

Assessing the Effectiveness of Government Digital Informatization Construction: A Three - Dimensional Analytical Framework of Institution - Subject - Public Perception

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Abstract. As the core engine of modern governance, the effectiveness evaluation of government digitalization urgently needs a systematic framework. Existing research has mostly focused on a single dimension and lacks a localized evaluation framework. This study attempts to construct a three-dimensional analytical framework of "institution-subject-perception" to fill this gap. The three-dimensional analytical framework has proposed improvements brought by government digitalization in multiple fields at the institutional level and provided feasible directions for the development of these fields in the next stage. At the subject level, this paper takes the medical field as an example to demonstrate the positive impact of government digitalization on subjects, which can be extended to other public service providers or participants in other fields. Finally, from the perspective of the ultimate governance goal of the Chinese government, "serving the people," government digitalization has improved public satisfaction. Moreover, this study is the first to incorporate institutional effectiveness, subject behavior, and public satisfaction into a unified analytical framework and proposes a localized evaluation path based on Chinese practice, providing a reference for future research.

Keywords: Digital Government, Informatization Construction, Local Practice.

1. Introduction

The 20th National Congress of the Communist Party of China proposed to accelerate the construction of a cyber-strong country and a digital China. As a strategic choice to enhance governance capabilities and optimize public services, the digital transformation of government institutions has been realized through the integration of 13,500 data resources from 5,951 departments via a unified national government data-sharing hub [1]. The government has taken the lead in breaking down administrative barriers and establishing a new mechanism for coordinated governance across departments and administrative levels. This has not only resolved the issue of information silos but also given rise to innovative institutional arrangements such as "one-stop online services," enabling more than 90% of government service matters to be processed online and significantly enhancing the scientific level of decision-making. This has laid the foundation for a new governance model characterized by "data-driven decision-making and evidence-based policymaking."

At the subject level, the government has demonstrated the exemplary effect of digital transformation in the medical field. By constructing the National Platform for Universal Health Information and a remote collaboration network covering 24,000 medical institutions [2], high-quality resources from top-tier hospitals have been extended to the grassroots level. This has also led to the formation of a new digital healthcare ecosystem characterized by "primary care at the grassroots level and two-way referrals." The digitalization of government services has reached the "last mile" of service delivery, resulting in a significant increase in public satisfaction. For example, Beijing's "respond immediately to complaints" mechanism, which links the 12345 hotline with a big data platform, has achieved a 100% response rate and a 93% resolution rate for public complaints [1]. The achievements of government digitalization are remarkable.

By transforming technological advantages into institutional strengths and data resources into governance resources, the government has achieved synchronous improvements in both government efficiency and people's sense of gain. It is evident that the construction of digital government has

formed a systematic reform framework. Through the development direction of "institutional innovation-subject action-people's livelihood effectiveness," the construction of digital government is reshaping the modernization pattern of the national governance system and governance capabilities.

Existing research suffers from three main deficiencies: (1) unidimensional analysis; (2) insufficient localization of Western evaluation frameworks; and (3) neglect of public perception. This study aims to construct a three - dimensional analytical framework to address these issues. Based on a comprehensive consideration of the effectiveness of government digitalization from multiple dimensions, this paper proposes a three - dimensional analytical framework of "institution - subject - perception." This framework, through the organic linkage of institutional operational efficiency analysis, subject - behavior - effectiveness validation, and public - perception - effectiveness feedback, provides a comprehensive and objective assessment of the actual effectiveness of digitalization efforts and uncovers deep - seated problems. This multidimensional analysis offers a scientific basis for formulating targeted improvement strategies, which helps to promote the continuous optimization and innovative development of government digitalization. Moreover, it provides an innovative methodological pathway for the modernization of national governance.

2. Literature Review

2.1. Theories of Government Informatization

Government informatization marks the beginning of digital transformation, with its core feature being the automated reengineering of administrative processes through information technology. Current research generally posits that government informatization, in the context of the information society era, involves the utilization of advanced information technologies such as big data, cloud computing, artificial intelligence, and the Internet of Things. It reconstructs the traditional hierarchical management model of government based on the concept of flat management. Administrative affairs within government agencies are segmented into a grid according to management departments, thereby optimizing and solidifying administrative service processes. This ultimately leads to the establishment of a transparent, open, and easily supervised and managed service-oriented government that operates in real-time online [3].

