

Role of Digitisation and E-Governance in Municipal Service Delivery under AMRUT: Some Evidence-Based Reflections from Srinagar Municipal Corporation

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Abstract

The government of India initiated the e-governance system in the Urban Local Bodies (ULBs) through the Atal Mission for Rejuvenation of Urban Transformation (AMRUT), launched in June 2015 with a mandate to ensure adequate infrastructure and governance reforms for the revival of Urban Local Governance for robust urban rejuvenation and transformation across the country. The AMRUT E-Governance Reforms initiative aims to enhance the efficiency and transparency of urban local bodies in India through digital transformation. By integrating technology into governance, the program seeks to streamline service delivery, improve citizen engagement, and facilitate data-driven decision-making in Urban Local Bodies. The initiative not only promotes accountability and responsiveness but also fosters a more inclusive urban environment, ultimately contributing to the broader goals of sustainable urban development and smart city initiatives. The present study is assessing the performance of municipal digitisation and e-governance services in the Srinagar Municipal Corporation to explore its impact on both service providers; municipal corporations and end users of these services. The focus was on gauging the extent of engagement with e-governance services and understanding people's perceptions regarding the online service delivery mechanisms implemented by the respective ULB.

Introduction

The government of India initiated the e-governance system in the Urban Local Bodies (ULBs) through the Atal Mission for Rejuvenation of Urban Transformation (AMRUT), launched in June 2015 with a mandate to ensure adequate infrastructure and governance reforms for the revival of Urban Local Governance for robust urban rejuvenation and transformation across the country. Atal Mission for Rejuvenation and Urban Transformation (AMRUT) is a centrally sponsored scheme launched on 25th June 2015 in selected 500 cities and towns across India. The focus of the mission was the development of the basic infrastructure in the sectors of water supply; sewerage and septage management; storm water drainage; green spaces and parks; and non-motorised urban transport (Ministry of Housing & Urban Affairs, 2022). The scheme was launched to provide basic services to households and build amenities in cities to improve the quality of life for all, with a major focus on the poor and disadvantaged. The focus of the mission is on infrastructure creation which has a direct link to the provision of better services. The purpose of the mission is to ensure that every household has access to a tap with an assured supply of water and a sewerage connection; to build storm water drains to reduce flooding; increase the amenity value of cities by developing greenery and well maintained open spaces, for example, parks, and recreation centers, especially for children and reduce pollution by

switching over to public transport and constructing facilities such as; parking spaces and non-motorised transport facilities, for example, walking and cycling (AMRUT Mission Statement & Guidelines, 2015).

Apart from the rejuvenation of urban infrastructure one of the vital missions of both AMRUT and AMRUT 2.0 is to improve governance through a set of 11 reforms: E-Governance, Constitution and professionalization of municipal cadre, Augmenting double entry accounting, Urban planning and city level plans, Devolution of funds and functions, Review of building by-laws, Municipal Tax and fees improvement which includes the improvement in levy and collection of user charges, Credit ratings, Energy and water audit and Swachh Bharat Mission. The mission clubbed the capacity building and set of reforms with AMRUT to enhance the transparency in services delivery in Urban Local Bodies (Murugaiah, Shashidhar and Ramakrishna, 2018). The first reform which is the concern of the present study is the provision of E-governance in the Urban Local Bodies. The mission was thoroughly mulling the digitisation of Urban Local Bodies, which includes the creation of the ULB website, publication of an e-newsletter, and support digital India, ducting to be done on PPP mode or by the ULB itself. Under e-governance reforms the mandatory recommendation of ULBs was the complete switch to an online service delivery mechanism. The implementation time limit for switching over to online services of following services was 24 months: Registration of Birth, Death, and Marriage, Water and sewerage Charges, Grievance Redressal, Property Tax, Advertisement tax, Issuance of Licenses, Building Permissions, Mutations, Payroll, and pension. It was recommended in the guidelines that within the time limit of 36 months every ULB should go for e-procurement and personal staff management and project management should be done digitally (AMRUT Mission Statement & Guidelines, 2015). The architects of the AMRUT mission also duly recognized the significance of web-based portals and the provision of digital civic services and hence clubbed the e-governance reforms under the mission and implemented them all across selected ULBs in the country. The present paper presents the overview based on both primary and secondary data of the implementation of AMRUT e-Governance reforms in Srinagar Municipal Corporation. The paper tries to see the impact AMRUT e-Governance reforms had made on the quality of service delivery through peoples perceptions and overview of the digital and e-governance infrastructure needed in the Srinagar Municipal Corporation. There is inadequate research on determinants of municipal digitisation and e-governance performance and its impact on both ULBs and end users. As a result, it is prudent to analyse the existing system of municipal digital tools and their efficacy, impact, and role in the digital transformation of Srinagar Municipal Corporation. In accordance, the proposed study is an effort to evaluate the AMRUT reforms on municipal digitisation and e-governance system in the city of Srinagar. The proposed study will encompass the transitional phase of selected ULBs from manual to digitised transformation and its impact on users and service providers—municipal corporations. The outcome of the study will outline the opportunities and challenges associated with these technology-induced service delivery systems and their benefits/impact on society, citizens, and local self-governments in general.

