

Generative AI Prompts as a Data Source for Administrative Innovation : A Conceptual Exploration with Simulation-Based Illustration

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Abstract

The expanding use of Artificial Intelligence (AI) in government is reshaping how public policies are designed, implemented, and evaluated, as well as how public officials perform their everyday work. In particular, Generative Artificial Intelligence (GenAI) has emerged as a transformative technology with significant implications for administrative innovation. While GenAI has been shown to enhance productivity and enable new forms of problem-solving, its value depends not on the technology itself but on how it is used and embedded in organizational practices. This highlights the importance of examining human-AI interactions in understanding administrative change. In this context, interactions between public officials and AI systems generate large volumes of prompt data, which capture how AI is used, adapted, and integrated into administrative work. This study explores the potential and limitations of using prompt data as a tool for identifying demand in administrative innovation. Using a simulation-based approach, it demonstrates how prompt data can reveal patterns of administrative work and emerging needs. The study makes two main contributions. First, it conceptualizes prompt data as a novel source of administrative data for observing human-AI interaction in practice. Second, it provides a simulation-based empirical illustration that highlights both the analytical potential and limitations of prompt data for capturing administrative innovation. The findings suggest that prompt data offers a promising but underexplored avenue for data-driven governance in the era of AI.