# Effectiveness of e-Governance Initiatives in Telangana—A Study of Citizen Services Monitoring System (CSMS)

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## ABSTRACT

*Worldwide governments are being pushed to alter their government systems in order to provide citizen-centric service delivery through the use of cutting-edge Information and Communication Technology (ICT). The use of e-governance has emerged as a critical tool in the fight against the evils of mismanagement and corruption. Over the course of more than two decades, e-governance initiatives have been introduced in India. The present study is set in the context of the growing significance of governance, public service delivery and e-governance, which highlights various issues like awareness, efficiency, transparency, responsiveness, participation and accountability. The study particularly examines the critical e-governance parameters of the Citizen Services Monitoring System (CSMS) initiative in urban areas of Telangana. Based on the study results, important policy suggestions have been provided.*

**Keywords:** *e-governance, good governance, participation, responsiveness, service delivery*

## INTRODUCTION

The existing literature on governance penned by individual writers as well as the international organisations like (UNDP), (UNESCO), World Bank reiterates that governance is an all-encompassing concept. It strives to ensure the social, economic and political development of the country through the judicious use of authority vested in the state. It carries with itself all the vital ingredients of democracy, "accountability, transparency, human rights, social cohesion, equity, participation and fights against the corruption" (Cheema, 2001).

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**Models of Public Administration and Reform Approaches in the Public Sector**

The term "Public Administration" encompasses a variety of concepts. It is a structure that performs its duties in accordance with the laws of the land it serves. Many debates on Public Administration have led to various concepts and approaches (World Public Sector Report, 2015). The movement from "Old Public Administration" to "New Public Management" that occurred in the 1980s and 1990s has been extensively studied by researchers. Following this, the new millennium saw a paradigm shift in Public Administration, labelled the "New Public Service", "New Public Governance", or "Post-New Public Management" (Dunleavy and Hood, 1994; Denhardt and Denhardt, 2000; Osborne, 2006).

For a long time, notably in the 20th century, the traditional or old model of Public Administration drew its essential concepts from Max Weber's ideas of bureaucracy. The Weberian paradigm is defined by "hierarchy and meritocracy". It is criticised for prioritising rules over results, being resistant to change, innovation, and experimentation, and delaying important decisions. Market-driven economic forces grew stronger, affecting ruling institutions. The previous paradigm couldn't keep up with a market-driven economy; thus, a new approach called New Public Management emerged (NPM-Competitive and Minimalist). The proponents of this strategy propose reducing the role of the state. "Competition, delegation, performance and responsiveness offer yardsticks to regulate bureaucratic behaviour and generate improved outcomes" (Dunleavy and Hood, 1994; Mc Court, 2013).

The application of market concepts to government has not resulted in a more equitable distribution of wealth. In this context, a call for a paradigm change and a new method to satisfy people's democratic desires was made. So came the idea of governance.

New Public Governance (Plural and Pluralist) espoused by Osborne (2006; 2010) is distinguished by the fact that it prioritises citizens rather than the government. The citizen is the objective; governance is the means. Governments must now more than ever be open, accountable, transparent, and eager to serve (Osborne, Radnor and Nasi, 2013). The New Public Service approach is viewed as the most consistent among the several approaches. It asserts that public leaders should encourage citizens to express and implement their "shared interests" rather than manage or steer society (Denhardt and Denhardt, 2000).

### E-Governance and Public Service Delivery

The government provides services directly or indirectly to the public. Effective governance is required to ensure citizen-centric public service delivery. Globally, governments must adapt their systems to enable citizen-centric service delivery through innovative Information and Communication Technology (ICT). Because of e-government, governments must now develop new methods of delivering public services (Ume Laila et al., 2020). Contemporary ICT tools have revolutionised the government's engagement with stakeholders such as citizens and businesses as well as the government's own departments (Bhattacharya, 2008).

E-Governance or 'electronic governance' is basically the application of Information and Communication Technology to the processes of Government functioning in order to bring about 'Simple, Moral, Accountable, Responsive and Transparent' (SMART) governance.

