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**PHAM THI THUY LINH**

**INSTITUTIONAL FRAMEWORKS FOR  
PROMOTING SMART CITY DEVELOPMENT  
IN HO CHI MINH CITY**

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*Tuy*  
**Supervisors:** 1. Assoc Prof, Dr. Pham Thi Tuy

2. Dr. Le Ba Tam *Le Ba Tam*

*Tran Hoa Phuong*  
**Chair of the Council:** Assoc Prof, Dr. Tran Hoa Phuong  
Ho Chi Minh National Academy of Politics

*Nguyen Thi Hai Van*  
**Reviewer 1:** Assoc Prof, Dr Nguyen Thi Hai Van  
People's Public Security Political Academy

*Trinh Xuan Viet*  
**Reviewer 2:** Dr. Trinh Xuan Viet  
Political Academy, Ministry of National Defense

*Hoang Van Hoan*  
**Reviewer 3:** Assoc Prof, Dr Hoang Van Hoan  
Ho Chi Minh National Academy of Politics

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## INTRODUCTION

### 1. The urgency of the theme

Revolution (Industry 4.0), the development of smart cities has become an inevitable requirement for large urban areas, aiming to address increasingly complex urban challenges such as infrastructure overload, environmental pollution, inefficient governance, and unequal access to public services. At the same time, building smart cities is essential to meet the demands of sustainable development and to improve the quality of life for citizens. According to the perspectives of many scholars and international organizations such as the United Nations Human Settlements Programme (UN-Habitat) and the World Bank, a smart city is not merely about the application of technology but rather a comprehensive development model. It requires the integration of digital infrastructure, big data, high quality human resources, and, most importantly, a flexible, coherent, and effective institutional framework to design, operate, and sustain smart city development. Institutions play a decisive role in establishing the legal framework, designing operational mechanisms, and organizing the implementation of smart city strategies. The absence of a comprehensive, consistent, and forward looking institutional framework will slow down the process of urban smartification through activities such as digital transformation and resource mobilization, while reducing the effectiveness of coordination among participating agencies and organizations. Therefore, institutions have been increasingly emphasized by many countries as a key factor in enhancing urban governance capacity in the new context.

Ho Chi Minh City (HCMC), as the economic locomotive of Vietnam and the core city of the Southeast region, considers smart-city development not only a strategic orientation but also a practical necessity arising from its development trajectory. Recognizing this imperative, HCMC has formulated a number of action plans for smart city development, including the adoption of master plans, programs, projects, and initiatives to establish an integrated ecosystem for building a smart city.

However, during the implementation process, HCMC has faced numerous obstacles, with institutional constraints standing out as one of the major impediments to smart city development. Specifically: (1) the institutional framework for smart city development is not only incomplete but also lacks overall coherence; (2) specific mechanisms and policies designed to support

and encourage smart city development exist but remain inadequate and difficult to implement; (3) data governance institutions are weak, lacking concrete regulations on standardization, interoperability, data access rights, and personal data protection critical components of smart city development; (4) financial mechanisms and policies for mobilizing social resources face significant challenges, as there are no specific policies to effectively support or incentivize smart city development. Private investment, public - private partnerships (PPP), and the socialization of digital infrastructure have encountered difficulties due to unclear benefit sharing, risk allocation, and approval procedures; and (5) intersectoral and multi level coordination mechanisms lack consistency, leading to fragmented, overlapping, or disconnected implementation of smart-city projects.

These shortcomings not only slow down the progress of smart city programs and projects but also undermine trust, motivation, and collaborative engagement among stakeholders in the overall process of smart city development, both nationally and in HCMC in particular.

The above analysis highlights the urgent need for a systematic and in-depth study of enabling institutions for smart-city development in HCMC. Therefore, the topic "*Enabling Institutions for Smart City Development in Ho Chi Minh City*" has been selected as a doctoral dissertation in Political Economy, given its theoretical significance and profound practical relevance.

## **2. Research objectives and tasks**

### **2.1. Research objective**

The objective of the dissertation is to contribute to proposing solutions for improving the institutional framework to promote smart city development in HCMC by 2030, with a vision to 2045.

### **2.2. Research tasks**

- To provide an overview of existing studies related to development-promoting institutions and institutions for promoting smart urban development, thereby identifying research gaps and clarifying the research directions and choices of the dissertation;

- To systematize the theoretical foundations (including concepts, roles, participating actors, contents, evaluation criteria, and influencing factors) and practical aspects (including experiences in the formulation and implementation of relevant institutions in selected domestic and international cities) of institutions for promoting smart urban development;

- To analyze and assess the current state of institutions for promoting smart urban development in Ho Chi Minh City, focusing on policy orientations and regulations of governing actors, as well as their concrete manifestations in economic, social, and ecological–environmental dimensions. On this basis, the study identifies achievements attained, existing limitations, underlying causes of such limitations, and emerging issues in the institutional framework for promoting smart urban development in Ho Chi Minh City;

- To forecast development trends and objectives for smart urban development in Ho Chi Minh City up to 2030, with a vision to 2045. Based on this, the dissertation proposes viewpoints, orientations, solutions, and a number of recommendations aimed at contributing to the improvement and completion of institutions for promoting smart urban development in Ho Chi Minh City toward 2030, with a vision to 2045.

### **3. Research subject and scope**

#### ***3.1. Research subject***

The research subject of the dissertation is the institutions (formal institutions, including the system of legal regulations, mechanisms, and policies) that promote smart city development, examined through the case of HCMC.

