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Rejuvenation of Urban Governance Through Smart Cities Mission in India

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Abstract
India's growth ambitions rest significantly on the ability of cities to perform their role as engines of economic growth; hence, urban governance has emerged as an important policy matter. The Smart Cities Mission (SCM) is integral to a set of large-scale, ambitious federal programmes aimed to rejuvenate and modernize Indian cities. The SCM, a flagship programme has greatly enhanced the ability of participating cities to govern: allowing cities the choice to interpret smartness in contextually relevant ways; enabling flexible governance mechanisms through institutional innovation; and improving coordination through data-driven and technology infrastructure. Smart cities offer hope for a more responsive and adaptive urban environment with improved quality of life, increased efficiency and enhanced public engagement. However, the realization of these aspirations requires a thoughtful and holistic approach that considers the complex interplay between technology, governance and societal needs.

Keywords: SCM, Urban Governance, service delivery.

Introduction

India has placed technology adoption at the heart of governance transformations via its Smart Cities Mission (SCM). Moreover, India's adoption of smart city solutions has been unique in also responding to the country's diverse urban contexts and specific urban governance challenges, which this report focuses on capturing.

By allowing cities' choice to interpret 'smartness' as per local needs and contexts, the SCM has encouraged cities to have diverse and, in several instances, more resident-centric project portfolios. Bringing in innovative institutional mechanisms, for instance the special purpose vehicle, has afforded localised decision-making flexibility and power to implement projects quickly and efficiently, though concerns about the sustainability of these institutional interventions remain. Lastly, the adoption of data-driven technology and infrastructure across smart cities has not only enhanced service delivery and emergency response but also provided an avenue to improve interdepartmental coordination.

Particularly encouraging is the first-time data-based urban transformations unfolding in the mid-sized cities. Improved governance in this fast-growing segment of the Indian urban landscape is expected to yield multiple positive spillovers for economic growth and social cohesion.

India's urban governance context

India's Constitution places the responsibility of urban governance with provincial (state) governments. While they initially were only legislative creations, the 73rd and 74th Constitutional Amendment Acts in 1992 conferred constitutional status on rural and urban local bodies, respectively. The 74th Constitutional Amendment Acts (74th CAA) ensured regular elections to urban local bodies (ULBs) and indicated various functions that could be transferred to them by the provinces, but did not mandate it – leading to variations across states and ULBs on their functional domain. Some large cities, such as Mumbai, provide a range of services comparable to global metropolises, while others like Bengaluru have more limited powers. No city in India determines its land use, which is a function controlled by the provincial government. While many provide diverse services, some smaller cities do little more than solid waste management.

The SCM's 100 smart cities represent a diversity of governance scenarios. Their experiences and outcomes are not just a measure of how cities can be modernized through digital and context-appropriate interventions, but equally a repository of lessons for altering city governance ecosystems.

Scope for national schemes to impact governance

While the federal government cannot directly intervene in municipal affairs, it has since the Jawaharlal Nehru National Urban Renewal Mission (JNNURM) in 2005 initiated various forms of federal financial support to cities, especially for urban infrastructure, housing and, recently, livelihoods. This includes the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), Pradhan Manti Awas Yojana or Housing for All (PMAY/HfA) and the National Urban Livelihoods Mission (NULM). The SCM is distinctive in that it focuses not just on project implementation, but also on changing processes – in particular, by allowing cities to propose the initiatives to be taken up under the mission within a budgetary envelope and by routing all finance and action through an institutional innovation, the Special Purpose Vehicle (SPV), which is a corporate body owned jointly by the province and the city.

Launched in June 2015, the SCM aims to help cities provide a decent quality of life to its citizens through, inter alia, the application of "smart" solutions to improve urban infrastructure and services delivery. State governments2 propose which cities are to be taken up, along with proposals that need to clear a vetting process before being selected as one of 100 smart cities. Such a process has enabled most Indian states to participate in the mission, and direct resources to small, medium and large-sized cities.

The implementing institutions of the SCM – Special Purpose Vehicles (SPVs) at the city level – were incorporated under the Companies Act 2013. Typically, the ULB and the province are equal shareholders in the SPV, which has senior representatives from both on their boards of directors along with a representative from the federal government. All funds from the SCM are routed through the SPV. The SPVs can also raise funds in other ways (e.g. user fees, debt, etc.). As on 30 June 2023, the Government of India has released ₹38,581 crore ($4.76 billion) and State Governments/Union Territories (UTs) have released their matching share of ₹34,411 crore ($4.16 billion), amounting to a total release of ₹72,992 crore (around $9 billion of an expected $12 billion), of which 90% has been utilized. The actual work being undertaken by SPVs is more than that financed by the SCM alone. Taking all projects into account, work orders worth ₹1.80 lakh crore ($22 billion) have been issued for 7,973 projects, of which 5,858 projects (73%) have been completed.

Key areas to change

Cities have also demonstrated the diversity of project choices across sectors, such as water supply, housing, urban transport and solid waste management, and even within each sector. Within the solid waste management sector, for example, cities have chosen projects as varied as sanitary vending machines and incinerators, battery-powered litter pickers, smart toilets, and GPS machine installation on vehicles. In the energy sector, cities have chosen projects such as LED street lighting and solar rooftops. Thus, smart cities have used the mission's open-endedness to select and implement projects that are responsive to local needs, often resulting in successful solutions to complex urban issues, as this report will demonstrate through cases.

Most ULBs in India have not historically been part of decision-making processes when it comes to major urban development projects, and consequently many were not intensively involved in the design of SCM plans and implementation of projects. While this allowed SPVs to hasten implementation, they did suffer from the lack of effective consultation with elected representatives. The SCM tried to address this complexity by implementing direct consultation processes and broader civic engagement initiatives. In retrospect, a richer engagement with the elected representatives may have led to better-informed choices and enhanced the ability of elected representatives to engage with the complexity of urban development processes. Such engagements could also have built a broader consensus on the continuance of institutional innovations brought about by the SPV under the SCM.