### Review of Literature

Awareness among citizens is the first signal of the successful adoption of e-governance projects. However, there is a dearth of clearly defined systems, methods, and models and a shortage of awareness about the e-governance mechanisms at all levels (Kumar et al., 2018). Lack of education becomes a hurdle to create awareness among the people who are actually the real end-users (Dass and Bhattacharjee, 2011).

Besides the problems with the service providers, e-governance projects are suffering from the absence of awareness and prevalence of ambiguity in several forms (Naik, 2011; Dwivedi et al., 2016).

Many authors (Santos, 2003; Zeithaml et al., 2002) consider efficiency as a critical dimension along with reliability, security, and responsiveness. Khanra and Joseph (2019) are of the opinion that the web interface used for e-governance activities should be very simple and neatly organised to become more efficient. Saxena (2018) studied the efficiency of the 'Digital India' campaign in realising the mission objectives. Mir et al. (2020) consider the use of digital identification methods as a critical means to curb identity-related frauds in e-governance systems.

Study findings have established that transparency, simplicity, and convenience are given more preference by the Indian citizens than the cost of service (Kalsi and Kiran, 2015). Transparency is not about providing the information alone. Transparency speaks about the usefulness of the information available (Grimmelikhuijsen & Welch

2012; Iyer and R.N. 2017; Alathur et al., 2016; Kumar et al., 2018; Bindu et al., 2019). Several researchers have strongly argued that transparency in e-governance is an effective tool to curb the menace of corruption. Digital governance should thus enable the government to provide good governance with transparency (Basyal et al., 2018; Singh et al., 2010).

For the success of e-governance, winning public confidence is essential. Thus, there should be faster responses to the needs of the public. To be successful in implementation, the projects require moral support in terms of responsiveness and philosophy too (Jain Gupta and Suri, 2017). Kompella (2017) suggest the use of inter-organisational information systems (IOS) to speed up the process.

The governments have to find ways to engage all the stakeholders till the end-user level to make the e-governance mission successful (Naik, 2011). Kumar et al. (2018) found that the public who had computer literacy found participation easier in e-governance compared to those who lacked computer literacy. To transform the deployment of ICTs in e-governance into a permanent mechanism towards life-enhancement, literacy in ICTs and increased participation are vital (Calista and Melitski, 2012).

The interactions and behaviour of the government agencies towards accountability and transparency can be structured by the institutional and legal systems (Saxena, 2018; Chen & Hsieh, 2009). ICT is utilised as a means to improve accountability and transparency in government's informational exchanges and supports the efforts to deliver effective and efficient public services (Bhatnagar, 2008; Pathak et al., 2007).

**Citizen Services Monitoring System (CSMS)**

Citizen Services Monitoring System is an initiative of the Director for Municipal Administration of Telangana. The system aims to provide transparent and time-bound services to urban citizens. The CSMS works as a bridge between the municipal staff and citizens in handling the service applications and grievances effectively and helps in redressing them within a specified time while alerting the stakeholders from time-to-time on every stage of the movement. An end-to-end grievance management system that includes a mobile app that allows citizens to log grievances with the local government body is an important feature.

Citizens get free access 24X7 to know the status of their application via SMS alerts, App notifications, web access and concerned staff are alerted on their performance disposal while keeping the delivery rate available to the senior officers and Heads of Departments (HoDs) for effective monitoring. There is a provision for registering the service

request/grievance through the website, citizen buddy app, phone facility and citizen service centre.

**Methodology**

The present research work is based on field study and empirical analysis. The study is set out with the following objectives:

*Objectives*

- To study the critical e-governance parameters of the e-governance initiative, Citizen Services Monitoring System (CSMS) in urban areas of Telangana.

- To analyse the awareness levels of citizens regarding the Citizen Services Monitoring System.

- To evaluate the effectiveness of the e-governance initiatives in achieving the objectives of good governance.

- To analyse the problems in operationalising Citizen Services Monitoring System (CSMS).

- To recommend appropriate policy measures for further improving the system.

