Eastern Data, Western Computing: Understanding Government-Companies Relationship and (Re)Distribution of Internet Outcomes on China's National Big Data Infrastructure Project

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Introduction

Although as early as the 1990s, the Chinese government identified the expansion of China's information and communications infrastructure and its usage as a key component of the national economic growth policies (Harrington, 2007), China's western region has suffered from digital inequality, compared with the eastern region (Xing, 2019). "Eastern Data and Western Computing" project (EDWC), a national big data infrastructure project launched by four Chinese government bodies[1] in 2022, as its name suggests, deployed and built hub nodes in the western region, which has a favorable climate and abundant energy sources but its digital industry is lagging, through establishing and implementing polies by central and local government to solve the imbalanced distribution of computing facilities (NDRC, 2022a). Differing from the previous national projects (e.g. "West-East Electricity Transmission" project), the EDWC is not a pure public infrastructure construction and its market-oriented purpose makes local government give platform companies preferential policies to attract them to join in the local data centers(The Paper, 2022), thereby generating revenue for local government and alleviating regional digital inequalities(NDRC, 2022b; Li & Ji, 2022), which is in line with the central government's long-term goal of "common prosperity for everyone"(Zheng, 2023). This reflects China's complex state-market structure where the state plays a role as both regulator and supporter in developing digital economy so that the government and technology are deeply entangled (Schneider, 2019). The research attempts to contribute by proceeding with an empirical study of the EDWC project, which may deepen our understanding of the relationship between China's government and platform companies and the redistribution of Internet outcomes in the theoretical issue of infrastructure study. The following questions warrant us to explore in depth:

RQ1: How is the relationship between the central government, local governments, and platform companies coordinated in this national project, particularly compared with previous national projects such as "West-East Electricity Transmission"?
RQ2: How has digital inequality in China's western region been alleviated through the interaction of these entities (government, technology, and platform companies)?

Methods and data collection

This article collects policies and companies documents regarding to EDWC project from the following resources: (1) Central-level administrative institutions, such as Central Government and National

Development and Reform Commission, 5 institutions in total; (2) Provincial and municipal governments where the data center located and other institutions, including government of Helingeer County, International Center for Science and Technology Innovation and so on, 21 institutions totally; (3) Five technology companies, such as Alibaba and Huawei. Finally, 1335 policy documents and articles were collected and content analysis method was employed.

Results and contributions

This study has following contributions. While previous studies often employed a "command-and-obedience" framework to describe the government-enterprise relationship in China, the EDWC project and its policies present a more nuanced perspective. Local governments strategically attract tech companies to participate through preferential policies, rather than imposing commands. Simultaneously, companies are incentivized to actively support this national strategy in order to gain locational advantages. This highlights a complex and negotiated relationship among stakeholders, rather than a simplistic dichotomy. In these interactions, private platform companies, initially driven by the maximizing commercial profits (Plantin et al., 2018), have become interconnected actors with public infrastructure. They serve as a means to alleviate digital inequalities in the western regions of China.

Note:

1. The "Eastern Data and Western Computing" project was launched by the National Development and Reform Commission (NDRC), Cyberspace Administration of China (CAC), Ministry of Industry and Information Technology (MIIT), and National Energy Administration (NEA).

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