MINISTRY OF NATURAL RESOURCES AND ENVIRONMENT
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RESEARCH ON THE SCIENTIFIC BASIS OF PUBLIC-PRIVATE PARTNERSHIP IN RESPONSE TO CLIMATE CHANGE IN VIETNAM

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INTRODUCTION

1. The urgency of the topic

In the present period, climate change response is an issue that attracts interest from society. However, due to the economic conditions of the country, there are many difficulties, as well as budgets and management experience limitations. Public-private partnership (PPP) is considered an indispensable solution to reduce the budget burden and strengthen the efficiency of climate change response in Vietnam.

The promotion of the PPP method in response to climate change is considered an effective resource for mobilizing financial resources, management, and technology from the private sector. However, considering today's market economy and international integration, PPP is still a new and urgent topic in terms of scientific, practical, and institutional policy, especially when applied in response to climate change.

Therefore, the choosing of the topic: *"Research on the scientific basis of public-private partnership in response to climate change in Vietnam"* as the Ph.D. thesis will provide both reasoning and practicality.

2. Research objectives

General Objective: To establish a scientific and practical basis to promote public-private partnerships in response to climate change in Vietnam.

Specific objectives:

- Build scientific arguments for public-private partnership in response to climate change in Vietnam;
- Evaluate the opportunities, challenges for the State, private sector, and stakeholders when participating in public-private partnership in response to climate change in Vietnam;

- Propose arguments for building a policy framework for public-private partnership in response to climate change in Vietnam until 2030 and foresee 2050;

3. Audience and research scope

+ Research subjects: The thesis studies theoretical and practical issues in promoting public-private partnership in response to climate change in Vietnam.

+ Scope of research:

About space: Research the mobilization of funds in addition to budget at several climate change response projects in Vietnam.

Time-wise: The figures and capital mobilization situation of climate change response projects since the first project was started construction to date and recommendations for subsequent years.

Content-wise: The thesis does not go into the study of borrowing funds from commercial banks, which focuses solely on the research of capital mobilization in forms of partnership between the State and PPP investors such as BOT, BTO, BT.

4. Defended theses

1) The thesis has developed a theoretical framework to assess the characteristics and roles of the State, the private sector, and stakeholders in public-private partnerships in response to climate change.

2) The thesis has proposed and applied the criteria for assessing the conditions for implementing public-private partnership contracts in the context of climate change for Vietnam.

3) Based on domestic and international research, the thesis has developed and applied the process to identify factors assessing the need to participate in public-private partnership in responding to climate change in accordance with Vietnamese conditions.

4) Proposed solution framework based on solid scientific arguments contributing to promoting public-private cooperation policy in response to climate change in Vietnam.

5. Scientific and practical significance

The scientific significance: the results of the thesis will expand and complete the methodology as well as the methods of PPP research in responding to climate change in Vietnam.

Practical significance: The results will determine the needs of the state, the private sector and the stakeholders, the opportunities and challenges that have been clarified in the thesis will contribute positively to the orientation of State policies to promote public-private partnership in response to climate change in Vietnam; The outcome of the thesis is a useful reference for environmental resource management.

6. New contributions from the thesis

- The theory has developed a theoretical framework to assess the characteristics and roles of the State, the private sector, and stakeholders in public-private partnerships in response to climate change.

- The thesis has proposed and applied the criteria for assessing the conditions for implementing public-private partnership contracts in the context of climate change for Vietnam.

- Based on domestic and international research, the thesis has developed and applied a process to identify factors assessing the need to participate in public-private cooperation in response to climate change in accordance with Vietnamese conditions.

- Proposed a solution framework based on solid scientific arguments to promote public-private partnership policies in response to climate change in Vietnam.

7. Structure of thesis

In addition to the introduction, conclusion and petitions, the thesis is arranged in five chapters:

Chapter 1: Overview of studies relating to public-private partnership in response to climate change

Chapter 2: Research methods and data used

Chapter 3: Theoretical and practical basis for public-private partnership in response to climate change

Chapter 4: Current conditions of public-private partnership in response to climate change in Vietnam

Chapter 5: Perspectives and solutions to foster public-private partnership in response to climate change in Vietnam

CHAPTER 1: OVERVIEW OF STUDIES RELATING TO PUBLIC-PRIVATE PARTNERSHIP IN RESPONSE TO CLIMATE CHANGE

1.1. Overview of the situation of foreign studies

Overseas studies have provided a general view of public-private partnership; theoretical analysis of concepts, roles, and experiences of implementing public-private partnership on areas of socio-economic life. It is an important secondary resource that helps shape the overall view and build the theoretical framework of public-private partnership in Vietnam. Additionally, these studies have evoked many new and useful approaches to research implementation of public-private partnership in Vietnam in response to climate change.

