

Public Financial Management in Vietnam: A Study for the Investment in Infrastructure Construction in Vietnam



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ABSTRACT: The topic of infrastructure investment is becoming more prominent, to enhance infrastructure quality and support economic and trade development, particularly in developing countries. However, there are still some obstacles that countries confront when investing in infrastructure construction in economic regions, most notably the issue of public financial management. As a result, this study investigates key elements influencing public financial management in the field of economic infrastructure-building investment in 11 provinces in the Red River Delta area. According to research findings, the three most influential variables in public financial management are (i) investment management, (ii) planning management, and (iii) supervision and inspection. Simultaneously, it highlights shortcomings in the public financial management process, presenting recommended remedies with the goal of effective, transparent, and sustainable development.

KEYWORDS: Infrastructure, public finance, infrastructure construction, Vietnam

1. INTRODUCTION

Financial management for public investment projects has been a topic of great interest recently. Public investment projects usually require large capital investments and have long investment periods. The ripple effects of public investment can last for hundreds of years. Therefore, financial management for these projects is essential to ensure effective investment, maximize project benefits, and avoid waste and corruption in financial management. According to macroeconomic theory, public investment will stimulate economic activity through short-term impacts on aggregate demand and increase the productivity of existing private capital (both physical and human). Public investment also encourages new private investment to take advantage of the higher productivity it generates, promoting economic growth (Barro, 1990; Turnovsky, 1997). Estache (2006), government investment accounted for 78% of total investment in economic infrastructure construction from 1994 to 2003. Therefore, it is important to focus on national-level infrastructure planning and construction to support commerce and the economy. There have been some empirical studies on the impact of infrastructure investment on economic growth and trade in developing countries. Among them, economic infrastructure construction is considered one of the decisive factors for international competitiveness, directly affecting the ability of countries to participate in international trade and compete for foreign direct investment (FDI). The remarkable growth of some developing countries in Asia, including newly emerging East Asian economies, in recent decades has been mainly supported by international trade expansion and infrastructure development (APEC Economic Committee 1997). However, their level of infrastructure development is still far behind that of industrialized economies. In Africa, the level of infrastructure development is even lower. From this, it can be seen that management for public investment projects is truly necessary, especially for developing countries or regions. It is necessary to strengthen infrastructure development, increase trade, and promote economic growth.

There are six economic-social zones in Vietnam, including (1) The North Central and Central Highlands Region, (2) The Red River Delta Region, (3) The North Central Coast and Central Coast Region, (4) The Central Highlands Region, (5) The Southeast Region, (6) The Mekong River Delta Region. The Red River Delta region consists of 11 provinces: Hanoi, Haiphong, Bac Ninh, Hai Duong, Quang Ninh, Vinh Phuc, Hung Yen, Ninh Binh, Ha Nam, Nam Dinh and Thai Binh. It is a region with a special position in terms of political and economic geography: Hanoi is the national political-administrative unit and a major center for culture, science, education, economics, and international trade. It has river mouths that connect with large seas to serve both the northern region of Vietnam and the western-southern regions of China, northern Laos, and Thailand. The Red River Delta region is a hub for trade by sea, rail, and air for the entire region, the country, and internationally. In addition to the most important seaports in the country such as Haiphong and Cai Lan ports, the Red River Delta region also has Noi Bai International Airport, national highways, and railways that connect other regions throughout the country and internationally. The Red River Delta region borders the East Sea and has a particularly important strategic position in terms of politics, economics, and national defense for the northern

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region of Vietnam to ASEAN and the Pacific region. From this it can be seen that developing economic infrastructure is a top priority for the Red River Delta region to respond promptly to current development trends, ensuring that it is a connecting area for trade not only between domestic provinces but also internationally with other countries. In addition, according to the GSO General Statistics Office, the proportion of GDP contribution of the Red River Delta region to the whole country increased from 27% in 2010 to nearly 30% in 2020. The average income per capita is more than 1.3 times higher than the national average. This region contributes nearly 33% of total national budget revenue with an average increase rate of 16.7% per year. The average GRDP per capita is about VND 274 million per person per year. In which industry and construction are still the key sectors, contributing about 47% to growth; services contribute 41%, product taxes minus subsidies 8.5%, and agriculture, forestry, and fish 3.5%. Therefore, it can be seen that the Red River Delta region plays a very important role in Vietnam's economic development, leading in most fields from economics, education, and culture and especially in building economic infrastructure.

The research objective is to evaluate the impact of factors on public financial management in the field of economic infrastructure construction for 11 provinces in the Red River Delta region of Vietnam. From the research results, the author expects to provide appropriate recommendations for public financial investment management policies for the Red River Delta region in particular and Vietnam in general in the coming period.

