Research on the Direction and Path of Government Digital Reform ——Based on the 'Run Once at Most' Reform and Government Digital Transformation in Zhejiang Province

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Abstract: Based on the data governance maturity model, this paper analyzes the existing achievements of the 'run once at most' reform and the digital transformation of the government and concludes that there are some problems in the 'run once at most' reform and the digital transformation of the government, such as single governance subject, data barriers, scene application effectiveness and data security. At the same time, based on the theory of collaborative governance and the perspective of data opening and sharing, this paper explores the direction and path of government digital reform under a reasonable theoretical framework, promotes the further development of government digital reform, and aims to enhance the satisfaction and happiness of the people. Explore innovative and feasible paths to provide more feasible suggestions for the development direction of government digitization for the convenience and benefit of the people.

1. Preface

Government digital reform is the iterative deepening of 'run once at most' reform and...
government digital transformation. The government's digital reform focuses on "management" and "service." In order to meet the needs of enterprises and the masses for government services, improve the sense of acquisition and satisfaction of doing things, we use digital means to promote the all-round, systematic and re-plastic transformation of government governance, build an overall and efficient government operation system, a high-quality and convenient inclusive service system, a fair and just law enforcement supervision system, and a global intelligent collaborative governance system, and accelerate the building of an overall intelligent governance and real-first modern government. With the deepening of the concept of "data running" and "convenience for the people", digital reform plays an increasingly important role in promoting the process of socialist development in the new era.

2. Research status

2.1. Research on the Optimization Path of 'Run Once at Most' Reform

Since the government vigorously promoted the implementation of the 'run once at most' reform in 2017, the government has always followed the important entry point of mass affairs, focused on 1000 high-frequency matters of provincial-level mass affairs, and applied the means of standardization and data collection and sharing to government affairs services. By the end of 2017, 1699 data sharing needs of 100 high-frequency items at the provincial level have basically achieved 'full access, full collection, full sharing, and full docking'. The most important landmark achievements at this stage are the three "one" of government services, namely "one network," "one window acceptance" and "one certificate." Many scholars have conducted in-depth research on the "run once at most" reform, providing reliable experience for the improvement of government administrative efficiency and the direction and path analysis of government digital reform.

2.1.1. Effectiveness of the 'Run Once at Most' Reform

The effectiveness of the 'run once at most' reform is obvious. Yu Jianxing and Gao Xiang (2018) elaborated on the effectiveness of the 'run once at most' reform from both short-term and long-term aspects: the short-term effectiveness is mainly to improve the efficiency of the work and reduce the cost. The 'run once at most' reform has better improved the efficiency of government convenience services, commercial registration, and enterprise investment approval projects, and reduced the cost of citizens and enterprises.[1] The long-term effect is mainly on the government process reengineering. The reform of "run once at most" has surpassed the efficiency improvement in the sense of administrative management. It has leveraged cross-departmental process reengineering by taking matters as the carrier, forcing departments to reduce administrative power. It has achieved remarkable results in promoting decentralization and standardizing the exercise of administrative power. It has initially shown the leverage effect of promoting the comprehensive deepening reform of the economic and social system.[1]

The overall government reform model based on 'Internet + government services' has also been gradually formed in the exploration of the 'run once at most' reform, which has accumulated important experience and provided an important perspective for the next stage of party and state institutional reform. This has been further reflected in the view of Weng Lien (2019). 'Run once at most' reform has opened up government big data, promoted the construction of a holistic digital government, and established a digital public service system to improve the efficiency of government construction and the satisfaction of the people.[2]
2.1.2. Effectiveness of the 'Run Once at Most' Reform

However, even if the 'run once at most' reform is effective, the challenges it faces need to be addressed. Yu Jianxing and Gao Xiang (2018) believe that the problems existing in the reform of 'running once at most' are 'outstandingly manifested in the fact that the sense of acquisition of citizens and enterprises still needs to be improved, and the transformation of government functions is not yet in place', and it is deeply analyzed from both internal and external aspects: As an endogenous problem of local practice, the outstanding problem is the problem of 'government centralism' - 'the logic of government centralism is still prominent, some reform measures lack organizational guarantee, and some regions and departments fail to accurately grasp the fundamental goal of the transformation of government functions is the problem of streamlining administration and delegating power'; as an external institutional constraint of local exploration, the outstanding problem is the problem of 'information isolated island' - 'the poor information connection between various departments and national ministries and commissions leads to the lack of data 'running for the people' in local reform; localization reform and national laws and regulations conflict, to focus on the task model to promote 'run once at most' reform, the lack of long-term mechanism'.