1.2. Overview of the domestic research situation

The study of the restructuring of the social function process of our state in current economic conditions and international integration, the organizational model, and public service supply activities, which have mentioned the need to expand private involvement in the provision of public service.

The research on investment in infrastructure development, which refers to the need to encourage private participation in investing in the development of infrastructure and climate change response.

Thus, public-private partnership has and will contribute positively to quantity-quality improvement and initially while timely address the high demands for public services of the people, and the urgent need for infrastructure for socio-economic development. In order to promote public-private partnership, certain exisitng problems need to be addressed, such as institutional, policy, information transparency and financial instruments, risk-sharing issues, inspection and supervision mechanisms of competent state agencies.

1.3. Conclusions drawn from the research overview

The above research overview shows that every work has positive contributions to reasoning and practicality on different approaches, with different subjects, scope, and time of the study. These are useful pieces of information, serving as an important basis for the implementation of the research's direction. However, these studies have yet to be considered in a uniform correction:

- The current issue of PPP in Vietnam has been mentioned in many studies. However, the PPP in response to climate change has not yet clarified the role of the State, the private sector, and its stakeholders. The factors affecting the PPP in response to climate change are still unclear.

- A model of how to mobilize the capital most effectively for the implementation of the project response to climate change is not yet available, especially in Vietnam when the policy framework is still limited.

- The evaluation and selection of PPP projects in response to climate change has not yet been formed, there are no clear sets of criteria. Therefore, choosing to prioritize PPP projects in response to climate change to receive the state's incentives is not yet clear;

- Have not yet built the key factors to assess the needs of the state, the private sector and the stakeholders to promote PPP in the context of climate change.

- The solutions to promote PPP are still not synchronized, especially for PPP projects in response to the climate change is not explicitly mentioned. Therefore, the policy framework and policy framework system should be investigated in order to promote PPP in general and PPP in the context of particular climate change.

These are content that should be further added, clarified, and perfected in both theoretical and practical ways, especially for investment projects that respond to climate change in the form of PPP in terms of Vietnam.

CHAPTER 2: RESEARCH METHODS AND DATA USED

To implement the thesis, the researcher used four approaches which are a multidisciplinary approach, a systematic approach, a historical approach, and sustainable development. These are the main approaches to helping the researcher get a general, synchronized, and comprehensive look at the issues. Additionally, the methods used by researchers in the research process include collecting statistical synthesis of documents method, expert method, interview method, statistical method, surveying the need for public-private partnership in response to climate change method. The approaches, methods, and data used in the research will be used to analyze, evaluate, and calculate in the following chapters of the thesis.

CHAPTER 3: THEORETICAL AND PRACTICAL BASIS FOR PUBLIC-PRIVATE PARTNERSHIP IN RESPONSE TO CLIMATE CHANGE

3.1. Characteristics of public-private partnership

Some features of the PPP include: ensuring the obligations and rights between the parties harmoniously; The involvement of the State; Private investors need to mobilize funds from those funded by organizations; PPP is not private.

3.2. Benefits, opportunities, risks, and challenges of PPP

Benefit: In terms of benefits, the adoption of the PPP model has three motivations: (1) Attract private capital (often supplementing the State capital or releasing State capital for use on other needs); (2) Increase productivity, effective utilization of resources and quality of supply services; (3) Reform the fields through the re-allocation of roles, engines and accountability.

Opportunity: Due to the request for the benefit of investment funds/investors find new investment channels after the crisis. ODA donors

propose many solutions to create an opportunity for PPP deployments such as technical assistance for PPP development, the establishment of PPP development funds, considering ODA funding more incentives, participating in first PPP projects when the market has no echo.

The risk of PPP deployments: Besides the obvious benefits and opportunities, there are also many potential risks such as monetary risk, construction risk, financial risk, policy risk, and legal.