2. THEORETICAL BASIS

2.1. The content of public financial management in economic infrastructure investment At the beginning of the 20th century, Henri Fayol pointed out that all managers perform six functions: Forecasting - Planning - Organizing - Commanding - Coordinating - Controlling. Nowadays, most researchers agree that managers perform four basic functions: 1) Planning - establishing strategies and objectives, developing plans, and coordinating activities within the organization; 2) Organizing - identifying which tasks need to be performed, by whom, how to coordinate them, reporting mechanisms, and accountability; 3) Leading - encouraging and leading employees to achieve goals; 4) Controlling - reviewing activities to ensure that work is done according to plan.

The World Bank (2016) has proposed public financial management methods in public investment that fiscal policies can be designed to promote growth and development while maintaining macroeconomic stability. Some general principles should be applied: prioritizing cuts in public consumption over cuts in public investment and reallocating resources from less efficient uses to more efficient ones can help enhance long-term growth, rather than increasing supplementary revenue or borrowing to finance the same production expenditure.

Regarding the role of public financial management in economic infrastructure investment, Aschauer (1989) found that public investment has a strong positive impact on US output, and Furceri and Topalova (2016) found new evidence on the macroeconomic impact of public investment in 17 developed countries in the OECD. The World Bank (2016) also points out that public financial management is an important component of infrastructure investment and economic development. Improvements to enhance the effectiveness of public financial management in investment will contribute to improving the efficiency and performance of infrastructure investment as well as its contribution to achieving development goals. Analysis has shown that the quality of public investment management is correlated with public investment and growth outcomes; therefore, improving capital management mechanisms between national and local governments throughout the life cycle of an investment project can achieve significant benefits (OECD 2013). An IMF study using a scale to measure the difference between a country's efficiency and that of countries with the best operating efficiency has shown that in emerging markets, the average efficiency difference is 27%; in low-income countries, this rate is 40%. The difference becomes more pronounced for the worst-performing group, where more than half of accumulated public capital from public investment does not significantly contribute to providing quality infrastructure services.

Anand Rajaram and colleagues (2010) described eight key "must-have" features of an effective public financial management system for infrastructure construction: (1) investment guidance, project development, and preliminary screening; (2) formal project appraisal; (3) independent review; (4) project selection and budgeting; (5) project implementation; (6) project adjustment; (7) facility operation; and (8) project evaluation. In addition, the authors also encourage governments to conduct periodic self-assessments of their public investment system and redesign it to improve productivity. Dabla-Norris and colleagues (2012) proposed some new indicators to evaluate the effectiveness of public financial management through a four-step process: (1) initial project assessment, (2) project selection, (3) project implementation, and (4) project evaluation based on a survey in 71 countries with 40 low-income countries and 31 middle-income countries. The research results show that these indicators can be applied to evaluate public investment policies and compare countries with similar conditions, which is very suitable for countries interested in reforming and improving the efficiency of public investment.

With some important policy, the Vietnam Government has identified the following criteria for evaluating the effectiveness of investment projects:

- The degree of achievement of investment project objectives, as decided and approved in the investment decision.
- Compare the actual exploitation and operation indicators of the project with the corresponding indicators approved in the investment decision.

- Internal rate of return.
- Economic, social, and environmental impacts and other specific development objectives (including poverty reduction, gender equality, household policies, and priority groups).
- Measures to minimize negative impacts on society and the environment have been implemented.

2.2. *Factors affecting public financial management in economic infrastructure investment*

(1) **Natural condition**

Natural conditions including geographic location, terrain, climate, and natural resources are important factors affecting the economic development of a region, thereby determining the level of state budget expenditure (Bui Manh Cuong, 2012). Chidlow and Young's (2008) research has shown that geographic factors have a positive impact on encouraging effective capital investment in public areas in Poland. A location with favorable geographic conditions such as proximity to major economic centers or easy economic and social exchanges will have a significant impact on economic development, creating conditions for increased budget revenue. In addition, negative impacts from natural conditions such as frequent natural disasters and floods also increase state budget expenditures, especially for investment in construction, repair of embankments, flood prevention works, and costs for effective measures to ensure the quality of works. Thuy and Dat's (2018) research emphasizes that the natural conditions of the localities where investment projects are about to be implemented are factors affecting investment decisions for infrastructure development funded by the state budget in Vietnam. A locality with abundant natural resources will be a valuable asset of that locality. Natural conditions have a significant impact on the economic structure of a locality, especially the proportion of agricultural, forestry, and fishery sectors. Therefore, it affects the economic-cultural-social life of the locality.

(2) **Socio-Economic Environment**

The research of Thuy and Dat (2018) also simultaneously points out that the socio-economic environment affects the success or failure of projects. Public financial management is affected by the level of economic and social development of the region and the income level of the people. When the level of economic and social development and per capita income increase, the ability to mobilize the budget also increases, so national budget management is less likely to conflict between high spending needs and low income, for example: in low-income areas with economic development at the level. When awareness of compliance with laws and national policies of organizations and individuals is improved, the ability to use state budget funds of organizations and individuals receiving state budget funds increases, so the use of state budget funds will be more effective. As a result, the level of violations is lower. Conversely, when the level of economic development, and per capita income in the region is still low, the awareness of spending is not high, and there will be a tendency to rely on public investment. ... making public investment management more difficult and complex.