Methodology

The study employed an interview-based methodology, utilizing a combination of primary and secondary data. The questionnaire was meticulously crafted to assess the effectiveness and usability of the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), as well as the utilization of e-governance services within selected Urban Local Bodies (ULBs). The focus was on gauging the

extent of engagement with e-governance services and understanding people's perceptions regarding the online service delivery mechanisms implemented by the respective Municipal Corporation. The data was collected from both primary and secondary sources of data. Two types of data collection formats were prepared one tailored for Urban Local Bodies (ULBs) and an interview schedule designed for the primary data collection. Both formats had a primary focus on assessing the implementation of e-governance reforms and its impact on stakeholders of online services delivery mechanism in selected municipal corporation. Further, study conducted two Focus Group Discussions (FGDs) to enhance the understanding of the implementation of digital services at the ground level.

The primary data was collected from the 150 respondents from the different municipal wards of Srinagar City. For the primary data collection, an interview schedule based on 62 questions which includes structured, multi-answered, and open-ended questions. The secondary source data was collected from the municipal corporation and other different departments implementing the AMRUT reforms. A dedicated questionnaire comprising of 13 sections, alphabetically numbered from A to M, each strategically crafted to gather comprehensive data on the implementation of digitisation and e-governance reforms in the selected municipalities. The format for collecting secondary official data was meticulously designed within the framework of e-governance reforms under the AMRUT Mission. This ensured a systematic and thorough exploration of pertinent aspects related to online service utilization in the targeted municipal corporations. Further, various published materials such as books, papers, government reports, policy statements, and online resources including websites and portals have been used to bring a comprehensive overview of the status of implementation of AMRUT e-governance reforms.

Before going into the details of digitisation of municipal service delivery mechanism of Srinagar Municipal Corporation lets first have a glimpse of urbanization scenario of Srinagar city.

Urbanization Scenario of Srinagar City

Srinagar city has experienced a dramatic urban transformation over the past few decades. This transformation is part of a broader trend of rapid urbanisation occurring across much of the Global South, but Srinagar's case presents a unique confluence of environmental vulnerability, socio-political complexity, and unregulated land use change. Like many other growing cities, Srinagar has witnessed an aggressive expansion of its built-up area. Between 2000 and 2020, the city's built-up land increased by over 75%, primarily at the expense of dense forests, vegetation, and water bodies (Wani et al., 2024). An earlier study reported that from 1971 to 2011, Srinagar's built-up area grew by nearly 585%, while the population grew by only 215%, revealing a mismatch between urban expansion and population needs (Bhat et al., 2014). This phenomenon of land consumption exceeding population growth reflects a global pattern of low-density, horizontal urban sprawl, seen widely in Asian and African cities, where the urban footprint expands disproportionately compared to demographic pressures (UN-Habitat, 2020). More land is being used per person (e.g., large houses, more roads, fewer high-rise apartments). Services like water, sewer, and transport need to cover more area, which is costlier and harder to manage, thus, harder for the municipal corporation to provide quality infrastructure and services across a widely spread city.

The key drivers of Srinagar's urbanisation include population growth, migration from rural and conflict-affected areas, expansion of tourism, and rising demand for residential infrastructure (Wani et

al., 2024). Much like in other South Asian cities, land in peri-urban areas of Srinagar has become increasingly valuable, leading to construction in ecologically sensitive zones. As a result, natural ecosystems such as wetlands and agricultural lands are rapidly disappearing. For instance, the Narkara wetland catchment area saw agricultural land decrease by nearly 78% between 1965 and 2016, while built-up area rose significantly, threatening the ecological stability of the region (Down to Earth, 2019).

Environmental degradation due to urban expansion is a key issue in Srinagar, just as it is globally. Urbanisation-induced loss of green cover, deforestation, and destruction of wetlands has not only disrupted the region's biodiversity but also intensified urban heat island effects and increased vulnerability to floods and droughts (Wani et al., 2024). These changes mirror global urban trends, where cities—especially in developing countries—face major ecological challenges due to unplanned growth (Seto et al., 2012).

