria using methods such as lifecycle cost (LCC) so that the most economical proposal over the project period can be prioritised?	The LCC method has not been stipulated in the relevant regulation(s)	
		In terms of the evaluation criteria, is the method for achieving the required service level stipulated?	No	
		In terms of the evaluation criteria, is appropriate risk management stipulated?	No	

5.2 OVERALL EVALUATION

As illustrated in Table 5.1, some areas of the legal framework are still missing and other areas, while they do exist, are not being implemented in a way that will directly support improvements in the PPP process in Viet Nam. The government is reluctant to enter into any level of risk sharing that includes some revenue guarantee or availability payments to private investors. The tax law is also lacking for investors. Collection of sewerage fees remains confusing because of overlapping laws; local authorities that collect wastewater charges do not collect any environmental protection fees.

While PPP units exist, they are passive and they do not fill the role of overall programme manager for PPP activities. They have a mandate to coordinate but it is unclear just what is being coordinated. Because of the many laws, decrees and orders, the units implementing PPP are often confused as to what exactly the modality should be and how it can be implemented. Creative support in this area is lacking and can significantly enhance the PPP process. The perceived corruption in public or public-managed procurement and project implementation is a strong disincentive for international investors. This inevitably leads to a PPP process that tends to be driven by links to state-owned enterprises.

6 CONCLUSIONS AND RECOMMENDATIONS

6.1 INTRODUCTION

The following topics cover those areas where proactive steps may be taken to improve the viability and scope of PPP investments in Viet Nam. Some of the issues and recommendations noted below are systemic and relate to the legal environment or the institutional structure of Viet Nam. Those areas may be difficult to change but equally they may also be continuing to impede more private investment.

6.2 INSTITUTIONAL CAPACITY

6.2.1 PPP unit as focal point

At this point it is hard to know what direction the current PPP unit in the Ministry of Planning and Investment will take. It is a small unit. It has primarily taken the role of dealing with the legal framework for PPP and coordinating among ministries to support PPP activity. As the focal unit, the PPP unit at the Ministry of Planning and Investment takes the lead in advising on the ministry's PPP tasks:

- Support government agencies in developing and proposing PPP projects; support the feasibility report of the PPP project; build categories of PPP projects
- Coordinate the implementation of technical assistance, capacity building and training on PPP
- Support for PPP investment promotion activities
- Receive, manage and use the funds related to development assistance for PPP projects
- Organise PPP communication activities
- Implement international cooperation on PPP
- Build a database on PPP
- Perform other PPP tasks assigned by the head of the Procurement Administration.

A study by Jenkins et al. recommended that the Ministry of Planning and Investment and Department of Planning and Investment 'assume an independent review role at the project preparation stage'.[28] The study further observed that 'the existing PIM [Public Investment Management] system in Viet Nam, in which project promoters such as sectorial ministries and Provincial People's Committees (PPCs) decide on investment intentions, results in conflicts of interest'. It recommended that independent reviews of Public Investment Project appraisals should be undertaken by the Ministry of Planning and Investment, arguing that the power to approve projects should be returned to the ministry.

[28] Glenn P. Jenkins, Mikhail Miklyaev, Shahryar Afra and Majid Hashemi, 'Prioritization of Public Investment Projects in Viet Nam' (discussion paper, Ontario: Queen's University, 2017).

6.2.2 Supporting PPP through the project cycle

PPP agencies in other economies follow models that are similar to the embryonic model in Viet Nam: a centralised nodal agency (PPP unit at the Ministry of Planning and Investment) and separate departmental agencies (PPP unit under the Ministry of Transport). In all cases the primary target of the PPP agencies is to move projects through the five steps of the project cycle:[29]

- Project identification
- Evaluation of PPP mode
- Project preparation
- Private developer selection
- Project implementation

At each step of the project cycle, the institutional framework should directly engage support at whatever political level is required to resolve problems and remove obstacles in a timely manner. For larger projects, the implication is, in most cases, that the institutions charged with implementing PPP projects should be seen to act with the support, and the ultimate authority, of the minister or the prime minister.

There must be continuity throughout the project cycle. Staffing continuity is important. If senior staff are rotated or reassigned regularly, it is essential that arrangements are put in place for effective handovers, so that progress on each PPP project (as it moves through the project cycle) can continue in a seamless manner.

At each stage, it should be clear which body is primarily responsible for ensuring progress on the project, and to whom it is accountable.

It is also important to avoid potential conflicts of interest. Regulatory issues should be separated from policy and operations; and during the project cycle, there should be a division of duties between the party giving the approval, the one carrying out the negotiations and project analysis, and the party engaged in contract monitoring (even if all these duties are within a single line department).

The following subsections outline significant drivers of success at each stage of the project cycle.

6.2.2.1 Project identification

Inputs from any unit of the government or projects initiated by the private sector are all worthy of consideration. It is not a good policy to restrict the flow of ideas.

[29] Recommendations on the project cycle are summarised from: Asian Development Bank, 'TA 3791-Ind: Enhancing Private Sector Participation in Infrastructure Development at the State Level' (Manila: Asian Development Bank, 2003).