In addition, Weng Lieen (2019) has also made further refinements on this basis. She believes that the 'Run Once at Most' reform has the problems of fragmentation of power operation and incoordination of the bureaucratic structure of the government, insufficient openness and interoperability of data sharing at all levels of government, and insufficient quality of digital services and user experience.

2.1.3. The optimization path of the 'run at most once' reform

Based on the 'run once at most' reform problems, many scholars have put forward their own optimization path. Among them, Yu Jianxing and Gao Xiang (2018) started from the problem, closely followed the problem of 'information island' and 'government centralism', and proposed to 'strengthen the top-level design, better coordinate the government affairs standardization and information sharing of various regions and departments, and break the institutional barriers of holistic government construction; the establishment of a 'people-centered' working mechanism, through the creation of responsive government, to better stimulate the 'run once at most' reform in improving people's satisfaction, sense of gain is the 'run once at most' reform optimization path'.

Weng Lieen (2019) proposed from the perspective of performance and public service quality to promote the development of a holistic government governance model by strengthening performance evaluation. Accelerate the establishment of a data sharing and interworking management mechanism between levels and departments; strengthen the demand orientation to promote the continuous improvement and development of public service quality and other ways to optimize the 'run once at most' reform.

2.2. Research on the Optimization Path of Government Digital Transformation

The reform focus of the government's digital transformation is constantly changing in the time course of 2018-2020, but its most prominent feature is still digital empowerment. From the main focus on the core business of the department; it mainly focuses on the core business combing and process reengineering of the government's performance and takes cross-departmental collaborative landmark projects as the starting point to promote the all-round digital transformation of the government; then the main focus is on system integration and comprehensive integration, with
scenario-based multi-service collaborative applications as the starting point. This shift has achieved a spiral of ‘from point to surface, from departmental division to overall coordination’, further promoting the creation of a ‘holistic and intelligent’ modern government.

The continuous advancement of the government's digital transformation has made scholars realize that the government's digital transformation not only includes the internal structure reconstruction, business process remodelling and government public service mode reform brought about by the embedding of digital technology into the government bureaucracy, but also the transformation of the relationship between government and society, the relationship between government and market caused by the new governance model, as well as the resulting digital society construction and digital economy development. [3]

2.2.1. Effectiveness of Government Digital Transformation

Government digital transformation, that is, digital government building has its unique results, different scholars have different views.

Bian Zhe thinks that government digital transformation takes system docking and process integration as an opportunity to promote government digital reengineering. Taking the merger and integration of heterogeneous systems in various departments as the key, we will promote the systematic reform, promote the gradual formation of government integration based on the sharing and disclosure of information data, and promote the refinement of government services with the wide application of information technology as the driving force. [4] He Shengdong, Yang Dapeng and others believe that the digital government is the externalization of the ‘people-centered’ concept, the evaluation basis for the implementation of the mission, based on the improvement of administrative efficiency, the main line of optimizing the relationship between governance subjects, the core of data opening, sharing and empowerment, and the purpose of people's satisfaction and social creativity. [5]

Digital government is a government with precise social governance. It can warn economic and social crises such as diseases and terrorism by integrating and analyzing government data and social data. From the state of existence, the digital government is to bid farewell to the traditional state of the existence of the department’s segmented physical place, and turn to a new operating state that can put digital technology into the government’s operation process and government affairs activities, and the ‘O2O’ overall integration operation, so that the government is no longer just a place, becoming the service needs of the people’s good life and an enabling platform to enhance the vitality of social innovation. [6] Zhou Wenzhang (2020) expounded the effectiveness of the digital transformation of the government from the role of the application of digital technology in the innovation of government governance model and process reengineering and pointed out that the digital government uses modern information technology to widely obtain information, scientifically process information, make full use of information, and digitize it in various fields such as economy, society, and environment. It is used to optimize government governance and form a modern governance model of dialogue with data, decision-making with data, service with data, and innovation with data to comprehensively improve the government's ability to perform its duties; resource sharing, eliminate resource islands; the full implementation of open government, decision-making, implementation, management, service, the results of the whole process through the network to let the whole society know, so that the power to run in the sun; optimize and adjust the government’s internal organizational structure, operational procedures and management services, government process reengineering. [7]