#### ***3.2. Research scope***

- *Scope of content:* The dissertation focuses on the study of formal institutions (including the Party's guidelines and the State's policies) for the following reasons:

First, from a legal–theoretical perspective, institutions are primarily understood as a system of rules promulgated by the State, possessing legally binding force and enforceability through public authority;

Second, from a research perspective, formal rules are characterized by transparency, publicity, and accessibility, making them relatively easy to observe and measure, whereas informal rules are mainly socio-cultural in nature, difficult to quantify, and do not constitute instruments of direct state management;

Third, the objective of the dissertation is to propose solutions that contribute to the improvement of institutions for promoting smart urban development, which entails providing scientific evidence to support the enactment, revision, and supplementation of legal normative documents. Therefore, formal institutions are identified as the central object of analysis, as they are most consistent with the research objectives of the dissertation.

- *Scope of space:* The institutions promoting smart city development are considered within the spatial context of HCMC prior to the implementation of

Resolution No. 202/2025/QH15 of the National Assembly dated June 12, 2025, on the reorganization of provincial level administrative units.

- *Scope of time*: The dissertation evaluates the current situation from the time the City began implementing smart city construction in 2017 up to 2024; research orientations and solutions are projected to 2030, with a vision to 2045.

#### **4. Theoretical basis and research methods**

##### **4.1. Theoretical basis**

- The theoretical foundation of the dissertation: The dissertation is grounded in the theoretical framework of Marxism - Leninism; the viewpoints, orientations, guidelines, and socio-economic development policies of the Communist Party and the State; and selected economic theories on institutions that promote smart city development.

- The practical foundation of the dissertation: Derived from the current institutional system promoting smart city development in HCMC, which encompasses initial premises for smart city development, but also contains many limitations and inadequacies for the process of making smart cities in HCMC become a reality in the most effective and optimal way. Therefore, this serves as the practical foundation for the dissertation to continue research and contribute to improving the institutional framework for promoting smart city development in HCMC in the coming period.

##### **4.2. Research methods**

- Scientific abstraction method
- Analytical and synthetic method
- Logical method in combination with historical method
- Statistical and comparative methods

#### **5. New contributions of the dissertation**

##### **5.1. Theoretical contributions**

The dissertation systematizes and selectively analyzes existing studies related to institutions, development-promoting institutions, smart cities, and institutions for promoting smart urban development. Through this process, it identifies theoretical gaps in the literature on institutions for promoting smart urban development. At the same time, the dissertation establishes its research approach and focal points from the perspective of political economy as a scientific discipline.

The dissertation develops a system of operational and core concepts, with particular emphasis on the concept of institutions for promoting smart urban

development. It also clarifies the roles and participating actors involved in such institutions. On this basis, the dissertation proposes an analytical framework for institutions for promoting smart urban development, thereby contributing to the elucidation of fundamental theoretical issues, including institutional content, evaluation criteria, and the factors influencing institutions for promoting smart urban development..

### ***5.2. Practical contributions***

The dissertation adopts a specific analytical approach to scientifically examine and evaluate the current state of institutions for promoting smart urban development in Ho Chi Minh City from two principal dimensions: (i) the guidelines and policies of governing actors in promoting smart urban development, and (ii) the institutional manifestations of smart urban development across economic, social, and ecological–environmental domains. On this basis, the dissertation elucidates the achievements attained, identifies persisting limitations, and analyzes the causes of such limitations in the process of formulating and implementing institutions for promoting smart urban development in Ho Chi Minh City during the period 2017–2024.

The dissertation also forecasts development trends, objectives, viewpoints, and orientations for institutional improvement, and proposes a set of fundamental and feasible solutions aimed at contributing to the further improvement and completion of institutions for promoting smart urban development in Ho Chi Minh City toward 2030, with a vision to 2045.

## **6. Scientific significance of the dissertation**

### ***6.1. Theoretical significance***

The dissertation contributes to supplementing and deepening the scientific basis for designing and adjusting institutional frameworks suitable to the requirements of smart city development in major urban areas of Vietnam, especially HCMC the locality pioneering in smart city implementation.

### ***6.2. Practical significance***

The dissertation provides a scientific basis for local governments in general, and for the HCMC government in particular, in improving enabling institutions for smart city development in response to local practical requirements.

Once completed, the dissertation will serve as a valuable reference for researchers, politicians, and policymakers in making decisions or providing

advice on development institutions, especially in shaping and improving enabling institutions for smart city development..

### **7. Structure of the dissertation**

Apart from the introduction, conclusion, references, and appendices, the main content of the dissertation consists of 4 chapters with 11 sections.

## **Chapter 1. OVERVIEW OF RESEARCH ON ENABLING INSTITUTIONS FOR SMART CITY DEVELOPMENT**

### **1.1. STUDIES RELATED TO INSTITUTIONS AND ENABLING INSTITUTIONS FOR SMART CITY DEVELOPMENT**

#### **1.1.1. Studies on institutions and enabling institutions for development**

Studies on institutions and enabling institutions for development present distinct perspectives depending on their research approaches. However, these studies share fundamental agreements regarding the concept, constituent elements, and the role of institutions and enabling institutions in the development of society. Notably, six representative works by the following authors can be highlighted: Douglass C. North (1990), *Institutions*; Giffinger, Rudolf & Gudrun Haindlmaier (2010), *Smart cities ranking: an effective instrument for the positioning of the cities?*; Masahiko Aoki (2000), *What are Institutions? How should we approach them?*; Stefano Moroni (2010), *An evolutionary theory of institutions and a dynamic approach to reform*; Phạm Thị Tuý (2014), *Institutions*; Trần Quốc Toản (2009), *Some theoretical and practical understandings on building institutions for rapid and sustainable development: Issues raised for Vietnam in the new period*; and Nguyễn Thanh Tuyễn & Nguyễn Lê Anh (2015), *The organic relationship between institutions, mechanisms, policies, governance mechanisms, and behavioral practices*.