6.2.2.2 Evaluation of PPP Modality

It is important at this early stage to be realistic about the prospects of a successful PPP project being implemented, as much time and money can be wasted on preparing a flawed project. International experience argues for early analysis of project proposals, as this allows for selection of those project proposals with a better chance of success.

Further, any viability analysis of potential PPP projects that may have financial implications for the government should be based on three criteria, namely: (i) impact on the budget (i.e. project affordability); (ii) project value for money: and (iii) risk transfer. All projects likely to have an impact on government finance should also be subjected to a full financial analysis. In many cases outside assistance from advisers will be required to develop the options and their associated benefits and indicative costs. This level of analysis will allow the promoting agency to assess which of the various modalities may be appropriate for the specific project.

This is also the stage where 'market sounding' may be introduced. Market sounding uses a select group of private companies to assess the general outline of the project. The aim is to identify those areas that will become important to the ultimate investors and to highlight the information that investors will need to decide if the project is attractive or not. The market sounding initiative can also help guide which of the modalities makes most sense for the specific conditions controlling the investment.

Managing this process is a valuable role for the PPP unit.

6.2.2.3 Project preparation

Project preparation essentially involves carrying out a full feasibility study. While the PPP unit may be responsible for this step, it is unlikely to carry out the work directly. Rather, the unit can contract directly with a consulting company or it can evaluate and assess the work done by a research unit within a line department or agency. It is also likely at this stage that the PPP unit will need to consult with other agencies both within the central government and the provincial or municipal government and perhaps form a coordination committee to steer the project.

At the end of the preparation stage, it is essential that the decision on whether or not to proceed to the next stage is taken by the government at a high level. It is the role of the PPP unit to summarise the project outline and its key features for presentation to the responsible decision-maker.

6.2.2.4 Private developer selection

The institutional arrangements at this stage should be aimed at ensuring that the bidding process is fair and transparent. In some economies a centralised procurement agency is used. In others, the PPP unit may establish an ad hoc procurement committee from among the interested ministries or subnational government units to assist with investor selection. It is also prudent to include an outside expert.

It is important to make sure that the conditions of the bidding are clear. If no financial support or guarantee is available from the government, then those conditions need to be clear in the bidding documents. A variety of methods can be used. For 'availability payment' options, normally a design–build approach is used with bidding based on the minimum availability payment required over the effective bidding life of the investment. Where the revenue stream

is strong and allows for a financially viable project, bidding may be the payment from the investor for the project.

In economies with corruption issues, the process of qualification of the bidders is critical. The pre-qualification criteria and the mandatory minimum level on those criteria should be clearly specified in advance. The market sounding process can be useful to help define both the criteria to be used and the minimum level against those criteria that the bidders need to reach.

The evaluation for pre-qualification should be managed by the PPP unit; and the PPP unit should be ultimately responsible for the bidding process and its transparency.

6.2.2.5 Project implementation

Based on international experience, the most effective way to support smooth project implementation, particularly in economies where delays are common, is to establish a single-window agency either as part of the PPP unit or as a separate entity.

The purpose of the single-window agency is to facilitate clearances for the investor prior to financial closure. More specifically, the single-window agency for each project would appoint a project coordinator to be the primary point of contact for the private developer. This project coordinator should then:

- Organise the detailed preparation of a list of all the remaining clearances required and the timetable for each clearance
- Organise project coordinators in all relevant government bodies that are required to provide the remaining clearances
- Actively monitor progress against the timetable, and report regularly to a higher authority.

The single-window agency should arrange for action to be taken to remove any bottlenecks that emerge as speedily as possible. It should also establish a complaints office to receive any reports from developers concerning alleged irregularities in the clearance process. Such complaints should be logged and professionally dealt with.

6.2.3 Capacity building summary

All staff, consultants and agency staff should understand what elements are needed to create a successful PPP project. The main areas where training is usually required are:

- The PPP process and project cycle
- PPP modalities and financial contract structures (what makes a project bankable and acceptable to creditors and investors?)
- Project funding strategies, and risk allocation between the government and the investor.

A number of independent PPP specialists are available in Viet Nam to assist with this type of training. There are also several international bodies active in Viet Nam, including the Public Private Infrastructure Advisory Facility (PPIAF) of the World Bank, the Asian Development Bank and bilateral donors. In some cases, study tours may be helpful in reinforcing more formal training, but only in exceptional cases and if located within Southeast Asia.

For units that are responsible for contract monitoring, we recommend courses that are run through the International Federation of Consulting Engineers.

6.3 LEGAL FRAMEWORK[30]

There remain inconsistencies among the various documents that together define the PPP legal framework in Viet Nam. The most important relate to the status of the key decrees that are the highest legal documents regulating PPP.

As discussed in Section 1.2, the legal framework for PPP is dependent on and must comply with many specific laws (Public Investment Law, Law on Construction, Law on Procurement, Land Law, Environment Law, etc.) as well as the legal documents guiding the laws throughout the lifecycle of a PPP project, from preparation to investment and operation to exploitation of the project. While these legal documents are primarily designed to regulate investment in pure public projects, they also have a profound impact on PPP and what PPP projects can and cannot do. Furthermore, because of the ambiguity of some of the conflicting provisions, the key players, mainly the departments and agencies that are to be the sponsors of PPP projects, are often unsure about what can be done.