Through a review and synthesis of the literature, three main characteristics emerge: First, a technology - oriented approach centered on the deployment of infrastructure hardware[4]; second, the electronic migration of business processes from offline to online; and third, a government - centered unidirectional service model with low public participation [5]. At this stage, the essence of government informatization is essentially a process of "technology replacing human labor." Tools such as process automation, paperless transformation, intelligent customer service, and decision - making assistance are employed to reduce administrative costs and unleash efficiency potential. However, this stage has yet to touch upon the transformation of the governance structure.

2.2. Theories of E - Government

E - government serves as a pivotal transitional phase from government informatization to digital transformation, with its theoretical roots tracing back to the New Public Management (NPM) theory. This theory emphasizes the optimization of government operations in a business - like manner [6], while also incorporating the concept of multi - stakeholder collaboration from governance theory [7]. The development of e - government in China has exhibited distinct phases: from 1999 to 2009, the focus was primarily on the construction of infrastructure, which later shifted towards application - oriented deepening and ultimately evolved towards intelligence and integration [8].

Compared with basic informatization, e - government has achieved three major breakthroughs. First, the integration of technological and managerial logics has enhanced the scientific nature of decision - making through data - sharing [8]. Second, service integration has been realized. For example, Hubei Province has constructed a province - wide integrated government service platform to address the problem of "information silos" [10]. Third, there has been an empowerment of

governance capabilities. However, in practice, contradictions still exist between technological over-reliance and insufficient adaptation at the grassroots level [11].

In summary, the theory of e - government is an interdisciplinary research domain that depends on technological progress while also taking into account historical experience, theoretical innovation, and reflective practice. This phase has provided a robust foundation for digital governance. However, its limitations lie in the over - emphasis on technology itself and the failure to achieve a fundamental transformation of the governance model. The case of Hubei Province illustrates that only by embedding the technological architecture into governance needs and ensuring implementation effectiveness through policy innovation can the leap from e - government to digital governance be realized.

2.3. Theories of Digital Governance

Digital governance marks the entry of government digital transformation into uncharted waters, representing a profound shift in the governance model from the application of technology to the reconstruction of institutions. Mirakoski's book, "*Digital Governance: New Technologies for Improving Public Services and Participation*" [12], elucidates the transition from e - government to digital governance. This transformation is not merely a continuation of government informatization but rather a fundamental reconstruction of the government organizational system, with its core lying in the decentralization of bureaucratic structures and the intelligent reallocation of power [13].

Government digitalization is an advanced form of government informatization, supported by modern information technologies. It emphasizes data - centricity and leverages technologies such as artificial intelligence, big data, and blockchain to restructure organizational architectures and business processes. This shift aims to transform the governance model from one of "management" to one of "service" and "collaboration" [14]. Essentially, it is the deep integration of technology and institutions, pursuing a systemic enhancement of governance effectiveness [15].

It is characterized by data - driven decision - making, intelligent service delivery, multi - stakeholder collaboration [16], and a user - centered orientation. Since China first proposed its digital transformation strategy in 2015 [17], a series of reform initiatives, such as Digital China and "Internet + Government Services," have been implemented. These measures align with global trends while being tailored to national conditions. They deeply embed digital elements and innovative changes into government services and people's livelihoods [18].

Overall, digital governance is not only a renewal of technological means but also a profound transformation of government governance concepts and structures. Its ultimate goal is to construct a modern governance system that is efficient, intelligent, and directly connected to the public.

2.4. Theories of Public Administration

With the rapid advancement of information technology, government informatization and digital construction have become a core issue in global public management reform. How to scientifically evaluate the effectiveness of construction, choose appropriate construction models, and summarize practical experience has become a focal point for both the academic community and policymakers. This paper systematically reviews domestic and international research findings from three dimensions: evaluation indicator systems, innovative construction models, and practical effectiveness. It also points out the areas that need improvement in current research. In response to these deficiencies, the third part of the paper will explore the effectiveness of government digital informatization construction from a new perspective.