PPP implementation challenges: lack of coordination among state agencies; Influence of interest groups; hierarchy when insufficient capacity; Political determination for PPP implementation; Clearance; The project is sufficiently attractive to investors; Create trust for investors; Ensuring the rights of users of the service; Anxieties over lack of control.

3.3. PPP forms in response to climate change

3.3.1. Characteristics of PPP forms in response to climate change

The characteristics of PPP in response to climate change comes from the nature of climate change response projects including PPP in response to climate change as a collaboration between the state and large investors, towards long-term benefits and patience pursuit project; Investors participating in the PPP in response to climate change should have large capital mobilization capacity from donors; Project managers should have very high management capacities; Economic efficiency for investors is often not high; Risk both political, economic, social, technological and natural risks, including many risks of force majeure as the risk of political conditions and policies are unstable.

3.3.2. Roles and functions of the State in promoting public-private partnership in response to climate change

The role of the State is very important, showing the following 4 roles: (1) initiating public-private cooperation; (2) partners in PPP contracts;

(3) Supporting private investors and (4) managing the development of PPP.

The basic functions of the state management for investment in the form of PPP in the response to climate change project include: strategic construction, planning, project development plan in response to climate change; Building policy framework, provisions for PPP forms in Climate change response project; Build a legal framework for the PPP form; Construction and operation of PPP management machines and human resource development; Monitoring and evaluation of investments in the form of PPP in climate change response project.

3.3.3. Roles and capacities needed from private sector investments in the form of PPP response to climate change

The role of the private sector in the response to climate change project in PPP form: Investors seeking profit and new opportunities; Construction of the project in response to climate change; Service provider.

In order to successfully implement PPP in addition to strong accountability and support from levels of management forms, units and organizations are also required to provide the tools and capacities needed to achieve success when participating in projects including: professional capability; Financial capability; Relationship capacity; Management capacity.

3.3.4. Role of stakeholders promoting PPP in response to climate change

The stakeholder's role for the boost of PPP includes: the role of the user of the service; The role of capital funding organizations; The role of training organizations and human resource development; The role of development support organizations.

CHAPTER 4: CURRENT CONDITIONS OF PUBLIC-PRIVATE PARTNERSHIP IN RESPONSE TO CLIMATE CHANGE IN VIETNAM

4.1. Identify PPP opportunities from current investment status in response to climate change

The institutional construction of ODA funds as well as mobilizing resources from outside and using a rhythmic combination to respond to emerging issues such as climate change has not yet been met.

The state capital budget, the official ODA support, resources from international NGOs and enterprises in response to climate change, evaluate the mobilization of resources for climate change.

Promising areas such as renewable energy, smart urban, ecosystem friendliness, intelligent traffic, work, and adaptation solutions, or increase the ability to adapt to climate change.

4.2. Assessing the status of certain factors and conditions to ensure public-private partnership in response to climate change

4.2.1. State legal system and policy mechanisms

Investment promotion policy: survey of business opinion on the "Investment promotion policy for PPP response to climate change project is reasonable", up to 35.48% disagree, 6.45% are highly disagree and 1.61% completely disagree with this opinion (average score of 3.58)

Fiscal policy: Survey of business opinion on "fiscal policy for the PPP project responding to climate change is reasonable", the average evaluation of the business is 3.35, which has up to 38.71% disagree, 11.29% strongly disagree and 3.23% completely disagree with this opinion.

Land Policy: Corporate Survey on the "Land Policy for the PPP response to climate change project is reasonable", an average rating of

3.66, with up to 33.87% disagree, 4.84% strongly disagree and 1.61% completely disagree with this opinion.

Environmental policy: Survey of corporate opinion on the "Environmental Policy for PPP response to climate change project is reasonable", the average rating of the business is 4.66, which has 1.61% completely disagree, 6.45% disagree, 24.19% agree, 59.68% highly agree and 8.06% completely agree with this opinion.

4.2.2. Capital Funding organization

In the last time, funding activities for PPP projects were carried out by various funding organizations: from domestic and foreign commercial banks (BIDV, Japan International Cooperation Bank...), from international development banks (ADB, WB...), UK International Development Fund (DFID) in Vietnam, The EDCF Fund (Economic Development Cooperation Fund), the ICDF Foundation (Taiwan International Cooperation Development Fund) ... In the years to come, in order to promote the project in the form of PPP State Vietnam will promote the operation of supporting funds such as the PDF Fund (established by the State with the funding from development partners to prepare PPP projects in Vietnam), the financial Deficit Compensation fund for the project (VGF)... Financial institutions not only present the role in the formation of projects, funding capital when conducting projects in the form of PPP but also participate in monitoring the feasibility of the project as well as monitoring the financial capacity of the loan units and conducting project construction.

