



# The Impact of Digital Technology on the Development of Social Organizations and Its Mechanisms

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**Abstract.** The digitalization of social organizations corresponds with the trends of transparency and digitization in governmental information. It serves as a crucial component in advancing the modernization of the national governance system and enhancing governance capabilities through information technology. This paper presents a case study on the application of digital technology by the Red Cross Society in Taiyuan, China, revealing that such applications can improve the operational efficiency and social impact of social organizations, thereby facilitating their further development. Additionally, the evolution of values and concepts within social organizations constitutes a key mechanism by which digital applications foster their growth.

**Keywords:** Digital Technology, Social Organization Development, Value Updating

## 1 Introduction

With the rapid advancement of information technology, the application of digital technology has emerged as a critical driving force for social development. In recent years, the effects of digital technology on public welfare and charity have attracted significant attention from academia. Scholars suggest that the impact of digitization is reflected not only in the operational efficiency and scope of activities of non-governmental organizations (NGO) but, more importantly, in the broader development opportunities and possibilities it affords them. For instance, digital technology has improved interactions between NGO and their audiences and has enabled NGO to assess their operational performance more effectively [1-2].

While existing literature predominantly addresses the effects of digitization on commercial and administrative organizations, there remains ample opportunity for empirical research concerning digital technology and NGO development. Research in the former area has yielded meaningful insights that could inform studies in the latter, given the similarities in organizational structures and internal management systems between government entities and certain social organizations. Thus, the optimization of internal management via digitization in government may also benefit the NGO

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sector. Consequently, this paper aims to explore the impact of digital technology on NGOs through case studies, with the goal of providing new ideas and insights for future research.

## **2 Literature Review**

### **2.1 NGO Development**

Based on the theories of the state and society, the government, market, and civil society are the three main pillars of modern national governance. Within this framework, civil society advocates for strengthening the public sphere, limiting state power, and compensating for market failures. Non-governmental organizations (NGO) play a significant role within civil society, representing non-profit, voluntary citizen groups established at international, national, and local levels [3]. Due to differences in national governance systems, notable distinctions exist between Chinese and Western NGO. Many of China's mainstream and influential NGO are closely aligned with the government, and their missions and activities largely correspond with the governance policies of the Chinese Party and state [4]. For instance, although the China Red Cross is classified as a social organization, it operates under the auspices of the Chinese government and is organized according to the structure of the State Council.

Current literature primarily examines NGO development from two dimensions: internal and external organizational conditions. Internally, scholars often focus on the size and scope of NGO, their activities, and levels of specialization [5]. Externally, scholars tend to assess the magnitude of social influence [6], sustainability [7], and the effectiveness of cross-sector collaboration with enterprises [8]. A significant consensus among researchers regarding the factors influencing NGO development is that macro-level political institutions, social environments, and economic development levels, along with micro-level factors such as social trust and organizational capabilities, are primary determinants of NGO growth [6]. In the context of China, previous research has primarily focused on the impact of the country's authoritarian regime on NGO development, while recent studies have begun to explore the influence of technology as a new variable in this sector.

### **2.2 Digital Technology Application**

Digitalization is the process of converting manual data into a digital format, while Digital Technology Application (DTA) encompasses the integrated use of next-generation information technologies, including big data analytics, cloud computing, artificial intelligence, and blockchain [9]. With the development and widespread adoption of digital technologies, various types of organizations—including government, enterprises, and social organizations—actively apply these technologies in their management and operations, resulting in diverse outcomes.

Internally, digital technology can enhance leadership and organizational performance by establishing platforms for team knowledge sharing [10]. Externally, the application of digital technology increases the transparency of government services and grassroots operations, thereby enhancing government credibility and deepening interactions between NGO and their audiences [1][11]. However, the adoption of digital technologies may also introduce certain risks, such as information leakage [12].

In summary, existing research on the impact of digital technology in the public welfare sector is still insufficient, with most studies focusing on its effects on government departments and corporate organizations. Nevertheless, as digital technologies become more widely applied across various fields, NGO are increasingly incorporating these technologies into their operations. This paper aims to concentrate on the public welfare sector and investigate the influence of digital technology on NGO development.