Owing to the constraints of governance philosophies, technological environments, and institutional foundations, research on the measurement indicators of the effectiveness of government digital informatization construction exhibits a multidimensional exploratory trend. Domestic scholars focus on the implementation of technology and the optimization of performance. For instance, the DTSPG five - dimensional dynamic interaction framework (data - technology - service - personnel - governance) enhances public value through the synergy of multiple elements [19]. In the field of

mobile government services, scholars have adapted the SERVQUAL model to the local context, constructing a service quality evaluation system that includes expectation confirmation, perceived usefulness, and user satisfaction [20].

On the methodological front, domestic research employs the Analytic Hierarchy Process (AHP) [21] and fuzzy comprehensive evaluation [22] to address the challenge of weight assignment and utilizes Data Envelopment Analysis (DEA) to quantify the efficiency of digital resource allocation [23], thereby achieving an organic integration of quantitative assessment and qualitative analysis.

In contrast, international research places greater emphasis on service effectiveness and institutional innovation. For example, the United Nations' EDGI index constructs a global evaluation system that encompasses online services, telecommunication infrastructure, and human capital [24]. The OECD's digital government assessment framework highlights the "user - centered" principle [25]. In the realm of cutting - edge exploration, the Metaverse Government Readiness Index [26] and the Smart City Three - Dimensional Governance Model (technology - human - institution) further expand the dimensions of evaluation [27].

On the basis of clarifying the measurement indicators, different countries and regions have explored distinctive models of government digital informatization construction in accordance with their own characteristics. Domestic models mainly include three types: the top - down design model represented by the "Digital China" strategy (such as Beijing's "respond - immediately - to - complaints" mechanism), the pilot - demonstration model (such as Shanghai's "one - stop - online - services" initiative), and the market - oriented model [28].

International practices, on the other hand, exhibit a diversified array of characteristics. The United States employs a "market - led" model to reduce IT costs [29]. Singapore achieves seamless cross - departmental collaboration and centralized construction through an "integrated - whole - of - government" approach [30]. Estonia has become a paragon of "paperless government" and "zero - trip - services" by adopting a "digital - nation - building" model [31]. In addition, Japan's "Digital Agency - centered" model breaks down "departmentalism" barriers [32], Germany's "sovereign - cloud" model safeguards data sovereignty [33], and India's "digital - public - infrastructure" model underpins inclusive services [34].

These models reflect that the current global digital government construction has transcended mere technological upgrades and is evolving into a competition of governance system reconstruction. They demonstrate that the essence of each country's model choice is a dynamic balance among technological capabilities, institutional flexibility, and value - oriented goals.

In terms of practical effectiveness, China's government digital informatization construction is characterized by a "top - down design + scenario - driven" approach. The online completion rate of government services has exceeded 80%, and applications such as health codes have set benchmarks in emergency management. However, barriers to data - sharing and the fragmentation of standards still persist.

In contrast, developed countries in Europe and America focus on the construction of institutional frameworks. For instance, the European Union has achieved mutual recognition of government services across its 27 member states through the Digital Governance Act. The United States has adopted a "Federal Cloud - First" strategy, increasing data openness to 92%. Singapore has achieved a digital identity usage rate of 98% among its citizens. South Korea's "Digital New Deal" has established an AI - powered government hub.

Comparative analysis reveals that China excels in the speed and breadth of application innovation, while developed countries have more mature systems in terms of data governance legalization and system compatibility. Currently, global digital government construction has entered a stage of deep integration. National practices not only demonstrate the commonalities of technology - enabled governance but also form distinctive paths due to differences in institutional environments, offering rich references for future research.

By reviewing the literature on theories, indicator systems, and construction effectiveness related to government informatization and digitalization, it can be concluded that informatization is the

foundation of digitalization, while digitalization represents the deepening and expansion of informatization. Therefore, this paper proposes the concept of government informatization and digitalization. Starting from the perspective that government digitalization is an extension and upgrade of informatization, it clarifies that “informatization” focuses on “technology replacing human labor,” whereas “digitalization” emphasizes “technology reshaping governance.” This conceptual framework not only helps explain the path differences in the digital - informatization transformation of governments in different countries but also provides a theoretical benchmark for future research.