4.3. Assessing factors that impact the need for public-private partnership in response to climate change

4.3.1. Scale assessment and adjustment - Pilot testing (n=36)

The test questionnaire consists of 40 questions that are used with 36 research subjects. The 40 questions are sorted in a random order, reverse-

intent questions are used to check the reliability of the respondents and converge on 05 groups according to topics: profits, legal frameworks, macroeconomics, risk-sharing, and partner search.

The Reliability Statistics method and the statistical method of correlation between each question with all the remaining questions in the group (Item-Total Statistics) are used to verify the reliability of the questionnaire before formal use in the study.

A scale adjustment assessment result shows that all targets are satisfactory with the Alpha Cronback index of the scales both >. 700 and Corrected Item-Total Correlation all >. 300. There are 09 questions in the test questionnaire that are LN4, LN9, LN10, KTVM06, KPL05, KPL06, RR03, RR05, DT04 eliminated from the topic's formal research questionnaire.

The findings of the discovery factors from observations were retained, with 06 factors being introduced from observation variables in which, the factors analyzed were consistent with the factors given from the theory. The test factor analysis is accepted with high reliability, so it is possible to affirm, 06 factors that are given in the research model are appropriate.

4.3.2. Formal study

The survey results show that most investors do not want to participate: 1.33% of investors are fully willing, 4.67% willing to invest, 12.67% have a willingness, 16% have no comments, 48.67% are somewhat unwilling, 14.67% are not available, and 2% are completely unwilling. The survey results are suitable for current investment status.

4.3.3. Testing the official survey scale

Measurement reliability: The results of the analysis indicate that the scales have no observed variables removed during the simultaneous inspection of the Cronbach-alpha coefficient of the scales are quite high

value, on 0.8, this can confirm that the observed variables have performed well in terms of the concept of the scale, therefore, these observed variables are suitable to represent the scales in the research model.

The observed variables remaining after the scale inspection process are conducted by the measurement of EFA analysis, which aims to test the convergence of the survey scales, using the Promax rotation method. The analysis result for the variable group shows the KMO coefficient by 0903, the Bartlet audit for the coefficient Sig = 0.000 suggests, the statistical significance of the analysis result is ensured and the conclusion of the factor analysis is to ensure reliability.

Factor Affirmation: The indicators measure the relevance of the model shows, the value of the Chi-square/df = 1.337 < 3, TLI = 0.982 > 0.9, CFI = 0.984 > 0.9, GFI = 0.921 > 0.9, RMSEA coefficient = 0.028 < 0.08...

The indicators measure the relevance of the model shown, the value of the Chi-square/df = 1.337 < 3, TLI = 0.982 > 0.9, CFI = 0.984 > 0.9, GFI = 0.921 > 0.9, RMSEA = 0.028 < 0.08, thus the model has a market suit.

Table 4.8: Synthesis of the correlation coefficient between factors

Correlated			Estimate	SE	CR	P-Value
KT_VM	<-->	Loi_Nhuan	0.139	0.048	18.029	0.000
KT_VM	<-->	Dau_Tu	0.366	0.045	14.127	0.000
KT_VM	<-->	Khung_PL	-0.097	0.048	22.856	0.000
KT_VM	<-->	Rui_Ro	-0.138	0.048	23.826	0.000

KT_VM	<-->	Doi_Tac	0.235	0.047	16.320	0.000
Loi_Nhuan	<-->	Dau_Tu	0.495	0.042	12.052	0.000
Loi_Nhuan	<-->	Khung_PL	-0.016	0.048	21.071	0.000
Loi_Nhuan	<-->	Rui_Ro	0.198	0.047	16.967	0.000
Loi_Nhuan	<-->	Doi_Tac	-0.237	0.047	26.403	0.000
Dau_Tu	<-->	Khung_PL	0.386	0.044	13.802	0.000
Dau_Tu	<-->	Rui_Ro	0.188	0.047	17.144	0.000
Dau_Tu	<-->	Doi_Tac	0.417	0.044	13.301	0.000
Khung_PL	<-->	Rui_Ro	-0.127	0.048	23.561	0.000
Khung_PL	<-->	Doi_Tac	0.181	0.047	17.268	0.000
Rui_Ro	<-->	Doi_Tac	-0.222	0.047	25.988	0.000