The adjusted scope of Decree 15 on PPP investment has not really reflected the requirements of PPPs investing in infrastructure development and public services,[31] so the ministries, branches and localities are still making arbitrary decisions. Some of the areas of inadequacy are:

- Foreign currency conversion and repatriation of investments in foreign funds while revenue is in Vietnamese *dong* is not guaranteed.
- No guarantees are available for a continuous source of supply of fuel or other raw materials that are under the monopoly control of state-owned enterprises.
- Value-for-money analysis is not often carried out in considering the advantage or disadvantage and feasibility of project investment before making a PPP investment decision.
- The regulations do not require consultants to assist the government agency to prepare and implement a complex PPP project when the capacity of the government agency is weak. This results in lack of development of promising projects that could attract either the domestic or foreign private sector.
- While viability gap financing is permitted by law, the relevant decrees lack clarity on the use of public–private finance and viability gap financing. They also limit the use of government capital to increase the financial feasibility of a PPP project. This makes it difficult for ministries to find sufficient funds to prepare a PPP project.
- The regulations governing the participation of government agencies (whether equitised or not) in bidding for a PPP project are unclear, which reduces transparency in the selection of investors and results in lack of interest from foreign investors.

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[30] The following text on legal and investment issues draws from the observations and recommendations on current PPP in the transport sector prepared in a report by one of our team members. See: Ministry of Transport and World Bank, *Feasibility Study for Viet Nam Southern Region Waterway and Transport Logistics Corridor Project: Final Report SWLC FS IW Legal, Institutional and PPP Framework* (Ministry of Transport and World Bank, October 2017).

[31] Decree 15 is based largely on international-standard models. However, in Viet Nam, PPP is often an agreement between a government-level agency or department and a state-owned company with marginally less than 100 percent government ownership. These types of agreements are not covered in Decree 15.

- One of the core issues is that because the governing laws stop at the decree level, the PPP process lacks policy stability, which becomes a big concern for foreign investors.

These inadequacies have been recognised by the Ministry of Planning and Investment. In a statement during a workshop at the Viet Nam-World Economic Forum Infrastructure Development Cooperation in November 2017, Vu Quynh Le, deputy head of the Public Procurement Department of the Ministry of Planning and Investment, noted:

> 'At present, PPP investment is regulated by Decree No.15/2015/ND-CP and Decree No.30/2015/ND-CP. Despite improvements, the risk-sharing mechanism, exchange rates, and revenue guarantees, which are considered the topmost concerns among foreign investors, remain absent from the decrees.
>
> **The decrees cannot help solve these problems, only a law can deal with them. We are proposing the government to build a PPP law**.' [emphasis added]

According to the statement, a draft PPP law is expected to be ready for submission to the government and the National Assembly in late 2018.

6.4 FINANCING OF PPP

Funds for the key steps in establishing a PPP project are often available but are not used by sponsors. This is particularly true for project development. The concerns are:

- Project development funding (PDF) from international donors is not being used. Unless pressured directly by donors through specific projects, Vietnamese sponsors are slow to use direct funding for the cost of preparation, appraisal and approval of the project proposal and feasibility study; the cost of consultants to assist the government agency in the selection of the investor; or the cost of negotiating and managing PPP contracts. The development of PPP projects is thus slowed since the funding for PPP project preparation at the ministries is small, especially for PPP transport infrastructure projects or for provincial development of water and sanitation projects.
- Inadequate funding for project preparation has implications for PPP project implementation such as:
  - PPP projects are not adequately prepared, do not adequately identify risks, and misallocate risk to unsuitable parties, leading to increased PPP project implementation costs. Under this scenario, the government is most at risk. Investors are also not pushed to minimise implementation costs and maximise investment efficiency. As a result, the project may not show adequate value-for-money which should normally be an advantage of the PPP model.
  - Open bidding is not often used. The lack of competition could result in the selection of investors lacking the capital base or technical competence to complete a project. This has recently been a problem with BOT road projects. The lack of transparency in the bidding process for PPP projects prevents the participation of the international private sector.
  - Project proposals may be prepared by the investor (due to lack of funding by the government agency) but if the government agency does not have enough capacity to

appraise the proposal, this may and has resulted in the approval of non-viable projects.