2.5. Research Gaps

Existing literature has yet to establish a unified theoretical framework for the integrated analysis of three - dimensional interlinkages. The majority of studies conduct independent analyses focusing on a single dimension, lacking a systematic integration of the interactive mechanisms among the three dimensions. Secondly, traditional evaluation models, influenced by existing Western assessment indicators, encounter significant cultural adaptation issues during the localization process. Western models fail to adequately account for China’s unique institutional environment, social structure, and value systems, resulting in systemic discrepancies between the evaluation outcomes and local practices. Lastly, current assessments are confined to the internal closed - loop operations of the government, exhibiting a unidimensional characteristic of “evaluating policies in isolation,” with an absence of comprehensive public perception. Against this backdrop, this paper aims to address these practical challenges by constructing a three - dimensional analytical framework with localized characteristics and incorporating the public - perception perspective for empirical validation.

3. Research Methods and Analytical Framework

3.1. Research Methods

To ensure a more comprehensive and meticulous validation of the three - dimensional effectiveness, this paper employs a differentiated research methodology to systematically assess the effectiveness of government digital informatization construction. At the institutional level, a literature meta - analysis approach is adopted. Sample selection is based on the richness, representativeness, and retrievability of the samples. Focusing on the implementation effectiveness of various institutions under the context of government digital informatization, the China National Knowledge Infrastructure (CNKI) database is utilized as the primary data source. Core literature from 2022 to the present is retrieved and organized using keywords such as “government,” “digitization,” and “informatization construction.” An initial pool of 2,038 articles is identified, and based on this, an in - depth analysis of the content is conducted, ultimately reporting the conclusions of 15 representative studies.

At the subject level, regression analysis is performed using Stata to test the effectiveness of government digital informatization construction in the medical field. At the perception level, the Beijing “respond - immediately - to - complaints” reform is selected as a case study. The effectiveness of government digital informatization construction is examined through multiple cases, focusing on three dimensions: responsiveness, case - handling volume, and public satisfaction.

3.2. Three - Dimensional Analytical Framework

Based on the research subject and the current development status of government digital informatization construction, this paper constructs a three - dimensional analytical framework for the effectiveness of government digital informatization construction from three mutually supportive and complementary dimensions: institution, subject, and perception.

This framework is underpinned by robust theoretical foundations. New institutionalism theory emphasizes the pivotal role of institutions in social development. In the context of government digital informatization construction, the institutional dimension serves as the top - down design and is an

important vehicle for Chinese - style reform. By driving reform through institutions and their formulation and refinement of rules and norms, the goals and pathways of digital informatization construction are clarified.

The subject dimension acts as the implementation vehicle. Given that government digital informatization construction is carried out across multiple departments, it is essential to study the subjects, as they implement the construction tasks based on institutional design. Public value theory highlights the citizen - centered philosophy, which aligns with the perception dimension. Whether it is the development of e - government or digital construction, the fundamental purpose is to satisfy the people and to practice the people - centered development philosophy. Public perception, as a feedback mechanism for effectiveness, is of vital importance. It indicates that the success of government digital informatization construction must ultimately be reflected through public perception to ensure the realization of public value.

Meanwhile, the three dimensions of institution, subject, and perception form a complete closed loop through data - sharing and technological collaboration. Data - sharing breaks down information barriers between departments, while technological collaboration ensures efficient connections between different stages. This promotes the effective implementation of top - down design and precise feedback in the implementation process, thereby continuously optimizing institutional design and forming a virtuous cycle that powerfully drives government digital informatization construction to new heights. As shown in Figure 1.