**Hypotheses**

1. **$H_0$ (Null Hypothesis):** E-governance initiatives does not contribute to the achievement of objectives of good governance (participation, transparency, responsiveness, accountability and efficiency).

   **$H_1$ (Alternate Hypothesis):** E-governance initiatives contribute to the achievement of objectives of good governance (participation, transparency, responsiveness, accountability and efficiency).

2. **$H_0$ (Null Hypothesis):** E-governance initiatives such as Citizen Services Monitoring System does not reduce the transaction cost, time in accessing service delivery.

   **$H_1$ (Alternate Hypothesis):** E-governance initiatives such as Citizen Services Monitoring System reduces the transaction cost, time in accessing service delivery.

3. **$H_0$ (Null Hypothesis):** Lack of inter-departmental coordination does not substantially impact the service delivery in the implementation of e-governance initiatives.

**H₁ (Alternate Hypothesis):** E-governance initiatives will have maximum effect in service delivery provided they have inter- departmental coordination.

## Data Collection

Data are collected from both primary and secondary sources. For the collection of primary data, the tools employed were: (i) questionnaire/schedule, (ii) Personal interview and discussion, and (iii) non-participant observation method. The secondary data regarding the performance of the Citizen Service Monitoring System (CSMS) were collected from the Commissionerate and Directorate of Municipal Administration (CDMA). Hence primary sources of data on implementing mechanisms and secondary sources like policy documents, performance reports of CSMS from CDMA, and web resources of the respective departments take an equal share in making qualitative analysis of the present research.

### *Study Instrument*

A structured questionnaire was developed to assess the impact of CSMS in realising the goals of governance, i.e., participation, transparency, responsiveness, accountability and efficiency. The parameters were taken from the Good Governance Report published by UNDP in 1997.

## Sampling Methodology

Based upon the total service requests resolved through CSMS at each Municipality (CDMA Performance Report), Urban Local Bodies (ULBs) were ranked from high to low. Out of 72 ULBs, 67 are Municipalities, and 5 are Municipal Corporations. From the 67 Municipalities, four were selected for the study by using Range**.**

Range taken on the basis of Service requests resolved for the selection of ULBs was:

Above 3000 :  Boduppal
1000 – 3000 :  Siddipet
500 – 1000   :  Shadnagar
Below  500  :  Vikarabad

Out of five Municipal Corporations, Karimnagar Municipal Corporation was selected based upon high performance. Through convenience sampling, the researcher approached the citizens who were availing these services and were willing to respond to the questionnaire.

**Sample Size**

For the purpose of the urban study of CSMS, a total of five Urban Local Bodies were covered. Out of the five ULBs, four were Municipalities, and one was Municipal Corporation. From each Municipality, 30 responses and 32 responses from Municipal Corporation were collected from households. Responses of five CSMS operators, five Municipal Commissioners, were collected. Thus, total sample size of 162 comprises 152 citizens, and the rest of the 10 sample represents CSMS operators and Municipal Commissioners.

The data collected were carefully analysed to examine the effectiveness of e-governance in the study region, particularly in the context of CSMS. The results of the data analysis are presented in the following section.

TABLE 1: SAMPLE DISTRIBUTION

| Respondent (s) | Number |
|---|---|
| Sample for Citizens (House hold) | 152 |
| CSMS Operator | 05 |
| Municipal Commissioners | 05 |
| Total | 162 |

Source: Author.

**Results**

*Satisfaction levels with respect to participation in CSMS*

Table 2 reflects the perceived satisfactory levels of the respondents with regard to the increased participation of the people after the advent of CSMS. An overwhelming majority of the respondents (72.4%) revealed that they were indeed either satisfied (56.6%) or highly satisfied (15.8%) with the participatory level of the people in the programme. The reasons that endeared the households were the provision for an online grievance redressal mechanism and online property tax assessment. These online arrangements, by their very nature, spurred the people's participation for the obvious reasons they can put forward any of their grievance / requests sans their physical presence at the respective offices and with no or least disturbance to their routine work. Other attributes for the higher participation were better access to information through periodical website notifications, citizen charter and SMS alerts.