- BT projects have inadequacies that affect the interests of the government. For example, land value, assets and compensation cannot be accurately assessed because Viet Nam does not have a transparent housing market and the capacity of organisations to evaluate and develop compensation plans remains weak. Particularly in non-competitive PPP contracts, it is not uncommon for investors to reduce long-term operational risks by overcharging for the initial capital construction cost.
- Viability gap financing invested by the government to increase financial feasibility and to attract investors lacks clear procedures for planning, identifying and approving the funding.
- The legal, institutional and policy environment for PPP investment in Viet Nam remains incomplete and the involvement of state-owned enterprises in PPP projects reduces bidding competitiveness and transparency, hence decreasing international interest.
- Availability payment modalities are not being used. While the revised Decree 15 specifically lists BTL and BLT as approved modalities, not one true availability payment project exists in Viet Nam. The closest one, called a BTL, is a small dredging contract between the Inland Waterway Administration (a unit of the Ministry of Transport) and a unit of the Department of Defence. The contract is signed by two Directors General of the government of Viet Nam. This is particularly a problem in the water and sanitation sector, where implementation of projects is done by direct assignment rather than through competitive bidding. The agencies assigned to provide the water or sanitation services are compensated for their costs. But rather than use a competitive availability payment mechanism that would allow private-sector bidders, the projects are typically given to an enterprise with less than 100 percent government shareholding, which under current regulation is counted as a 'private' company.
- The Ministry of Transport works based on annual and five-year budget plans (which have to be submitted to the Ministry of Planning and Investment for appraisal and to the prime minister and the National Assembly for approval). Those budget periods do not align with the budget plan required for a PPP project, which has a project cycle that often lasts 20 to 30 years or more. As noted earlier, investors may be wary of committing themselves to large PPP projects, since there is a lack of budget certainty beyond the five-year window (because of the five-year planning window for government budgets).
- Due to the lack of standardised PPP contracts, a number of BOT road sector projects were changing their capital structure continuously during the implementation process, leading to a high proportion of government capital investment (50 to 70 percent) which is unreasonable with a standard BOT project.
- There is generally no mechanism and regulation for changing fee rates and approving a fee level outside the tariff frame required for PPP transport projects:
  - The fee rate frame or specific fee determination has to be approved by the relevant competent authority and the Ministry of Finance (with the exception of the rail sector, where private investors have the right to determine the rates and rents for rail infrastructure facilities).
  - The Ministry of Transport determines the aviation fee rate (for lease of premises at cargo terminals and passenger terminals, and for essential services at airports).

- The Ministry of Finance determines fee levels for inland waterways (e.g. the fee for passing out/in an inland waterway port) and road transport. The circulars regulating such fees do not provide a mechanism for gaining approval for a charge outside the prescribed fee.

6.4.1 Opening the Vietnamese financial market

The Vietnamese financial market is still developing. As noted in Chapter 3, the tenor of commercial funding either directly through commercial banks or via bonds is limited to 10–12 years. Given the time scale of a typical PPP project, this imposes a heavy penalty on the investor since the capital repayment levels are higher than could normally be sustained for other than very profitable projects. Some of the causes include:

- An underdeveloped banking system, where credit organisations, equity capital markets and insurance are focused on short-term and medium-term loans. As a result, there are no sources of financing to meet the demand for large-scale PPP projects. Normal PPP projects with high investment costs require longer-term credit of 25–30 years in line with the PPP project lifecycle.
- Difficulty accessing the international financial market. Due to Viet Nam's low credit rating, the international financial sector has limited interest in investing in the Vietnamese market. As the Vietnamese economy strengthens, this may change.
- Since the loans for current PPP projects are mainly from local credit institutions with short- and medium-term tenor, financing for PPPs is not adequate to allow for project implementation.

Improved access to stronger international and domestic financing is essential for the longer-term success of the Vietnamese PPP initiatives.

6.4.2 Improving risk sharing in PPP investments

Viet Nam does not have a history of successful international-standard transport sector PPPs. Those that are in place are based on direct assignment (especially to state-owned enterprises) and a number of those are in financial trouble. The lack of a clear risk-sharing mechanism currently limits international investor interest.

However, the option of design/build/operate/transfer/sell is viable. Investors are much more interested in an opportunity if it can be shown to be able to generate a consistent stream of revenue and where the operating costs are well defined.

This option is now in place for a number of roads, including part of the north-south expressway and specific radial expressways such as the Hanoi-Haiphong or Ho Chi Minh City-Trung Luong expressways. These expressways are already in operation, meaning that traffic levels can be reasonably estimated. In the Trung Luong case, the first link of 40 kilometres has been completed and open since 2010. The second link to the My Thuan bridge has been concessioned to a consortium of construction companies with a due date for opening in 2018.

Much scope exists for improved risk-sharing, in using gap financing, in establishing availability payment PPPs and in providing risk guarantees where such guarantees are needed.

6.5 DECENTRALISED MODEL

In practice, the decentralised model of organisation and assignment of responsibilities has created difficulties in the management of the water supply and drainage sector. The essence of this organisational model is the decentralisation of the responsibility for the provision of water supply, drainage and wastewater treatment services in urban areas and industrial parks to provincial People's Committees.

The role of the relevant ministries, their branches and the government is to support by advising and issuing mechanisms, policies, procedures, technical norms, price frameworks, etc. for localities to apply. This raises a number of issues:

- The water supply and drainage sector was decentralised according to the administrative boundaries of the provinces rather than by river basin. Although a number of international best practices in river basin water management have been recommended to Viet Nam, pilot initiatives based on them have met with little success due to the decentralisation of administration there. To improve its river basin management, it would have to review this decentralised arrangement. Most international models use some form of combined jurisdiction between the central level and the local level. This type of model is needed in Viet Nam.
- The second issue relates to differences in the financial capacity of the various provinces and cities. Their ability to provide water supply, sewerage and wastewater treatment services at the local level vary greatly depending on their financial circumstances:
    - Many localities previously supported by the central government have access to ODA funding for construction of water supply, drainage and wastewater treatment systems.
    - Other localities, in the context of the current domestic debt, have had to mobilise capital themselves to build water supply, drainage and wastewater treatment systems; and this is something that cannot be done overnight.
- Understanding, complying with and implementing the many legal regulations, decisions and decrees of the government is also more difficult when circulars of ministries relating to the water supply, sewerage and wastewater treatment industries in various localities are very different. For example:
    - Many localities have not deployed the Water Supply Service Agreement although this was enacted under Decree 117/2007/ND-CP issued in 2007.
    - Decree 80/2014/ND-CP has been in effect since 1 January 2015, but to date, just over 20 localities – a very small percentage of the cities and townships – have issued prices for sewerage service and the implementation roadmap.
    - Decision 58/2016/QD-TTg from the prime minister specified that the proportion of government ownership in water supply enterprises (as part of the equitisation policy) must be greater than 50 percent and less than 65 percent, but many localities have yet to comply with this provision due to differences in their interpretation of this decision.
- Decentralisation has generated many localised models of management and provision of water supply and drainage services, with little consistency. For example:
    - In Thua Thien-Hue, the WSC provides services to both urban and rural areas across the province, while in other places, there are at least two separate units responsible for urban water supply and rural water supply.

- In Bac Giang, the Pumping Centre, an internal unit of the People's Committee of Bac Giang city, manages and operates the water drainage system and wastewater treatment plant even though Decree 130/2013/ND-CP requires open bidding to select units to manage and operate public services.

6.5.1 Strengthening linkages between the central and provincial government

The allocation of responsibility for water management on a province-by-province basis essentially ignores the movement of water through river systems that cross provincial boundaries. Essentially effluent from one province can become the input water source for the downstream province. For investors in water treatment projects, the concern is that they do not have a say in the treatment of the water in upstream jurisdictions, which may increase treatment cost in the downstream installation. Water management by water corridors is therefore both sensible and good public policy and is discussed in the Water Law. The central government should thus move toward a watershed management approach as opposed to a strictly decentralised provincial approach.

It is common for provincial People's Committees to directly appoint enterprises with less than 100 percent government capital (considered a private company under current regulations) and call the project a PPP. The misrepresentation of what are essentially state-owned enterprises as private-sector companies is a problem. Viet Nam remains a transitional economy with a limited role for the private sector as evidenced by the degree to which state-owned enterprises remain the default for many types of contracting.

This is seen with BOT port and road projects, which are often awarded to joint ventures or joint-stock companies in which the government holds a substantial equity stake. Cases are seen where the government management agency is the contracting body, while the investor company is under the management of that agency. Such projects cannot be considered true PPP projects. This lack of transparency makes foreign investors unwilling to participate in bidding for such projects.

An international 'arm's length' standard for designing, implementing and monitoring PPP in both the central and provincial governments is needed. The central government, through the Ministry of Planning and Investment, can provide needed guidance and approval.

6.6 COORDINATION MECHANISM

The coordination mechanism between the Ministry of Transport and other ministries is still inadequate (depending on the nature of the project, each PPP project may require coordination among different ministries). In particular, there is a need to work closely with the Ministry of Planning and Investment and the Ministry of Finance, which play an important role in the preparation and development of PPP projects. The lack of a clear coordination mechanism among these ministries adversely affects the effectiveness of the ministry's work and leads to longer lead times and unnecessary problems.

Improving coordination would require addressing the following:

- The mechanism for assigning tasks and coordinating between the various entities – the PPP Department, transport departments, the professional management department, and Project Management Units – in the preparation and development of PPP projects is not clear, and is complicated and overlapping.

- Procedures for authorising negotiating points or obtaining approval in contract negotiations by the Ministry of Transport have not yet been determined. There is no specific coordination mechanism between the different departments under the Ministry of Transport to negotiate PPP contracts.
- There is no mechanism for assigning tasks for the management and implementation of long-term project contracts. The task of monitoring compliance and project performance is currently allocated to various agencies during the project implementation phases. The role of the PPP Department in coordinating project contract management is unclear.
- There is no PPP organisation such as the PPP Steering Committee at the Ministry of Transport level that is able to direct the overall management and coordination of the agencies under the Ministry of Transport in developing PPP.
- Within the Viet Nam Roads Authority or the Vietnam Inland Waterways Authority and other specialised departments, there is no specialised PPP unit acting as the focal point and directing the implementation of the PPP project.
- There are no specialised PPP Project Management Units to manage the project and support the government agencies in the PPP project preparation and implementation process.
- The capacity of organisations and agencies that play the role as authorised government agencies is still weak. Lack of the required competencies and human resources leads to many inadequacies in the preparation, appraisal and implementation of PPP projects (e.g. project selection; assessment of non-standard investors; contract management; and monitoring of progress).

APPENDIX A: IMPACT OF EXCHANGE RATE ON CALCULATION OF ROAD ASSET VALUE

The data in Figure 2.7 are based on normative values for each road class in US dollars. This is necessary because it is difficult to compare economy-specific normative values without a common currency base. Because of the need to standardise the currency among the economies, the variability of the exchange rate over time complicates the comparison.

The exchange rates by economy are shown in Table A.1. The Indonesian Rupiah, for example, has depreciated against the US dollar by 25 percent over the period 2004–2014 but the dollar has also depreciated due to inflation by 25 percent. The comparison against the real dollar value in 2004 is thus the sum of the two value changes. Clearly trying to make meaningful estimates of the replacement value of the roads in 2004 and again in 2014 is impossible. As a result, a normative replacement value in 2014 dollars across all of the economies was used for all calculations.