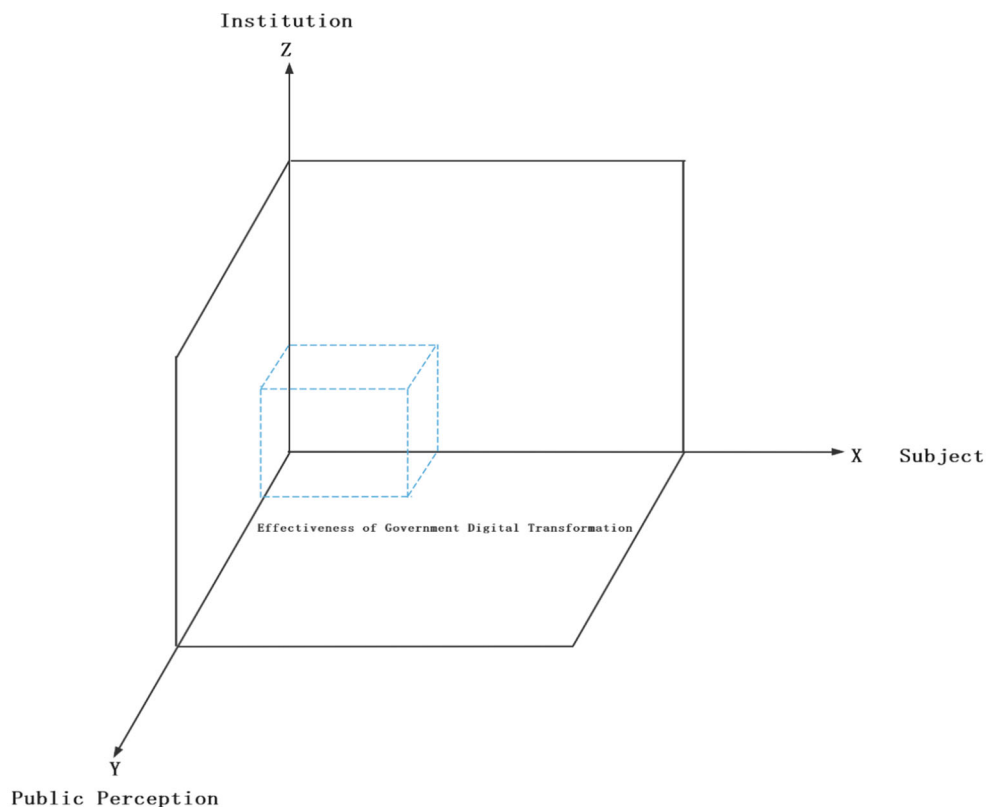


Figure 1. Schematic Diagram of the Three-Dimensional Analytical Framework

4. Research Results

4.1. Institutional Level - Based on Literature Meta - Analysis

Due to space limitations, the main viewpoints of scholars on the effectiveness of digital informatization construction are presented in the following table.

Table 1. Sorting out the Effects of the Government's Digital Informatization Construction at the Institutional Level in Various Fields

Literature Meta - Analysis				
	Author	Field	Main Opinions	Specific Development Recommendations
1	Wu Kechang and Huang Ran [35]	Technological Advancement and Government Organizational Change	Proposed the “technology - organization duet” framework to explain how technology reconstructs government functions (adaptation and goal achievement) and promotes the dynamic balanced transition of government from informatization to digital government.	Construct a flexible institutional framework to ensure that technology serves the public interest.
2	Liu Shui and Fan Weifeng [36]	Economic Domain	Policy tool innovation (from the dimensions of supply, demand, and environment) drives the digital economy and enhances governance coordination through the “tool - platform - value” framework.	Optimize resource allocation and construct intelligent platforms; let data guide demand and ensure the security of government data.
3	Kang Maonan, Mao Kai, Lin Renjing [37]	Entrepreneurial Activity	Digital government stimulates entrepreneurial vitality through both services and governance. The mechanisms include the construction of service - oriented and clean governments as well as spatial spillover effects.	Deepen digital empowerment to improve the business environment; pursue differentiated regional development to enhance complementarity and balance.
4	Shen Zhixuan, Zhu Shujin, Wen Xi and Tang Chao [38]	Corporate Investment Rate	Government digital governance reduces the institutional transaction costs for enterprises and enhances investment efficiency, particularly for non - state - owned and small enterprises.	Refine the policy system to promote the collaborative digital transformation of government and enterprises.
5	Sun Li and Zhang Jie [39]	Urban Economic Resilience	Digital government enhances economic resilience through innovative incentives and improved efficiency in resource allocation, with positive regulatory effects from the institutional environment and the development of the digital economy.	Construct a unified digital platform; optimize resource allocation and formulate differentiated policies.
6	Yang Ping, Lv Yanqin, Chen Jing and Gao Feng [40]	Urban Carbon Emission Rate (Environmental Protection and Sustainable Development)	Government digital transformation enhances carbon emission efficiency through land optimization, green innovation, and industrial upgrading.	Deepen the digital transformation to promote the “Broadband China” and “Smart City” initiatives.
7	Shi Jun [41]	Public Services	Digital technology reshapes public demand and governance logic, necessitating a balance between data circulation, privacy protection, and algorithmic regulation.	Construct a digital service - oriented government based on demand - driven approaches, technology for good, and institutional rights - confirmation.

