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Innovative civic engagement and digital urban infrastructure: Lessons from 100 Smart Cities Mission in India

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Abstract

In 2015 the Government of India announced an ambitious mission to develop 100 smart cities throughout the rapidly urbanising country. As part of this mission, the Government has initiated ICT based citizen engagement through a dedicated website - MyGov.in. The disparity in digital infrastructure between different socio-economic demographics is a challenge for cities in emerging economies wishing to implement smart city policies. Our research explores the relationship between active civic engagement and the availability of basic digital infrastructure and socio-economic standards in Indian cities. This study provides insights on factors that lead to the success or failure of cities' online citizen engagement platforms. Such insights offer important lessons for building future smart and connected cities as well as promoting healthy urban relationships and welfare, in the emerging economies of the world.

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1. Introduction

The urban landscape is changing dramatically in emerging economies around the world. Innovative planning approaches have been introduced to manage this dramatic urbanisation process. The integration of information technology to create "smart cities" provides a unique opportunity to manage this change through open, participatory and collaborative "e-governance". Although definitions and structural aspects of smart cities are diverse, the need for

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greater transparency in local governance and deployment of collective intelligence in city making is a point of consensus [1, 2]. This suggests that smart cities of the 21st century require more than technological innovation and need to integrate Institutional reforms and policies that engage citizens in democratic activities necessary to improve urban competitive advantages, and ensure new technologies have a genuine social impact [3].

Scholarship on smart cities often emphasises economic growth, and competitiveness. But, smart cities can also offer opportunities for enhancing citizen participation and encourage consultative decision making processes [4]. Such processes exploit the power of IT to enhance democratic debates about the vision of the city and help people create their own experiences in a type of virtual 'public culture'. The progressive smart city has the potential to address issues of political power and unjustness in the city, and thereby support equality, diversity and shape a democratic urban pluralism [5]. The landscape of active digital citizenship is evolving and can be supported by urban planners, smart cities professionals and others concerned with the contemporary urban condition.

The rise of smart cities, networked societies and networked governance powered by the use of ICTs has inspired new innovative approaches to governance and communication. Such theories have generated debates on the restructuring of government-citizen engagement, and knowledge transfer and dissemination. Contemporary works on ICT and smart communities strongly advocates that the use of ICT in local government can adequately enhance the management and functioning of cities. For example, Coe *et al.* (2001) observed that the use of ICT at local level leads to economic and socio-political transformations encapsulated by the new smart community movement [6]. These discourses indicate that the application of ICT in the urban context needs to go beyond its current focus on economic competition and must promote e-governance and social cohesion to foster inclusive urban societies.

The promise of ICT based citizen engagement and eParticipation faces specific challenges in the context of the developing world. The developments of inclusive smart cities are constrained by internet penetration and confusion regarding the target populations for these interfaces [7]. Internet technology has yet not been recognized as a basic urban infrastructure in cities of global south and as a result household internet access is extremely limited. Likewise, there are strong concerns that internet led engagements will reach a limited number of citizens who are already predisposed or interested in politics [8, 9]. For example, most technologically advanced cities in India like Ahmedabad had only 10.3% of its household accessing internet as of the year 2011. And the numbers are even more constrained for other medium sized cities (e.g., Solapur 4.6%, Davangere 5.1%, Surat 5.1% etc.) which have been selected as future smart cities by the Government of India.

In the year 2015, the Government of India rolled out the 'Smart Cities Mission' with an aim to drive economic growth and improve the quality of life for people in 100 selected cities by enabling local development and harnessing technology as a means to create smart solutions for citizens. The federal government launched ICT based citizen engagement through a specific website (MyGov.in) to engage citizens in debates, vision sharing through essays and e-voting for smart city service prioritisation. Majority of the 100 cities, including the ones mentioned above have engaged citizens through the online platform which has been a pre-condition for accessing central grants for rolling out smart city projects. Exactly how this eParticipation drive will attract different populations within the selected cities was an unknown.

This paper addresses this research question and critically investigates the nature and intensity of eEngagement across 100 smart cities in India. Our research also explores the reasons behind the diverse patterns of engagement and discusses the outcomes of the 100 smart cities citizen engagement platform one year since it was launched. To achieve this, internet access and digital inequalities across cities are investigated on a regional scale, and then relationship between the intensity of ICT led online engagements and internet penetration is analysed. The research also assesses the impact of the socio-economic status of cities on online engagements. Overall, the study provides insights on factors that lead to the success or failure of cities' online citizen engagement platforms and initiatives. Such insights on a continental scale are helpful for city leadership in tailoring smart city policy for specific geographical and socio-economic context and offer important lessons for building healthy urban relationships and welfare, in an increasingly interconnected and urban world.

2. Critical review

In this section we examine global case studies where eParticipation has been initiated to enhance democratic dimensions of smart city policies. A critical literature review of such initiatives establishes a comprehensive