Based on the results of the study (table 3.6) We see that the correlation coefficient of each conceptual pair with the standard deviation of the scales is different from 1 in reliability 95%, reaching the statistical significance (all P values are equal to 0.000). As a result, observations used to measure the concepts of research have achieved a distinct value.

Table 4.9: Synthesis of aggregate reliability and quoting variance of the scales

Factors	Composite reliability	Total Variance Quoted
Macroeconomic	0.923	0.707
Profit	0.897	0.593
Investment willingness	0.881	0.648

Legal framework	0.915	0.682
Risk	0.916	0.645
Partner	0.931	0.694

4.3.4 Testing the research model

Model analysis

The indicators measure the relevance of the model shown, the value of the read-square/df = 1.337 < 3, TLI = 0982, CFI = 0984, GFI = 0921, RMSEA factor = 0.028 < 0.08, hence the model has a market suit.

Table 4.10: Synthesis of the impact factor of factors in the unstandardized model

			Estimate	S.E.	C.R.	P
Dau_Tu	<---	Loi_Nhuan	0.208	0.024	9.725	***
Dau_Tu	<---	Khung_PL	0.182	0.023	8.689	***
Dau_Tu	<---	KT_VM	0.186	0.021	8.014	***
Dau_Tu	<---	Rui_Ro	0.151	0.025	6.213	***
Dau_Tu	<---	Doi_Tac	0.221	0.024	9.575	***

Table 4.11: Synthesis of the impact factor of the factors in the standardized model

			Estimate
Dau_Tu	<---	Loi_Nhuan	0.420
Dau_Tu	<---	Khung_PL	0.359
Dau_Tu	<---	KT_VM	0.324
Dau_Tu	<---	Rui_Ro	0.253
Dau_Tu	<---	Doi_Tac	0.400

The results of the analysis also indicated that the variation of variables in the model could be explained by 63% the variation of the investor's choice of readiness, indicating that the model is suitable for use when studying the factors affecting the investor's willingness to invest.

Model Inspection with model size 700

With the survey model size of 432 people, the bootstrap inspection will be executed by the author with a sample size of 700, with additional samples being randomly taken from the original set of 432 examiners.

Table 4.12: Influence of variables in boostrap model

			Estimate	S.E.	C.R.	P	Label
Dau_Tu	<--	Loi_Nhuan	0.203	0.021	9.718	***	
Dau_Tu	<--	Khung_PL	0.189	0.022	8.699	***	
Dau_Tu	<--	KT_VM	0.183	0.023	8.011	***	
Dau_Tu	<--	Rui_Ro	0.149	0.024	6.224	***	
Dau_Tu	<--	Doi_Tac	0.217	0.023	9.584	***	

Table 4.13: Differences between models with original data and boostrap models

Parameter			SE	SE-SE	Mean	Bias	SE-Bia
Dau_Tu	<--	Loi_Nhuan	0.019	0.001	0.204	0.001	0.001
Dau_Tu	<--	Khung_PL	0.020	0.001	0.190	0.001	0.001
Dau_Tu	<--	KT_VM	0.023	0.001	0.184	0.001	0.001
Dau_Tu	<--	Rui_Ro	0.026	0.001	0.149	0.001	0.001
Dau_Tu	<--	Doi_Tac	0.019	0.001	0.217	0.001	0.001

The results showed that the coefficient in the model had no major difference compared to the model identified with the model size of 432.

This suggests that the model remains true to the model size by 700 and the estimates in the model are reliably possible.

4.4. General assessment of the practice of public-private partnership in response to climate change

4.4.1. Positive results

The public cooperation in responding to climate change in Viet Nam has achieved substantial, specific achievements: There has been a change in the private sector in Vietnam; Initially built the legal basis for the implementation of the project on public-private partnership; The level of participation of the private sector in response to climate change in Vietnam is increasing; Some of the conditions for public-private partnership have initially been consistent with international practice and Vietnamese practices.