#### **1.1.2. Studies on institutions enabling smart city development**

Research on smart cities has been widely analyzed by many scholars, with broad consensus on fundamental aspects such as the concept, characteristics, and key pillars of smart cities. Representative studies include: Giffinger, R., Fertner, C., Kramar, H., & Meijers, E. (2007), *Smart cities: Ranking of European medium-sized cities*; Lee et al. (2011), *Taiwan Perspective: Developing Smart Living Technology*; Maville et al. (2014), *Mapping Smart Cities in the EU*; Tahir, Z. & Malek, J.A. (2016), *Main criteria in the development of smart cities determined using analytical method*; Bibri, S.E. & Krogstie, J. (2017), *Smart sustainable cities of the future: An extensive interdisciplinary literature review*; Li, D. & Shao, Z. (2018), *Research on Physical City*; Trencher, G. (2019), *Towards the smart city 2.0: Empirical evidence of using smartness as a tool for tackling social challenges*; Nguyễn Văn Thành, Fredmund Malik & Đỗ Quang Hưng (2020), *Building and Governing Smart Cities to Ensure Security, Welfare, and Safety Indicators in the Fourth Industrial Revolution*; Cohen, B. (2022), *The 3 Generations of Smart Cities*; Kumar, T.V. & Dahiya, B. (2017), *Smart economy in smart cities*; and Liu, Z. & Wu, J. (2023), *A Review of the Theory and Practice of Smart City Construction in China*.

Studies on institutions enabling smart city development address issues of content, current conditions, and solutions for improving institutions in the practical contexts of cities. Representative works on institutions enabling smart city development include: UNDP (1997), *Governance for Sustainable Human Development*; J.A., Adkins, B.A., & Kendall, G. (2008), *Community participation, rights and responsibilities: The governmentality of sustainable development policies*; Lee et al. (2011), *Taiwan Perspective: Developing Smart Living Technology*; World Bank – Ministry of Planning and Investment of Vietnam (2016), *Vietnam 2035: Toward Prosperity, Creativity, Equity, and Democracy*; Nguyễn Ngọc Hiếu (2017), *Smart cities and the challenges of urban development management*; Hartati & Makmin Wahid (2019), *Development Policy Kampung Bantar in Realizing Smart City in Jambi City, Indonesia*; Konstantin Samouylov, Evgeny Popov, & Konstantin Semyachkov (2019), *Institutional Support of a Smart City*; OECD (2020), *Smart Cities and Inclusive Growth: Building on the Outcomes of the OECD Roundtable*; and World Bank Group Korea Office (2022), *Smart Cities in the Republic of Korea*.

Studies on institutions enabling smart city development in Ho Chi Minh City focus on the current situation of institutional construction and solutions for institutional improvement. Representative works include: Trương Đức Thuận (2018), *Directions and Issues to be Addressed in Building a Smart City in Ho Chi Minh City*; Phạm Ngọc Hoà (2019), *Building a Smart City in Ho Chi Minh City: Achievements and Emerging Issues*; Bùi Thị Ngọc Trang (2019), *The Project of Building Ho Chi Minh City into a Smart City – Initial Results Achieved*; Lương Nguyễn Duy Thông et al. (2022), *Building a Smart City in Ho Chi Minh City with Modern Digital Technology*; Trần Lê Phuoc Duy & Nguyễn Bảo Thành (2023), *Solutions to Promote the Application of GIS in Urban Planning in Ho Chi Minh City*; and Nguyễn Phương An (2025), *Key Challenges for Ho Chi Minh City in Building a Smart City*.

## 1.2. ASSESSMENT OF RESEARCH RESULTS RELATED TO THE DISSERTATION TOPIC AND ISSUES OF FOCUS

### 1.2.1. Achievements of published studies

#### 1.2.1.1. Theoretical achievements

First, the studies present different perspectives on the concept of institutions enabling development, affirming the decisive role of institutions in societal development.

Second, the studies have engaged in discussions on various aspects of the concept of smart cities and smart city development.

Third, the studies have analyzed the contents and requirements in establishing institutions that enable smart city development.

#### 1.2.1.2. Practical achievements

*First*, many countries have identified the core issue in establishing institutions that enable smart city development as the promulgation of dedicated smart city legislation, together with the formulation of detailed strategies and clear supporting policies to encourage and promote smart cities across different national contexts.

*Second*, developed countries have built effective institutional frameworks through the establishment of detailed, appropriate, and feasible evaluation criteria, thereby ensuring transparency and sustainability in development efforts.

*Third*, the enactment of legal regulations, mechanisms, and policies for effective public private partnerships is considered one of the key factors in attracting investment and promoting the development of smart city projects.

*Fourth*, enabling institutions that promote democratic participation and strengthen cooperation among stakeholders not only ensure transparency and effectiveness but also create a foundation for social consensus and sustainable development in the process of building smart cities.

### **1.2.2. Research gaps and issues addressed in the dissertation**

#### ***1.2.2.1. Gaps in published studies***

##### ***- Theoretical gaps***

*First*, no study has provided a systematic overview of the published works related to institutions enabling smart city development.

*Second*, the connotation of enabling institutions for development has not been clearly defined, leading to difficulties in identifying and constructing an institutional framework aligned with development objectives.

*Third*, many fundamental theoretical aspects such as the content, criteria, and factors influencing institutions enabling smart city development when examined in the specific contexts of different countries have not yet achieved a high degree of consensus.

*Fourth*, while certain studies have addressed institutional improvement in general or within specific sectors/fields, research discussing solutions to improve institutions enabling smart city development remains scarce, or where it exists, lacks sufficient persuasiveness and practical applicability.

##### ***- Practical gaps***

*First*, most existing studies mainly focus on analyzing certain aspects of the institutional context for smart city development, such as development strategies, implementation resources, or smart city objectives, without addressing in a fundamental way the institutions enabling smart city development. Therefore, the current state of enabling institutions remains a research gap, particularly when linked to specific local contexts.

