

**MINISTRY OF EDUCATION AND TRAINING**  
**UNIVERSITY OF MINING AND GEOLOGY**

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**STATE MANAGEMENT OF INVESTMENT PROJECTS USING  
THE PUBLIC-PRIVATE PARTNERSHIP (PPP) METHOD IN  
BUILDING ROAD TRAFFIC INFRASTRUCTURE  
IN LONG AN PROVINCE**

**Major: Economic Management**  
**Code: 9310110**

**SUMMARY OF DOCTOR THESIS IN ECONOMICS**

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The thesis is completed at the Faculty of Economics - Business Administration, University of Mining and Geology.

**Supervisor:**

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## INTRODUCTION

### 1. Rationale of the thesis

To invest in transport infrastructure construction, large capital is required. Therefore, countries tend to expand their capital attraction through the public-private partnership (PPP) method, which is an effective tool to attract capital from private sectors. This helps to improve the efficiency of public investment, the quality of public services, reducing the budget burden, promoting sustainable development, and creating better competitiveness.

Currently, Long An province is managing a PPP investment project, specifically the BOT project to upgrade and expand provincial roads DT830 and DT824 from An Thanh bridge to Duc Hoa town, which is in the fee collection stage. In Long An province and other localities, there are many shortcomings such as: legal corridors for PPP method in transport infrastructure are not unified or synchronized; the fee revenue management is not strict and transparent. The construction and maintenance quality of some projects have not met requirements, lacking of clear state's commitment. Other issues including complex decision-making process, policies which are not consistent with practices, low reliability, poor risk management, lack of economic management, etc. are from the state management perspective.

Due to the above reasons, the thesis: "*State management of investment projects using the Public-Private Partnership (PPP) method in building road traffic infrastructure in Long An province*" is very urgent and necessary.

### 2. Purposes of the thesis

Proposing solutions to strengthen state management of Long An government for PPP construction investment projects in road transport infrastructure.

To achieve the purposes, the thesis identifies the following objectives:

- General objectives: Establish a scientific basis to analyze, evaluate, and propose solutions for improving state management of PPP road transport infrastructure projects in Long An.

- Specific objectives:
  - + Review domestic and foreign research to identify gaps and in-depth issues;
  - + Systematize the theoretical, legal, and practical basis for state management of PPP investment projects in road traffic infrastructure by provincial governments;
    - Analyze and evaluate the current state management of the People's Committee of Long An province for PPP investment projects in constructing road transport infrastructure in the province;
    - Develop models, scales, and hypotheses to analyze factors affecting state management of PPP investment projects in Long An province, determining each factor's influence;
    - Propose solutions to strengthen state management of PPP investment projects in road transport infrastructure in Long An province.

### **3. Objects and scopes of the research**

Research objects: state management of PPP investment projects in the construction of road transport infrastructure for provincial authorities.

Scope of research: Examine the state management of PPP road transport infrastructure projects by the People's Committee of Long An province, with reference to PPP projects in other localities from 2010 to 2023.

### **4. Research methods**

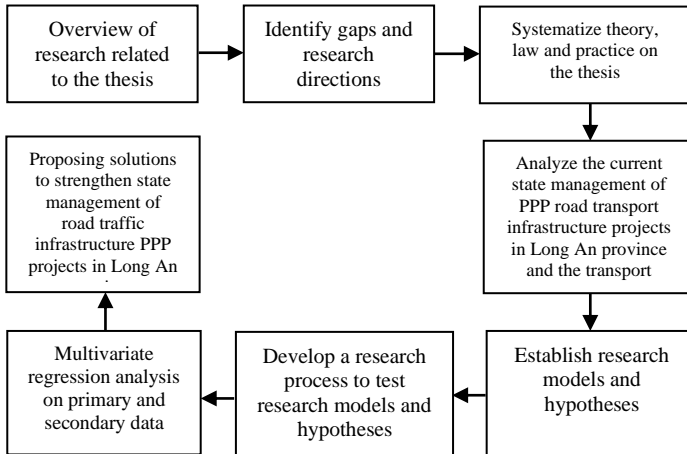
The thesis uses a combination of research methods: desk research; methods of synthesis, comparison and analysis; qualitative research methods (experts, investigation and survey); quantitative research methods.

### **5. Research approach and framework of the study**

#### **5.1. Research approach**

Approach research issues according to the state management functions of local governments for PPP investment projects.

#### **5.2. Research framework of the study**



*Figure 1: Research framework*

## 6. New scientific contributions of the thesis

- This thesis examines key improvements needed for Long An province to effectively manage PPP investments in road traffic infrastructure projects.

- Research method through practices to strengthen the theoretical basis of PPP investment method, to supplement new arguments that previous studies have not mentioned.

- The thesis proposes the viewpoints, orientations and solutions of the People's Committee of Long An province to strengthen state management capacity for PPP investment projects to build road transport infrastructure until 2030.

- The thesis proposes a model of state management separate from business management to ensure equality and transparency in bidding and investment efficiency.

## 7. The outline of the thesis

The thesis includes 3 chapters and is illustrated by 18 data tables, 10 figures, 3 appendices along with 7 published research works and a list of 142 references.