### **3 Research Methods And Case Background**

#### **3.1 Research Methods**

This study employs a case study methodology, which enables a detailed and contextual analysis of the real environments in which research subjects operate. This approach allows for an in-depth exploration of experiential realities and the examination of empirical details. Through conceptual induction and the analysis of experiential processes, case studies systematically illustrate causal mechanisms [13]. Consequently, this paper conducts an in-depth case analysis through field investigations of a single case to explore how digitalization promotes the development of NGO.

#### **3.2 Rationale for Case Selection and Data Collection**

This paper utilizes the digital reform of the Red Cross Society in Taiyuan, China, as a case study for three main reasons. First, representation: the Red Cross Society of China is the unified Red Cross organization of the People's Republic of China, engaged in humanitarian work as a social relief entity and is a member of the International Red Cross Movement. The Taiyuan Red Cross Society is a subsidiary of the Red Cross Society of China and serves as a typical representative of Chinese NGO. Currently, the Taiyuan Red Cross Society has over 50 organizational members. In 2022, it raised donations totaling 38,072,456.09 yuan and organized more than ten activities, including "Red Cross Love Sent to Thousands of Families." The organization's use of digitalization reflects the digital status of NGO to a certain extent. Second, analyzability: the Taiyuan Red Cross Society began applying digital technologies to its office processes early and encompasses a wide range of activities involving digital technologies. Third, completeness: the research subject is willing to participate in interviews and can provide opportunities for research as well as detailed internal data.

Regarding data collection, the required materials primarily include primary interview data and secondary sources, such as reports, videos, forums, and journals. Of these, primary interview data serves as the main source of research information. The research team conducted two field interviews with the organization in July and August 2023, followed by two online interviews in June and July 2024. The interview subjects fall into two categories: First, leadership members, including the party secretary and vice president; Second, technical staff, such as the person responsible for managing the official WeChat account and the accountant. The interview content covers the organization's journey in adopting digital technologies, classification of application areas, impacts on organizational operations, audience acceptance, and the flexibility of internal members in utilizing digital technologies. In total, approximately 100,000 words of interview transcripts and around 100,000 words of secondary data were compiled.

## **4 Case Analysis**

### **4.1 Development Process and Effectiveness of Digital Technology Applications in Social Organizations**

In recent years, the widespread adoption of digital technology has led the Red Cross Society in Taiyuan to gradually integrate these technologies into its daily operations. The digitalization process at the Taiyuan Red Cross Society can be delineated into three developmental stages: the use of basic technologies, the introduction of digital technologies, and the expansion of digital technologies.

**Stage of Basic Technology Usage (2010-2016):** In this initial stage, the Taiyuan Red Cross Society began utilizing internal management software. This included entering important documents, such as archival files, into computers using Excel spreadsheets for archiving and establishing workgroups. The application of information technology during this phase primarily enhanced the efficiency of document archiving and organization within the society, as well as the standardization of work processes.

**Stage of Digital Technology Introduction (2016-2022):** During this stage, the Taiyuan Red Cross Society focused on exploring its official website and online service channels. (1) The society established an official website to publicly disclose information about its activities and financial data. (2) The organization expanded its online service channels by creating online donation services for charitable giving and the "Three Rescues and Three Donations" program, enabling citizens with related needs to directly access donation pages via links on the website. The impact of digitalization during this period included improved organizational promotion, which allowed more people to learn about the Taiyuan Red Cross Society and its projects, thus attracting greater charitable contributions from diverse sectors of society and establishing social influence. Additionally, digital capabilities facilitated interactions between the Taiyuan Red Cross Society and prominent social organizations nationwide and globally, further improving its management system and enhancing digital empowerment. Lastly, increased information integration and

accessibility bolstered organizational transparency, strengthening governmental, social, and market oversight of the organization, thus prompting continuous improvement of its internal management processes.