*Second*, some studies have analyzed the institutional realities of enabling smart city development in certain Vietnamese cities; however, they have not

clarified the institutional impacts on economic, social, and environmental dimensions of urban development.

*Third*, the institutional approach to enabling development has not yet been systematic, but rather confined to certain aspects. Consequently, the reviewed studies have so far only proposed limited solutions for improving institutions enabling smart city development in Ho Chi Minh City, which remain inadequate to meet the requirements of urban transformation in the new context.

#### ***1.2.2.2. Issues for further research in the dissertation***

*First*, what has been achieved in the existing studies related to institutions enabling smart city development, and what are their research outcomes?

*Second*, how should “institutions enabling smart city development” be understood? What concepts, contents, criteria, and influencing factors need to be approached in order to construct a theoretical research framework?

*Third*, what is the current state of institutions enabling smart city development in Ho Chi Minh City?

*Fourth*, what solutions are required to contribute to improving institutions enabling smart city development in Ho Chi Minh City toward 2030, with a vision to 2045?

## **SUMMARY OF CHAPTER 1**

Chapter 1 has provided an overview of domestic and international studies related to institutions, smart cities, enabling institutions, and institutions enabling smart city development. The review indicates that existing studies have affirmed the crucial role of institutions in shaping the legal framework, operational mechanisms, and governance of smart cities. At the same time, the reviewed studies have also provided important empirical evidence on the impact of institutions on digital transformation, resource mobilization, and the improvement of urban services toward the development of modern and sustainable smart cities.

However, the published studies accessible to this dissertation also reveal certain gaps. From a theoretical perspective, no research has established a comprehensive and systematic analytical framework for institutions enabling smart city development. From a practical perspective, although some studies have addressed this theme, they remain insufficiently in-depth and lack coherence in the Vietnamese context, particularly with regard to HCMC.

Based on the review results, the dissertation identifies the following issues requiring further research:

*First*, to define the instrumental concepts of the dissertation and to construct an analytical framework (including the content, criteria, and influencing factors of institutions enabling smart city development).

*Second*, to apply this analytical framework as a reference for identifying the current state of institutions enabling smart city development in HCMC.

*Third*, to explore solutions for improving institutions enabling smart city development in HCMC toward 2030, with a vision to 2045.

The findings of Chapter 1 will serve as the scientific foundation for conducting research in the subsequent chapters of the dissertation.

## **Chapter 2. THEORETICAL FOUNDATIONS AND PRACTICAL EXPERIENCES OF INSTITUTIONS ENABLING SMART CITY DEVELOPMENT**

### **2.1. CONCEPTS, ROLES, AND ACTORS INVOLVED IN INSTITUTIONS ENABLING SMART CITY DEVELOPMENT**

#### **2.1.1. The concept of institutions enabling smart city development**

##### ***2.1.1.1. The concept of institutions and institutions enabling development***

Institutions are the framework that orients the behavior of social actors; thus, institutions are inherently associated with the behavior and dynamics of specific entities or subjects.

Institutions enabling development are defined as a system of legal regulations promulgated by competent state authorities to regulate the behavior of relevant actors (the state, enterprises, and citizens) in order to create an appropriate environment for the development of a locality, a nation, or a region.

##### ***2.1.1.2. The concept of smart cities and smart city development***

A smart city is an urban area developed on the basis of innovation, the application of information and communication technology (ICT), and advanced technological solutions, with the aim of improving quality of life, enhancing competitiveness, while ensuring balanced and long-term development in economic, social, and environmental dimensions to meet the needs of both the present and the future.

Smart city development is the process of optimizing urban operations with the support of smart technologies to improve the quality and efficiency of management and the provision of urban services. The ultimate objectives of smart city development are to strengthen the competitiveness of the urban economy, improve citizens' quality of life, and protect the urban ecological environment.

##### ***2.1.1.3. The concept of institutions enabling smart city development***

Institutions for promoting smart urban development constitute a system of legal regulations promulgated by competent state authorities (including the Party's guidelines and the State's policies) that govern the behavior of relevant actors (the State, enterprises, and citizens), with the aim of creating a favorable environment for the application of smart technologies in urban management and operation, thereby ensuring sustainable development across economic, social, and ecological–environmental dimensions.

#### **2.1.2. The roles of institutions enabling smart city development**

First, to concretize the orientations and guidelines of the Party and the State on building and developing smart cities.

Second, to contribute to the successful implementation of national digital transformation in the development of smart cities.

Third, to support and accelerate the process of national industrialization and modernization.

Fourth, to actively contribute to and promote international economic integration.

### **2.1.3. Actors involved in institutions enabling smart city development**

First, competent state authorities at all levels.

Second, enterprises.

Third, citizens.

## **2.2. CONTENT, CRITERIA, AND INFLUENCING FACTORS OF INSTITUTIONS ENABLING SMART CITY DEVELOPMENT**

### **2.2.1. Content of institutions enabling smart city development**

#### ***2.2.1.1. Orientations and policies for smart city development***

The orientations and policies of governing actors in promoting smart city development include:

(1) The system of central-level orientations and policies on smart city development, which are institutionalized through various types of legal normative documents of different roles and levels, promulgated by competent authorities. Specifically, these include: Resolutions, Laws, Decrees, Decisions, Circulars, and Directives.

(2) The orientations and policies of local governments on smart city development, which are primarily promulgated in the form of Resolutions of People's Councils and Decisions of People's Committees.

#### ***2.2.1.2. Institutional Manifestations of Enabling Smart City Development in Economic, Social, and Ecological Dimensions***

First, institutional manifestations of enabling smart city development in the economic dimension.

Second, institutional manifestations of enabling smart city development in the social dimension.

Third, institutional manifestations of enabling smart city development in the ecological and environmental dimension.