At the other end lies the dissatisfied segment. A little more than one-fourth of the respondents (26.3%) expressed either dissatisfaction (24.3%) or high dissatisfaction (2%). The reasons for such an unconcealed dissatisfaction were malfunctioning of the citizen buddy app, inadequate

access to information and their suggestions/feedback neither received solemn consideration nor acted upon. The table further reveals the data related to satisfactory levels of households with women participation after the initiation of CSMS. More than two-thirds of the respondents (70.4%) opined that they were either satisfied (62.5%) or highly satisfied (7.9%) in this particular aspect of an enhanced level of women participation with the introduction of CSMS. The reasons accounting for the increased level of women participation were chiefly Mission for Elimination of Poverty in Municipal Areas (MEPMA) and its tributary wings Town Level Federation and Slum Level Federation.

On the other hand, a quarter of the respondents (25.6%) felt that they were either dissatisfied (24.3%) or highly dissatisfied (1.3%). Besides them, a few of the respondents (3.9%) preferred to be neutral. In their perception, lack of technical know-how resulting in non-substantiation of laid down processes and procedures, want of a helpdesk to aid and advise the needy in a proper way, lack of general literacy, particularly the digital one, collided and contributed to the lukewarm response of the women.

Table 2 highlights the levels of satisfaction derived by the respondents from the benefits accrued to them because of CSMS. More

TABLE 2: SATISFACTION LEVELS WITH RESPECT TO PARTICIPATION IN CSMS

| *Parameters* | *Highly Satisfied (5)* | *Satisfied (4)* | *Neutral (3)* | *Dissatisfied (2)* | *Highly Dissatisfied (1)* | *Total* |
|---|---|---|---|---|---|---|
| Participation | 24 | 86 | 2 | 37 | 3 | 152 |
| % | 15.8 | 56.6 | 1.3 | 24.3 | 2.0 | 100.0 |
| Women Participation | 12 | 95 | 6 | 37 | 2 | 152 |
| % | 7.9 | 62.5 | 3.9 | 24.3 | 1.3 | 100.0 |
| Benefits of Participation | 13 | 93 | 4 | 37 | 5 | 152 |
| % | 8.6 | 61.2 | 2.6 | 24.3 | 3.3 | 100.0 |
| Participation in Formulating and Modifying CSMS | 21 | 86 | 3 | 38 | 4 | 152 |
| % | 13.8 | 56.6 | 2.0 | 25.0 | 2.6 | 100.0 |

Source: Field Data.

than two-thirds of the respondents (70%) felt that they were either satisfied (61.2%) or highly satisfied (8.6%). The reasons attributed for such an adulation were that in the wake of online arrangements being brought by the CSMS, households were able to avail themselves of considerable services even while sitting at their home desk, thus saving much desirable cost and time. However, more than one-fourth (27.6%) of the respondents expressed either dissatisfaction (24.3%) or high dissatisfaction of (3.3%). Besides them, very few respondents (2.6%) remained neutral. The reasons for such an avowed dissatisfaction were improper functioning of the App and the presence of corrupt elements. The table also indicates the level of citizen participation in formulating and modifying CSMS. More than two-thirds (70%) of the respondents reported that they were indeed either satisfied (56.6%) or highly satisfied (13.8%) with the part being played by them in formulating and modifying CSMS.

Those who subscribe to this view recalled that the feedback given by them, suggestions offered and the grievance put forward were indeed taken into consideration and acted upon. At the other end lie more than one-fourth of the respondents (27.6%) who were not much enamoured of the system and expressed the view that they were either dissatisfied (25%) or highly dissatisfied (2.6%). The reasons ascribed were the availability of feedback option only in-app and its non-availability in other media like website, citizen service centre, phone call (Table 2).

**Satisfaction levels with respect to transparency in CSMS**

The results in Table 3 show that nearly three-fourths (72.3%) of respondents were either satisfied (57.2%) or highly satisfied (15.1%) with regard to transparency in the process and procedures of CSMS. They reported that certain features of CSMS like Citizen Charter, file tracking mechanism, and feedback from stakeholders had enhanced the transparency in the process and procedures of CSMS. On the other hand, more than one-fourth (27%) of the respondents expressed either dissatisfaction (19.1%) or high dissatisfaction (7.9%). Only a few respondents, i.e., 0.7%, were neutral.