Since the unit replacement costs used were close to current (2014) costs, the ratios for 2004 are higher than they would have been if unit costs for 2004 had been used. But to allow for a meaningful illustration of the impact of the growth of the economy on the ratio, the unit costs were kept constant across all economies.

Table A.0.1: Exchange rate variation, 2004–2014

	2004	2014	% Change	Total Change
Indonesia	8,894.00	11,188.00	25.79%	50.79%
Malaysia	3.64	3.08	-15.38%	9.62%
Philippines	53.33	42.00	-21.25%	3.75%
Thailand	38.89	31.45	-19.13%	5.87%
United States			25%	
Viet Nam	14,622.70	20,246.40	38.46%	63.46%

Source: Oanda Exchange Rate Conversion Database.

APPENDIX B: STATUS OF EVALUATION MATRIX

The following abbreviations are used in the matrix:

ADB	Asian Development Bank
FS	Feasibility Study
IFI	International Financial Institution
LCC	Lifecycle Cost
MOF	Ministry of Finance, Viet Nam
MOT	Ministry of Transport, Viet Nam
MPI	Ministry of Planning and Investment, Viet Nam
PPC	Provincial People's Committee
PPP	Public–Private Enterprise
SOE	State-owned Enterprise
VfM	Value for Money
WB	World Bank

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
1. General	Public procurement	Is there a legal system in place on public procurement?	43/2013/QH13 dated 26/11/2013 Procurement Law	While provisions are made in the law and PPP decrees for international procurement, little has occurred in either the roads or water sector PPP. Largely this is an issue of risk-sharing where international investors are wary of the risks imposed by the uncertain demands by officials.
	Legal system related to PPP	Is there a legal system in place related to PPP?	67/2014/QH13 dated 26/11/2014 (Investment Law); 50/2014/QH13 dated 18/6/2014 (Construction Law); Decree 15/2015/NĐ-CP dated 14/2/2015 on Investment in the form of PPP; Decree 30/2015/NĐ-CP dated 17/3/2015. Guidelines for some articles in investor selection of the Law on Bidding, and some other legal documents.	The key PPP Decree 15 was updated in 2017 to clarify the types of PPP activities covered and provisions for dealing with SOE participation in PPP.

[32] Based on consultant's assessment.

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
	Accounting system	Is there an accounting system in place?	Yes, Viet Nam Accounting Standard and various MOF guidance on accounting for government projects Circular 55/2016/TT-BTC dated 23/3/2016 on 'Providing for certain contents of financial management of investment project in the form of public-private partnership and cost of investor selection'	
	Tax law	Is there a tax law in place?	Yes, Enterprise Income Tax and Personal Income Tax Law exist	There is no specific tax law in place that addresses PPP issues.
	Environmental and social assessment	Are there laws and guidelines in place that stipulate the implementation of an environmental and social assessment for implementing infrastructure projects?	Yes, under Land Law; Decree 47/2014/ND-CP dated 15/5/2014 on 'Compensation, support and resettlement upon land expropriation by the State'; Decree 18/2015/ND-CP dated 14/2/2015 on environmental protection planning, strategic environmental assessment, environment impact assessment environmental protection plans; and some other legal documents.	In wastewater management, provision exists for local collection of environmental protection fees for wastewater. Up to now, around 20 provinces collect wastewater fees rather than the outdated charge based on water usage. However, some confusion remains in the applicable decrees and the lack of political will to increase the tariff limits the application of the price mechanism
	Funds	Is there a structure in place for providing funds (e.g. funds for conducting an FS) for infrastructure projects?	ADB is supporting a Project Development Fund under the MPI using Decree 15/2015/ND-CP dated 14/2/2015 on PPP. However, this has been going on for the last five years but is not yet implementable.	At the moment, the debt ceiling provision of the government is severely limiting public investment of any type. In 2017, only one project with IFI support was initiated. The reason is lack of counterpart funding for IFI supported projects. Domestic projects are also affected.

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
		Is there a structure in place for providing funds necessary for promoting PPP projects and for providing government guarantees?	Yes, under Decree 15/2015/ND-CP.	However, in practice, minimum revenue or shared profit and loss provisions are not accepted by Viet Nam. International bidders are not interested in moving forward in Viet Nam without some form of risk sharing.
	Structure for project promotion	Are there organisations in place for promoting infrastructure projects or PPP projects?	Yes, Decree 15/2015/ND-CP, there are some units such as the Steering Committee under the prime minister, the PPP units under the ministries and PPCs	A PPP unit exists in the MOT but it is largely an information exchange unit. It has not progressed to a 'one-stop shopping' assistance unit similar to what is found in other jurisdictions such as India.
	Others	Is there a system in place for protecting the private sector from arbitrary policies or changes in the system?	Yes, provided in the Article 63 (Settlement of Disputes) of Decree 15/2015/ND-CP on PPP	
		Is there a system in place relating to land acquisition?	Yes, under Land Law (Article 202, 203: conciliation of land disputes; Article 204 on 'Settlement of complaints and lawsuit related to land'; Article 205 on 'Settlement of denunciations about land'); Decree 47/2014/ND-CP on 15 May 2014 on 'Compensation, support and resettlement upon land expropriation by the Government'; Code of Civil Procedure (92/2015/QH13 dated 25/11/2015)	