### **2.2.2. Criteria for assessing institutions enabling smart city development**

#### ***2.2.2.1. Completeness and consistency of the legal framework***

The completeness and consistency of the legal framework reflect the extent to which the State institutionalizes its orientations and governance in the process of building smart cities. This criterion is expressed through the number and degree of updates of legal documents, as well as the coherence between laws and sub-law documents, among different branches of law, and across levels of government in the implementation process.

#### ***2.2.2.2. Transparency and accessibility of institutions***

Transparency and openness of institutions are reflected in the degree to which information is publicly available across all domains of smart city

development. At the same time, data accessibility must be ensured through open data portals that allow citizens to make effective use of information. In addition, accountability mechanisms must be embedded in the implementation process, enabling citizens and enterprises not only to access information but also to provide feedback, lodge complaints, and receive transparent and timely responses from the authorities.

#### ***2.2.2.3. Effectiveness and efficiency of institutional implementation***

- In the economic domain;
- In the social domain;
- In the ecological and environmental domain.

#### **2.2.3. Factors influencing institutions enabling smart city development**

First, the context of urban development.

Second, the national development orientation.

Third, local practical needs and development orientation.

Fourth, the political will and determination of local authorities.

Fifth, community participation.

### **2.3. EXPERIENCES IN BUILDING AND IMPLEMENTING INSTITUTIONS ENABLING SMART CITY DEVELOPMENT AND LESSONS FOR HO CHI MINH CITY**

#### **2.3.1. Experiences in building and implementing institutions enabling smart city development in selected international cities**

The experience of building and implementing institutions enabling smart city development in Seoul, Republic of Korea.

The experience of building and implementing institutions enabling smart city development in Shenzhen, China.

#### **2.3.2. Experiences in building and implementing institutions enabling smart city development in selected domestic cities**

The experience of building and implementing institutions enabling smart city development in Hanoi.

The experience of building and implementing institutions enabling smart city development in Da Nang.

#### **2.3.3. Lessons for ho chi minh city in building and implementing institutions enabling smart city development**

First, ensure consistency in strategic vision from the central government to the local implementing authorities regarding the construction and development of smart cities.

Second, institutions enabling smart city development must be established in a coherent and integrated manner with the digital economy, while encouraging innovation.

Third, institutions enabling smart city development should be oriented toward building a smart society with citizens at the center.

Fourth, a sustainable ecological environment must be established as a mandatory requirement in building institutions enabling smart city development.

## **SUMMARY OF CHAPTER 2**

Building upon the research issues identified in Chapter 1, Chapter 2 focuses on constructing the analytical framework for the dissertation. The main contents examined in this chapter include:

First, the dissertation defines the instrumental concepts used throughout the study, namely: the concept of institutions and institutions enabling development; the concept of smart cities and smart city development; and the central concept of the dissertation institutions enabling smart city development.

Second, the dissertation establishes an analytical framework consisting of the content, criteria, and influencing factors of institutions enabling smart city development. In particular, the content of institutions enabling smart city development is clarified, including: the orientations and policies of governing actors in promoting smart city development, and the institutional manifestations of enabling smart city development in the economic, social, and ecological dimensions. Furthermore, three criteria are identified for assessing institutions enabling smart city development: the completeness and consistency of the legal framework; transparency and accessibility; and the effectiveness and efficiency of implementation. At the same time, the chapter specifies the influencing factors of institutions enabling smart city development, such as: the context of smart city development; national development orientations; local practical needs and development directions; the political will of urban authorities; and community participation.

Third, Chapter 2 examines the experiences of building and implementing institutions enabling smart city development in selected domestic and international cities, thereby providing practical references to validate the analytical framework of the dissertation.

Fourth, the findings of Chapter 2 serve as an important theoretical foundation for the dissertation's examination of the current state of institutions enabling smart city development in Ho Chi Minh City, which is the focus of Chapter 3.

## Chapter 3. THE CURRENT STATE OF INSTITUTIONS ENABLING SMART CITY DEVELOPMENT IN HO CHI MINH CITY

### 3.1. OVERVIEW OF THE SMART CITY DEVELOPMENT PROCESS IN HO CHI MINH CITY, 2017–2024

During the period 2017–2024, Ho Chi Minh City gradually established the foundations of a smart city through the synchronized implementation of orientations, policies, and the application of modern technologies in practice. The project *“Building Ho Chi Minh City into a Smart City for the Period 2017–2020, with a Vision to 2025”* was approved under Decision No. 6179/QĐ-UBND dated November 23, 2017, which identified four strategic pillars: (i) a shared data center and the development of an open data ecosystem; (ii) a smart city operations center; (iii) a center for socio-economic development simulation and strategic forecasting; and (iv) a cybersecurity center.

### 3.2. THE CURRENT STATE OF INSTITUTIONS ENABLING SMART CITY DEVELOPMENT IN HO CHI MINH CITY, 2017–2024

#### 3.2.1. The current state of orientations and policies of governing actors in promoting smart city development

##### 3.2.1.1. *Orientations and policies of the central government on promoting smart city development*

The guidelines, orientations, and policies for smart city development in Vietnam originate from the consistent directives of the Communist Party of Vietnam. These orientations have been institutionalized through the legal system and specific state policies, most notably Decision No. 950/QĐ-TTg dated August 1, 2018, which approved the *“Sustainable Smart City Development Project for the Period 2018–2025, with an Orientation to 2030.”* This decision serves as the foundation for localities to develop institutional frameworks and to implement smart city models suited to their specific conditions.