8	Shi Bingzhan, You Annan [42]	International Trade	Digital government promotes export trade by reducing information asymmetry and facilitating customs clearance, with Chinese exports benefiting significantly.	Strengthen the support of digitalization for exports and optimize domestic supporting conditions.
9	Huang Xianhai, Zhu Haojie, Yuan Yiming, Sun Yongming and Song Xueyin [43]	Social Welfare	Government digital transformation enhances social welfare but faces challenges from aging populations and human capital gaps.	Promote the integration of resources and the opening - up of data to address structural challenges.
10	Yin Bowen [44]	Rural Governance	Digital power challenges public authority, necessitating a balance between data rights and algorithmic regulation to advance the modernization of rural governance.	Legislation should be used to consolidate the achievements of reform, and a balance in the governance system should be achieved through “reinforcement + restraint.”
11	Xin Lulu [45]	Common Prosperity of Urban and Rural Areas	Digital government promotes common prosperity in urban and rural areas through new - type urbanization and the marketization of factors, with more pronounced effects in the eastern regions.	Expand application scenarios, coordinate the layout of factors, and create regional collaborative networks.
12	Shi Rong, Tang Yiqian, Yang Guotao [46]	Agriculture	Digitalization enhances agricultural green productivity through scaled production and improved labor quality, with the empowerment effect being strengthened by enhanced government governance capabilities.	Differentiated international cooperation; strengthen digital infrastructure and skills training in rural areas.
13	Deng Yuguan [18]	Government Performance	Digital government needs to balance quantitative indicators and value - rationality to build a shared governance pattern through “direct - connection - with - the - public.”	Value - oriented leadership, optimized resource allocation, and strengthened Party - building guidance.
14	Wang Feng, Zhang Zhaoting [47]	Public Health Services	Digital technology enhances the efficiency of rural public health services, but information silos need to be broken down.	Strengthen digital infrastructure in rural areas and optimize the application of the three - tier medical system.
15	Yi Xingjian, Li Qingyuan and Yang Biyun [48]	Household Consumption	Digital government promotes consumption among middle - aged and elderly households by increasing income and alleviating savings pressure, with significant benefits for low - and middle - income groups in rural areas.	Strengthen service capacity in a location - specific manner and improve the digital literacy of rural residents.

4.2. Subject Level - Based on OLS Regression Model

This study employs an Ordinary Least Squares (OLS) regression model to conduct an empirical analysis of 31 sample observations covering government digital informatization construction and its effectiveness indicators. The explanatory variables are rigorously selected based on a 1% statistical

significance level to identify core influential factors with strong significance. This approach provides a statistically robust quantitative basis for research on the effectiveness of government digital informatization construction at the subject level.

Thus, a multiple linear regression model is established with the average number of patients treated per physician per day (in person - times) as the dependent variable and the number of server CPU cores (within 50 units) as the independent variable, while incorporating control variables. The model is specified as follows:

$$Y = \beta_0 + \beta_1 X_1 + \sum_{i=2}^n \beta_i C_i + \varepsilon$$

where Y represents the average number of patients treated per physician per day, X_1 denotes the number of server CPU cores (within 50 units), C_i represents control variables, β_0 is the intercept, β_1 and β_i are regression coefficients, and ε is the error term.