**Stage of Digital Technology Expansion (2022-2024):** In this stage, the Taiyuan Red Cross Society has explored two primary digital applications: (1) Promotion through a WeChat public account. The society established its official WeChat account in March 2022 and gradually developed sections for humanitarian services and interactive communication. It actively created digital applications for "emergency rescue, emergency care, humanitarian assistance, organ donation, fundraising, volunteer services, and humanitarian outreach," facilitating online services for the public. (2) Adoption of online donation digital technology software. Following the launch of the WeChat public account, the Taiyuan Red Cross Society integrated the "Love Donation" mini-program into the account's services section. This mini-program encompasses numerous functions, including donation acceptance, project management, financial management of donations, donor service management, and data statistics and analysis, effectively ensuring the efficiency and transparency of donation operations.

The introduction of digital technology during this stage has played a crucial role in enhancing the organizational efficiency of the Taiyuan Red Cross Society. Through its WeChat public account, the organization is able to offer more intelligent and convenient services to the public, partners, and volunteers, including online learning and emergency first aid training. This capability addresses the diverse needs of various groups and improves overall service efficiency. For instance, during significant events that require urgent fundraising, the Red Cross Society can promptly and accurately disseminate information via its official website and WeChat account, accelerating fundraising efforts to provide better support.

Additionally, the scope of the organization's activities has expanded further. The Taiyuan Red Cross Society has not only received an increased volume of donated supplies through its WeChat public account and donation mini-program but has also connected to a broader range of organizational resources through online platforms, thereby launching more collaborative projects across wider geographical areas.

Furthermore, the organization's influence has markedly increased. By disseminating organizational information and activity updates through its official website and WeChat account, the Taiyuan Red Cross Society has heightened public awareness, enhancing its influence and garnering support for charitable efforts in the city. Concurrently, the organization has frequently attracted the attention of mainstream media, resulting in increased coverage of its activities. This reciprocal relationship has significantly bolstered the Red Cross Society's influence within the media sphere.

#### **4.2 Key Mechanisms of Digital Application: Updates in Value Concepts**

Leveraging digital technology to promote the development of social organizations in China poses a significant challenge within the current landscape of social organizational growth. Traditional grassroots NGO often struggle to adopt advanced

digital technologies due to limited human and material resources. In contrast, larger organizations, such as the Red Cross Society in Taiyuan, face challenges stemming from a limited understanding of the values associated with digital technology during implementation. To address the issues arising from deficiencies in value recognition that hinder the advancement of digital applications, the organization continually seeks to update mutual understanding and concepts throughout the implementation process of digital applications and public services, thereby reinforcing both leadership and staff recognition of digital technology's value.

The leaders of the Taiyuan Red Cross Society have shifted from a passive approach to task completion to an active exploration of digital applications. During the initial phase of digital adoption, leadership began implementing digital technologies internally, including the development of an official website. However, these initiatives were primarily motivated by explicit directives from higher authorities. The organization's vice president remarked in an interview, "At first, everyone was just trying to complete a task, which felt like a burden at that time." This indicates that the introduction of digital technology represented a passive organizational development strategy. Nevertheless, during the implementation phase, the core leadership of the Taiyuan Red Cross Society identified numerous positive outcomes from the reforms, including substantial improvements in organizational efficiency, enhanced management capabilities, increased teamwork, and greater social impact due to improved transparency.

Recognizing the critical role of digital technology in organizational management and advancement, the leadership team pursued two key initiatives. First, they requested the allocation of technical personnel from higher authorities. The leaders of the Taiyuan Red Cross Society proactively sought to arrange technical positions and allocate skilled personnel to manage various aspects of internal network technology, including the daily operations of the WeChat public account and website, timely dissemination of organizational news, coordination with finance to consolidate donation information, and regular monitoring of engagement metrics to gather public feedback. Second, they aimed to enhance recognition and support among organizational members. Initially, most members were engaged in the digital transition merely to fulfill obligatory tasks, unaware of the many benefits digital technology could offer the organization. However, as the website and WeChat public account were improved and developed, members began to realize that their workload had been alleviated through digital technology. Additionally, in their communications with the public, they observed a significant increase in the organization's influence and public recognition. A staff member from the Disaster Relief and Rescue Department stated, "Previously, many people didn't know about our organization and even doubted our legitimacy. Now, they encounter our posts on their phones and gradually come to understand us, which makes us quite happy. It truly feels like we are serving the people." These changes have influenced the perspectives of the Red Cross staff, gradually increasing their recognition and support for digital technology.