##### 3.2.1.2. *Orientations and policies of ho chi minh city on promoting smart city development*

In line with the spirit of the Central Government’s orientations on smart city development, on November 23, 2017, the People’s Committee of HCMC issued Decision No. 6179/QĐ-UBND approving the project *“Building Ho Chi Minh City into a Smart City for the Period 2017–2020, with a Vision to 2025.”* To achieve the stated objectives, the People’s Committee, together with various departments and agencies, promulgated a number of projects and action plans to implement activities for building and developing a smart city across economic, social, and ecological dimensions.

#### 3.2.2. The current state of institutions enabling smart city development in economic, social, and ecological dimensions

##### 3.2.2.1. *The current state of institutions enabling smart city development in the economic dimension*

The city government has introduced various programs and plans to foster economic development, enhance competitiveness with other localities domestically and internationally, and generate strong momentum for the city's economic transformation toward smart development. Specifically, these include: promulgating institutions to promote the digital economy and new business models; supporting technology enterprises and innovative startups; establishing financial institutions and mobilizing investment through public-private partnerships (PPP); and creating institutional frameworks for developing a digital workforce that meets the requirements of smart city development.

***3.2.2.2. The current state of institutions enabling smart city development in the social dimension***

HCMC has been a pioneer in applying smart technologies across various social sectors, bringing numerous benefits to urban residents. Accordingly, institutions have been promulgated to regulate specific activities aimed at "smartifying" the city, such as the provision of public services, smart transportation, smart education, and smart healthcare.

***3.2.2.3. Institutional transparency and accessibility remain insufficient, thereby diminishing the proactive participation of citizens and enterprises in providing feedback, exercising oversight, and implementing smart urban development projects.***

Information concerning the objectives, roadmaps, and implementation mechanisms of smart urban development projects remains fragmented, unsystematic, and insufficiently standardized, which constrains the ability of citizens and enterprises to access and engage with such initiatives.

The institutional environment has not yet created favorable conditions for enterprises to participate in innovation-oriented projects, including smart urban development initiatives. In particular, the lack of clear guidelines on public-private partnerships, information technology service procurement, and mechanisms for social oversight has increased policy access costs, resulting in the largely passive participation of citizens and enterprises.

***3.2.2.4. The current state of institutions enabling smart city development in the ecological and environmental dimension***

HCMC has issued a number of regulations related to energy saving and environmental protection, aiming to build a green, clean, and smart urban environment while enhancing resilience to climate change.

**3.3. GENERAL ASSESSMENT OF INSTITUTIONS ENABLING SMART CITY DEVELOPMENT IN HO CHI MINH CITY**

**3.3.1. Achievements**

**3.3.1.1.** *The system of legal normative documents has been increasingly improved, becoming more complete and coherent from the central to the local level, thereby creating a solid foundation for smart city development.*

**3.3.1.2.** *The system of legal normative documents has generally ensured transparency, accessibility of information, and effective feedback mechanisms in relation to the construction and implementation of institutions enabling smart city development in Ho Chi Minh City.*

**3.3.1.3.** *Institutions enabling smart city development have been practically implemented and have achieved certain positive outcomes across the economic, social, and ecological dimensions.*

### **3.3.2. LIMITATIONS OF INSTITUTIONS ENABLING SMART CITY DEVELOPMENT IN HO CHI MINH CITY**

#### ***3.3.2.1. Delays in issuing implementation guidelines for smart city projects in line with the city's development pace***

The city has not promptly updated and promulgated the e-government architecture framework to match the city's rapid development, creating difficulties in implementing smart city projects.

Institutions enabling digital economy development still contain provisions that are not fully aligned with the city's practical development needs.

Institutions enabling smart city development have not provided specific guidance for the implementation of certain activities in the education sector.

Institutional frameworks supporting smart city development in the environmental field lack comprehensive legal regulations and specific provisions on environmental protection and climate change adaptation.

#### ***3.3.2.2. Shortcomings in the quality of institutions enabling smart city development in HCMC***

First, the current legal system lacks a comprehensive and specialized legal framework directly regulating smart city development.

Second, the system of legal normative documents remains overlapping, contradictory, and inconsistent, creating challenges for smart city implementation in HCMC.

Third, the legal system has not been promulgated in a timely and flexible manner to adapt to rapid changes in modern technology, thereby hindering the process of building and developing a smart city.

#### ***3.3.2.3. Limitations in the implementation of institutions enabling smart city development in economic, social, and environmental dimensions***

*Economic dimension:* Although smart city development has been promoted, the city's GRDP has shown a declining trend; the number of digital human resources remains limited and does not yet meet the requirements of smart city development.

*Social dimension:* Public service quality remains limited; citizens' participation in providing feedback and engaging in smart city development is still low.

*Environmental dimension:* The existing system of policies and regulations has not ensured comprehensiveness and consistency; mechanisms to encourage the participation of enterprises and communities in environmental protection remain weak.

### 3.3.3. Causes of limitations

First, the awareness of stakeholders about smart city development is still incomplete and insufficient, leading to a lack of support and creating difficulties in project implementation; Second, the dynamism, transparency, and accountability of Ho Chi Minh City's government remain inadequate; Third, there is a shortage of science and technology personnel and high-quality human resources to meet the requirements of smart city development; Fourth, the absence of specific financial mechanisms for smart city development has constrained the mobilization and allocation of funding, resulting in difficulties in project implementation; Fifth, coordination mechanisms among state agencies and administrative bodies are not sufficiently close, reducing the effectiveness of smart city implementation; Sixth, mechanisms for citizens' participation in providing feedback on policies directly affecting them remain ineffective.

## SUMMARY OF CHAPTER 3

Building upon the analytical framework established in Chapter 2, Chapter 3 of the dissertation focuses on several key areas:

First, it provides an overview of the smart city development process in Ho Chi Minh City during the period 2017–2024.

Second, it analyzes and assesses the current state of institutions enabling smart city development in Ho Chi Minh City from 2017 to 2024 across two main aspects: (i) the orientations and policies of governing actors in promoting smart city development, and (ii) the institutional manifestations of enabling smart city development in the economic, social, and ecological dimensions.