The fitting results of the OLS regression model are shown in the following figure:

Table 2. OLS Empirical Regression of the Government's Investment in Informatization Construction and the Burden of Physicians

	coefficient	Robust std. err.	t	p> t
CPU	-0.0792905	0.031941	-2.48	0.020
doctor	-2.90E+00	5.97E+00	-4.86	0.000
bed	-7.52E+00	1.79E+00	-4.20	0.000
patient	8.28E+00	1.43E+00	5.77	0.000
economy	-4.07E+00	3.63E+00	-1.12	0.273
_cons	11.57275	2.238374	5.17	0.000

The results of the benchmark model based on OLS regression indicate that the overall fit of the model is significant at the 5% significance level. This means that the independent variables (CPU - the number of server CPU cores (within 50 units) and d) have a significant impact on the dependent variable (hard - the average number of patients treated per physician per day (in person - times)).

Considering the number of independent variables, both the R - squared and adjusted R - squared values are relatively high, indicating a good fit of the model. Analysis of the coefficients of the independent variables reveals that for CPU, the coefficient is - 0.0792905, the t - value is - 4.03, and the P - value is 0.000, which is significant at the 1% significance level. This suggests that an increase of one unit in the quantity of technological equipment investment (CPU) is associated with a significant decrease of 0.0792905 units in the physician's workload (number of consultations), indicating that investment in technological equipment (CPU) may help to alleviate the burden on physicians.

After analyzing the empirical results from Stata, a detailed examination of the overall model fit and the significance and economic implications of the coefficients of each variable indicates that CPU can significantly reduce hard. The decrease in the number of consultations substantially alleviates the burden on doctors, thereby validating the hypothesis that the government's digital informatization construction in the medical field is effective. This finding corroborates that digital technology, by optimizing the consultation process and enhancing the utilization rate of resources, can effectively mitigate the work pressure on medical personnel. Particularly within the framework of a rational distribution of server cores (within 50), the marginal benefits of technology are fully realized.

Although the expansion of bed capacity and changes in patient numbers have minimal and varied impacts on the workload of doctors, the significant effect of CPU core numbers highlights the central role of digital infrastructure in the medical system.

4.3. Perception Level - Based on “Respond Immediately to Complaints”

At the perception level, Beijing’s “respond - immediately - to - complaints” mechanism provides a compelling example of the effectiveness of government digital informatization construction. The effectiveness of this mechanism is demonstrated through an analysis of a large number of cases across three dimensions: responsiveness, case - handling volume, and public satisfaction. The three - dimensional case study demonstrates that the “respond - immediately - to - complaints” reform, through digital informatization construction, has significantly enhanced government responsiveness, processing efficiency, and public satisfaction at the perception level. This reform offers valuable insights for advancing the modernization of the government governance system and capabilities. The effectiveness is shown in the following table: (Data Sources: 1. China Health Statistics Yearbook 2022; 2. China Statistical Yearbook 2022)

Table 3. Effect Evaluation of the Government's Digital Informatization Construction at the Practical Level