Srinagar's urban expansion also shows a strong pattern of peri-urban growth. Areas such as Bemina, Hyderpora, Natipora, and Lal Chowk have emerged as urban growth hotspots (Wani et al., 2024). This horizontal pattern of expansion is similar to cities such as Nairobi, Dhaka, and Manila, where land affordability, inadequate urban planning, and population pressure fuel sprawl into fringe zones (Angel et al., 2011). However, Srinagar's topographical limitations—surrounded by mountains and water bodies—make this pattern particularly dangerous, as construction often takes place on floodplains or ecologically fragile terrain.

In the global context, Srinagar represents the common challenges faced by fast-growing mid-sized cities in developing countries. The city's issues with carrying capacity, environmental stress, and infrastructure lag are echoed in cities across South Asia and Sub-Saharan Africa (UN-Habitat, 2020). However, its urbanisation is further complicated by its location in a politically sensitive and environmentally fragile zone. Unlike many other Indian cities, Srinagar's urban dynamics are influenced by seasonal tourist inflows, conflict-induced displacement, and environmental restrictions that are often overlooked in development plans.

Globally, urbanisation has been accompanied by an increasing emphasis on sustainable development and ecological planning. Concepts like urban greening, smart growth, and compact city models are being adopted in many countries to counteract the negative impacts of sprawl (UNEP, 2019). Yet in Srinagar, these practices are still in their infancy, and land use continues to be shaped more by market forces and informal settlement than by planning frameworks. Although, Jawaharlal Nehru National Urban Renewal Mission (JNNURM) sought to address many of these by mandating reforms and funding infrastructure, including digital/ICT-based reforms. Studies, especially by Manoj Kumar Teotia (2024) show that while some reform has occurred in Srinagar, many institutional, functional, and fiscal reforms have been only partially implemented. Given new missions like AMRUT, there is both a strong need and an opportunity to scale up digital services to improve transparency, citizen satisfaction, and efficiencies. These findings also corroborate with another study of AMRUT in Punjab towns by Teotia (2022) and an earlier study of Srinagar by Teotia & Kumar (2014).

Urban local bodies (ULBs) in India are under increasing pressure to deliver services more efficiently, transparently, and with citizen participation. Digital services (online portals, grievance redressal, e-governance, GIS, MIS etc.) are widely seen as key tools to achieve these aims. The JNNURM (2005–2014) mandated reforms to push ULBs in that direction. Under JNNURM, cities needed to adopt

reform agendas in governance, finance, service delivery etc. Srinagar was one such mission city. The study on the status of JNNRUM done by Teotia & Kumar (2014) identified some key areas to assess the function of the scheme. In the institutional domain study reveals that while legislative and institutional frameworks exist, their effective implementation is weak. Srinagar's municipal corporation had limited fiscal and administrative autonomy. The implementation of mandatory reforms such as property tax reform, user charge rationalization, audit systems, e-governance / MIS systems were partial. There were delays in adopting double entry accounting and in making grievance redressal mechanisms accessible online. In the functional domain it has been identified that service delivery in areas like water supply, sewerage, solid waste, roads etc. improved in some parts (especially infrastructure), but digitalization of service delivery (e.g. online permitting, building plan approvals, online NOCs, etc.) was not uniformly implemented. Many services were required physical visits, personal interaction, manual work. Teotia reports citizen complaints about delays, lack of awareness of digital or reform processes, and weak coordination among municipal departments. In the fiscal domain study identified revenues from property tax, user charges etc. were inadequate. Further, collection efficiencies were lower, user charges were not fully cost-recovering, which reduces the funds available for investment in digital capacity. Also, some state level reforms (e.g. state contribution to ULBs) were delayed or inconsistently applied. In addition to this study reveals that Citizens had limited awareness of reforms or digital services. Public disclosure, community participation as envisioned under JNNURM reforms were weak in practice. Thus, suggests this gap reduces the efficacy of digital governance (Teotia & Kumar, 2014). Citizens had limited awareness of reforms or digital services. Public disclosure, community participation as envisioned under JNNURM reforms were weak in practice. Teotia suggests this gap reduces the efficacy of digital governance. (Teotia & Kumar, 2014).

AMRUT Implementation: An Overview of Srinagar City

Srinagar Municipal Corporation is implementing 35 projects at a total outlay of 227.89 crore under AMRUT-1 Mission in Srinagar city. Among these 34 have been completed and one is in the completion process. The major areas where the municipal corporation is implementing the AMRUT scheme and has completed many projects are the construction of storm water drainage system at the total outlay of 54.13 crores, drainage networking with 14.89 crores, parking at a different location at the cost of 56.32 crores, construction and development of parking and green spaces at the amount of 6.06 crore, walkways, pedestrians, footpaths and cycle tracks at the amount of 10.43 crore, septage treatment and sewerage with the amount of 39.49 crores, rejuvenation of water bodies with 8.76 crore, construction and upgradations of dewatering stations 3.23 crore, procurement of sucker/jetting machine with 2.39 crore and installation of intelligent traffic signal systems and control units with 11.84 crores.