### Chapter 1: OVERVIEW OF RELATED STUDIES

#### 1.1. Related domestic and foreign research studies

**1.1.1 On policy institutions in state management:** studies of Yescombe, 2007; Maluleka, K.J. 2008, Cuttaree (2008), Pascual (2008), Ward, J.T. and Sussman J.M. (2005) and domestic authors such as National Assembly Economic Committee and UNDP (2014), Phan Thi Bich Nguyet (2013), Pham Duong Phuong Thao (2013)

**1.1.2 On state management in project implementation:** Maluleke (2008), Sader (2000), Nyagwachi và Smallwood (2006), Akintoye. A et al., (2003), Nyagwachi. J. N. and Smallwood. J. J (2007), domestic authors such as Bui Minh Huan (2008), Ngo The Vinh (2015), Pham Diem Hang (2018), Nguyen Thi Hong Minh (2016), Hoang Anh Tuan (2019), Le Quang Tung (2023).

**1.1.3 On management and mobilization of financial resources:** there are some authors such as Dang Thi Ha (2013), Hoang Cao Liem (2013); foreign authors such as Afriyie G.O (2010), Agyemang.P.F.K (2011), Shedy.R et al. (2011), practices in the UK .

**1.1.4 On risk management during implementation:** mentioned in the research of Than Thanh Son (2015), Le Huong Linh et al. (2017), Pham Thi Trang (2019), or Sader (2000).

**1.1.5 On management of the construction exploitation:** mentioned in the research works of Nghiem Van Dinh, Nguyen Quynh Sang (2009), Le Manh Tuong (2016), Tran Trung Kien, (2019).

**1.1.6 On management of issues related to the investment environment:** this issue was raised by group of Huang Y, Bird R, Bell M, ADB, 2008; Li,B. and Akintoye, A., 2003. However, there has not been much attention to studying the PPP method from the perspective of environment and social security. Recently, there was an article by Professor. Nguyen Ngoc Tran.

*In general, there has not been a systematic and complete study of state management for PPP road traffic infrastructure investment projects of Long An province.*

## **1.2. Conclusions from an overview of studies related to the thesis**

Private sector participation in PPPs is driven by profit and new business opportunities.

The state plays a crucial role by creating a favorable environment

through legal frameworks, unified regulations, bidding procedures, capital structures, and financial instruments.

A transparent mechanism for mobilizing investment outside the state budget is essential, along with policies encouraging private investment in road transport infrastructure.

### **1.3. Research gaps and further research directions**

#### ***1.3.1. Research gaps***

- Feasibility of applying management experience of other countries on state management for PPP investment projects.
- Solutions to effectively manage investment projects using the PPP method in building transport infrastructure in Long An province.
- Develop a logical framework of content, impact factors, and criteria for evaluating the effectiveness of state management.

#### ***1.3.2. Further research directions***

The thesis delves into the state management of PPP investment projects in building road traffic infrastructure in Long An. This will help create motivations to promote PPP project management more professionally, effectively, and highly attracting investment.

## **Chapter 2: THEORETICAL, LEGAL AND PRACTICAL BASIS OF STATE MANAGEMENT OF PPP INVESTMENT PROJECTS IN ROAD INFRASTRUCTURE CONSTRUCTION**

### **2.1. Theoretical basis for PPP investment and state management for PPP investment projects in road traffic infrastructure**

#### ***2.1.1. Basics of public-private partnership (PPP), PPP projects***

The PPP Investment Law (Law 64/2020/QH14) defines the concept of PPP investment: “*Investment in the form of public-private partnership (PPP) is an investment method implemented on the basis of term cooperation between the state and private investors through the signing and implementation of PPP project contracts to attract private investors to participate in PPP projects.*”

❖ *Investment projects using the public-private partnership method:* the definition of “PPP Project” is explained in Clause 9, Article 3 of the PPP Law.

❖ *Characteristics of investment projects under PPP method*

- Competent state agencies, investors and private enterprises are participants in PPP contracts.
- The private sector is responsible for project operations and bears most of the project risks.
- The public sector has a role in monitoring private sector activities and enforcing contract terms.
- Private sector's costs can be recovered thanks to the state.
- State payments are based on performances stated in the contracts.
- The private sector contributes most of the project's capital costs.
- PPP contracts are related to infrastructure and public services.
- Each PPP project will have a type of contract suitable to the specific characteristics and requirements specified in the PPP Law.

### ***2.1.2. Theoretical basis for state management of PPP investment projects in road traffic infrastructure construction***

#### ***2.1.2.1. Definitions***

a. State management is the administration of the entire state apparatus, the impact and organization of state power in the legislative, executive and judicial aspects.

b. State management of PPP investment projects is an organized, systematic impact and adjustment by state legal power implemented by competent state agencies for PPP investment projects.

c. The concept of a public-private partnership investment project in road traffic infrastructure is a construction project implemented based on a contract between a competent state agency and the investors/project enterprise to implement infrastructure projects.

d. State management of PPP investment projects is *the organized impact and rule of law of the state from the formation, implementation and exploitation of PPP investment projects in the construction of road traffic infrastructure through planning, promulgation and implementation of policies and laws; organizing the state management apparatus, monitoring and evaluating the project to implement state management objectives for PPP investment projects in road traffic infrastructure construction.*

#### ***2.1.2.2. The need for state management of PPP investment projects in***



### *road transport infrastructure construction*

The state plays an important role in developing and managing PPP projects to build road transport infrastructure:

- It performs the development planning of the projects.
- It performs the implementation of policies and laws.
- State management performs organizational functions.
- State management performs the control and monitoring.
- State control mechanism in finance.

➤ PPP projects are a complex mechanism in terms of policy, law, finance and administration.

#### *2.1.2.3. Characteristics of state management of PPP investment projects in road transport infrastructure construction*

- State management is not involved in financial matters, all costs are based on public-private partnership contracts.
- Be purposeful in building long-term plans and monitor performance rather than being involved in day-to-day operations.
- State management must monitor the entire project life and force the public sector to select the method to provide and make payment for services.

