

Researchers examine AI's role for improving government services

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Shanghai, China. Credit: Li Yang, Unsplash

Many countries are exploring the potential of artificial intelligence (AI) to improve their operations and services, and China is no exception. Still, not all AI techniques are suitable for every government service or process, considering that transparency and accountability remain top

concerns in the public sector.

In a new article published in the *International Journal of Electronic Government Research* (IJEGR), Center for Technology in Government (CTG UAlbany) Director J. Ramon Gil-Garcia and Professor Yi Long of the Shanghai University of Political Science and Law analyze the AI processes currently utilized in China to manage [government services](#), and whether other forms of automation could be better options for ensuring transparency.

"There are many types of AI techniques and applications, each with its own advantages and disadvantages," said Gil-Garcia.

In China, for instance, the rapidly spreading initiative "Smart Examination and Approval" (SEA) is an interesting government innovation based on AI.

SEA was first promoted by Guangxi Province in 2017 and has some distinguishing features, such as applying for a government service (e.g., starting a business) through an online application system, automatic examination and approval by the system using pre-coded rules, and obtaining results immediately.

"While SEA provides considerable benefits, the application of SEA normally requires a significant IT investment and large volumes of individual data," continued Gil-Garcia, who also serves as a professor of Public Administration & Policy and International Affairs at the Rockefeller College of Public Affairs and Policy. "It's important to understand the potential for SEA, but also the challenges governments face when using AI innovations compared to more traditional forms of service delivery."

Based on their research, Gil-Garcia and Yi argue that governments could

consider hybrid approaches.

"You could combine, for example, machine learning for verification processes and [expert systems](#)—which are more easily auditable—to make final decisions on individual cases," said Gil-Garcia.

The authors also propose a classification of services by considering the extent of automation and process transparency needed for different types of services.

"This isn't unique to China since governments from around the world are increasingly using AI-based systems and not enough is known about their [potential benefits](#) and challenges for government and society," added Gil-Garcia.

In the traditional service-delivery model, there are disadvantages for residents because of the need to physically transfer application materials by visiting one agency after another. During this process, individuals can spend a lot of time and money completing multiple tasks in different locations. This is particularly problematic when the applicant must travel from one city to another—many of which are in remote areas—and back again.

In some instances, [government employees](#) may demand bribes from the applicants to process their paperwork. However, traditional face-to-face services offer also some advantages in that results are perceived by the customer as more effective, especially in areas where online services are unavailable or inconsistent.

Also, as AI-based systems learn over time, the criteria that AI systems use in the future are likely to be different than the decision criteria utilized by the same systems today, which could have implications in terms of accountability and fairness in society.

"Our study provides evidence about the potential benefits from the combination of expert systems and advanced AI techniques, such as machine learning, to provide better services. For example, this combination has the advantage of improving efficiency and effectiveness, but still keeping a good level of transparency in terms of how decisions are actually made," Gil-Garcia said.

"We argue that this is very important in government services, particularly when decisions are directly affecting specific individuals, since transparency is highly valued in the public sector and is expected to lead to better accountability."

More information: Yi Long et al, Understanding the Extent of Automation and Process Transparency Appropriate for Public Services, *International Journal of Electronic Government Research* (2023). [DOI: 10.4018/IJEGR.322550](https://doi.org/10.4018/IJEGR.322550)

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