According to the data given by the Srinagar Municipal Corporation the digitisation of services were started in the year 2010, however, AMRUT e-governance reforms have given a considerable push towards digitisation within MC, and citizen service delivery mechanism got a major push in the year 2022. Today services like registration of birth and death, payments of water and sewerage charges, grievance redressal, advertisement tax, and issuance of licenses, building permissions, e-procurement, and personnel staff management are done through online mode (see Table-1.1).

Table- 1.1

Status of Implementation list of e-Governance Reforms in MC Srinagar

Sr. No.	List of Reforms	Srinagar
1	Creation of ULB Website	Achieved (2009)
2	Publication of e-newsletter	Not Achieved
3	Support Digital India (deducting to be done on PPP mode or by ULB itself	Not Achieved
4	Registration of Birth, Death, and Marriage	Achieved (2012)
5	Water & Sewerage Charges	Achieved (2021)
6	Grievance Redressal	Achieved (2021)
7	Property tax	Not Implemented
8	Advertisement Tax	Achieved (2006)
9	Issuance of Licenses	Achieved (2024)
10	Building Permissions	Achieved (2012)
11	Mutations	Partially Achieved
12	Payroll	Not Achieved
13	Pension	Not Achieved
14	E-procurement	Achieved (2016)
15	Personnel Staff Management	Achieved (2023)

Source: Municipal Corporation Srinagar

Besides using the municipal corporation website people are also availing municipal services through various apps such as *Janparichay*, *jansugam*, *umang*, *e-unnat*, and *OBPS* for building permissions. In personal management i.e. the digitisation within MC, attendance of 3110 permanent employees and

2662 casual consolidated employees is digitised, salary is manual, payroll of permanent 3110 employees are digitised and pension pertains to the local fund office. According to data received from MC Srinagar GPS/GIS is used to track the attendance and work beats of employees. There is no specialized unit holding charge of e-governance service in MC Srinagar; however, there are 12 employees in the IT section responsible for the e-governance services. Three important issues identified by the concerned officials in MC need attention for the proper digital transformation i.e., lack of insufficient ICT knowledge & digital literacy among people, lack of trained staff and inadequate funds in the Municipal Corporation.



Figure 1.1 Official Website of Srinagar Municipal Corporation

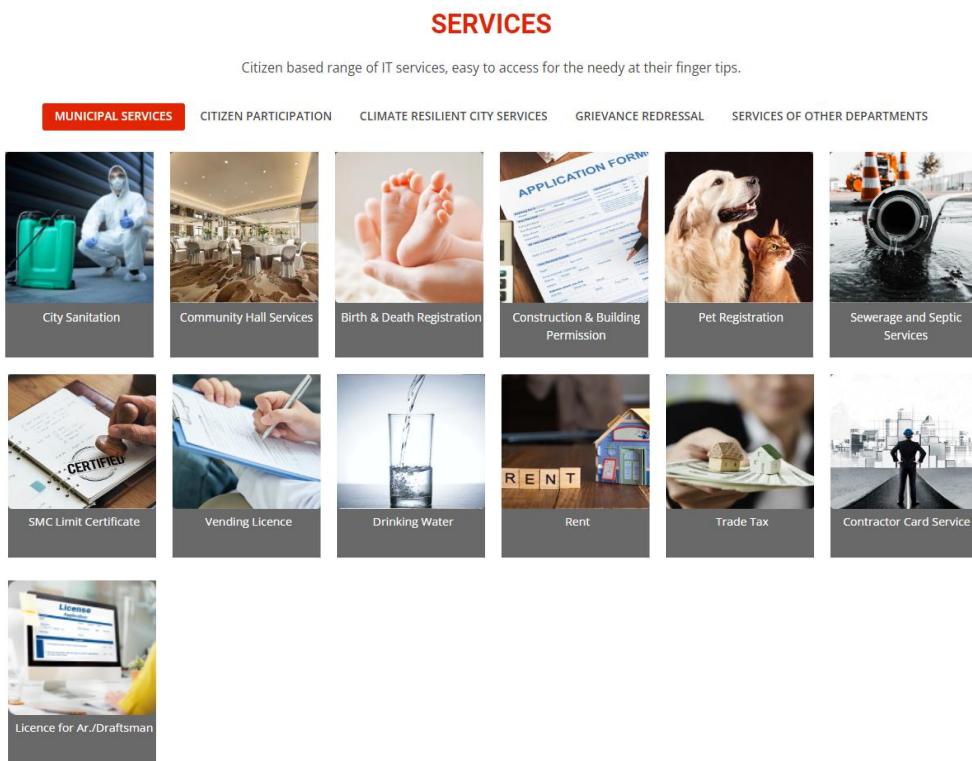


Figure 1.2 Lists of Online Services in MC Srinagar

Although functioning of Srinagar municipal corporation, both in the form of management of Municipal Corporation staff as well as the service delivery mechanisms have switched over to digital mode