#### *2.1.2.4. Requirements of state management of PPP investment projects in road traffic infrastructure construction*

- In line with the national socio-economic development strategy and relevant plans according to the provisions of law on planning.
- Ensure effective management and use of state resources.
- Carry out inspection, state audit, and supervision of PPP projects to ensure that they do not hinder normal investment and business activities of PPP investors/ project enterprises.
- Ensuring openness, transparency, sustainability and efficiency.
- Ensuring interests of the state, investors and the community.

#### *2.1.2.5. Details of state management of PPP investment projects in road transport infrastructure construction*

a. *Develop provincial-level plans for PPP investment projects in road transport infrastructure construction*

b. *Implementation*

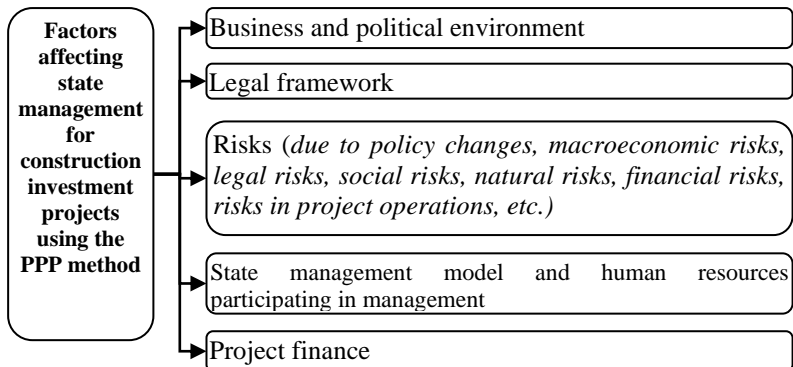
- Establish legal documents in line with local decentralization.
- The state management is analyzed according to aspects such as specialization, decentralization, authority and coordination.
- The provincial apparatus must be established with the ability to inspect, supervise the implementation of regulations, handle related violations, disputes related to infrastructure investment activities.
- The local government apparatus builds processes and manages each content according to investment stages.

c. *Inspect, supervise the implementation of PPP investment projects*

2.1.2.6. *Criteria for evaluating state management activities for PPP construction investment projects:* Effectiveness; Efficiency; Suitability; Sustainability.

2.1.2.7. *Factors affecting state management of PPP investment projects in road transport infrastructure construction*

Based on a review of domestic and foreign works in section 1.1, realizing many factors affecting state management, the thesis identifies and synthesizes factors affecting state management of PPP investment projects in figure 2.1.



*Figure 2.1: Factors affecting local state management of investment projects using the PPP method*

## **2.2. Practical overview of state management for PPP investment projects in building road traffic infrastructure.**

### **2.2.1. Experience from other countries**

#### **2.2.2.1 Experience of some countries on state management of PPP road traffic infrastructure investment projects**

Refer to PPP investment experience of the UK, Korea, Philippines and India.

#### **2.2.1.2. Lessons learned for Vietnam**

- Information is crucial to get an objective and comprehensive outlook, avoiding slow and impractical document issuance.

- It is necessary to separate the role of state and business management by establishing a focal point for PPP projects.

- Training people to improve state management and management capacity of investors/project enterprises.

- Reasonable risk division between the state and investors/project enterprises based on the principle of “equality - risk optimization”.

- Build an effective financial tool system to support investors.

- Create conditions to attract investors/project enterprises through favorable policies.

### **2.2.2. Practice in Vietnam and experience of provinces and cities**

#### **2.2.2.1. Status of PPP projects in the transportation sector**

Table 2.2: Transport PPP project contracts by sector

| <b>No.</b> | <b>Sectors</b>      | <b>Quantity (projects)</b> | <b>Total budget (billions dong)</b> |
|------------|---------------------|----------------------------|-------------------------------------|
| 1          | Road projects       | 211                        | 656,877                             |
| 2          | Aviation projects   | 03                         | 11,176                              |
| 3          | Maritime projects   | 03                         | 1,340                               |
| 4          | Waterway projects   | 02                         | 1,428                               |
| 5          | Specialized project | 01                         | 1,524                               |
|            | <b>TOTAL</b>        | <b>220</b>                 | <b>672,345</b>                      |

- Up to 49 projects that had lower revenue than expected, only reaching 50% - 80% of the estimate. There are 04 projects that have not yet collected fees or had to stop collecting fees; some projects only collected 13% - 15% of the estimate.

- Reduced competition, lack of transparency, bad public opinion: not announcing project lists, not posting information about investor selection results according to regulations.

- Loss of public assets and community trust: shortcomings in project management at all stages of the investment process.

*2.2.2.2. Current status of implementing PPP projects managed by the central government*

Analysis of expressway projects on the North-South Eastern route in the period of 2017-2020 and 2021-2025 shows that project transparency, shortcomings and traffic unsafety are the issues. There is also opposition from public opinion.

*2.2.2.3. Current status of some provincial-level managed projects*

Analysis of a number of projects in Tien Giang province, Phu My Bridge project (Ho Chi Minh City) shows that there are many issues such as: *unsecured investor capacity; fee collection policy; roads without emergency lanes, traffic unsafety; unreasonable location of toll plazas.*

**2.2.3. Causes of problems in state management of PPP road traffic infrastructure investment projects**

(1) The legal documents for state management on PPP investment projects to develop traffic infrastructure are constantly changing.

(2) The state management apparatus for PPP transport infrastructure development investment projects is not appropriate.

(3) Limitations in human capacity in PPP management.

(4) Financial support tools are not effective.

(5) Appraisal work in the project preparation is ineffective.