Delivering governance

While the SCM provides for choice, flexibility and improved coordination, the ability of smart cities to adopt these new approaches varied greatly, depending on existing governance capacities and the local institutional and economic landscape, among other factors. This section illustrates how the SCM has helped cities improve their quality of life and respond to citizen needs while enhancing governance ecosystems in the process. Case studies from three key sectors – ecology, mobility and economy – are presented with a view to articulating the diversity of approaches and articulating some of the implementation mechanisms and on-ground impacts of the SCM.

Creating clean and sustainable urban environments through "smart" solutions has been a key objective of the SCM, eliciting diverse responses from cities. While some cities ramped up environmental impact monitoring, others took a focused approach. For example, Bhopal eased data collection and decision-making for its pollution regulator by installing environment sensors in the smart poles that dot the entire city. Other cities have focused on resilience – Coimbatore has revived local water bodies and Bhubaneswar has put more electric buses and e-rickshaws on its roads. Indore has gone a step further by recycling solid waste to generate its own transport fuel and evolving a unique monetization model such as green bonds and carbon credits sales to ensure long-term financial viability.

Revitalizing public spaces

Coimbatore has a large lake system that is supplied by the river and rainwater runoff. The system, which traces its history to the Chola times, serves to manage floods during rainy season and cope with water scarcity in the dry season. However, as the city grew, sewage and solid waste was discharged into the drainage system and ended up in the lakes. When the SCM was announced, Coimbatore was the only city to propose a lake rejuvenation project, building on residents' demands for clean lakes and public spaces, which the city had lacked until then. Coimbatore Smart City Ltd. Engaged with multiple

stakeholders (e.g. local civil society and environmental interest groups and officials from the water, transport and housing departments, and academic institutions like Tamil Nadu Agriculture University) in the early stages. Hence, right at the outset, the project articulated two discrete but interlinked aspects of the project: water rejuvenation and public place making. Approximately 35% of the total funds of the SCM in Coimbatore have been deployed for the lake projects. Eight major tank sites in Coimbatore were selected for rejuvenation – Narsampathy, Krishnampathy, Selvampathy, Kumaraswamy, Selvachintamani, Periyakulam, Valankulam and Singanallur. The emphasis has been on eco- restoration, including increasing water security, reducing of flooding by reviving interconnections among the lakes, minimizing pollution discharge into lakes and enhancing biodiversity, all of which build climate resilience.

A careful design of the interface between humans and the water body to create diverse opportunities for public recreation, including a 32-kilometre-long greenway for walking and cycling that connects all the lakes and also key landmarks in the city, has ensured the project gets continued and widespread public, including political, support.

Public Transport

Urban mobility and public transportation serve as the fundamental pillar of a thriving city, forming the backbone that supports rapid urbanization. Enabling citizens with affordable and efficient public mobility systems contributes to the overall well-being and economic development of cities; thus, Indian cities are keen to invest in creating robust mobility solutions.

The SCM places a significant emphasis on the mobility sector, evident from the fact that approximately 19% of total investments under the initiative have been allocated specifically for mobility and its related areas. Particularly, the use of Information and Communication Technology (ICT) is driving a transformative shift in the mobility sector. A notable example in this is the implementation of Intelligent Traffic Management Systems (ITMS); out of 100 smart cities in India, more than a third have adopted such systems. This demonstrates the adoption of advanced technologies to improve urban governance, a key objective of the SCM, in this case through efficient traffic management and enhanced urban mobility.

Economic Growth and Innovation

The Smart Cities Mission has encouraged cities to leverage local and regional economic bases and socio-cultural conditions to boost production, livelihoods and competitiveness both in the manufacturing and services sectors. The cities have focused on four types of projects for economic growth: growing trade, especially retail commerce; boosting tourism through enhancing cultural, heritage and other resources of interest; enhancing local production; and boosting entrepreneurship. Of the total 421 projects focused towards economic growth, nearly 30 percent are related with public space improvement and about 27 percent with retail improvement.18 Srinagar, which hastened project implementation to be at its best as the host of the G20 Tourism Working Group meeting in May 2023, exemplifies how cities combine these aspects to rejuvenate key economic precincts and core areas.

Conclusion

The Smart Cities Mission has allowed cities more leeway in the choice of what they would use the money for and this has resulted in a diverse array of projects across multiple sectors. Some are large flagship interventions, such as Surat’s mobility system or Coimbatore’s lakes, while others are small

redevelopments of neighbourhood infrastructure that bind people to each other. In the case of many of the larger initiatives, there was an existing groundswell of demand from residents that was turned into a project by the SPV. The SPV, mandated by the mission, may have been seen as an imposition by some at the start of the mission, but the flexibility it affords as a project implementation body has come to be realized as an asset. As a corporate body, it can engage more effectively and non-hierarchically with a broader range of stakeholders and its empowered board of directors, which includes senior provincial officials, cut through layers of decision-making and provide a forum for interdepartmental coordination.
As the mission has progressed, however, many of the apprehensions have waned and while IT and data still remain at the heart of the mission, it is increasingly seen not as something imposed from above, but as an enabler that allows stakeholders make more informed decisions, and importantly, responds to the demands from the city's residents. The technology for the successful implementation of SCM is just a tool. The mission has gone much beyond technology, and through its funding approach and institutional insistence on the SPV, it has begun to change city governance ecosystems across different scales in small, mid-sized and large cities. In doing so, it has re-energized the conversation about urban governance in India, which bodes well for the future.

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