however, what are the perceptions and experiences of those who are using these services will provide the picture of the impact of digitised services empirically. The following section shows the impact of municipal digital services on selected 150 respondents. Before going to the details of Municipal digital services under AMRUT scheme let's have a look on the demographic details of 150 respondents interviewed in the Srinagar city.

Demographic Profile of Respondents:

The study does not go deep in the demographic profile of respondents, although as always crucial to social science research present study presents some demographic aspects such as educational profile, economic and occupational status of interviewed respondents in the tables 2.1, 2.2 and 2.3 respectively.

Educational Profile of Respondents:

Table 2.1 presents the educational profile of respondents. The data shows 68 (45.3%) respondents are having 12th standard education; 26 (17.3%) middle; 25 (16.7%) graduate; 16 (10.7%) 10th and 13 (8.7%) Post Graduate level education.

Table-2.1

Educational Qualification of Respondents

Illiterate	Prima ry	Midd le	10th	12th	Gradu ate	P.G.	Techni cal	Profess ional	Total
1 (0.7)	0 (0.0)	26 (17.3)	16 (10.7)	68 (45.3)	25 (16.7)	13 (8.7)	1 (0.7)	0 (0.0)	150 (100.0)

Source: CRRID Field Survey 2023

Locality and Economic Category of Household:

The table 1.2 has two parts one shows interview respondents residents belongs to two spatial categories urban and urban slum and next section show the respondents economic category of respondents. The data shows that an overwhelming majority of respondents i.e. 133 (88.7%) reside in urban areas of Srinagar city and only 17 (11.3%) in urban slum. Majority of respondents i.e. 110 (73.3%) belongs to APL category and 40 (26.7%) to BPL category.

Table-2.2

locality of House & Economic Category of Households

Locality of House		Total	Economic Category of Household		Total
			APL	BPL	
Urban	Urban Slum	150	110	40	150

(88.7)	(11.3)	(100.0)	(73.3)	(26.7)	(100.0)
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Source: CRRID Field Survey 2023

Main Occupation of Respondents

The table 1.3 shows most of the respondents were engaged either in their own businesses i.e. 73 (48.7%) or in private job i.e. 39 (26.0), rest were engaged in other occupations and two responded they are unemployed.

Table 2.3

Main Occupation of Respondents

Private Job	Govt. Job	Retired Person	Labour	Business	Housewife	Unemployed	Total
39 (26.0)	16 (10.7)	3 (2.0)	15 (10.0)	73 (48.7)	2 (1.3)	2 (1.3)	150 (100.0)

Source: CRRID Field Survey 2023

Citizen Perceptions Regarding the Usage of MC Digital Services:

The provision of digitised ULBs and online service delivery mechanism are mentioned in the AMRUT reforms to be achieved by ULBs in a limited timeframe. The table-3.1 Shows various municipal services used by respondents in the Srinagar Municipal Corporation. The data shows the most used e-Governance services pertains to 'Registration of birth, death and marriage', with 98% (147) respondents have used these services. The second most availed e-service is 'water & sewerage charges' 64.7% (97) respondents have used this.

Table 3.1

Types of Online Services Used

Name of ULB	Registration of birth, Death and Marriage	Water and sewerage charges	Grievance Redressed	Pension	E-procurement	Property Tax	Advertisement Tax	Payroll	Mutations
Srinagar	147 (98.0)	97 (64.7)	5 (3.3)	5 (3.3)	17 (11.3)	5 (3.3)	0 (0.0)	0 (0.0)	1 (0.7)

Source: CRRID Field Survey 2023

Functioning of Online Portals:

The proper function of online portals is very crucial to the implementation of online service delivery mechanism of Municipal Corporation. Among many things, proper digital infrastructure and a

professional workforce are two important aspects of the implementation process. Table-3.2 shows the views of users on whether they face any problems while accessing online portals, and what are those problems.