(3) **Administrative procedures and legal regulations related to capital management**

Administrative procedures and legal regulations related to public financial management in the process of capital management. These are the impact of legal documents regulating the activities of state agencies in the process of managing public funds. Specifically, these are documents that clarify the scope and purpose of public spending; regulations on the division of spending tasks and management of spending by government at all levels; regulations on the procedures, content, implementation, and settlement of budgets; regulations on the role of state agencies in the process of managing public funds and using budget funds. Functions, tasks, powers; legal regulations, principle regulations, system regulations, expenditure norms. These documents have a significant impact on the effectiveness of public financial management within a certain scope, so the state and local governments must issue appropriate documents according to the actual situation for effective public financial management.

Pham Minh Hoa (2017) also pointed out that to ensure that public investment activities are carried out effectively, there must be a strict, complete, rigorous, transparent, and open legal system. The author also pointed out that public investment activities are usually low mainly due to ineffective management work, which is mainly due to lack of coordination and strictness. This is also the source of corruption in public financial management in economic infrastructure investment. Therefore, the current legal system of the country, the constraints of sectors, and localities on organization, production, labor, environmental protection, social relations, and own regulations are legal norms and legal frameworks in this process. The more complete the system of legal documents is, the clearer the legal framework is, the more convenient it is for public financial management.

(4) **Personnel capacity**

Short and Kopp's (2005) research shows that human factors are an important factor that directly affects the quality of public financial management. Financial officials with high professional quality and awareness of using public funds will play an important role in collecting, processing information, and helping leaders make decisions. Making timely and correct decisions will avoid errors in using state funds and contribute to improving the effectiveness of public financial management. Conversely, when the level of knowledge, capacity, and experience of financial officials is still limited, accounting and financial expertise are lacking in responsibility, which will easily lead to violations, losses, and reduced effectiveness of national budget spending.

(5) Corruption in capital management in infrastructure construction

Construction, especially infrastructure construction, continues to be ranked as one of the most corrupt fields worldwide. Corruption in this field occurs in all stages from ensuring government contracts to providing infrastructure. Kenny’s (2007) research also points out that the major impacts of corruption in the infrastructure sector can lead to poor quality construction, labor safety limitations, and low profits for government infrastructure investments. There are several reasons for corruption in infrastructure construction, including lack of transparency and competition in the bidding process, arbitrary power of each official involved in contract awarding, financial auditing, and incomplete facts and enforcement capacity of management agencies (Kenny 2007; Dabla Norris et al., 2011). After analyzing by secondary data synthesis method, the study identified 5 factors that have a significant impact on public financial management for economic infrastructure construction. These factors include (1) Natural conditions, (2) Socioeconomic environment, (3) Administrative procedures and legal regulations related to capital management, (4) Personal capacity, and (5) Corruption in capital management in infrastructure construction.

3. RESEARCH METHODOLOGY

To serve the research purpose of the topic, primary data was collected through a survey. The primary data collection was carried out through expert methods and survey methods at small and medium-sized tourism businesses. Based on the qualitative research results, the study adjusted and supplemented the observation variables into the questionnaire to conduct quantitative research. After the questionnaire was designed and edited, a pilot survey was conducted on ten subjects from ten small and medium-sized businesses in the industry. After the trial investigation, misunderstandings in language use were eliminated and unreasonable observation variables were removed before conducting the formal study. The scales were preliminarily evaluated using Cronbach’s alpha reliability coefficient. The Cronbach’s alpha coefficient is used to eliminate inappropriate variables first. Variables with an item-total correlation coefficient less than 0.30 will be eliminated, and the standard for selecting a scale is when it has an Alpha reliability coefficient of 0.60 or higher (Nunnally and Bernstein, 1994). Finally, an official scale was obtained before conducting a large-scale survey with 300 samples, with 264 questionnaires received and 255 questionnaires received enough information for analysis (Figure 1).

Based on the research model and hypotheses, a scale is designed for each factor in the model, and a questionnaire is constructed. The preliminary survey includes two parts: general information about the respondents and a survey on public financial management. The questions focus on exploring the candidate’s evaluation of factors affecting public financial management in economic infrastructure investment. The scale used for quantitative questions is the Likert scale from 1-5 with 1 being Very Poor/Completely Disagree and 5 being Very Good/Completely Agree. The questions are then processed using Excel and imported into an SPSS file for analysis. Descriptive statistics are used to clarify the participants. Then, SPSS22 is used to analyze the impact of factors and conduct multiple analyses.

