

## **Comparison and Analysis of Development Models of E-government at Home and Abroad**

Wenrui Xiao, Kexin Fan, Zifu Fan

Chongqing University of Posts and Telecommunications, China

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*Abstract: This paper firstly selects four important dimensions of the development model of e-government, and compares and analyzes the e-government development models in more than 30 regions at home and abroad from the four dimensions: investment model, sharing mechanism, security mechanism, and management model. It provides sufficient theoretical basis and more realistic thinking for China's e-government construction.*

*Keywords: Comparison and Analysis, E-government.*

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### **1. INTRODUCTION**

With the development of the Internet, the methods of government information dissemination, information disclosure, and information services have made new breakthroughs and developments. E-government has emerged as the primary method of government information services in a very short time. With the continuous development of e-government construction and application, the state has paid increasing attention to promoting the development, utilization, and sharing of e-government information resources. In particular, since the "Eleventh Five-Year Plan", it has been promulgated by the Party Central Committee, the State Council and the e-government informatization authority. There are clear requirements in the document. Understand the global e-government construction situation, compare domestic and foreign e-government development models, and summarize the characteristics and experience of e-government construction in developed countries, which will help us broaden our horizons, broaden our thinking, and provide a sufficient theoretical basis and more realistic references for China's e-government construction.

### **2. COMPARISON DIMENSION CHOICE**

The investment model, sharing mechanism, security mechanism, and management model summarize the key points in the process of e-government construction. It is the most important link in the construction of e-government. Therefore, the comparison of e-government construction at home and abroad is made from these four dimensions.

### **2.1 Investment model**

The investment model refers to the sources of funding in the process of e-government construction, including full investment by the government, joint investment by the government and the enterprise, investment by the government in conjunction with market operations, and full investment by the enterprise. The investment model determines the main unit of construction and affects the design and management methods in the construction process. The selection method is different, and the framework of the entire e-government construction will be different. Therefore, the investment model determines the direction of the construction of e-government.

### **2.2 Sharing mechanism**

Sharing mechanism is a way how to share information resources. The core of e-government is sharing information resources. Different sharing mechanisms determine the quality of e-government system construction.

### **2.3 Security mechanism**

Security mechanism is a way how the system protects information resources. As the e-government system carries a large amount of valuable data and information, these data and information relate to various fields such as national politics, military affairs, economy, culture, science and technology, and are confidential and sensitive. E-government must consider the issue of information security. The construction of a security mechanism is an important link in the construction of an e-government system.

### **2.4 Management model**

The management model refers to how to manage the e-government system, including unified management and hierarchical management. E-government includes dozens of systems such as a large-scale database management system and a personnel file management system. It also deals with government-related public affairs and internal affairs. How to better manage this huge system is also an extremely important link in the construction of e-government.

## **3. COMPARISON AND ANALYSIS OF DEVELOPMENT MODELS OF E-GOVERNMENT AT HOME AND ABROAD**

In this paper, the status quo of the development of e-government in more than 30 regions at home and abroad is analyzed and summarized. The development model of e-government at home and abroad is compared and analyzed from four dimensions: investment model, sharing mechanism, security mechanism, and management model. Useful reference for domestic e-government construction work.

### **3.1 Investment model**

Through the consolidation of over 30 e-government implementation cases at home and abroad, a summary of investment models adopted at home and abroad is shown in Figure 1. At home and abroad, over 50% of the regions use fully government-invested models for e-government construction, of which the more representative ones are Singapore. The Singapore government follows the basic idea of “a government, numerous institutions”. The construction of the

e-government system is completely controlled by the state's investment and control. The national government has issued guidelines for website design. A number of project integrated e-government systems have been developed for various government agencies by the Information and Communications Development Authority (IDA) in accordance with the needs of specific user groups. There are Beijing, Guangzhou, etc. in China. It can be found that a large proportion of successful e-government construction projects at home and abroad are entirely funded by the government. In addition, some regions adopt the method of joint investment by the government and the enterprise.



Figure 1 Comparative Analysis of Investment Models of E-government Cases at Home and Abroad

### 3.2 Sharing mechanisms

By sorting out the sharing mechanisms in different parts of the country, we have obtained the five sharing mechanisms for policy promotion, cloud platform, sharing platform, shared directory, and exchange center. Among them, Qingdao City adopts 1+4+X for sharing. Shenzhen adopts a hierarchical directory sharing model. Places such as Fujian and Ningbo have joined the cloud platform on the basis of the original network.

Through the review of 13 overseas country sharing mechanisms, finding that in addition to using the five major sharing mechanism strategies in the country, most countries have established an independent sharing agency to coordinate the sharing of information resources among various departments. The second is that e-government developed countries have adopted mandatory administrative measures to urge the sharing of information resources among various departments and increase the sharing of information resources to the level of national strategic planning. Such as Sweden requires the establishment of the library units must sign an agreement to share various types of databases. The government implements a series of cross-departmental e-government projects to avoid duplication of construction and procurement. Developed countries represented by the United Kingdom and the United States are establishing a set of information resources that share stringent laws and regulations.

