# Identifying the Determinants of Platform-Based E-Government Service Use

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## ABSTRACT

Governments have embraced platform-based business models, increasingly used in companies, to enhance efficiency, standardize information, and deliver a broader range of information quickly and easily. The integration of platform-based e-information services is essential for innovative e-government policies, as it leads to improvements in administrative efficiency and better information quality. A theoretical review of success factors highlights the significance of service efficiency, user satisfaction, and the intention for continuous use. The authors conducted their own survey of Korean citizens using Government 24, an integrated platform for frontline e-services. Their analysis revealed that information and service quality boost user satisfaction, while system and service quality heighten perceived efficiency. Perceived efficiency and satisfaction in platform-based e-services play a crucial role in encouraging users to continue utilizing these services.

## KEYWORDS

e-government success factor, Information platform, information quality, service quality, system quality, Systems Success Model, user satisfaction

## IDENTIFYING THE DETERMINANTS OF PLATFORM-BASED E-GOVERNMENT SERVICE USE

In response to digital transformation, technology-advanced countries have recently begun offering information services based on data analysis (de Mello & Ter-Minassian, 2020). This transformation is an ongoing process in which traditional structures are converted into digital ones using information and communication technologies (ICTs). Policies employing ICTs across nations signal the future direction of governments (Andersen & Henriksen, 2006; Gholami et al., 2010; Tan et al., 2005). The emerging digital paradigm has led to the networking and integration of administrative information systems, increasing productivity and efficiency in the public sector.

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This study focuses on the recent e-government case of South Korea, which has gained international acclaim and recognition, particularly from the United Nations e-Government Development Index (United Nations, 2022) and the Organisation for Economic Cooperation and Development (OECD) Digital Government Index. The South Korean e-government gets keen attention to its significant improvements in administrative efficiency and citizen convenience. In the 2010s, the South Korean government proposed a paradigm shift from Government 2.0 (active interaction between citizens and government) to Government 3.0 (personalized and customized services, increased openness, and participation). More recently, digital transformation has inspired the South Korean government to transition from digital government towards digital platform government, which offers platform-based integrative services across various domains and sectors.

O'Reilly (2011), the first to propose the "government as a platform" (GaaP) concept, argued that the government acts as both a provider and participant of the platform, generating outputs through the involvement of public and private sectors within the public platform (UK Government, 2017). Currently, effective public portals' platform functions connect stakeholders to decisions made through citizen participation (Gorwa et al., 2020) and provide bottom-up insights to policymakers (Janssen & Estevez, 2013).

Platform-based administrative services using ICTs are continually evolving, but remain in transition. Furthermore, while the quantitative participation in public portals as platforms connecting public and private sector actors has increased, qualitative progress is still lacking. As previous studies indicated (Paul et al., 2004; Reddick, 2005; Yun, 2009), both private sector users (citizens and firms) and public sector users may be unclear about their acceptance and intention to adopt and use new e-government services. These users might not experience the innovative performance of services and information provided by the government (Ma & Zheng, 2018), even though service accessibility and real-time information provision meet citizen needs (Jin et al., 2014). A crucial lesson is that the intention to adopt is vital for the success of e-government services (Wu et al., 2016; Zhang et al., 2009).

The user-centered and demand-oriented approach, including the technology acceptance model (TAM) (Davis et al., 1989; Venkatesh & Davis, 2000; Venkatesh & Moris, 2000), unified theory of acceptance and use of technology (Venkatesh et al., 2003), innovation acceptance theory (Rogers, 1983), and information systems success model (Bason, 2018; DeLone & McLean, 2003; Rana et al., 2015; Zaied, 2012), reflects innovative shifts in the administrative environment (van Dijk et al., 2008). A change in organizational structure is necessary to enable citizen-centered and multilateral governance. A system that offers flexible and prompt services tailored to user needs through a platform is driving research on its performance and process (Millard, 2018; Styrin et al., 2022). A public sector platform can be viewed as a governance structure that enhances government planning capabilities and data openness, encourages citizen participation, and generates new public values (Yildiz, 2007).

Considering the paradigm shift towards digital platform government and the importance of a user-oriented approach, this study poses the research question: What determines the use of platform-based e-government services? To identify the determinants, the authors analyze data from a survey of South Korean citizens who used Government 24[1], an integrated platform for frontline e-services. This study aims to address a gap in existing research on platform-based e-government, which exhibits a lack of interest in user-side e-government platforms and an accumulation of studies on supply-side ones (Cao et al., 2023).

The rest of this paper is organized as follows. The second section provides a review recent studies on platform-based e-government services, technology acceptance, and citizen acceptance of government services. The thrid section covers data and methodology, presenting a research model and hypotheses to test it, and providing operational definitions of variables. The fourth section presents the results of validity tests, reliability tests, and hypothesis tests. The fifth section offers the discussion of the results, policy implications, and research limitations. The sixth section offers concluding remarks.

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