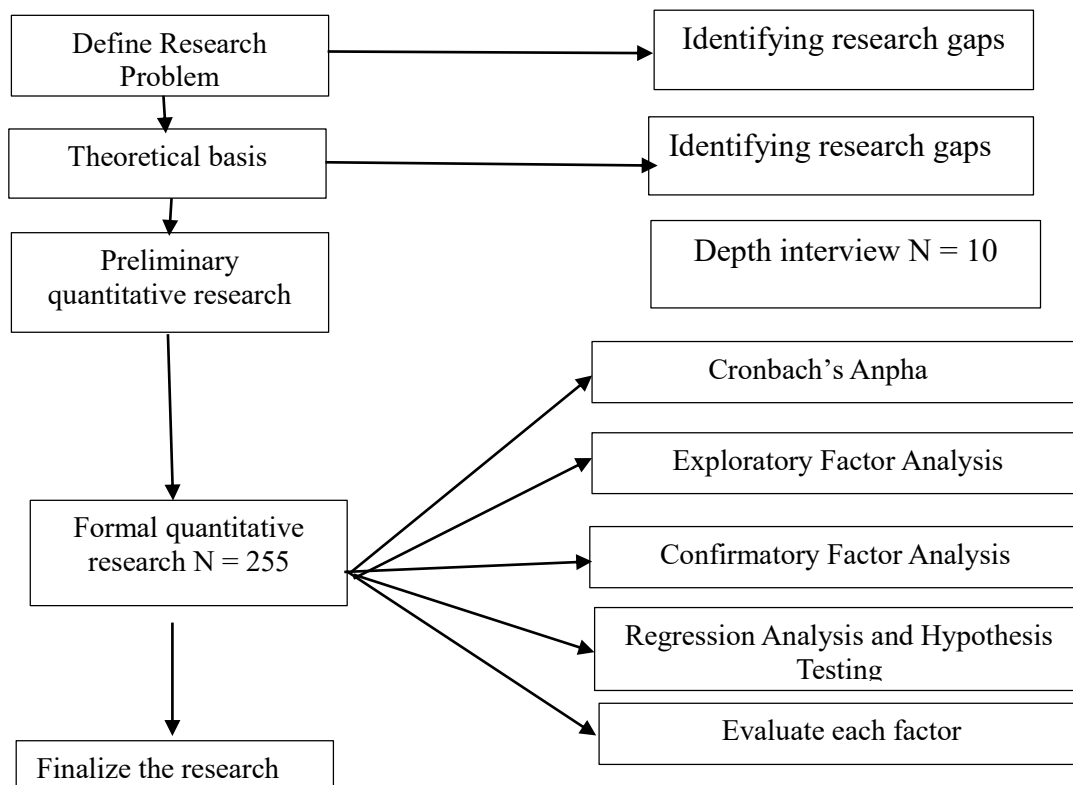


Figure 1. Research process, Source: Author

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After analyzing the theoretical basis of public financial management in economic infrastructure construction using the method of secondary data synthesis, the study identified several factors that have an impact on state management, including (1) Planning management; (2) Public investment appraisal; (3) Planning and allocation of public investment capital; (4) Tender management and appraisal; (5) Investment supervision, evaluation, and inspection. To evaluate the impact of variables on a specific variable, in this study, the impact of these factors on the current state of public financial management in economic infrastructure investment is analyzed using a factor analysis model. This is a statistical technique used to determine the basic structure of a relatively large set of variables and to explain these variables in terms of fewer underlying factors. It helps to investigate potential relationships between observed variables.