### 3.3 Security mechanism

Table 1 Construction of a Case Security Mechanism for Domestic E-government Affairs

Methodological measures	nan jing	ji na n	che ngd u	bei jin g	fuj ian	sh an xi	ti an jin	gu an gz ho u	ha ng zh ou	ni ng bo	sh an gh ai	qu an zh ou	sh en zh en	ao me n	xi an gg an g	gu iy an g
Safety protection system		●												●	●	
Safety assessment		●									●					
Unified Security Certification			●					●	●			●				●
Government key									●			●				●
Unified Service Platform			●		●											
Grade protection				●							●					
Fractional protection				●												
Detection and early warning											●					
Authentication					●	●	●									
Emergency Response Center					●											
Patch Management Center					●											
PMI authorization management							●									
Data Center Partition Management												●				
Outsourcing technical support															●	
Guarantee assessment mechanism																
System guarantee		●	●	●	●	●	●		●	●	●		●	●		
Data disaster recovery	●			●		●		●	●	●	●	●		●		

According to Table 1, it can be found that the establishment of a legal system guarantee is the most widely used method in the protection of e-government in China, and the platform and data security are protected by compulsory means. At the technical level, domestic measures are scattered. Through the review of successful cases from abroad, it was found that foreign countries also mainly promoted the security level of e-government from the establishment of regulatory agencies and technical aspects. Such as the establishment of laws and regulations, the development of technical standards at the same time, strengthen the application of new technologies. Compared with foreign countries, domestic work on the technical level is lacking.

### 3.4 Government management

At present, in the domestic e-government construction management model, it is basically divided into two modes: unified government management and hierarchical management. The majority of provinces and cities have adopted a unified management approach. Among them, Qingdao and Shenzhen have set up management organizations. There are three levels of management in Tianjin and Shanghai.

In foreign countries, the management mechanism is also divided into two modes: unified management and hierarchical management. It is more prominent that countries with more advanced e-government have generally established hierarchical management organizations. The highest authorities such as Singapore's Information and Communications Development Authority and the United States' Joint Information Commission are responsible for the unified coordination of the nation's e-government planning, construction and maintenance work. In addition, various countries also coordinate administrative agencies, legislatures, and law enforcement agencies to issue relevant policies and regulations to force the management of e-government operations.

#### **4. CONCLUSION AND INSPIRATION**

Through the above four dimensions of the investment model, sharing mechanism, security mechanism, and management model for comparative analysis of e-government development models at home and abroad, the following summary and inspiration are obtained.

Firstly, Although most of the domestic and foreign regions adopt the mode of full government investment, the joint investment and construction between the government and enterprises is the trend of development, Such as the e-government development index ranked first in the world's Korea. While the government plays a leading role, the government guides information and communication companies to participate in the country's e-government construction. The government invests most of the money while absorbing some of the funds from the company. Use resources such as corporate funds and technology to develop related software and browser technologies to solve some of the problems.

Secondly, Countries with more successful sharing mechanisms have all formed unified information sharing standards and norms. There is a comprehensive and complete sharing mechanism and process, and a special organization is set up to coordinate and have laws and regulations. For example, in the United States sharing mechanism, all information collected with information collection codes is released to the public unless it is prohibited by the law, and all statistical survey information is freely shared in government departments. Many government agencies have set up an information deciphering office and, in accordance with the law, promptly decrypt information that was originally classified as confidential.

Thirdly, In addition to strengthening the formulation of laws and regulations, China's e-government construction safety protection mechanism should seek greater breakthroughs in the technical aspects of the security mechanism and establish a more precise and stricter security mechanism system. For example, the practice in the United Kingdom is to "identify the government" and the standards of various departments to identify users. They are divided into three entrances: enterprises, the public, and organizations. There are two types of authentication methods: user ID plus password or digital signature.

Fourthly, Establish a hierarchical management organization system, set up a general management agency, and then set different levels of management agencies by different levels of work. For example, France established the Electronic and Communications Technology Bureau to manage the development of e-government, The French government has established three levels of committees to manage e-government work at three levels: strategic objectives, project management, and daily operations. They are Direction Committee, Project Committee, and Project Operation Monitoring Committee.

#### **5. CONCLUSION**

This article has combed and summarized the development status of e-government construction in more than 30 regions at home and abroad. Select four dimensions of investment model, sharing mechanism, security mechanism and management model in e-government construction. Comparison and Analysis of Development Models of E-government at Home and

Abroad from Four Dimensions. It has been found that China's e-government construction has achieved considerable results. At the same time, it has also been developed from the e-government construction in developed countries abroad to develop joint investment by the government and enterprises, form a unified information sharing standard and specification, and establish a more accurate technical level. The Enlightenment of Strict Safety Mechanism and Establishment of Hierarchical Management Organization System. Constantly optimize China's e-government construction to adapt to the rapid development of society.

## **REFERENCES**

- [1] Zhang Min, Wu Yusong, Huo Chaoguang. Analysis on Research Hotspot and Research Trend of China's E-government[J]. Journal of Information, 2015, 34(02): 137-141.
- [2] Zhou Chengbing, Xue Gang. Foreign E-government Information Resource Integration Model and Its Enlightenment[J]. Electronic Government, 2013(12): 94-99
- [3] Qi Lei. Research on E-government Information Security Mechanism [D]. Southeast University, 2017.