Respondents reporting dissatisfaction levels said that some of the officials themselves are uploading fake documents and certificates. A considerable number of the respondents cited certain instances of illegal mutation certificates. Another cause attributed by the households for their dissatisfaction was the discriminatory assessment of property tax.

Further, Table 3 reveals that an overwhelming majority of the respondents (72.4%) expressed either satisfaction (54.6%) or high satisfaction (17.8%) with respect to transparency in timely reporting

TABLE 3: SATISFACTION LEVELS WITH RESPECT TO TRANSPARENCY IN CSMS

| *Parameters* | *Highly Satisfied (5)* | *Satisfied (4)* | *Neutral (3)* | *Dissatisfied (2)* | *Highly Dissatisfied (1)* | *Total* |
|---|---|---|---|---|---|---|
| Transparency in process and Procedures | 23 | 87 | 1 | 29 | 12 | 152 |
| % | 15.1 | 57.2 | 0.7 | 19.1 | 7.9 | 100.0 |
| Transparency in Timely reporting of Progress | 27 | 83 | 1 | 36 | 5 | 152 |
| % | 17.8 | 54.6 | .7 | 23.7 | 3.3 | 100.0 |
| Needy and Deserved Getting the benefits | 15 | 90 | 6 | 29 | 12 | 152 |
| % | 9.9 | 59.2 | 3.9 | 19.1 | 7.9 | 100.0 |
| Easy access to information | 29 | 77 | 3 | 34 | 9 | 152 |
| % | 19.1 | 50.7 | 2.0 | 22.4 | 5.9 | 100.0 |

Source: Field data.

of progress, and the reasons cited were issuing of a unique identity number, the facility to track the status at every stage.

At the same time, some of the respondents (23.7%) expressed dissatisfaction, and 3.3% expressed high dissatisfaction. The causes mentioned were non-receiving of regular SMS alerts, the abrupt closure of service request/complaint.

The data from Table 3 also reveals that more than two-thirds of the respondents (69.1%) expressed either satisfaction (59.2%) or high satisfaction (9.9%) with regard to the needy and deserved getting the benefits. On the other hand, a considerable number of respondents were either dissatisfied (19.1%) or highly dissatisfied (7.9%). They were of the view that the benefits of the programme were not reaching those who deserved and who needed them most.

The Table 3 also unfolds the satisfaction levels of respondents with regard to easy access to information. More than two-thirds of respondents (69.8%) felt that they were either satisfied (50.7%) or highly satisfied (19.1%). The causes mentioned were, display of citizen charter, provision for both online and physical access, and the display of a dashboard on the website. On the other hand, a little more than one-fourth of the households surveyed (28.3%) spoke of either dissatisfaction

(22.4%) or high dissatisfaction (5.9%). And the main reason attributed to such dissatisfaction was the lack of provision for the right to information in the Citizen Buddy App to know the facts in certain cases of illegal mutations and fake certificates (Table 3).

**Satisfaction levels with respect to responsiveness in CSMS**

Table 4 unravels the opinion of the respondents on the responsiveness of the employees in the discharge of their obligations mandated by CSMS. According to the above data, while half of the respondents (51.3%) reported that the responsiveness of the employees was indeed satisfied, 19.1% felt highly satisfied. Quick and good response on the part of employees, calling the households immediately after applying online were the gladdening features. On the other hand, a quarter of the respondents (25.7%) felt that the responsiveness of the employees was dissatisfied; that being so, a very minute percentage of the respondents (0.7%) deemed it to be highly dissatisfied. Besides those, 3.3 per cent of the respondents remained neutral. The reasons mentioned by the group of respondents for their considered view were the rash and rude behaviour of some personnel.