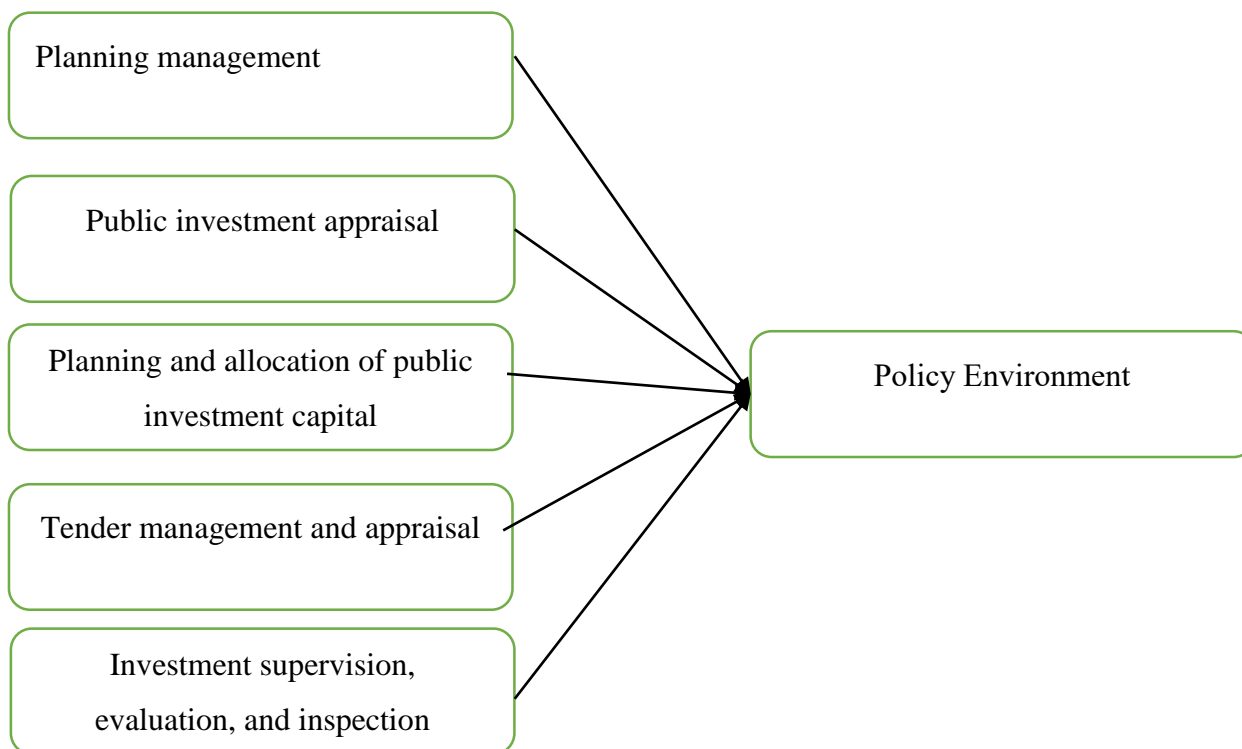


Figure 2. Propose Model

Source: *Author*

4. RESULTS

4.1. Reliability of scale evaluation

Evaluate the suitability of all factors in the questionnaire with reality by using SPSS software to test the Cronbach's Alpha (CA) coefficient for each group of observed variables belonging to different factor groups. If any factor has a Cronbach's Alpha coefficient less than 0.6, it will be removed from the research model (Peterson, 1994), and observed variables with a total correlation coefficient less than 0.3 are considered inappropriate variables and are also removed from the scale of factors (Nunnally and Burnstein, 1994). After removing a variable, the author will rerun the model for evaluation. This process will stop when all variables are deemed appropriate.

The details of the reliability analysis results through the Cronbach's Alpha coefficient are presented in the table below, which shows the Cronbach's Alpha coefficient of each group and the variables that meet the requirements.

Table 1. The reliability evaluation results of the scale

Rank	Symbol	Correlation coefficient	Cronbach's Alpha if remove a variable
(1) Factor "Planning management" Cronbach's Alpha = 0,819			
1	QLQH1	,650	,774
2	QLQH2	,684	,762
3	QLQH3	,822	,679
4	QLQH4	,464	,843

(2) Factor “Public investment appraisal” Cronbach’s Alpha = 0,876			
5	TQDT1	,624	,881
6	TDDT2	,755	,833
7	TDDT3	,852	,792
8	TDDT4	,717	,848
(3) Factor “Planning and allocation of public investment capital” Cronbach’s Alpha =0. 773			
9	PBDT1	,551	,729
10	PBDT2	,597	,713
11	PBDT3	,547	,730
12	PBDT4	,587	,717
13	PBDT5	,443	,764
(4) Factor “Tender management and appraisal” Cronbach’s Alpha = 0,885			
14	QLDT1	,686	,823
15	QLDT2	,646	,837
16	QLDT3	,746	,795
17	QLDT4	,722	,808
(5) Group factor “Investment supervision, evaluation, and inspection” Cronbach’s Alpha = 0,742			
18	GSKT1	,474	,757
19	GSKT2	,603	,614
20	GSKT3	,638	,569

Source: Author

After a certain number of iterations, the study obtained 20 observed variables that met the requirements for inclusion in the next stage of analysis - exploratory factor analysis (EFA). After being tested by Cronbach’s Alpha coefficient, 20 variables that meet the requirements will continue to be evaluated for reliability and the value of the scale by performing exploratory factor analysis EFA.

Testing the variance extracted by factors (% Cumulative variance): The results show that the total variance extracted (Total Variance Explained) and Cumulative % have a value of the cumulative variance of factors at 65.928% > 50% meeting the standard. From these quantities, the study concluded that 65.928% of changes in factors are explained by component measuring variables of Factor. The results are shown in the tables below.

Table 2. The results of KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.74
Bartlett's Test of Sphericity	Approx. Chi-Square	2,247,861
	Df	190
	Sig.	,000
Total Variance Explained		65,928

Source: Analysis of survey results

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After KMO and Bartlett's Test, the study continued to test the Factor Loading coefficient to evaluate the correlation between the observed variables of the factors that affect public financial management in the construction of economic infrastructure of 11 provinces in the Red River Delta of Vietnam.

