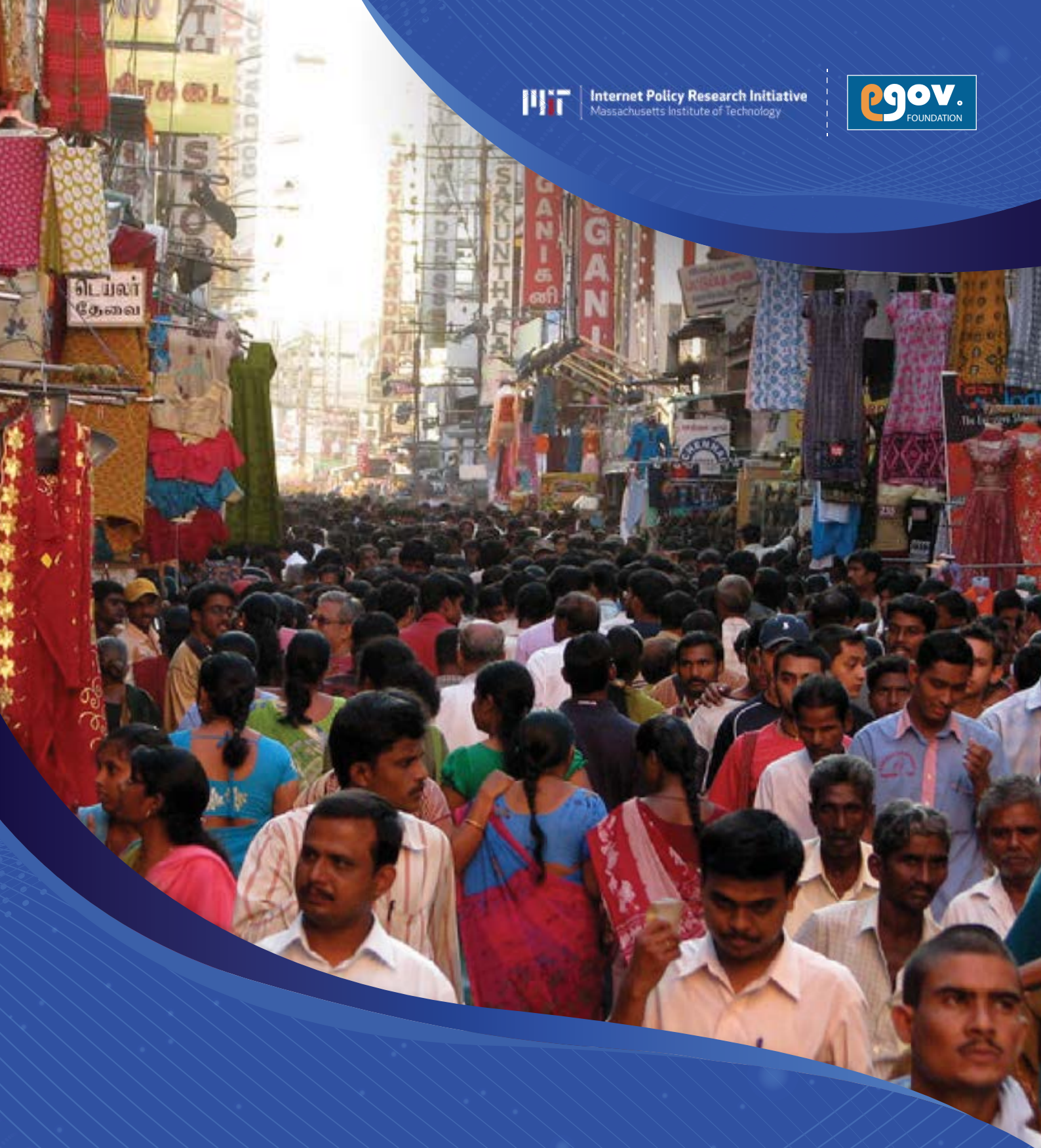




Internet Policy Research Initiative
Massachusetts Institute of Technology



Balancing Efficiency & Citizen Privacy in Urban Governance

What should the new Indian government's digital policy look like?