Table-3.2

Citizen Experiences of Using Online Portals

Have you ever faced any problems while using online portals?		If yes what kind of problem				
Yes	No	Visited several times due to the documents	Server errors	Network problem	Sit slow	online payment issue
126 (84.0)	24 (16.0)	1 (0.7)	83 (55.3)	56 (37.3)	49 (32.7)	2 (1.3)

Source: Primary Data

An overwhelming majority of respondents i.e. 84% (126) replied they face problems, whereas only 16% (24) respondents replied usually they never face problems while accessing online portals. Respondents put out a series of problems they face while using online portals, among these some are prominent in the sense these are highlighted by most of the respondents such as 55.3% (83) have faced server error problems, 37.3% (56) faced network related problems, 32.7% (49) replied municipal corporation website is working slow. Although these issues are important and demand attention to give better digital services to concerned citizen.

Impact of E-Governance Services on Overall Functioning of Municipal Corporation:

Table-3.3 has two sections, one section shows the overall functioning of municipal corporations after the implementation of e-Governance and another section shows whether there is any improvement in the service delivery. The analysis is based on citizen perceptions.

Table-3.3

Impact of ULB E-Governance on ULBs & Service Delivery

e-governance has improved & speed up the functioning of MC					e-governance has improved the service delivery of MC schemes including AMRUT				
Agree	Strongly Agree	Disagree	Strongly Disagree	Neither agree nor	Agree	Strongly Agree	Disagree	Strongly Disagree	Neither agree nor

				disagre e					disagre e
118 (78.7)	4 (2.7)	3 (2.0)	3 (2.0)	22 (14.7)	64 (42.7)	1 (0.7)	3 (2.0)	0 (0.0)	82 (54.7)

Source: Primary Data, Survey 2023

The Table-3.3 shows that the e-governance services of Srinagar Urban Local Body (ULBs) have quite improved because the majority of the respondents i.e. 78.7% (118) agree and 2.7% (4) strongly agree on this. Just 2.0% respondents disagree and 2.0% (3) strongly disagree on this.

The Data further shows that e-governance has improved the service delivery of municipal corporation schemes as 42.7% (64) respondents agree on this. However, data also shows lack of awareness or sufficient information among respondents as 54.7% (82) neither agree nor disagree

on the whether MC e-governance services have improved the service delivery of MC schemes including AMRUT scheme.

E-Governance and its Impact on Corruption, Transparency, and Faith on Government

Table-3.4 presents data on citizen perceptions of three variables corruption, transparency, and faith in the government in the backdrop of the implementation of e-governance services in Srinagar Municipal Corporation.

Table-3.4

Impact of E-Governance on Corruption, Transparency & Peoples Trust on Government

e-governance has reduced corruptions					e-governance has improved the transparency in the functioning of MC					e-governance applications have helped to improve the faith of the government				
Agree	Strongly Agree	Disagree	Strongly Disagree	Neither agree nor disagree	Agree	Strongly Agree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	Disagree	Strongly Disagree	Neither agree nor disagree	
94 (62.7)	1 (0.7)	2 (1.3)	1 (0.7)	52 (34.7)	10 2 (68.0)	2 (1.3)	3 (2.0)	43 (28.7)	82 (54.7)	1 (0.7)	1 (0.7)	1 (0.7)	65 (43.3)	

Source: Primary data, Survey 2023

The Table-3.4 shows that municipal e-governance services have led to reduced corruption, increased transparency, and positive faith on the government. More than half of the respondents i.e. 62.7% (94) agree that e-governance has reduced the corruption levels, 68.0% (102) agree that the e-governance brought transparency and improvement in the overall functioning of the municipal corporation and 54.7% (82) respondents hold that municipal e-governance services also helped to improve the faith on the government. A very small fraction of respondents contends and hold the opinion that e-governance failed to reduce corruption and increase transparency thus, no positive impact on the people's faith in government. However, the majority of respondents hold the opinion that there is a positive impact on the municipal corporation governance system due to the e-governance system.

Municipal Corporation E-Governance Services: Benefits

The Table-3.5 shows the benefits of municipal corporation e-governance services as per the views and opinions of respondents.

Table-3.5

Benefits of MC E-Governance Service (only %)

Easily approachable	More convenient	Reduc e operati on cost	more transparency	Redu ce corr uptio n	Qui ck pro cess	time save	all time available servi ces	work on time	Travel savi ng	eas y and sm oot h pro cess ing	eas y to use	mo re affo rda ble
7.3	24.7	47.3	23.3	6.0	2.0	32.7	8.0	0.7	0.7	2.7	4.7	3.3

Source: CRRID Field Survey 2023

There is an array of benefits of municipal e-governance services counted by respondents. According to 47.3% respondents' major benefit of e-governance is that it reduces operational costs, 32.7% replied digital services are time saving, 24.7% hold that this service brought more convenience and 23.3% think digital services increases transparency in the functioning of selected Municipal corporation. According to respondents, these services are more convenient, easily accessible, reduce corruption, and bring a lot of transparency to the municipal governance system. For some respondents, the benefits of these services bring efficiency as these services are time saving, reduce operational costs, available all the time, and easy to use. The responses provided by respondents link the municipal e-governance services with the major feature of good governance. The eight major characteristics of good governance enunciated by the United Nations are participation, rule of law, transparency, responsiveness, consensus-oriented, inclusiveness, efficiency, and accountability.