(6) Environmental management has not been paid attention.

(7) Operational management, exploitation, maintenance.

(8) Risk management is not regularly implemented.

**Chapter 3: CURRENT STATUS OF STATE MANAGEMENT OF PPP INVESTMENT PROJECTS IN TRANSPORTATION INFRASTRUCTURE IN LONG AN PROVINCE**

**3.1. Overview of the socio-economic status of Long An province**

- Natural area of 449,194.49 hectares, population of nearly 1.7 million people, 15 administrative units including 13 districts, 1 town and 1 city.

- Long An province is the gateway connecting the Southeast with the Mekong Delta; a national boundary with Cambodia with two border gates of Binh Hiep (Moc Hoa) and Tho Mo (Duc Hue). It shares a border with Ho Chi Minh City and has two river systems of Mekong and Dong Nai.

- The socio-economic status of Long An province still has many difficulties and limitations.

### **3.2. Current status of PPP investment projects in road traffic infrastructure in Long An province**

#### ***3.2.1. Projects to upgrade and expand DT830 and DT824 from An Thanh bridge to Duc Hoa town, Long An province***

Construction started in 2016. The construction time was extended twice, completed and put into use in June 2018.

*Table 3.4: Total investment changes of the project to upgrade and expand DT830 and DT824*

| No. | Items  | Decision No.<br>2346/QĐ-UBND<br>dated June 10,<br>2016 | Decision No.<br>3026/QĐ-UBND<br>dated July 21, 2016 | Differences           |
|-----|--|--|---|-----------------------|
| 1   | Construction costs   | 672,543,806,837  | 760,719,682,080                                     | 88,175,875,243        |
| 2   | Project management costs, construction investment consulting and other costs | 67,254,380,683   | 76,071,968,208                                      | 8,817,587,525         |
| 3   | Site clearance costs   | 66,512,606,299   | 66,512,606,299                                      | -                     |
| 4   | Redundancy costs   | 119,871,982,200  | 119,236,161,869                                     | (635,820,331)         |
| 5   | Interest costs during construction period                                    | 56,490,000,000   | 56,786,655,293                                      | 296,655,293           |
|     | <b>Total (rounded)</b>   | <b>982,673,000,000</b>                                 | <b>1,079,327,000,000</b>                            | <b>96,654,000,000</b> |

#### ***3.2.1.2. Compliance with laws and policies in investment management***

The project is compatible with the approved planning, the basic design is consistent with the location, and the ability to connect to other infrastructure. Compliance with design standards and technical regulations: the project applies current regulations and is approved by the Provincial People's Committee in Decision 5273/QĐ-UBND dated December 14, 2016 as a basis for implementation.

#### ***3.2.1.3. Duties of representative of the competent state management***

- Investor selection complies with regulations.
- Preliminary selection of investors: nation-wide.
- Form of investor selection: appointing investors.
- Capacity conditions for participating individuals are guaranteed according to regulations.

Based on contract negotiation on November 7, 2016, the BOT contract No. 49/HD.BOT.SGTVT was signed on November 14, 2016 between the Department of Transport of Long An province and Bang Duong-Capital Joint Venture.

### ***3.2.2. Ho Chi Minh City - Trung Luong expressway with its part in Long An province***

The project started in 2004, opened to traffic in 2010 and organized fee collection from 2011. Then fee collection right was sold in the period of 2014-2018. From the beginning of 2019, this expressway has not collected fees.

During the project implementation, Long An province coordinated with the Ministry of Transport and relevant units to carry out compensation, site clearance, and resettlement according to approved plans. When the project was completed, Long An province took over the operational management and maintained 30.03 km of public access roads; 8 bridges on the express crossing; 3 civilian underground tunnels; expanding expressway DT.830 and National highway 62 at the intersection area.

After stopping toll collection (in 2019), the Ho Chi Minh City-Trung Luong expressway was seriously degraded, traffic capacity was not guaranteed due to large transport demand. The Prime Minister has been proposed to approve the policy of implementing the Ho Chi Minh City-Trung Luong expressway project phase 2 with state budget capital or other legal capital sources.

## **3.3. Current status of state management for road infrastructure projects of the People's Committee of Long An province**

### ***3.3.1. Establish a strategy for building road traffic infrastructure projects from central to provincial levels***

- Resolution of the Long An Provincial Party Congress

determines that the strategy is to invest in building synchronous and effective infrastructure.

- The 11<sup>th</sup> Congress of Long An Provincial Party Committee determines to mobilize all resources to build a synchronous transport infrastructure system. Accordingly, 8 projects in the program are significantly important.

### ***3.3.2. Develop plans for PPP investment projects in building road traffic infrastructure in Long An province***

- Long An province's traffic planning is also included in the Long An strategic development planning project in the period of 2021-2030, with a vision to 2050.

- Regarding mid-term plan for period of 2021-2025 of the People's Council, Department of Transport coordinates with relevant units to carry out procedures to propose investment policies.

### ***3.3.3. Current status of implementation and organization***

#### ***3.3.3.1. Current status of implementation of legal documents and regulations in Long An province***

It has been implemented in many forms. However, there is no professional unit in charge of implementation

***3.3.3.2. State management apparatus organization:*** not yet complete, not boldly delegating power to localities, administrative reform still needs to be adjusted.

#### ***3.3.3.3 Current status of management according to investment stages***

- State management capacity in investment preparation: lack of experience; revenue opportunities not been analyzed; unattractive bids; lost-lasting negotiations; confused in setting up bidding for hiring consultants.

Investor selection: No experience in resolving recommendations. Long An province must refer to projects in other provinces.