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
		Is there a system in place relating to foreign exchange?	Yes, under Law on Credit Institutions dated 16/6/2010; Ordinance on the Foreign Exchange dated 13/12/2005 and the amended Ordinance on the exchange dated 18/3/2013; Decree 70/2014/ND-CP 17/72014 on 'Detailing the implementation of several provisions of the Ordinance and the amended Ordinance on the foreign exchange'.	
		Are there policies and systems in place taking account of the poor, socially vulnerable, gender gap, etc.?	Yes, under Law on Legal Aid; Law on Gender Equality (73/2006/QH11 dated 29/11/2006); Law on Natural Disaster Prevention and Control (33/2013/QH12 dated 19/7/2013)	
		Are there laws and guidelines in place for preventing bribery and corruption?	Yes, quite substantial. But not effective. The MOT's Inspectorate Department is preparing a set of manuals to define the process for inspection.	MOT is preparing a set of manuals for the Inspectorate Department. But recommendations for practical improvement to laws and procedures that could limit corruption are not incorporated in the new manuals.
2. Project planning	Consistency between policy/master plan	Are the current projects specified in the master plan and infrastructure development plan?	Yes, PPP projects are required to be in the Master Plan by Decree 15/2015	
		In case the current projects are not specified in the master plan or the infrastructure development plan, has it been confirmed that the project will contribute to achieving the objectives of policies or goals?	Not applicable	

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
		In case the current project is not specified in the master plan or the infrastructure development plan, have necessary measures been taken such as the amendment of the master plan or the infrastructure development plan?	Not applicable	
	Project's economic evaluation	Is it stipulated that the project's economic performance be quantitatively measured using measures such as EIRR?	Yes, under Circular 55/2016/TT-BTC	
		Is it stipulated that alternatives be considered and the better method adopted through comparing economic performance?	Yes, under Circular 55/2016/TT-BTC	
	Environmental and social assessment considerations	Are considerations of environmental and social assessment stipulated?	Yes, under Decree 15/2015/ND-CP	
3. Feasibility study	Clarification of the project's level of achievement	Is it stipulated that the project's level of achievement be clarified through the following elements? - Is the minimum required level stipulated in accordance with relevant laws and regulations? - Are specific levels of achievement specified using quantitative indicators? - Is the LCC calculation model specified?	1. Yes, minimum required level stipulated in accordance with current laws and regulation, particularly Circular 55/2016/TT-BTC for PPP projects. 2. Project's level of achievement is not specified under regulation for FS but is usually quantified in project FS 3. No, LCC calculation model is not specified	

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
	Implementation of an environmental and social assessment	Is it stipulated that the following be considered in the environmental and social assessment? - Treatment of workers and working conditions - Environmental contamination prevention/reduction and measures in case of contamination - Local community's sanitation/safety - Land acquisition and inhabitants' relocation - Conservation of biological diversity and sustainable control of natural resources - Respect for indigenous people and protection of cultural heritage - Economic benefits (e.g. job creation for local residents), enhance resilience against disasters, building local residents' capacity	Yes, provided in Decree 47/2014/ND-CP dated 15/5/2014 (Decree regulation on compensation, support and resettlement upon land expropriation by the Government), and some other legal documents	
	Safety considerations	Are the following stipulated in terms of safety? - Appropriate construction management, and maintenance and operation management - Safety control for users and residents in neighbouring area - Resilience against disasters - Response in times of disaster or emergency	Yes, under Law on Natural Disaster Prevention and Control; Law on Construction 2014; Law on Bidding 2013; Decree 46/2015/ND-CP dated 12/5/2015 on 'Quality control and maintenance of construction works'.	

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
	Risk management	Are the following stipulated? - Appropriate identification of risks assumed for individual projects - Method for prioritising identified risks - Measures against identified risks	Not so clearly under current regulation. Some of this might be reflected in the PPP contract sample. General coverage provided in Decree 15/2015/ND-CP on investment in the form of PPP	Risk-sharing is one of the key impediments in opening up PPP to international investors. The perception of Viet Nam as prone to corruption makes investors nervous and in turn ask for revenue guarantees, particularly in the early years. This is offset by profit-sharing in later years. Viet Nam has not as yet agreed to this model.
		In case of a PPP project, is the appropriate risk-sharing between the public and private sectors stipulated?	Not so clearly under current regulation. Some of this might be reflected in the PPP contract sample in the road sector. General coverage provided in Decree 15/2015/ND-CP on investment in the form of PPP	
	Study on the private market	Is it stipulated that consideration be given to the competitive environment based on hearings conducted on private entities regarding the contents of the project?	Yes – market sounding Decree 15/2015/ND-CP on PPP	
	Selection of the procurement method	Is it stipulated that review and selection of the project's procurement method be based on criteria such as VfM?	Yes, under Procurement Law – 90% directed	
4. Procurement	Procurement in general	Is it stipulated that the quality aspects of the project are to be focused in the procurement such as output specifications and/or service level specifications?	No, not in current regulation General coverage in Decree 15/2015/ND-CP on PPP, Decree 63/2015/ND-CP dated 26/6/2014, Circular 10/2015/TT-BKHDT dated 26/10/2015, Circular 06/2016/TT-BKHDT 28/6/2016 on 'Guideline for the implementation of some provisions òf Decree 15/2015/ND-CP'	

