

Clearing AI for Takeoff

Protocols to help governments use AI responsibly in public sector data analysis

BY THAO PHAM

Since its inception, artificial intelligence (AI) has been increasingly integrated into nearly every aspect of professional life, including public-sector financial management. AI offers powerful opportunities to process, analyze, and interpret large volumes of data at unprecedented speed. At the same time, its growing use has raised important concerns, particularly in areas like data accuracy, security, and ethics. In the public sector, these concerns extend beyond operational efficiency to questions of accountability, transparency, and public trust. Governments face a fundamental challenge: how to use AI effectively to support data-informed decision making while safeguarding sensitive information and upholding principles of good governance.

Government data: beyond numbers

Governments maintain extensive datasets at both the community and individual levels, collected for a wide range of administrative, fiscal, and policy purposes. Community-level data may include budgets, population figures, and demographic characteristics such as age distribution, educational attainment, or socioeconomic indicators, including poverty rates, median household income, insurance coverage, and crime rates. These datasets play a central role in informing budget priorities, performance measurement, and long-term planning.

Individual-level data, by contrast, often includes information contained in public records and administrative systems that is directly tied to residents or service recipients. The archiving and analysis of such data can support valuable insights, but it also introduces heightened responsibility

for governments to protect privacy and ensure appropriate use. Because public-sector data frequently combines broad scale with high sensitivity, data management practices must be especially rigorous when advanced analytical tools, including AI, are applied.

Big data analysis—it's a fine line

AI has the potential to significantly enhance the way governments manage and analyze big data, particularly within the budget process. AI-driven tools can help budget offices by identifying patterns in historical revenue and expenditure data, improving forecasting through scenario analysis, and enabling faster evaluation of policy trade-offs. These capabilities can help decision makers better understand fiscal trends, anticipate risks, and allocate resources more strategically—especially in environments characterized by uncertainty and constrained capacity.



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But the value of AI-generated analysis depends on the quality, completeness, and relevance of the underlying data. If data inputs are inaccurate, biased, or outdated, or if data security protocols restrict access to segments of data without appropriate disclosure, AI models may produce misleading results that appear objective but fail to reflect fiscal or programmatic realities. In the budgeting context, such inaccuracies can have tangible consequences, potentially influencing funding decisions, service levels, or long-term financial commitments based on flawed assumptions.

In addition to accuracy concerns, AI introduces heightened data security and privacy risks. The aggregation and analysis of large datasets—particularly

those containing individual-level information—expand the potential impact of data breaches or misuse. Public agencies must therefore contend not only with technical security challenges, but also with the reputational and ethical implications of AI-related failures. Without appropriate safeguards, the expanded analytical power of AI may inadvertently undermine public trust rather than strengthen it.

For budget and finance leaders, these benefits and concerns underscore a critical reality: AI should be viewed as a decision-support tool, not a substitute for professional judgment. Its insights are most valuable when interpreted within an institutional context, informed by domain expertise, and subject to clear accountability.

The right approach

To responsibly integrate AI into big data analysis, particularly within the budget process, public-sector leaders should consider several guiding principles:

- Governments should establish clear governance frameworks that define acceptable uses of AI, identify accountability for AI-driven analysis, and ensure alignment with existing data privacy and security policies. Budget leaders play a key role in setting expectations for how AI outputs are reviewed and used in decision making.
- Investment in data quality and transparency is essential. AI tools should rely on well-documented and validated datasets, and their analytical outputs should be explainable to decision makers rather than treated as opaque results. This transparency supports informed judgment and helps mitigate the risk of misplaced confidence in automated analysis.
- AI adoption should be paired with capacity building. Budget staff should be equipped not only to use AI-enhanced tools, but also to critically assess their results. Strengthening data literacy and analytical skills ensures that AI augments, rather than replaces, professional expertise.
- Governments may benefit from a phased or incremental approach to AI adoption, beginning with lower-risk applications like internal forecasting or trend analysis. Lessons learned from these early uses can inform broader deployment while minimizing unintended consequences.

Budget decision makers who approach AI with both ambition and caution can harness its analytical benefits while preserving fiscal integrity, data security, and public trust. **■**

Thao Pham is a consultant with GFOA's Research and Consulting Center.