Through the updating of ideological concepts, digital technology and its applications have been actively promoted and effectively maintained within the Red Cross Society in Taiyuan. This initiative has transformed the organization's

governance model, reengineered work processes, significantly improved operational efficiency, and continuously enhanced organizational transparency and public satisfaction. By integrating internal and external strategies, these efforts have fostered positive organizational change and development. Thus, the internal updating of ideological concepts within the Taiyuan Red Cross Society serves as a key mechanism driving the application of digital technology and, consequently, the organization's development.

## 5 Conclusions

The digitalization of social organizations aligns with the trends of transparency and digitization in government information, constituting a crucial element in advancing the modernization of the national governance system and enhancing governance capabilities through information technology. This paper presents a case study of the Taiyuan Red Cross Society's application of digital technology, demonstrating that the implementation of such technologies can enhance the operational efficiency and social impact of social organizations, thereby facilitating further organizational development. Furthermore, the internal updating of values and concepts within social organizations is a pivotal mechanism through which digital applications promote their development.

By exploring this case, the paper delves into the impact and mechanisms of digitalization on the development of social organizations, revealing the practical connections between digital technology and the modernization of national governance systems and capabilities.

In terms of research significance, this study aims to summarize the experiences of Chinese social organizations in utilizing digital technology, offering new insights for the collaborative advancement of global digitalization and charitable initiatives.

## References

1. Moreno-Cabanillas, A.; Castellero-Ostio, E.; Castillo-Esparcia (2024), A. Digital Communication and Social Organizations: An Evaluation of the Communication Strategies of the Most-Valued NGOs Worldwide. *Future Internet*(16), 26.
2. Tarek Rana, Carolyn J. Cordery(2024), Digitalization as a form of marketization: The performativity of calculative practices in framing and overflowing NGO performance and accountability, *The British Accounting Review*, Volume 56(1), 101176, ISSN 0890-8389
3. Salamon, Lester M.(1994) .The rise of the nonprofit sector.*Foreign Affairs*. (73) 109.
4. Amp, Q. L. , & Wang, M. . (2009). An analysis of the development of china's ngos and its social foundation since the reform and opening up. *Journal of Public Administration*, 33(8), 675-83.
5. Aigner, D.J.; Pesqueira, L(2020). The Effects of Organizational Traits on NGO–Business Engagement in Mexico. *Sustainability* (12), 10108. <https://doi.org/10.3390/su122310108>
6. Dany, C. (2014). Janus-faced NGO Participation in Global Governance: Structural Constraints for NGO Influence. *Global Governance*, 20(3), 419-436.

7. Huyse, H., Molenaers, N., Phlix, G., Bossuyt, J., & Fonteneau, B. (2012). Evaluating NGO-capacity development interventions: Enhancing frameworks, fitting the (Belgian) context. *Evaluation*, 18(1), 129-150.
8. Paweł Brzustewicz, Iwona Escher, Akram Hatami, Jan Hermes, Anne Keränen, Pauliina Ulkuniemi(2022), Emergence of social impact in company–NGO relationships in corporate volunteering, *Journal of Business Research*, Volume 140,62-75, ISSN 0148-2963
9. Tilson, K. Lyytinen, C. Sørensen (2010). Research commentary—Digital infrastructures: The missing IS research agenda. *Information Systems Research*, (21) 748-759
10. Jiangnan, Lyu (2024), How does digital leadership improve organizational sustainability: Theory and evidence, *Journal of Cleaner Production*, Vol 434, 140-148,ISSN 0959-6526
11. Kim, S., Andersen, K.N. and Lee, J. (2022), Platform Government in the Era of Smart Technology. *Public Administration Review*, 82: 362-368. <https://doi.org/10.1111/puar.13422>
12. Trittin-Ulbrich, H., Scherer, A. G., Munro, I., & Whelan, G. (2021). Exploring the dark and unexpected sides of digitalization: Toward a critical agenda. *Organization*, 28(1), 8-25.
13. Eisenhardt K M, Graebner M E.(2007). Theory building from cases: Opportunities and challenges[J]. *Academy of management journal*, 2007, 50(1): 25-32.

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