From the perspective of the development of the governance system promoted by the digital transformation of the government, Li Qi, Cao Sheng et al. (2020) pointed out that the construction of digital government can promote the improvement of the system elements such as the governance
subject, concept and content, which is the key area to promote the digital transformation of governance and the forerunner to improve the governance system. Through the construction of digital government, we will improve the unified government internal and external network, e-government platform, government service platform, credit supervision platform, market supervision platform, as well as basic database and government data sharing platform to promote the overall coordination of government internal operation and improve the efficiency of government operation. Provide policy advice, data and information services, and platform channel services through open data sharing and standardized participation of various platforms to create a standardized and orderly market and social environment and stimulate the vitality of economic and social development; through the integration and efficient service of the platform, it provides an autonomous and self-organizing platform for the grassroots society, and also provides a channel for the demands to be responded to and solved, and promotes the refinement and publicity of social governance and public services. [8]

2.2.2. Challenges of Government Digital Transformation

Although the digital transformation of government has an important impact on government governance and reform, there are also some obstacles. Bian Zhe (2018) believes that 'the lag of digital governance ideas, the absence of digital governance system construction, and the lack of information talents lead to the lack of digital governance means' restrict the comprehensive deepening of reform.

2.2.3. Optimization Path of Government Digital Transformation

Based on the application of digital technology and thinking mode, Bian Zhe (2018) proposed that the digital transformation of government should be guided by Internet thinking and promote the transformation of digital government governance. Taking system construction as the starting point, consolidate the foundation of digital government governance; taking digital information technology as the key to promote the breakthrough of digital government governance methods to break through the bottleneck of government digital transformation. [4] Yu Jianxing (2021), from the perspective of the subject of digital transformation, puts forward that 'the government is not the only subject of digital transformation, and the market and society are also the key actors to promote digital transformation. Accordingly, the government not only needs to promote its own digital transformation, but also needs to provide basic order, institutional support and factor guarantee for the construction of digital economy and digital society.' [9]

2.3. Research on the direction and path of government digital reform

Government digital reform is based on the 'Government Digital Transformation' and 'Run Once at Most ' reforms. With the continuous advancement of digital reform, how to find the direction of digital reform and optimize the path of digital reform has become an important proposition. However, Yu Jianxing (2021) pointed out that 'digitization itself is not the goal, and the people's sense of gain, happiness and security is the basis of all government work.' [9] Therefore, digital technology is only a tool, cannot become a shackles, bound people's hands and feet. Digital reform should move towards the direction of convenience and people centered. The government should always grasp this important concept when implementing specific measures of digital reform. Firstly, governments at all levels can make full use of new technologies such as "Internet +," explore ways to build citizen participation channels in the digital age, and truly define the priorities of digital reform content based on people's needs, so that people have a sense of gain in digital reform. Secondly, governments at all levels need to pay more attention to the transformation of the
development stage from 'construction' to 'operation', form more quality digital projects, and make people happier in digital reform. Thirdly, 'business data' provides a new way for the government to improve the quality of digital applications more scientifically. Finally, in the digital reform, governments at all levels should not only attach importance to the 'brain' of technical experts, but also attach importance to the 'heart' of public policy experts and the 'eyes' of humanities scholars. By setting boundaries for innovation, setting the bottom line for application, and adding value to tools, we will effectively protect the people's sense of security and safeguard the fairness and justice of public governance. [9]

Liu Shuchun pointed out that the implementation of digital government has strong relevance, isomorphism, and synergy, and it is urgent to promote the "six in one" digital transformation of economic regulation, market supervision, public service, social management, environmental governance, and government operation in an all-round way. [10]

2.4. Literature evaluation

Digital reform is a new stage of digital Zhejiang construction, an expansion and upgrading of the government's digital transformation, and a major strategic measure for Zhejiang to base itself on the new development stage, implement the new development concept and build a new development pattern. Government digital reform is an iterative deepening of 'run once at most' reform and government digital transformation, which makes up for the deficiencies in the process of 'run once at most' reform and government digital transformation. The 'Run Once at Most' reform and the digital transformation of government have re-constructed the coordination mechanism of government functional departments, realized the reengineering of work processes, and used public satisfaction as a key indicator of performance evaluation, contributing to the improvement of government efficiency. However, in the operation mode of the combination of digital technology and government governance theory, there are practical problems such as difficulty in integrating data resources, difficulty in breaking data sharing barriers, and difficulty in improving the effectiveness of scene applications.