The EFA analysis results for the independent variables of the rotated factor matrix show that, after removing five factors in each round of analysis, the factor loading coefficient of the remaining measuring variables satisfies the condition when analyzing factors with a Factor loading coefficient of 0.5 and the factor generated after factor analysis is five independent factors with 20 measuring variables (Table 3). Therefore, the observed variables of the factors affecting public financial management in economic infrastructure correlate with each other overall. The table below provides specific information about the results of exploratory factor analysis.

Table 3. Exploratory factor analysis results

Rotated Component Matrix					
	Component				
	1	2	3	4	5
TDDT3	,915				
TDDT4	,852				
TDDT2	,849				
TQDT1	,759				
QLDT3		,853			
QLDT4		,836			
QLDT1		,812			
QLDT2		,772			
PBDT3			,799		
PBDT2			,740		
PBDT4			,718		
PBDT1			,679		
PBDT5			,574		
QLQH3				,909	
QLQH2				,828	
QLQH1				,806	
QLQH4				,662	
GSKT3					,863
GSKT2					,834
GSKT1					,727

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Source: Author

4.2. Confirmatory factor analysis (CFA)

After conducting exploratory factor analysis, the study continued to evaluate the suitability of each factor in each factor affecting public financial management in the construction of economic infrastructure by conducting confirmatory factor analysis (CFA). In this model, 20 factors from the results of exploratory factor analysis of independent variables are used for further analysis using AMOS 22 structural equation modeling software. Confirmatory factor analysis is the next step to test whether the above conceptual model meets the requirements.

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After analyzing and adjusting the model, the author obtained results as shown in the figure below, and concluded that the second CFA model's indices met the criteria for evaluating model fit. The regression values of variables in each factor range from 0.5 to 1.

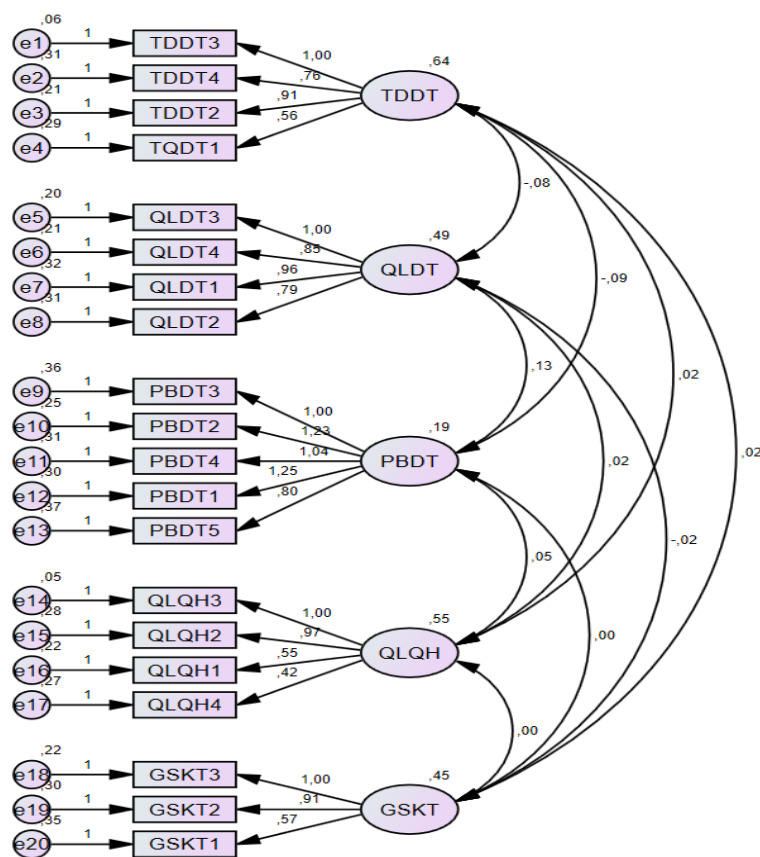


Figure 2. The CFA model of the study after adjustment
Source: Analysis of survey results

The GFI coefficients = 0.957, CFI = 0.982, and TLI = 0.976 are all greater than 0.9. The value of CMIN/df = 2.274 < 3); RMSEA = 0.035 < 0.06, so the model is considered appropriate for market data and ensures unidirectionality.

4.3. Testing the theoretical model and research hypotheses

The results of correlation analysis and regression analysis are shown below:

Table 4. Summary table of regression results of the model

Model Summary						
Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate	Durbin-Watson
1	0,875a	0,662	0,665		0,44836	2,625
a. Predictors: (Constant), MTCS. KD. NNL. CN. HTTP. DT. TD						
b. Dependent Variable: QL						

Source: Analysis of survey results

The regression analysis results show that $R^2 = 0.662$, indicating that the model's suitability is 66.2%, or in other words, 66.2% of the variation in the "public financial management process" is explained by the five influencing factors mentioned in the model. The Durbin-Watson statistic = 2.625 (meets the requirement within the range of one to three), indicating that the model has no autocorrelation.