4.4.2. Limitations

The public investment in coping with climate change in Vietnam is more restrictive and obstructed. The basic limitations include: lack of tools and publicity, transparency in the response to private participation in climate change engagement projects. Risk diversity but does not have the proper risk division mechanism; Many conditions impede the involvement of the private sector in Viet Nam's response to climate change projects; The legal system is lacking in sync and gaps; Public investment projects in the field of climate change response are relatively limited, small scale, monotonous forms; Foreign private participation is less.

4.4.3. Causes for limitations

The above limitations have many causes, some of which are mainly: awareness of new private cooperation in Vietnam; Lack of strategy on public-private partnership in Vietnam; Conditions for ensuring public-private partnership in the field of climate change in response to missing

and not feasible; The capacity of the subject to participate in public-private partnership is weak.

CHAPTER 5: PERSPECTIVES AND SOLUTIONS TO FOSTER PUBLIC-PRIVATE PARTNERSHIP IN RESPONSE TO CLIMATE CHANGE IN VIETNAM

5.1. Viewpoints that foster public-private partnership in response to climate change

The viewpoints that promote PPP in response to climate change focus on the following: adaptation of climate change is to enhance the resilience and mitigation to contribute to global solutions; Focus on the organization and better arrangement of financial investments; Promote the green credit program, especially in order to build mechanisms and incentives policy in mobilizing financial resources; The policy to attract external resources and ODA funds should be redirected; Strategies, policies, and financial commitments based on analysis and scientific research will be a tool to attract significant sources of ODA and external resources; Climate change is a complex development problem that requires a holistic approach to the State; Continue integrating and enhancing the implementation of the National Action Program for the climate change response to 2006-2010 through integration into the socio-economic development plan; The national target program coping with the climate change needs to be updated in response to changes in response to climate change requests; Promotes investment from economic components, integration into ODA and foreign direct investment for sustainable infrastructure development and land management.

5.2. Solutions to promote public-private partnership in climate change response in Vietnam

5.2.1. Solutions to complete the legal corridor and conditions to apply the form of capital mobilization in addition to the budget building project response to climate change in Vietnam

To create a solid legal base for the private sector participating in the PPP project should promote the drafting work to soon be issued investment law in the form of public-private partnership (PPP). To develop and improve policy and legal corridors to mobilize funds effectively. Policies and solutions should meet the following requirements: public transparency in rights and obligations; About the specific regulation of the project; Dispute resolution; Strong commitments of the State for the form of PPP investments; Strengthen the state's support for investment projects to build up project response to climate change in the form of PPP.

5.2.2. Solutions to strengthen the mobilization and policy mechanisms for mobilizing investment in the development of climate change response project in Vietnam

The solution team aims to implement the project to build a project for climate change response: institutional, policy; Solutions to improve investment efficiency; The State needs to support investors to participate in the project; Building State support tools such as construction assistance or capital assistance, operational prices, minimum revenue guarantee.

5.2.3. Completing a set of criteria for evaluation of PPP project in climate change response project

Basic criteria for defining a project: describing the project; The Economic efficiency award; The team performs projects and organizational capacities of competent State agencies; Demand and revenue estimates; The project's proposed innovation; Estimate the participation of the State; Types of risks that may occur for the project; Legal frameworks; The proposed timeline for the project.

5.2.4 Completing a set of criteria for evaluation of conditions for implementing public-private partnership in response to climate change

Continue to improve the evaluation criteria of the conditions of implementation of the project-private-investment in response to climate change, which should be more detailed groups of criteria: The condition group of the three investment environment consists of the following component conditions; The legal environmental conditions group consists of the following component conditions; The State capacity condition group includes the following component conditions.

5.2.5. Improving the content of monitoring and evaluation in PPP form in the Climate Change response project

The investor should be supervised the implementation of the responsibility of the authorized CQNN with the following contents: (1) Monitoring the progress of the clearance belongs to the state's duties as compared to the specified contract; (2) Monitoring of progress, the state's disbursement capital (if any) for investment for road project in comparison to the forecast; (3) supervise the implementation of indicators in comparison with the expectation level to determine the risk of principal and propose the transfer of risk to the State, for example, the level of participation in traffic reduced compared to the plan can lead to risks that may require the mechanism to pay the minimum traffic level of the State.

