Governing China in Digit: A Framework for Assessing the Development of Digital Government in 101 Chinese Municipalities*

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Abstract

China has become one of the most progressive actors in the global trend of governmental digitization over the past two decades. "Digital technologies are increasingly weaving into every aspect of the Chinese governance system, necessitating a renewed understanding of digital politics. This article offers an up-to-date framework for depicting the rapid growth of China's digital government through a holistic view encompassing four dimensions: organizations, institutions, capacities, and effectiveness. Applying this analytical framework, we construct an original dataset to assess the current state of digital government in 101 municipalities. Our analysis shows that China has established full-scale institutions and organizations that direct the utilization of smart cities

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and big data in delivering public services. However, Chinese municipalities vary drastically in terms of the capacity and the effectiveness of digital governance. A digital divide clearly manifests between regions— while the coastal cities have developed full-fledged digital infrastructure and services, a large majority of inland cities have lagged far behind. This article also explores the factors that contribute to digital government. Two models of government digitization—government-society balanced model and government-driven model—coexist in Chinese municipalities. We find that aside from socio-economic factors such as economic development and social structure, political factors serve as a key driver. The larger city scale, lower percentage of government employee, and higher business size per public official, the more digitally sophisticated the city tends to become. The framework provides new insights for understanding digital government in China, revealing the pattern of rapidly growing yet unbalanced development.

1. Introduction

The past two decades have witnessed the rapid adaption, diffusion, and development of digital government on a global scale. Governments around the world increasingly use technologies to improve administrative efficiencies, deliver services, and engage with citizens.[1] China stands out as one of the most progressive actors in this global trend. According to the United Nations' E-Government Surveys, China was ranked among countries with "minimal e-governing capacity" in 2001; but by 2021, it had transitioned into the tier of "very high e-governing capacity," as measured by the E-Government Development Index.[2] The recent battle with the COVID-19 pandemic, for instance, exemplifies how the Chinese government utilized smart city infrastructure along with cutting-edge technologies such as big data and artificial intelligence to curb the transmission of the coronavirus. By collaborating with Big Tech corporations that developed various digital service applications for individuals to scan codes, report their trajectories and health status, the Chinese government quickly collected and analyzed data from mobile phones, search engines, travel histories, and social media to track and identify potential infections.[3]

The sheer fact that digital technologies increasingly weaving into every aspect of Chinese governance system calls for an updated understanding of this digital giant. This study proposes a new framework to systematically delineate how China is governed digitally. The framework