To test the overall suitability of the regression model, the study considers the F-statistic value in the ANOVA variance analysis table.

Table 5. ANOVA variance analysis results table

ANOVA^a

Model		Sum of Square	Degrees of freedom (df)	Variance	F	Sig.
1	Regression	117,523	5	21,436	72,935	0,000 ^b
	Residual	137,849	466	0,282		
	Total	226,512	481			

a. Dependent Variable: QL
 b. Predictors: (Constant), MTCS. KD. NNL. CN. HTTP. DT. TD

Source: Analysis of survey results

The English translation of the Vietnamese text is as follows: "The F value has a significance level of Sig. = 0.000 < 0.05, which initially indicates that the linear regression model is suitable for the dataset and can be used.

The multiple regression results:

Table 6. Multiple regression results table

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	Sig.	Collinearity Statistics	
	B	Std. Error	Beta		Tolerance	VIF
(Constant)				.000		
QLQH	.169	.153	.237	.001	.745	1.672
TDDT	.254	.071	.177	.001	.813	1.145
PBDT	.201	.076	.115	.002	.774	1.217
QLDT	.254	.156	.242	.001	.635	1.126
GSKT	.262	.064	.193	.000	.815	1.371

a. Dependent Variable: QL

Source: Analysis of survey results

Testing hypotheses include:

+ H1: The planning management has an impact on public financial management in the economic infrastructure in the Red River Delta.

With sig. = 0.000 (< 0.05), hypothesis H1 is accepted. The variable QLQH (Planning management) has a positive impact on public financial management in the economic infrastructure in the Red River Delta (α_5 coefficient = 0.169 and beta coefficient = 0.237). For the criterion of "Planning management", there is a fairly high rate of agreement, indicating that this criterion has been addressed quite well in the Red River Delta provinces over time.

+ H2: Public investment appraisal has a positive impact on public financial management in the economic infrastructure in the Red River Delta.

With sig. = 0.000 (< 0.05), hypothesis H2 is accepted. The variable TDDT (Public investment appraisal) has a positive impact on public financial management in the economic infrastructure in the Red River Delta (α_5 coefficient = 0.254). For public investment appraisal: there are four criteria "Quality of appraisal", "Capacity of appraisal staff", "Time for appraisal", and "Approval file according to regulations", however, it ranks fourth out of five influencing factors with beta = .177. This is quite consistent with the current situation in our country in general and the provinces in the Red River Delta in particular, which is the quality of project appraisal, where project evaluation is assigned to investors, which creates a risk of conflicting interests. As a result, although investment evaluation can be legally detailed, it is carried out very formally in reality during the appraisal process.

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+ H3: The planning and allocation of public investment capital has a positive impact on public financial management in the economic infrastructure in the Red River Delta.

With $\text{sig.} = 0.000 (< 0.05)$, hypothesis H3 is accepted. The variable PBDT (Planning and allocation of public investment capital) has a positive impact on public financial management in the economic infrastructure in the Red River Delta (α_5 coefficient = .201). However, it has the lowest impact on the public financial management process with $\text{Beta} = .115$. This reflects the reality that project selection is not balanced with budget allocation, making many investment projects impossible to implement or delayed if they can be implemented. Therefore, provinces should also come up with specific solutions for their province, which may be to give top priority to funding for projects that have already been handed over and completed but have not yet been arranged and/or fully paid for. Next is to allocate funds for projects that need to be completed early or are about to be completed, counterpart funds (according to project implementation progress) for projects using official development assistance funds, and then for ongoing projects. This will solve the problem of timely funding arrangements for projects and ensure timely implementation.

+ H4: The tender management and appraisal have a positive impact on public financial management in the economic infrastructure in the Red River Delta.

With $\text{sig.} = 0.01 (< 0.05)$, hypothesis H4 is accepted. The variable QLDT (Tender management and appraisal) has a positive impact on public financial management in the economic infrastructure in the Red River Delta (α_5 coefficient = 0.254) and is also the factor with the strongest impact on public financial management with $\text{Beta} = .242$. In practice, it has been shown that localities have taken many measures to improve the organization of contractor selection according to regulations and very transparently to implement this work publicly and transparently, avoiding negative issues. However, there are still some different opinions that have quite negative views on this issue, especially the selection of contractors with personal relationships in the organization, so the quality of contractors may be poor in terms of capacity leading to many consequences. This is also a current difficulty in this work for localities.

+ H5: Investment supervision, evaluation, and inspection have a positive impact on public financial management in the economic infrastructure in the Red River Delta.