	Examples of “Respond - Immediately - to - Complaints”		
Greater responsiveness within a given time frame	The "18 - Point Exclusive Working Method" of the Donghuashi Sub - district in Dongcheng District: Focusing on high - frequency issues such as parking difficulties, home - based elderly care, and waste sorting, this method involves categorizing problem types and devising exclusive solutions to achieve rapid response tailored to each specific issue. For instance, in response to parking disputes in old residential communities, the sub - district coordinated with surrounding organizations to arrange staggered - peak parking resources, thereby completing the allocation of parking spaces within 24 hours.	Emergency Response of the Health Commission of Haidian District during the Pandemic: During the COVID - 19 pandemic, the Department of Public Rights Protection of the Health Commission of Haidian District handled an average of over 13,000 requests per day. The department head, Wang Wei, received 50 - 60 phone calls daily and worked for more than 14 hours to ensure that urgent requests related to medical coordination and vaccine administration were responded to within 2 hours.	The Full - Chain Monitoring and Scheduling of the 12345 Sub - Center in Chaoyang District: By real - time monitoring of the status of work order circulation, a closed loop of “request acceptance - dispatch - supervision - feedback” is constructed to ensure that over 90% of work orders are dispatched within 1 hour. For instance, in response to the issue of construction noise at night, the sub - center collaborates with urban management and environmental protection departments to achieve on - site handling within 30 minutes.
Higher processing volume within a given time frame	Chaoyang District’s Leading Volume - Based Processing Capacity: From 2020 to 2021, Chaoyang District handled a cumulative total of 2.02 million requests, accounting for 16% of the city’s total volume, with a daily average of over 5,500 requests processed. This demonstrates the district’s high - density request - handling capacity and efficient response mechanism.	Fengtai District’s Efficient Processing of 56,000 Requests per Month: In 2022, the monthly volume of requests in Fengtai District reached 56,000, a 273% increase from 2019. By constructing an “hotline + grid” intelligent dispatch system that automatically identifies request types and matches them with responsible units, the efficiency of work order dispatch was increased by 40%.	Pinggu District’s Integrated “One - Stop” Processing: By integrating the processes of “reporting upon request,” “responding immediately to complaints,” and “acting before complaints,” and establishing a three - tier Party - secretary - led responsibility system, the district has enabled one - click cross - departmental work order transfer. For instance, in response to disputes over land - expropriation compensation, multiple departments have jointly handled over 200 similar requests in a single day.

Higher public satisfaction	Dongcheng District’s “Acting Before Complaints” and “Solving 100 Difficulties to Relieve People’s Worries” Initiative: The Chongwenmen Outer Sub - district, through its “Two - Week Neighbourhood Visit” initiative, proactively identified and resolved issues such as chaotic parking and public rental housing exchanges, resulting in a 35% decrease in the volume of complaints and a satisfaction rate of 97%.	The “Round - Table Working Method” in Qianmen Xijie Community, Xicheng District: In response to the conflicts arising from the renovation of old residential communities, the community organized face - to - face consultations among residents, property management, and construction parties through joint discussion and governance, resolving over 300 disputes and increasing the satisfaction rate to 96%.	The “Labor Arbitration at the Grass - Roots Level” Public Service in Shijingshan District: In response to labor - related disputes, the District Human Resources and Social Security Bureau established mobile arbitration tribunals that conduct on - site mediation in enterprises. This has reduced the case - closing cycle to 7 days and increased the satisfaction rate to 98%, extending professional services to the community level and reducing the travel costs for the public.
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5. Conclusions and Discussion

This paper examines the effectiveness of government digital informatization construction from three dimensions: institution, subject, and perception. Combining previous research with the findings of this study, it can be concluded that comprehensively measuring the effectiveness of digital government informatization construction from these three dimensions is rational, necessary, and meaningful. At the institutional level, improvements brought by government digital informatization to various fields have been proposed in multiple areas, and feasible directions for the development of these fields in the next stage have been provided. At the subject level, this paper takes the medical field as an example to demonstrate the positive impact of government digital informatization on subjects, which can be extended to other public service providers or participants in other fields. Finally, from the perspective of the ultimate governance goal of the Chinese government, “serving the people,” government digital informatization has improved public satisfaction.

The potential limitations of this paper are mainly due to the fact that the primary innovative objective of this article is to discuss the significance and value of the integrated analysis of the three dimensions (institution, subject, and perception). Therefore, there are deficiencies in the specific arguments for each dimension. In the next stage, more data and examples can be introduced to more accurately demonstrate the interrelationships among the three dimensions.

In contrast to international experiences, Singapore’s “integrated - whole - of - government” model emphasizes unified planning and cross - departmental collaboration. In China, however, a distinctive path characterized by “top - down design + scenario - driven” approaches has been developed. This path not only strengthens central coordination but also encourages local innovation. Based on this, policy recommendations should adopt differentiated pathways that take regional disparities into account. At the central level, efforts should be intensified to build standard - setting and data - sharing mechanisms. Meanwhile, local governments should advance their initiatives in a differentiated manner. Developed regions may focus on institutional innovation (such as smart city governance), while less - developed regions should promote the application of technology at the grassroots level (such as “one - stop - online - services” at the local level) to balance efficiency and equity. Future research could further explore adaptive strategies under different governance models to optimize the overall effectiveness of digital government.

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