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
		Is the use of appropriate incentives for procurement stipulated, such as applying a performance-based approach to contracts (e.g. contingency fee)?	General coverage in above legal documents	
		Is consideration for an appropriate risk-allocation in procurement specified?	General coverage in above legal documents	
		Do laws and guidelines stipulate that not only the price be the basis of evaluation in tenders but the quality also be evaluated appropriately?	General coverage in above legal documents	
		Is there a standard form of an agreement to be executed; Does it reflect best practices?	Yes, some forms have been prepared for the water and infrastructure area. The funding for these activities comes from the WB so it does reflect 'some' best practice. Above legal documents and Circular 9567/BGTVT-DTCT dated 17/8/2016 on 'Guideline for implementing the PPP transport projects'	
		Is it stipulated that a competitive dialogue or similar procedures be taken as appropriate?	In regulation but not in practice	

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
		In developing an evaluation method, are economic benefits (e.g. job creation for local residents), enhancing resilience against disasters and building local residents' capacity taken into account?	Provided in the Law on Natural Disaster Prevention and Control; Decree 47/2014/ND-CP dated 15/5/ 2014; Decree 18/2015/NĐ-CP dated 14/2/2015.	
	Prequalification	Are the following items clearly stipulated in the evaluation criteria, to be evaluated/confirmed? - Financial appropriateness - Track record in sufficiently similar projects - Keeping to construction schedule and appropriate cost control - Environmental impacts - Prevention of bribery (e.g. use of WB Listing of Ineligible Firms and Individuals)	Yes, for all of them (except the last point, which is only applicable for WB funded projects)	
		In confirming the above evaluation criteria, does the ordering party systematically accumulate data of past records (preferable to have a database set up)?	Not yet. Some support has been provided to do this	
	Proposal evaluation	Are evaluation criteria using methods such as LCC, so that the most economical proposal over the project period can be prioritised?	LCC method has not been stipulated in regulation	
		In terms of the evaluation criteria, is the method for achieving the required service	No	

Focus of the evaluation		Criteria	Current Status[32]	Specific Issues for Road or Water
		level stipulated?		
		In terms of the evaluation criteria, are keeping to construction schedule and appropriate cost control stipulated?	Yes	
		In terms of evaluation criteria, is environmental impact stipulated?	Yes, pre-qualification only – not mitigated in practice. Provided in Decree 18/2015/ND-CP	
		In terms of evaluation criteria, is appropriate risk management stipulated?	No	
		In the proposal evaluation, are technical aspects in the proposal also appropriately evaluated, in addition to the price (e.g. comprehensive evaluation, two-envelope method)?	Yes	
	Management of contract and monitoring	Are contract management and method of monitoring stipulated?	Yes, do not hire independent engineers	
		Are penalties and incentives stipulated for management of contract and monitoring?	Yes	
5. Ex-post evaluation		Is the method for ex-post evaluation stipulated?	Yes, some cases	
		Is it stipulated that objective data be accumulated in the project's ex-post evaluation to be used in the project of the next term?	Yes, can be better	

APPENDIX C: IB-NET DATABASE COVERAGE FOR VIET NAM WATER AND WASTEWATER SECTOR

	Viet Nam (Proportion of Urban Population, %)	Cambodia (Proportion of Urban Population, %)	Philippines (Proportion of Urban Population, %)
1997	37	0	
1998	43		
1999	44		
2000	48		
2001	51	0	
2002	53		
2003	57		1
2004	61	29	27
2005	66	33	27
2006	70	35	33
2007	74	40	39
2008	77		38
2009	81		
2010			
2011	80		
2012			
2013	98	66	
2014			
2015	97		

Source: International Benchmarking Network for Water and Sanitation Database.

GLOSSARY

Annual Investment over Total Assets (%)	Amount of investment (from utilities' own sources) over the total value of asset
Average Water and Wastewater Revenue (US$/m^3 sold)	Total annual water and wastewater operating revenues expressed by annual amount of water sold
Average Water Revenue (US$/m^3 sold)	Operating revenues (water only) expressed by annual amount of water sold.
Gross Fixed Assets (Water and Wastewater Assets)	Total gross fixed water and wastewater assets
Non-Revenue Water (%)	Difference between water supplied and water sold (i.e. volume of water 'lost') expressed as a percentage of net water supplied
Non-Revenue Water (m^3/Network Km per Day)	Volume of water 'lost' per km of water distribution network per day
Sewerage Coverage (%)	Population with sewerage services (direct service connection) as a percentage of the total population under utility's notional responsibility
Unit Operational Cost of Water and Wastewater (US$/m^3 sold)	Total annual operational expenses/Total annual volume sold.
Water Coverage (%)	Population with access to water services (either with direct service connection or within reach of a public water point) as a percentage of the total population under utility's nominal responsibility
Water Network Density	Total number of connections over the overall length of mains
Water Network Renewal (%)	Length of the network renewed over the total length of the network at the end of the fiscal year

Source: International Benchmarking Network for Water and Sanitation Database.