3. Research on Government Digitalization Reform Path - Based on Government Big Data Governance Maturity Model

Table 1: Evaluation index system of government big data governance maturity

<table>
<thead>
<tr>
<th>Maturity elements</th>
<th>Factor index</th>
<th>Performance indicator</th>
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<tbody>
<tr>
<td>strategic planning</td>
<td>strategic objective realization of process laws and regulations</td>
<td>Business objectives and value creation, big data science decision-making capabilities</td>
</tr>
<tr>
<td>system guarantee</td>
<td>policy system standard specifications mechanism personnel culture</td>
<td>Process standard setting, big data solutions</td>
</tr>
<tr>
<td>organizational guarantee</td>
<td>data platform</td>
<td>Data resource management (data acquisition, storage, sharing, transaction, reuse, security, etc.), data resource rights</td>
</tr>
<tr>
<td>technology framework</td>
<td>data technology</td>
<td>Technology policy, industrial policy, application policy, talent policy, Funding policy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data management, statistical evaluation</td>
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<tr>
<td></td>
<td></td>
<td>Management institutions, organizational structure</td>
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<tr>
<td></td>
<td></td>
<td>Data Governance Specialists, Data Administrators, Data Users organizational culture</td>
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<td></td>
<td></td>
<td>Government data unified sharing exchange platform, government data unified open platform</td>
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<td></td>
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<td>Big data key common technology, big data technology innovation</td>
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</table>
Government digital reform is the iterative deepening of government "run once at most" reform and government digital transformation. Based on the research on the guiding role of the government's "run once at most" reform and the results of the government's digital transformation, the maturity of government big data governance is in a more important position.

![Figure 1: Government data governance maturity radar chart](chart.png)

The government big data governance maturity evaluation index system (GBD-GMIS) \(^{[11]}\) aims to help the government understand its big data governance status, build big data governance capacity and development path and its continuous improvement countermeasures, adjust, and optimize the government big data governance plan or action plan, and promote the modernization level of national governance system and governance capacity. \(^{[12]}\) Zhang Yujie, An Xiaomi et al. (2018) \(^{[13]}\) divided the maturity evaluation of government big data governance into six big data maturity elements: strategic planning, institutional guarantee, organizational guarantee, technical architecture, data management and governance capabilities, 16 factor indicators, and 40 implementation indicators (see the Table1) \(^{[13]}\) by using the model of smart city implementation path and technical means to measure the maturity of development. To objectively reflect the actual status of government big data governance (Zhejiang Province’s 'run once' reform and government digital transformation), reveal experience and practice, and find areas for improvement. Share the best practical experience and appropriate practices of digital reform in the development process.

Through the maturity survey of the results of the "run once at most" reform and the government's digital transformation (i.e., Government digital governance) in Zhejiang Province, the maturity level standards of each implementation index are evaluated, and the evaluation results of all
elements are integrated. By calculating the average value of the grade results, the maturity level of each factor index is obtained by rounding down, and the result is represented by the radar chart (see the Figure 1).

The research results show that in Zhejiang's 'run once at most' reform and the digital transformation of the government, to a certain extent, it has improved the efficiency of policy formulation and decision-making, served social intelligence, enhanced the output of decision-making, improved decision-making efficiency, and continuously improve the efficiency and efficacy of the masses. However, there are three major problems in the process—the difficulty of integrating data resources, the difficulty of breaking data sharing barriers, and the difficulty of improving the effectiveness of scene applications.

3.1. Breaking data barriers and promoting the integration and sharing of digital resources

The theory of collaborative governance points out that the synergistic effect refers to the overall effect produced by the coordination and cooperation of each subsystem in the system around the common goal. The servo principle means that at the critical point of system development, there are a few order parameters that can dominate the behavior of other variables and play a decisive role in the development direction of the whole system. Sub-organization means that the subsystems within the system can automatically form a certain structure and function without receiving external instructions. Collaborative governance means that when solving public problems, stakeholders discuss together, cooperate, and finally form solutions to achieve the effect of 'good governance'.

In the process of government digital reform, there are some problems, such as the fragmented distribution of digital information, the difficulty in realizing the interaction of digital platform technology, the imperfection of institutional incentives, and the lack of trust culture construction. We use collaborative governance theory to break data barriers and promote the integration and sharing of digital resources.

3.2. Accelerating the Transformation of Thinking Concepts

From the perspective of the government's organizational structure, the Chinese government is a pyramid-shaped bureaucratic structure. The entire administrative region is cut into blocks through hierarchy, and the blocks are cut into strips through the corresponding departments at all levels, thus forming a system combining blocks and strips. The Internet and big data are flat network structures. There are countless lines between each node. Any link can transmit information from one node to another at the speed of light. In the context of the inadaptability of the bureaucratic government structure and the flat Internet structure, the government should change its ideological concepts, improve the strict hierarchy and complex structural redundancy, and solve the problem that the members of the lower-level organizations are difficult to truly participate in the construction of the organization, and the members of the upper-level organizations are also difficult to truly understand the drawbacks of the real situation of the organization. Not only can reduce management costs, can quickly transmit information, bottom-up, top-down, easy to communicate, improve the management level, and constantly realize the government centrism to people-centered concept change, promote the real implementation of digital reform.