Third, based on the overall picture of the institutional context for smart city development in Ho Chi Minh City during 2017–2024—analyzed in light of the evaluation criteria established in Chapter 2—the chapter identifies the achievements, limitations, and underlying causes of those limitations.

The findings of Chapter 3 thus provide a comprehensive and integrated assessment of the institutional realities of smart city development in Ho Chi Minh City. At the same time, they serve as an essential foundation for proposing solutions to improve institutions enabling smart city development in Ho Chi Minh City toward 2030, with a vision to 2045.

## **Chapter 4. ORIENTATIONS AND SOLUTIONS FOR IMPROVING INSTITUTIONS ENABLING SMART CITY DEVELOPMENT IN HO CHI MINH CITY**

### **4.1. FORECAST OF TRENDS, DEVELOPMENT OBJECTIVES, PERSPECTIVES, AND ORIENTATIONS FOR IMPROVING INSTITUTIONS ENABLING SMART CITY DEVELOPMENT IN HO CHI MINH CITY TOWARD 2030, WITH A VISION TO 2045**

#### **4.1.1. Forecast of trends and development objectives for smart city development in ho chi minh city toward 2030, with a vision to 2045**

##### ***4.1.1.1. Forecast of development trends in ho chi minh city toward 2030, with a vision to 2045***

First, priority will be given to addressing the city's urgent urban challenges.

Second, enhancing the competitiveness of the city's economy.

Third, improving the quality of life for residents.

Fourth, ensuring ecological sustainability.

##### ***4.1.1.2. Development objectives of ho chi minh city as a smart city toward 2030, with a vision to 2045***

**By 2030:** Ho Chi Minh City aims to become a civilized, modern, humane, dynamic, and innovative city with a high-quality workforce. It will be a modern service-industrial city, a leader in the digital economy and digital society, and the nation's center of economy, finance, trade, culture, education, and science-technology. It will be deeply integrated into the global economy and hold a prominent position within Southeast Asia. The city targets an average annual growth rate of 8–8.5%, per capita GRDP of approximately USD 14,500, and a digital economy contributing 40% of GRDP.

**Vision to 2045:** Ho Chi Minh City will reach the level of major global metropolises, becoming a leading economic, financial, and service hub of Asia; a globally attractive destination; a city with distinctive economic and cultural development; and a place where residents enjoy a high quality of life. It will serve as the core of the Ho Chi Minh City metropolitan area and the Southeast region, acting as a national growth pole and a magnet for international financial institutions and multinational corporations.

#### **4.1.2. Perspectives and orientations for improving institutions enabling smart city development toward 2030, with a vision to 2045**

##### ***4.1.2.1. Perspectives on improving institutions enabling smart city development in ho chi minh city toward 2030, with a vision to 2045***

Legality and transparency of institutions.

Consistency with national strategies.

Citizen-centered orientation.

##### ***4.1.2.2. Orientations for improving institutions enabling smart city development in ho chi minh city toward 2030, with a vision to 2045***

First, to continue harmonizing institutions from the central to the local level, in alignment with the specific characteristics of Ho Chi Minh City.

Second, to formulate special mechanisms and policies regarding the necessary conditions for promoting smart city development, tailored to the city's practical context.

Third, to further improve mechanisms that create incentives for stakeholders in promoting smart city development.

#### **4.2. SOLUTIONS FOR IMPROVING INSTITUTIONS ENABLING SMART CITY DEVELOPMENT IN HO CHI MINH CITY**

##### **4.2.1. Solutions to enhance awareness of smart cities among stakeholders**

Raising awareness of smart city development among state management agencies in HCMC.

Raising awareness of smart city development among enterprises operating in the city.

Raising awareness of smart city development among citizens of HCMC

##### **4.2.2. Solutions to further harmonize institutions enabling smart city development from the central government to HCMC across economic, social, and ecological dimensions**

###### ***4.2.2.1. Economic dimension***

Issuing inter-ministerial guidelines between the Ministry of Finance and HCMC authorities to establish a unified legal framework and concretize policies on economic development, particularly the digital economy and innovation.

Establishing regular coordination mechanisms between central ministries and city authorities.

###### ***4.2.2.2. Social dimension***

Promulgating more detailed and specific legal documents to provide clear guidance for agencies, organizations, and individuals in implementing activities related to smart society development.

Harmonizing the system of legal normative documents to avoid overlaps, increase consistency, and facilitate social development in smart cities.

Improving coordination mechanisms among government agencies, enterprises, communities, and social organizations.

###### ***4.2.2.3. Ecological and environmental dimension***

Establishing specific policies on green and renewable energy to reduce environmental impacts and enhance sustainability.

Improving environmental protection institutions reflected in regulations on pollution control, waste management, and sustainable use of resources.

Requiring climate change adaptation to be integrated into smart city development projects.

### **4.2.3. Solutions to develop special mechanisms and policies aligned with conditions ensuring smart city development**

#### ***4.2.3.1. Infrastructure conditions***

Issuing policies that prioritize investment in digital infrastructure development.

Establishing flexible mechanisms for implementing public–private partnership (PPP) models in smart infrastructure investment.

Integrating digital infrastructure planning into urban planning.

#### ***4.2.3.2. Investment and Financial Resources***

Developing special policies to encourage investment, innovation, and revenue generation from smart cities.

Reviewing and supplementing financial mechanisms for public investment and PPPs.

Improving pilot mechanisms for financial decentralization in support of smart city development in Ho Chi Minh City.

Establishing policies to develop and implement smart financial models.

#### ***4.2.3.3. High quality human resources***

Training high-quality human resources to meet the requirements of smart city development.

Improving policies to attract and retain talent.