Municipal Corporation E-Governance Services: Problems and Constraints

Table-3.6 reflects the views of respondents about the problems and constraints in the proper implementation of municipal corporation e-governance services. There are a range of issues highlighted by respondents as a possible roadblock in the way of municipal corporation e-governance services. Among these lacks of awareness about services, lack of proper digital literacy and mall functioning of municipal corporation website are prominently mentioned by the majority of respondents. Rest of the respondents hold issues such as cyber fraud, slow process of services, less campaigning, slow customer services, server issues in website, lack of availability of cybercafé, delay in complaint redressal, lack of cyber security, lack of centralized services, lack of proper staff and disruptions in the internet services as a roadblock in the Municipal e-governance.

Table-3.6

Roadblocks in the MC E-Governance (only %)

So me of the onl ine ser vic es are par tial ly ava il a ble	Lac k of ren ess	La ck of git al lit er ac y	C yb er d	Faci ng som e with onli ne mon ey tra n sacti on s	Sl ow pr oc issu e	Eve ryth ing sho be men tion ed at MC dept .	Less cam paig ning	Cus tom er ser vice s are slo w	Se rv er iss ue in bsi te	Del ay in we bsi ms of com plai nts	Cy ber caf e in ter ble all the tim e	lac k of be rila securi ty	Full y cent ralis ed serv ices	L a c k of st af f	Disr upti on s in inte rnet serv ices
14.0	33.3	30.7	0.7	0.7	1.3	0.7	1.3	7.3	22.0	2.0	0.0	0.0	1.3	5.3	4.7

Source: CRRID Field Survey 2023

Discussion

Digitisation and e-governance in Urban Local Bodies (ULBs) are not merely administrative reforms; they represent deep social transformations that reshape power relations, access to services, the everyday experience of governance, and the structure of urban life. When examined through a sociological lens, the AMRUT reforms in Srinagar Municipal Corporation (SMC) reveal dynamics of inequality, modernisation, social capital, digital exclusion, institutional change, and the reconfiguration of state–citizen relations.

Manuel Castells' concept of the Network Society helps us understand how AMRUT's e-governance reforms place information flows at the centre of urban governance. According to Castells (1996), digital infrastructures reorganise institutions around real-time communication, replacing hierarchical, paper-based bureaucracies with networked, connected systems. The study shows in Srinagar online portals for birth/death registration, building permissions, and water charges create new forms of connectivity between citizens and the municipal state. The adoption of GPS/GIS for staff attendance, MIS dashboards, and automated data systems reconfigure how municipal power is exercised. The "speeding up of municipal functioning," reported by 78% of respondents, is not merely a technical improvement but an example of bureaucratic rationalisation through digital networks, changing how authority is practiced and how citizens experience the state. Thus, e-governance becomes a process of embedding SMC into a wider network society, where digital flows structure urban governance.

Pierre Bourdieu's theory of cultural capital (1986) is highly relevant to understanding disparities in the use of e-governance services. As empirical data shows 45% of respondents have education only up to the 12th standard. 30% identify lack of digital literacy as a barrier. Many reports difficulty navigating portals, server errors, or unfriendly interfaces. Urban poor and slum dwellers form only 11% of sample—pointing to their likely reduced usage. This suggests that those with higher education, digital skills, and economic resources are better able to use online municipal services. Digital governance risks reinforcing pre-existing inequalities, creating a new digital stratification within the city. Thus, a citizen's ability to "benefit" from e-governance becomes dependent on their cultural capital (education, digital fluency, language skills). Likewise, Mark Warschauer (2003) argues that digital divides are shaped not only by access to devices and internet but by Literacy levels, social support systems, Institutional culture, Economic resources. Thus, the AMRUT reform's success is limited by structural divides rooted in social class, education, and economic exclusion. E-governance advances rights only when these divides are addressed.