- Operation PPP projects in Long An: the operation management must be repeatedly adjusted in terms of operating costs, interest rates, fee collection plans, etc.

- Risk management: many potential risks due to policy changes, social, natural, financial, and project operations.

### ***3.3.4. Current status of inspection and supervision activities***

Although each stage of project implementation is supervised, some tasks are still not regularly monitored and problems are not promptly detected, affecting the effectiveness of state management.

### 3.4. Factors affecting the state management of People's Committee of Long An province for PPP investment projects

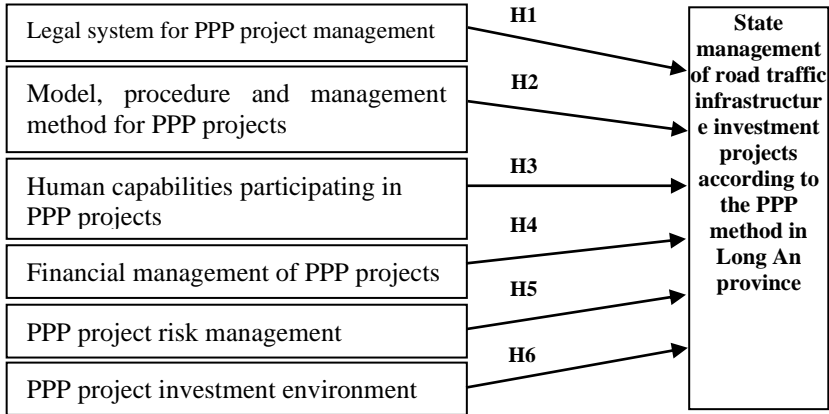


Figure 3.1: Proposed research model and research hypotheses

#### 3.4.4 Results of regression analysis

$$QLNN DA PPP = 0.299*HTVB + 0.285*MHPT + 0.282*NLQL + 0.159*QLTC + 0.121*MT\Delta T + 0.089*QLRR (1)$$

In which:

1. HTVB: legal document system of PPP project management.
2. MHPT: model, procedure and method of PPP project management.
3. NLQL: human capacity of PPP projects.
4. QLTC: financial management of PPP projects.
5. MTΔT: PPP project investment environment.
6. QLRR: PPP project risk management.

## Chapter 4: SOLUTIONS TO STRENGTHEN THE STATE MANAGEMENT OF THE PEOPLE'S COMMITTEE OF LONG AN PROVINCE FOR PPP INVESTMENT PROJECTS ON TRANSPORT INFRASTRUCTURE CONSTRUCTION

### 4.1. Orientation for developing road traffic infrastructure in Long An province

#### 4.1.1. Developmental perspectives

Developing road traffic infrastructure in Long An province in



line with the socio-economic development, development orientation of the transportation sector, transportation development strategy of Ho Chi Minh City, Mekong Delta and neighboring localities.

#### **4.1.2. Development objectives**

The average economic growth rate (GRDP) in the period of 2021-2025 reaches 9.2-10%. Economic structure: Agriculture-forestry-fishery, industry-construction, trade-service by 2025 will account for 10%, 60.5%, 29.5% respectively. GRDP per capita by 2025 will reach 115-120 million VND. The ratio of social investment capital to GRDP reaches 31-33%. The average increase rate of state budget revenue is 12%/year, striving to increase the ratio of annual development investment expenditure in total budget expenditure.

#### **4.1.3. Orientation for road traffic infrastructure development in Long An province for the period of 2021-2030**

**External traffic:** developing Ho Chi Minh City-Trung Luong expressway, N1, N2 expressways and national highways passing through Long An province.

**Ring roads:** Ben Luc - Long Thanh Expressway; Ring road 4.

**Traffic in the province:** new construction, upgrading and expansion of existing provincial and district roads.

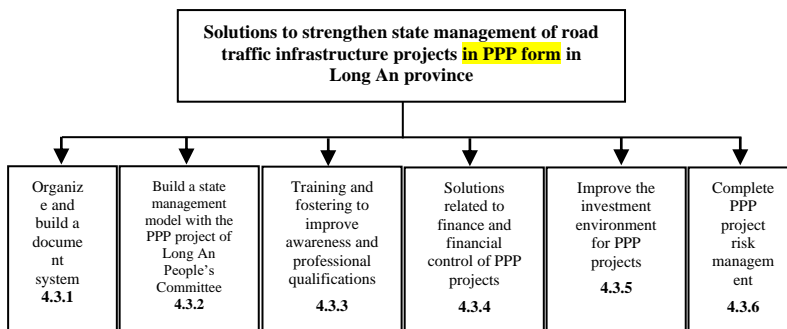
#### **4.1.4. Projects are about to be implemented using the PPP method**

Belt 4 Project; Duc Hoa dynamic axis project; Ho Chi Minh City - Trung Luong Expressway Expansion Project (Phase 2; Projects expected to apply for a specific mechanism to implement the PPP method).

#### **4.2. Basis for building solutions**

- PPP Investment Law No. 64/2020/QH14 dated June 18, 2020;
- Development orientation of Long An province's road traffic infrastructure in period of 2021-2030;
- Current status of state management for PPP investment projects in road traffic infrastructure of Long An People's Committee;
- Regression equation in section 3.4.4

### 4.3. Solutions to strengthen the state management of Long An People’s Committee for PPP road traffic infrastructure projects



*Figure 4.1: Solutions to strengthen state management of road traffic infrastructure projects in PPP form in Long An province*

#### 4.3.1. Solutions related to organizing a system of guiding documents of Long An province on PPP road traffic infrastructure investment activities

##### 4.3.1.1. Strengthen the capacity and responsibility of the competent authorities in charge of creating legal policy documents

- It is necessary to have a separate unit, including experienced, and specialized experts, to create a “legal corridor” for procedures and mechanisms for PPP projects.