### **4.2.4. Solutions to create incentives for stakeholders in promoting smart city development**

#### ***4.2.4.1. Local government***

Strengthening the governance capacity and dynamism of Ho Chi Minh City's authorities in managing economic and social life.

Enhancing transparency and accountability of local government in smart city governance.

Improving mechanisms for dialogue and effective cooperation with enterprises and citizens in urban governance.

Enhancing the quality of civil servants and public officials to meet the requirements of smart city development.

Establishing mechanisms for evaluating and rewarding individuals and organizations that successfully fulfill tasks related to smart city development.

#### ***4.2.4.2. Enterprises***

Enhancing the competitiveness of enterprises.

Improving mechanisms and policies to encourage investment by technology enterprises in smart city projects.

Strengthening interactions between city authorities and enterprises.

#### ***4.2.4.3. Citizens***

Improving channels for citizen interaction and feedback regarding city government activities.

Issuing preferential policies for public services, such as reducing costs for participation in smart transportation services.

Improving mechanisms for citizen participation and policy feedback in smart city related areas.

#### **4.3. PROPOSALS AND RECOMMENDATIONS**

##### **4.3.1. Proposals to the central government**

Proposals to the ministry of construction.

Proposals to the ministry of finance.

Proposals to the ministry of science and technology.

##### **4.3.2. Recommendations to enterprises and citizens**

Recommendations to enterprises.

Recommendations to citizens.

#### **SUMMARY OF CHAPTER 4**

Chapter 4 of the dissertation represents a pivotal component that directly realizes the research objectives of the study. Building upon the overall picture of the institutional framework for smart city development in Ho Chi Minh City analyzed in Chapter 3 together with the clarified achievements, limitations, and their underlying causes this chapter forecasts the trends of smart city development in HCMC toward 2030, with a vision to 2045. On this basis, it establishes the city's development objectives for this period. With these objectives defined, Chapter 4 proposes perspectives and orientations for improving institutions enabling smart city development in HCMC.

To operationalize these orientations and to comprehensively address the limitations identified in Chapter 3, the dissertation proposes four groups of solutions for improving institutions enabling smart city development in Ho Chi Minh City toward 2030, with a vision to 2045. Specifically: (i) solutions to raise awareness of smart city development among stakeholders; (ii) solutions to further harmonize institutions enabling smart city development from the central government to Ho Chi Minh City across the economic, social, and ecological dimensions; (iii) solutions to develop special mechanisms and policies aligned with conditions ensuring smart city development; and (iv) solutions to create incentives for stakeholders in promoting smart city development.

To ensure the effective implementation of these four groups of solutions, the dissertation also presents proposals to the central government and recommendations to relevant stakeholders.

## CONCLUSION

The study *“Institutions Enabling Smart City Development in Ho Chi Minh City”* aims to propose solutions for improving institutional frameworks in order to promote the smart city development process in line with the practical conditions of Ho Chi Minh City. Based on the research findings, the dissertation draws several conclusions as follows:

1. Smart city development is an inevitable trend in the process of modernization and international integration, in which institutions play a decisive role in determining its success. Building and improving institutions hold profound theoretical and practical significance in promoting HCMC transformation toward a smart, sustainable, and innovative development model.
2. By applying theories of enabling institutions, smart cities, as well as the Party’s orientations and the State’s legal policies, the dissertation inherits, extends, and further develops the theoretical foundations of institutions enabling smart city development. At the same time, it clarifies the connotations, roles, contents, influencing factors, and evaluation criteria of institutions in the context of rapid digital transformation and urbanization.
3. The dissertation analyzes and evaluates the current state of institutions enabling smart city development in Ho Chi Minh City during 2017–2024 across economic, social, and ecological dimensions. It identifies achievements as well as limitations and shortcomings in the process of designing and implementing such institutions in Ho Chi Minh City. The causes are analyzed in connection with central-level institutions, local institutional frameworks, and the implementation capacities of stakeholders involved in smart city development.
4. Based on forecasts of trends and development objectives for smart cities toward 2030 with a vision to 2045, and on the orientations for improving institutions enabling smart city development in Ho Chi Minh City, the dissertation proposes a system of concrete and feasible solutions. These include: raising stakeholder awareness of smart cities; harmonizing institutions between central and local governments; establishing special mechanisms for investment, finance, infrastructure, and human resources; and creating incentives for stakeholders. In addition, the dissertation makes proposals to the central government and recommendations to enterprises and citizens, with a view to fostering consensus in the implementation of smart city initiatives and ensuring the coherence, feasibility, and relevance of institutions in line with the realities of digital transformation and smart city development.
5. Research on institutions enabling smart city development is relatively new, interdisciplinary, and highly complex. From the perspective of political economy, the dissertation provides initial clarification of theoretical and practical issues within the specific context of Ho Chi Minh City.

**LIST OF THE AUTHOR'S PUBLISHED RESEARCH WORKS  
RELATED TO THE DISSERTATION**

1. Phạm Thị Thuỳ Linh. (2023). *Institutional frameworks for technology development of smart cities in Seoul, South Korea, and implications for Ho Chi Minh City*. *Finance Journal*, 2/9-2023 (809), 150–153.
2. Phạm Thị Thuỳ Linh. (2023). *Building institutions to promote smart city development in Ho Chi Minh City in the new context*. *Journal of Economics and Forecasting*, 28 (855), 78–81.
3. Phạm Thị Thuỳ Linh. (2024). *Developing smart healthcare in Ho Chi Minh City to meet the requirements of smart city construction in the current context*. *Journal of Economics and Forecasting*, 15 (881), 193–196.
4. Phạm Thị Thuỳ Linh. (2024). *Improving the quality of human resources in the Southeast region to meet the requirements of digital transformation and smart city development*. *Journal of Economics and Management*, (65), 60–67.