With $\text{sig.} = 0.000 (< 0.05)$, hypothesis H5 is accepted. The variable GSKT (Investment supervision, evaluation, and inspection) has a positive impact on public financial management in the economic infrastructure in the Red River Delta (α_5 coefficient = 0.262). For criteria related to investment supervision, evaluation, and inspection, investigators believe that this has shown fairly good signs over time. Especially for proactive criteria in planning and handling arising issues.

The results show that all sig. values in the Pearson correlation between all independent variables and the dependent variable are 0.000, less than 0.05, indicating that all independent variables have a strong linear correlation with the dependent variable, meaning that as the value of the influencing factors increases, the value of public management also increases. The Pearson correlation coefficient between each pair of independent variables is < 0.5 , so it can be predicted that there will be no multicollinearity phenomenon.

5. DISCUSSION AND POLICY IMPLICATIONS

Public financial management is one of the most important economic and social development policies anywhere. However, determining, orienting, scaling objectives, and positioning development appropriately depends heavily on the decisions of policymakers in different regions and periods. The basis of the solution according to the process of evaluating the effectiveness of public financial management includes the following arguments:

1- *Planning management work*

Improve the quality of planning, build and implement infrastructure development review, and improve the system to enhance the quality of planning. Issue planning laws for all types of development planning nationwide. Review, amend, supplement, and issue new government decrees on planning review while establishing independent, centralized, and unified review mechanisms.

Early construction of a comprehensive national economic-social infrastructure system plan. Review, adjust, and supplement economic infrastructure development plans, and social infrastructure development plans of departments, branches, and localities to ensure coherent linkage between sectors, fields, and regions nationwide to meet industrialization and modernization requirements. Choose projects that are common and important to achieve a breakthrough in promoting concentrated investment.

Strengthen national management of planning, and closely link leadership responsibilities for construction and implementation of planning to ensure effectiveness and feasibility of planning. Focus on monitoring, inspection, and inspection of planning implementation, seriously investigating and handling cases of planning violations.

2- *Initial investment project appraisal work*

Arranging and prioritizing investment projects is extremely important. The mechanism for decision-makers to decide on investment is only based on balance and allocation of capital. Clearly define personal responsibility, and related units for construction quality. Strengthen the decentralization of monitoring, evaluation, inspection, and supervision in public financial management to promptly handle arising violations and improve the effectiveness of investment capital management. It is necessary

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to focus investment on a few key areas that are breakthroughs and spread quickly for use. Focus on completing some key infrastructure projects such as roads, industrial zones, and economic zones.

3- *Planning and allocation of public investment capital*

Strongly attract and effectively use sources of investment capital for developing infrastructure systems. Effectively use state budget funds and government bond investment funds. Build medium-term and long-term development investment plans to replace annual public investment capital allocation plans, and prioritize key projects. Issue bonds, and project bonds for urgent construction investment projects. Review and improve regulations of the Public Investment Law and Public Procurement Law. Amend the decentralized investment mechanism and improve public financial management capacity. Investment decision-makers must consider the ability to arrange capital before approving investment projects, taking responsibility for form selection, contractors, quality, and project efficiency. Strongly attract and effectively use ODA funds. Create conditions to mobilize partners, and sponsors to continue providing ODA funds for infrastructure development, especially for large-scale projects. Review, amend, and supplement relevant legal documents; prioritize counterpart funding sources, remove difficulties, accelerate disbursement progress, and complete projects.

4- *Tender management and appraisal work*

Promote administrative procedure reform, ensure openness, convenience, and solve problems for investors, reduce costs in public financial management. Train human resources for management, construction, operation, and development of technical infrastructure. Enhance the capacity of state agencies and units, especially state-owned corporations and enterprises to ensure good implementation of the functions of investors and state owners for infrastructure projects.

Apply information technology and modern management methods to organize the construction and appraisal of infrastructure projects. Strengthen independent consulting and monitoring to improve project quality; strictly control investment rates, shorten implementation cycles, and put into effective exploitation and use management. Improve the decentralized investment mechanism and capital allocation, promote proactivity, and creativity, and implement responsibilities of local authorities to ensure centralized unified management, while strengthening supervision, inspection, examination, and strict handling of violations. Do well in propaganda work to mobilize the whole society and create consensus so that the people support and share with the country the responsibility for investing in national infrastructure development.

5- *Investment supervision, evaluation, and inspection work*

In investment project supervision and inspection work, it is necessary to promptly clean up and improve the system to create a good environment to attract and effectively use investment capital sources. Amend, and supplement Land Law, Procurement Law, Investment Law, Public Investment Law, City Law, and other laws or documents under the law related to promoting infrastructure construction.

Improve the system of management, evaluation, and monitoring such as norms, unit prices, technical standards, cost approval methods, auditing, and sanctions to ensure project quality, and prevent negative phenomena such as waste or loss. Educate training courses for related personnel selection; strictly handle all violators or negative elements. Incorporate into law.

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