- Establish a mechanism for assigning responsibilities, performing evaluation and testing through practice to minimize problems and improve state management efficiency when applied in local production practices.

##### 4.3.1.2. Decentralizing state management in the process of managing the implementation of legal policies on PPP investment

The Department of Transport issues a circular guiding PPP investment projects in transport infrastructure (including a BOT contract for PPP investments-mandatory terms, risk sharing methods, other notes, etc.) for uniform application, especially for key upcoming traffic projects.

- The Department of Finance issues a circular guiding the management, costs and revenues in investor selection; coordinate with departments, especially the Department of Planning and Investment and the Department of Finance to guide the return on

investor equity framework and project contract templates.

- Departments provide detailed instructions on the content of PPP investment activities under their management scopes.

- PPP Boards of provinces and centrally-run cities are responsible for researching and selecting suitable PPP projects, then submitting them to the People's Committee for approval.

- The Provincial People's Committee directs the preparation, appraisal, and approval of the List of investment projects using land, ensuring synchronization with the planning and List of land recovery projects, as a basis for determining the form of investor selection and carrying out investment procedures.

#### *4.3.1.3. Establish a comprehensive PPP policy framework*

Long An province needs to build a comprehensive PPP policy framework, ensuring the following requirements:

- (i) The legal framework is to address the nature and level of government support for PPP projects between sectors in Long An province;

- (ii) Establish a fair, transparent, flexible, predictable and responsive partnership for public-private partnerships;

- (iii) Develop a mechanism to evaluate, measure, monitor and appraise from the beginning whether the PPP method is a suitable capital option, predict risks in site clearance and comply with assurance measures on environmental and social aspects.

### **4.3.2. Building a state management model of the People's Committee of Long An province for PPP road traffic infrastructure investment projects**

#### *4.3.2.1. Completing the state management model for managing PPP investment projects in Long An province*

Long An province proposes that the Government establish a PPP Board as the focal point to manage local PPP activities to increase involvement in managing PPP projects as shown in figure 4.4.

The PPP Board is responsible from researching to find suitable projects and directing project formulation, technical design, bidding, contracts and implementation as well as managing the operation, technical expertise, quality records for each item and overall as the Public Investment Project Management Board.

Business responsibilities of PPP Board: It is under the Provincial People's Committee in researching suitable projects, preparing state counterpart funds, managing business, signing contracts with investors, independent consultants, controlling issues: site clearance, resettlement and issues related to technique, quality, cost, progress, environment, etc. throughout the project life cycle. Next is the exploitation to ensure technical quality, traffic safety, and environmental protection. At the end of the exploitation, finalize the projects and hand over them to the state.

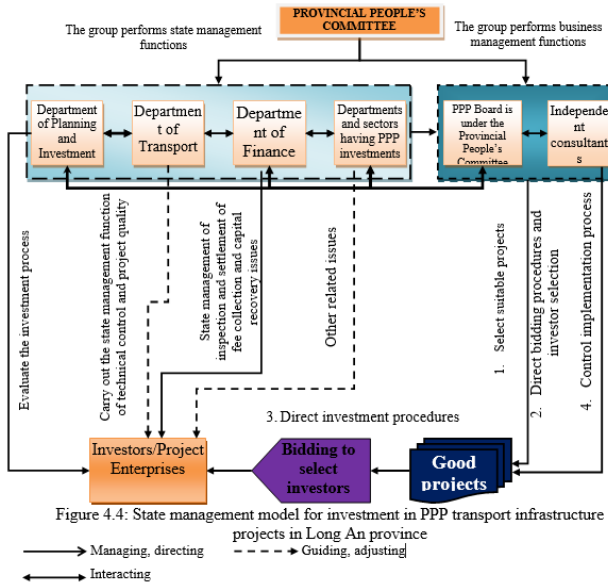


Figure 4.4: State management model for investment in PPP transport infrastructure projects in Long An province

#### 4.3.2.2. Strengthen state management in each investment phase

Long An Provincial People's Committee needs to focus on the following issues:

- (1) Review projects according to approved plans
- (2) Strengthen the assessment of the socio-economic effectiveness of the project

- Strengthen appraisal work:

+ Appraise the environmental assessment report: placing environmental benefits above industry and local benefits to choose the best option;

- + Verify projects being prepared for implementation in Long An, including: Project location; Construction materials; Drainage; Traffic Safety; Environmental pollution.

- Criticism of all parties: Long An Department of Transport researches and promulgates independent, mandatory, and public criticism regulations for investment projects with high expertise and socialization, with great investment value.

- Overall review of the toll plaza location system in accordance with the Long An area and policy mechanism: Complete the overall review of toll plaza locations, exemption and reduction policies. This is to efficiently use roads and strictly manage revenue to have synchronous, timely and unified solutions, ensuring harmony of interests between the state, investors and traffic users. Promulgate criteria for establishing toll plazas, developing appropriate fee levels, and applying advanced technology (in the form of automatic, non-stop service).

**(3)** Carry out inspection, examination, supervision and sanction activities.

- Enhance the role of each organization related to project supervision.

- + Clearer regulations and requirements of state management (to be stated in contracts, referenced in regulations or laws);

- + Establish specialized management agencies;

- + Train the state management team on the basis of both professionalism and expertise;

- + Build state management tools qualified to receive information.

- There should be an independent PPP monitoring unit: it can be located in an independent department of the government, or it can be an independent agency in charge of PPP projects.