Soon the election results will be over and it will be back to work for the government. As things stand, India has a lot to achieve in the next five years. From becoming a five-trillion-dollar economy to creating millions of jobs, driving innovation, enhancing investments, and promoting entrepreneurship, a lot is at stake for the next government.

To achieve the scale and nature of such goals, we need a structured and planned approach to policy making, especially in the technology and digital

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Income tax department plans deep dive into data this year

Income tax department's project insight will be fully rolled out in new financial year.

It uses data analytics to identify those with high risk of tax evasion and then to gently nudge them with text messages, phone calls and email to 'voluntarily' comply with the tax laws

live**mint**

1 August 2018

Balancing Big Data and Privacy

The Justice Srikrishna Committee has become so mired in privacy concerns that it has severely curtailed the potential benefits of Big Data and AI

One of the most exciting promises that the Justice Srikrishna Committee held out was that the data protection framework it suggested would protect individual privacy while ensuring that the digital economy flourished. It claimed that in doing so it would chart a path distinct from the US,

the European Union and China, one that was finely tuned to the new digital economy. If it was going to deliver on this, its biggest challenge was going to be designing its privacy framework to address both the promises and challenges of Artificial Intelligence and Big Data.

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India Has Big Data; But Poor Data Quality Hurts Real Development

Having a policy strategy specifically drawn out for big data would define the regulatory and contractual aspects of each type of data which



New Delhi: Even as protecting privacy of citizens remains core concern of the draft Personal Data Protection Bill, 2018, the government would ensure that it does not become an 'unintended barrier' to India's growth in digital economy, said a senior government official, here on Monday.

to function without these technologies — as customers, our primary fear is for our privacy. With the launch of the Digital India campaign, India has been moving swiftly in the direction of smart cities. increased

Protecting privacy core concern, but not at cost of crunching big-data

The draft Personal Data Protection Bill, 2018, is in final stage and is to be tabled in Parliament in June, after which it will become a law

SC judgement lays down blueprint for privacy protection

The ruling is significant in view of the fact that a new data protection law is under preparation



New Delhi: The Supreme Court verdict on Wednesday laying the constitutional foundation for biometric identification has laid down the blueprint for privacy protection in the country, at a time when businesses are increasingly using personal data and artificial intelligence to serve customers.

The apex court's Constitution bench headed by Chief Justice Dipak Kumar has discussed at length the scope of the right to privacy in the context of Aadhaar. The ruling, which shows the government and the

Data privacy is a must, it should not be at the cost of innovation: **RS PRASAD**



live**mint**

23 October 2018

Opinion | Ensuring that the vulnerable benefit from Aadhaar

The widespread use of offline QR-based verification will prove to be a viable alternative that will allow us to continue to benefit from the Aadhaar identity system without exposing the holders.



INTRODUCTION



Indian cities are embracing technology at an unprecedented pace. City managers are establishing digital governance systems and deploying smart technologies to improve the quality of urban governance and service delivery. These systems are generating transactional, operational and sensor data, resulting in cities rapidly becoming data-rich.

With this unlimited growth in digital data availability, city managers are exploring the use of this data to improve decision-making, notifying governance reforms and catalyzing innovation. A vital example is India's draft strategy by the NITI Aayog for the use of Artificial Intelligence (AI).

At the same time, there is a growing legal recognition of the right to privacy and the need to protect citizen privacy and data internationally. Data Protection has been a sensitive topic in India ever since the Supreme Court judgment in August 2017 holding privacy to be a fundamental constitutional right of every Indian, and the subsequent work by the Srikrishna committee in producing the Personal Data Protection Bill in August 2018.

THE CURRENT STALEMATE

In this environment, it is challenging for active city managers and policy makers to spend time on the deep thought and analysis needed to strike a balance between using data to drive greater efficiencies in governance and the need to maintain citizen privacy.