3.3. Improve the effectiveness of scene application

The application scenario is the main carrier of digital reform and the pillar and link to realize digital empowerment and system reshaping. Digital reform is essentially a scene revolution.
application scenarios, digital reform can be implemented, focused, and experienced \[18\]. The application scene is divided into the scene application between the horizontal departments and the scene application of the vertical 'province-city-county-township' governments at all levels. Horizontally, in the process of intelligent division of administrative agencies, the fragmented distribution of information resources and the block structure in administrative organizations make it difficult to achieve resource sharing and scene reciprocity among various departments \[15\]. Vertical 'province-city-county-township' governments at all levels to push, provincial and ministerial level to play a leading role in the top-level design, through field surveys and feedback mechanisms to identify the people’s lives pain points, while effectively coordinating the interests of the provincial, municipal, county and township governments at all levels to determine their relatively clear policy objectives and task arrangements, set up in all aspects of the effect evaluation link, timely monitoring of all aspects of the problem and take appropriate measures to resolve the existing institutional system and specific institutional mechanisms to bring obstacles, and reduce the levels, administrative regions, policy areas between the fragmentation of governance and functional conflicts. Really effectively promote the implementation of various scenarios \[19\].

3.4. Maintaining digital security and privacy

While data is increasingly becoming the core element of digital transformation of our government, its security risks are gradually exposed. In recent years, the integration of the digital economy and the real economy has been continuously improved, and the utilization of government-related data has increased, making the issue of personal privacy data security increasingly prominent \[20\]. On the ideological level, individuals, businesses, and governments need to establish security awareness, and firmly establish the awareness of data security protection; at the technical level, enhance the ability of data security situation acquisition, understanding and prediction. Based on a variety of government data sources, actively access to security information in the Internet environment, and attribute fusion, correlation analysis and data mining, the establishment of relevant models to protect personal privacy \[20\]; system level, the government according to the current situation, formulate relevant laws, build e-government security mechanism to ensure the orderly flow of data and information.

4. Research on the operation mechanism of government digital reform

Through the research on the dilemma of "run once at most" reform and government digital transformation in Zhejiang Province, this paper studies the operation mechanism of government digital reform based on collaborative governance theory and data open sharing perspective. Based on the theory of collaborative governance and the perspective of data opening and sharing, the government’s digital reform absorbs the participation of multiple subjects and optimizes and upgrades the single subject management of the government and its related departments into universal digital governance. On the one hand, it coordinates the interests of the government, the masses, enterprises and platform builders, on the other hand, it opens up data barriers between provincial-municipal-district levels and government departments, and constantly promotes horizontal and vertical data sharing of the government and draws the future development direction and development path of government digitization, and further promotes the reform of government digitization. Based on the analysis of the people’s analysis of the main coordination mechanism and data sharing mechanism in the government’s digital reform, we should promote the government’s digital reform based on the needs of the people, improve the efficiency of the government’s various functions, and improve the people’s sense of security, gain and happiness.

In the process of government digital reform, it often needs to strengthen the policy and
technology in addition to the governance body. In terms of policy, the first is to improve the policy system and strengthen the policy formulation of digital government integration construction, management, and use, including guiding policies, targeted programs and related rules and regulations. Second, promote standardization. To establish and improve the digital government standard system at the national level, around the management mechanism, collaborative office, service process, platform architecture, security, etc., to standardize the content of digital government construction and digital collaboration one by one and accelerate the standardization of the whole process. In terms of technology, strengthen the construction of government affairs platform and strengthen security. Establish and improve the digital government security protection system, enhance data traceability capabilities, and ensure the smooth and efficient operation of data such as infrastructure and digital resources.

5. Summary and discussion

Based on the research results of Zhejiang Province’s ‘Run Once at Most’ reform and the digital transformation of the government, we explore the direction and path of the digital reform of the government, and put forward opinions and suggestions on the problems existing in the existing research results: to break the data barriers and integrate and share digital resources; to speed up the transformation of the concept of thinking; to improve the effectiveness of application scenarios and to maintain data security and privacy. During its research, it puts forward opinions and suggestions that can be improved in the field of public management, and constantly promotes the level of government digital reform from the level of public management. However, the government digital reform is essentially introducing digital technology into government governance. While promoting government governance, it also needs to constantly promote the follow-up of digital technology and constantly meet the needs of stakeholders such as the masses, enterprises, and governments. In this paper, there is a lack of research on the follow-up part of digital technology, and there are certain deficiencies.

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References