- Independent audit: auditing companies provide independent assessments of operating results, providing reliability and support for project monitoring activities.

- Strengthen community supervision: explain people to understand guidelines, policies, laws, and benefits from implementing the policy of building traffic infrastructure according to the PPP method.

- Strengthen communication work: provide complete and accurate information according to laws on PPP investment projects.

#### **4.3.3. Training, enhancing expertise in PPP project management**

Long An People's Committee conducts training, enhancing expertise on PPP project management in the following subjects: Policy development team; Officials of competent state agencies; Officials participating in project management as representatives of local state capital; Project planning staff; Project appraisal team; Project control and evaluation team.

PPP management staff need to be trained in the following aspects: Synthesis and consultation capacity; Financial appraisal and management capacity; Ability to monitor and manage PPP contracts.

#### **4.3.4. Solutions related to financial control of PPP projects in road transport infrastructure construction.**

##### *4.3.4.1. Improve and control financial mechanisms*

*a. Completing the budgetary and financial mechanism for PPP projects:*

- The state researches and arranges centralized counterpart budget at the central level specifically for PPP projects and allocates them to localities in each period.

- Propose investors' loan interest rates for priority projects.

- Develop a mechanism to mobilize capital for investors.

- Develop regulations on payment methods and conditions for investors/project enterprises with state capital.

*b. Controlling the capital management mechanism of investment projects according to the PPP method:*

- Enhance transparency and accountability

- Limit encroachment on public interests

- Minimize group benefits

#### *4.3.4.2. Building a corridor to protect capital by credit institutions*

The PPP Law should have provisions for responsible credit institutions as follows:

- The loan amount is in the range of 80-90% of the capital payable to the supplier of materials, equipment, etc. included in the project and the banks must be responsible for the authenticity of those documents.

- Competent state agency (PPP Board), independent monitoring consultant, coordinate with the banks to confirm that those loans are brought to the construction.

### **4.3.5. Improve the investment environment for PPP projects**

#### *4.3.5.1. Improve investment environment*

Ensure an open investment and business environment with fair and transparent competition, shortening the time to resolve administrative procedures, creating, strengthening and enhancing business trust.

Commit to strictly complying with the signed contract, ensuring the rights and interests of the parties to the PPP agreement, reducing risks for investors regarding policy changes.

#### *4.3.5.2. Improve the investment management apparatus of the investment promotion unit*

Research and innovate the operating methods of investment promotion units in a professional manner, diversifying investment promotion. Switch from passively attracting investment to actively attracting investment projects.

#### *4.3.5.3. Support investors to resolve difficulties and problems*

Address feedback from businesses and investors on unfavorable conditions. The Long An Provincial People's Committee ensures a public and transparent process for handling tasks related to businesses and investors.

### **4.3.6. Complete PPP project risk management**

#### *1. Project implementation:*

- Identify possible objective and subjective risks.

- Analyze risks and identify responsible agencies.
- Monitor project implementation to early detect possible risks and develop timely treatment and prevention plans.

- Allocate agencies before finalizing the construction volume.

## 2. Project operations:

- Develop implementation procedures before exploitation.
- Risks occur during all stages including testing fee collection.
- Allocate technical and financial risks.
- Finalization of risks allocated to project finalization (table 4.1).

Table 4.1: Table for determining and allocating risk responsibilities

| No. | Risks | Causes    |            | Responsible subject |                        |                      | Solutions |                        |                          | Minutes of shared responsibility |
|-----|-------|-----------|------------|---------------------|------------------------|----------------------|-----------|------------------------|--------------------------|----------------------------------|
|     |       | Objective | Subjective | Investors           | Competent state agency | Joint responsibility | Investors | Competent state agency | % other responsibilities |                                  |
|     |       |           |            |                     |                        |                      |           |                        |                          |                                  |

Table 4.1 shows that if the state agency and the investor agree on the contract terms before signing, solutions are easier to implement.

## 4.4. Evaluate the scientificity and feasibility of the solutions

Each solution has its own objectives, but all aim to strengthen state management of PPP transport infrastructure investment projects.

Table 4.2: Results of assessing the scientificity and feasibility of solution groups

| Scientificity |                    |          | System of solutions to improve state management for investment projects using the public-private partnership method in building road traffic infrastructure in Long An province | Feasibility |                    |          |
|---------------|--------------------|----------|---|-------------|--------------------|----------|
| Medium        | Standard deviation | Priority |   | Medium      | Standard deviation | Priority |
| 3.62          | 0.934              | 1        | Complete the document system for managing PPP investment method   | 3.64        | 0.869              | 1        |
| 3.37          | 0.836              | 4        | Develop financial tools and financial control of PPP projects   | 3.46        | 0.850              | 3        |
| 3.30          | 0.804              | 5        | Improve the professional level and awareness of people participating in PPP   | 3.52        | 0.870              | 2        |
| 3.58          | 0.929              | 2        | Complete the content model and management method  | 3.34        | 0.826              | 4        |
| 3.47          | 0.832              | 3        | Improve the investment environment for PPP projects   | 3.32        | 0.776              | 5        |
| 3.18          | 0.816              | 6        | PPP project risk management   | 3.23        | 0.772              | 6        |
| <b>3.42</b>   |                    |          |   | <b>3.41</b> |                    |          |

Source: The author calculated based on survey results



## **CONCLUSIONS - RECOMMENDATIONS**

### **1. Conclusions**

The thesis has achieved some of the following research results:

- Systematize the theoretical, legal, and practical basis for state management of PPP road traffic infrastructure projects by provincial governments;

- Analyze and evaluate the current state management of PPP road infrastructure projects by the Long An People's Committee, highlighting limitations.