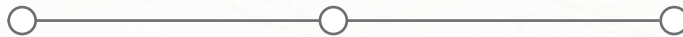
The first is imperative for state machinery that collectively serves 1.2 billion citizens while the second is a bedrock on which trust between citizens and governments will be built and maintained in the 21st century.

Current mainstream discourses cast the tradeoffs and equilibria between governance efficiencies and information privacy as a zero sum game. However must this necessarily be a zero sum game?



Government Efficiency

Equilibriums & Trade offs in traditional approaches



Information Privacy

GEI and IPI: Breaking the stalemate

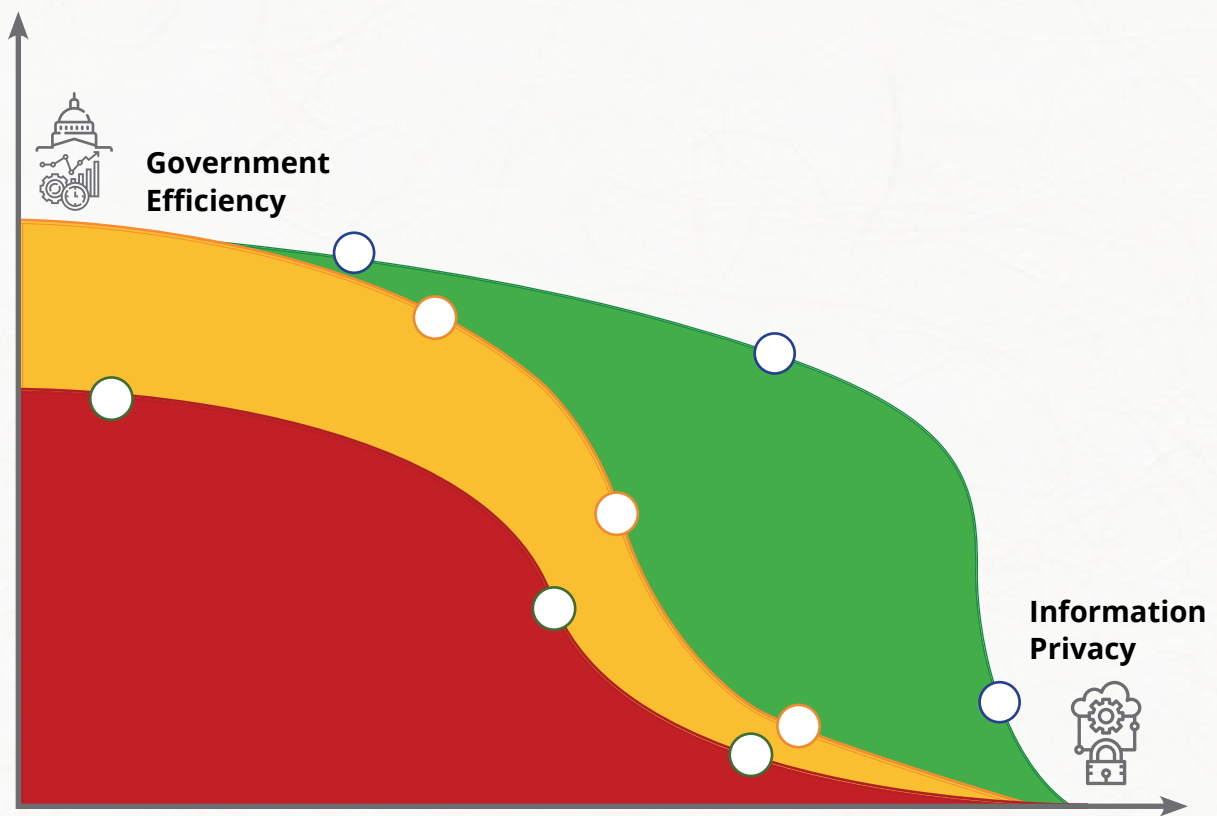
Over the past eighteen months, we have been exploring this tension between governance and privacy using a combination of metadata analysis from digital governance systems, field surveys and interviews with government officers. Based on our research we are proposing two numerical indices that not only measure governance efficiency and information privacy but also offer a way to maximize each:

The Governance Efficiency Index (GEI) that measures the *timely delivery of services* (often prescribed by a citizen charter) and its *accuracy* (delivering the right service to the right citizen without any rework). In our initial analysis, we have not included the cost of service in this index, as it was not available for the initial analysis; however, we are confident that in future iterations of the index we will be able to do so, thus providing a more holistic view on governance efficiency.

The Information Privacy Index (IPI) that measures the *responsible collection, use, and disclosure* of citizen data by government agencies. Responsible collection refers to limiting data collection to that which enables the government to deliver the service in the first place or to improve the accuracy and efficiency of service delivery (e.g., name and address of a person who has applied for a water connection, along with the type of connection requested). Responsible use means restricting the information shared with employees to only those fields or elements needed to complete the service delivery. E.g., a water engineer will not need access to property tax records to provide a connection. Responsible disclosure indicates citizen privacy protection by minimizing the disclosure of personally identifiable information.

These indices allow us to shift the current conversation to a new construct in which we can have a more nuanced approach on the governance vs privacy debate as shown below:

Recasting Equilibria and tradeoffs using the GEI and IPI



CONCLUSION

Our research shows that equilibria between governance efficiency and information privacy are not a zero-sum game, as shown in the figure above. By calibrating their existing practices around data collection, data use and data disclosure using the GEI and IPI constructs, city managers can achieve a high level of efficiency while ensuring the privacy of citizens' information is not compromised in a harmful manner. E.g., city managers can implement simple rules preventing citizens' financial information and their properties from being accessed by non-revenue functionaries. These entities may not have a direct need for the information to perform their function without reducing the overall quality of service delivery to citizens.

Moreover, by reengineering processes and policies, it might be possible for the city manager to shift the set of possible equilibria towards further improving both governance efficiency as well as information privacy simultaneously.

The GEI and IPI constructs are designed to scale from an individual form or service, to city departments and the city at large, thus enabling more targeted policies. We believe the GEI and IPI constructs could act as significant tools in helping city managers make decisions on the collection, usage, and disclosure of data within their jurisdictions in a structured manner. We hope the GEI and IPI constructs will act as crucial building blocks for cities to effectively unlock data economies without compromising citizen privacy by identifying which data and data aggregates can be released safely to spur data-driven innovation.

If you are interested in getting more information or collaborating on the further development of these indices please write to us at:

gautham.ravichander@egovernments.org

chintanv@mit.edu



Gautham Ravichander

Head-Policy Initiatives,
eGov Foundation

Gautham leads eGov's policy initiatives with the Government of India and partner states. He started his career at Janaagraha where he led the Ward Infrastructure Index Program and was a founding team member of The Education Alliance. Gautham has a MIB degree from Fletcher where his studies focused on social enterprises and leveraging business models to reach underserved populations. At Fletcher, Gautham organized and co-chaired the first Tufts Innovation Symposium on Scaling Innovation in Emerging Markets.



Chintan Vaishnav

Senior Lecturer, MIT Sloan School of Management
Academic Director, MIT Tata Center for Technology
& Design Visiting Professor, IIT Bombay

Dr. Chintan Vaishnav is a socio-technologist, an engineer trained to understand and build large-scale systems with both human as well as technological complexities. He is motivated to build socio-technical solutions that overcome constraints fundamental to improving human conditions in resource-poor environments, and is pursuing this objective at the intersection of Information Technology and Systems, Development, and Public Policy. His current work focus on building the Information Architecture for addressing challenges in agriculture, water, and urban governance.



eGovernments Foundation
Jambudvipa, #147/J, 1st Floor, 10th Cross, 12th Main,
3rd Block, Koramangala, Bangalore - 560034



contact@egovernments.org