Further, the study shows that 33% respondents cite lack of awareness of e-services. 22% cite server/website problems, which disproportionately affect less tech-savvy users. Citizens from BPL households (26.7%) are likely less familiar with digital processes. Thus, the AMRUT reform's success is limited by structural divides rooted in social class, education, and economic exclusion. E-governance advances rights only when these divides are addressed. However, with 62.7% agreeing that e-governance reduces corruption and 68% acknowledging greater transparency, digitisation is also affecting social capital—citizens' trust, norms, and networks. According to Putnam (1993) Trust in institutions strengthens when governance becomes predictable and transparent. Digital systems reduce discretionary power of clerks, brokers, and intermediaries. In Srinagar automated certificates, online tracking, and digital receipts weaken traditional spaces of petty corruption. This produces a shift in the moral economy of bureaucracy—where citizens feel governance is less arbitrary and more rule-bound. Thus, e-governance builds institutional trust, a key component of social cohesion. Henri Lefebvre (1968) emphasises that citizens have a "right to the city"—which includes the right to services, information, and participation in urban life. Digital municipal services contribute to this right by making essential services (birth certificates, water bills, licenses) accessible without physical barriers. Allowing citizens to shape their engagement with the city on their own terms (any time, from home). Thus, while e-governance expands the right to the city for many, it remains incomplete for digitally marginalised populations. The promise of urban citizenship through digital means is uneven.

Conclusion

The overall outcomes of AMRUT in Srinagar city led to the digitisation and online service delivery, better record of property tax data, better staff management, delivery of online services are lesser time consuming, resource mobilization, and better communication with citizens. There seems to be serious efforts on the part of Srinagar Municipal Corporation to implement the reforms. Other line departments like revenue department are also making genuine efforts to make mutation online. It seems that AMRUT has been able to achieve its objectives in Srinagar Municipal Corporation. The analysis of primary and secondary data indicates good progress (physical, financial and reforms) of AMRUT and its various components including e-governance and municipal digitization. The scheme continues to be relevant and has been trying to address the crucial problems of basic services like water supply, sewerage, drainage, parks etc., and efficient service delivery to the citizens as depicted through positive responses and perceptions of the citizens.

The higher level of satisfaction of citizens with augmented urban infrastructure, online services and their very high response that e-governance has improved and speed up the overall functioning of Municipal Corporation. Besides improving transparency and reducing corruption indicate that the AMRUT scheme has been capable of providing desired results. The aim of AMRUT reforms relating to e-governance was to provide services efficiently and in an online mode. The overwhelmingly very high percentage of respondents are using online services with modern gadgets like mobile phone, laptop, desktop etc. The scheme has been very effective in improving the interaction between local governments and citizen, improved MIS and greater trust of the citizens with delivery of services as per normative patterns. The cost cutting on operations, reduction in time and wasteful expenditures, creation of big data base, better digital infrastructure, single window systems decentralized service delivery with greater participation of people are some important indicators of the effectiveness of implementation of e-governance reforms under AMRUT. The efficiency of municipal staff also seems to be improving along with the reduction in manual workload and filings. The positive impact is visible in the positive feedback of users, improved service delivery and hassle-free e-transactions. However, there are some issues/gaps/challenges too like lack of adequate and trained IT professionals, inadequate awareness among the people about AMRUT scheme, safety of data, poor customer grievances redressal mechanism, complicated process for end users, unfriendly server, low digital literacy resulting into digital divide etc. The lack of adequate funds and poor capacity of the local self-government institutions with poor autonomy, technical know-how of the service providers and poor digital literacy are some crucial limitations. Absence of regular technical training of the staff and digital citizens forums and tribunals, lack of awareness to use e-tools, no system of regular upgradation of technology, insecure access of e-services, absence of sensitization of citizens about cyber laws and no use of local and native language and poor role of local policy makers (elected representatives) are some important challenges for improving municipal digitization and e-governance initiatives. The study suggests working on these aspects for further improving the quality of e-services and good governance at local level.

In sum, the sociological perspectives strongly reinforce the positive outcomes observed in the Srinagar Municipal Corporation under AMRUT. Castells' notion of the network society aligns with the study's finding that digital platforms have made governance faster, more connected, and more responsive. Sen's capability approach supports the evidence that citizens now enjoy greater freedom, convenience,

and autonomy in accessing essential services. Putnam's ideas on social capital echo the substantial increase in public trust, transparency, and confidence in municipal institutions reported by respondents. Lefebvre's "right to the city" resonates with the expanded accessibility of civic services, enabling broader participation in urban life. Even theories addressing structural inequalities—such as Bourdieu's cultural capital and digital-divide scholarship—underscore the importance of the positive steps already taken while pointing to areas where continued progress will enhance inclusiveness. Together, these sociological frameworks affirm that Srinagar's digital transformation is not only technically successful but also socially empowering, marking a significant move toward equitable, transparent, and citizen-centered urban governance.

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