- Build models, scales and research hypotheses, identify 6 groups of factors affecting state management for PPP investment projects, through analysis of regression results:

$$QLNN DA PPP = 0.299*HTVB + 0.285*MHPT + 0.282*NLQL + 0.159*QLTC + 0.121*MTĐT + 0.089*QLRR$$

- Propose six scientific and feasible solutions to strengthen state management of PPP road infrastructure projects, including:

- + Building guiding documents of Long An province on PPP investment activities applied to road traffic infrastructure construction;

- + Building a state management model of Long An People's Committee for PPP road traffic infrastructure investment projects;

- + Training, raising awareness and expertise of human resources in PPP project management;

- + Financial control of PPP projects in road traffic infrastructure;

- + Improve the investment environment for PPP projects;

- + Complete PPP project risk management.

### **2. Recommendations**

In order to increase the attractiveness of PPP investment, the author recommends:

- (1) Improve central-level policies and laws for PPP projects.

- (2) Strengthen state management functions for road transport infrastructure PPP projects at all levels

Build a model in Figure 4.7 to unify central to local as per vertical sectors; promoting the central advisory and guiding role to localities.

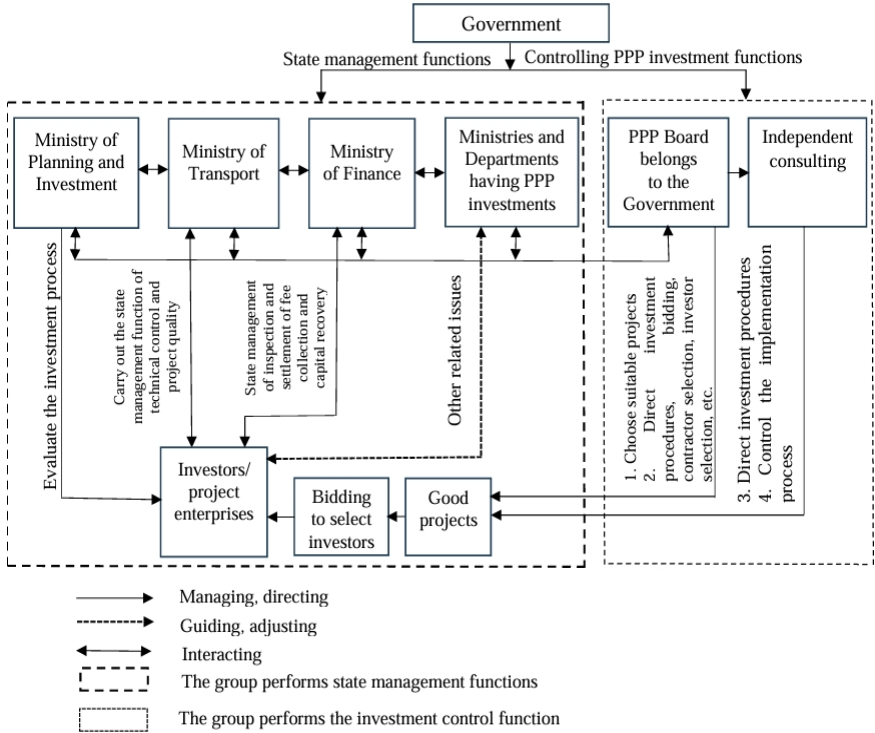


Figure 4.7: Proposed model of state management at central level

## LIST OF PUBLISHED SCIENTIFIC WORKS RELATED TO THE THESIS

### Vietnamese

1. Acceptance report on Long An provincial-level scientific project (2022), ***“Proposed state management model to enhance the ability to control investment in the form of public-private partnership - applied to BOT contracts of road traffic infrastructure in Long An province”***, project leader Dang Hoang Tuan.
2. Dang Hoang Tuan, Le Khanh Linh (2024), ***“Evaluating the investment efficiency of Vietnam’s Eastern Expressway projects and the application of the BOT method from 2017 to present”***, Journal of Economics and Projection Newspaper, Institute of Development Strategy - Ministry of Planning and Investment, May 2024, e-ISSN: 2734-9365.

### Tiếng Anh

3. Le Manh Tuong, Le Hoai Linh, Dang Hoang Tuan, Le Phi Vu (2021), ***Assessment on Vietnam’s Transport Infrastructure Development Investment under the mode of Public-Private Partnership - Proposing Solutions***, International Journal of Scientific Research in Civil Engineering, September-October-2021, 5 (5) : 156-163.
4. Le Manh Tuong, Le Hoai Linh, Dang Hoang Tuan, Le Phi Vu (2022), ***The Transport Infrastructure Investment in form of Public-Private Partnership in Vietnam - Current Situations and Recommendations***, International Journal of Engineering Research & Technology (IJERT), ISSN: 2278-0181, Vol. 11, Issue 05, May – 2022, 374-379.
5. Tuan Hoang Dang, Linh Hoai Le, Khuyen Hoang Nguyen, Vu Phi Le, Tuong Manh Le (2022), ***Solution to complete state management for road traffic in frastructure investment in BOT form***, International Journal of Scientific Research in Science, Engineering and Technology, July-August-2022, 9 (4) : 361-380.
6. Tuan Hoang Dang, Linh Hoai Le, Vu Phi Le, Tuong Manh Le, Khuyen Hoang Nguyen, Tuan Anh Nguyen (2023), ***Identifying Factors Affecting Investment Control In Form Of Public - Private Partnerships For Road Traffic Infrastructure***, International Journal of Advanced and Applied Sciences, 10(1) 2023, Pages: 144-156.