CONCLUSION AND PETITIONS

A. Conclusion

Research on the scientific basis of private cooperation in response to climate change for Vietnam and scientific significance, and meaningful practical services for the planning of financial policies, economic response to climate change. In the context of climate change, when disasters such as storms, floods, water surges, salinity intrusion, and extreme weather phenomena influence on a clear focus on socio-economic activities. The practice shows that when state resources are limited, PPP is increasingly developing an important role in mobilizing social resources to develop the economic sustainability of the country.

Previous studies of PPP helped to understand the characteristics and roles of the State and enterprise, which have now been specifically obtained by the legal PPP documents in Vietnam. However, applicable practices still have many barriers that make it difficult for businesses to participate in PPP, especially foreign-invested enterprises. In the context of climate change, when the PPP risk is at risk of a growing day, finding out the scientific arguments, practices, and lessons learned about these countries will be the basis for Vietnam to make policy recommendations on PPP appropriate to provide legitimate interests between the State and the investor.

From the issues of reasoning, the thesis clarified the characteristics ensuring the harmonious obligations and interests between the parties, the participation of the state, private investors need to mobilize capital from the capital funding organizations, the PPP is not private.

The thesis also clarified the opportunities, risks, and challenges of the PPP. In particular, the benefits of the PPP will attract private investment resources, increase productivity and resource efficiency and issue reform areas through the elimination of possible conflicts. A series of risks when

implementing PPP may be encountered is also clarified in the thesis as a matter of risk of monetary, policy, financial, construction. In addition, the series of PPP implementation challenges are aggregated on the basis of international and Vietnamese experience.

The thesis clarified the PPP forms in the context of climate change, in which a number of features such as the project lasted from 20-30 years, 70-80% of private equity. The development of PPP forms in response to climate change should be seen at the level of the state's role in promoting PPP, the role of the private sector in the search for cooperative cooperation, and stakeholders in maintaining benefits and promoting PPP policies. On the basis of the PPP theory and practices in the world and in the country, the thesis has built a set of criteria for implementing the conditions of public-private partnership project in the context of climate change in Vietnam. At the same time, with the proposed set of criteria, the thesis conducts a practical assay through the investigation of figures, assessment tests and verify the criteria for the evaluation of the criteria for different conditions including the directive for the investment environment, legal environment, the capacity of the State.

The reasoning and practicality of the PPP are based on needs between the state, the private, and the stakeholders. The thesis has given the research process needs to evaluate the needs of public-private partnership in the enterprise to respond to climate change in Vietnam. In it, built the impact factor set, modeling factor impact, audit scale survey, testing the research model. The factors that are inspected through the reliability and convergence of the scale thereby show that the element set is built for evaluation that ensures requirements with the Cronbach-alpha coefficient and the KMO coefficient are approximately or greater than 0.9, the variance in 66,745, the Eigenvalues coefficient of the 6th factor of 1,008, the factor load coefficient of each observation variable representing each

of the factors is greater than 0.5. This suggests that the factor given from the theoretical model has a high convergence.

On the basis of what has been achieved and limited in the PPP response to climate change in Vietnam, the thesis has launched 5 solutions to promote the PPP focused on the legal framework, investment mobilization Policy, the PPP project evaluation criteria, the PPP monitoring, and investment evaluation. These are total transgender solutions to promote PPP in a sustainable way, which benefits both the state and the enterprise when participating in the PPP.

B. Petitions

Research on the scientific basis and theoretical practice of PPP for Vietnam has been mentioned in the thesis based on solid bases. Hence, this is the reference to ensure high reliability for subsequent research on PPP.

The Department of Statistical factors for surveying PPP demand in response to climate change is audited, judging through a proposed procedure in the thesis as the basis for further research studies to survey the needs of PPP in various fields and aspects of PPP.

It should be carried out in a total way for solutions from the legal corridor to mobilize the involvement of the parties to strongly promote the PPP on the basis of a number of solutions that have been oriented in the thesis.

In the process of executing the thesis, due to the wide scope of research subjects, shortcomings are inevitable. Additionally, the survey was executed in a typical manner, therefore, in the practical process of applying the results to each sector or field, locals will need more specific and detailed assessments and research to ensure the objectivity in promoting PPP.

LIST OF PUBLISHED WORKS BY AUTHORS RELATING TO THE THESIS

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