TABLE 4: SATISFACTION LEVELS WITH RESPECT TO RESPONSIVENESS IN CSMS

| Parameters | Highly Satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Highly Dissatisfied (1) | Total |
|---|---|---|---|---|---|---|
| Responsiveness of Employees | 29 | 78 | 5 | 39 | 1 | 152 |
| % | 19.1 | 51.3 | 3.3 | 25.7 | .7 | 100.0 |
| Implementation of Citizen Charter | 21 | 88 | 3 | 37 | 3 | 152 |
| % | 13.2 | 58.3 | 2.0 | 24.5 | 2.0 | 100.0 |
| Responsiveness towards needs of the People | 24 | 84 | 2 | 38 | 4 | 152 |
| % | 15.8 | 55.3 | 1.3 | 25.0 | 2.6 | 100.0 |

Source: Field data.

Table 4 further unravels the data related to satisfaction levels of respondents on the implementation of Citizen Charter. It can be inferred from the data that more than half of the respondents (58.3%) were satisfied, and one-eighth (13.2%) were highly satisfied. Respondents revealed reasons for such satisfaction on their part. They reported that

their requests/grievances were being redressed within the time frame. Further, they added that norms like intention delays inviting penalties, outer time limit at every level of file movement and dashboard on which was displayed every action of every staff member and every movement of the file were acting like spurs for timely performance.

On the other side of the fence, almost one-fourth of the respondents (24.5%) expressed dissatisfaction; besides that, very few of the respondents felt that they were highly dissatisfied (2%). The reasons mentioned for such an avowed dissatisfaction were the documents being kept pending even after one month in certain cases, the existence of only one single counter instead of multiple counters in certain places, inadequate staff, lack of coordination among MeeSeva, Sub-Registrar Office, Municipal Office and officials often citing legal and financial implications for non-compliance of Citizen Charter.

Table 4 also unravels the views of the respondents with regard to the responsiveness on the part of officials towards their needs. It can be discerned from the data that more than half of the households (55.3%) were satisfied, and more than one-sixth (15.8%) were highly satisfied.

At the other end, whilst one-fourth of the respondents (25.2%) expressed dissatisfaction, very few respondents (2.6%) felt that they were highly dissatisfied. Apart from these, still, a lesser number (1.3%) preferred to be neutral. Those respondents who expressed disenchantment gave vent to their feelings. The respondents made a strong plea to the effect that their needs like Birth, Death Certificates, and Property Valuation Certificate ought to be resolved at a single point, i.e., CSMS (Table 4).

**Satisfaction levels with respect to accountability in CSMS**

Table 5 reflects the satisfactory levels of respondents with regard to the security of the data in the Citizen Service Monitoring System. While more than half of the households (53.3%) expressed the view that they were satisfied, close to one-fifth (18.4%) reported high satisfaction. Reasons ascribed by them to arrive at such a positive conclusion were the lack of any apparent technology threats so as to breach their data and a third-party security audit by Telangana State Technology Services (TSTS). On the other hand, whereas close to one-fourth (24.3%) of the households reported that they were dissatisfied in this aspect, a few of them (3.3%) unhesitatingly reported high dissatisfaction. A meagre per cent (0.7%) of them preferred to be neutral.

The Table 5 further unravels the satisfaction levels of respondents with respect to CSMS accountability. Whereas more than half of

TABLE 5: SATISFACTION LEVELS WITH RESPECT TO ACCOUNTABILITY IN CSMS

| *Parameters* | *Highly Satisfied (5)* | *Satisfied (4)* | *Neutral (3)* | *Dissatisfied (2)* | *Highly Dissatisfied (1)* | *Total* |
|---|---|---|---|---|---|---|
| Security of data | 28 | 81 | 1 | 37 | 5 | 152 |
| % | 18.4 | 53.3 | 0.7 | 24.3 | 3.3 | 100.0 |
| Account-ability of CSMS Officials | 22 | 88 | 0 | 36 | 6 | 152 |
| % | 14.5 | 57.9 | 0.0 | 23.7 | 3.9 | 100.0 |
| Grievance Redressal | 21 | 87 | 2 | 35 | 7 | 152 |
| % | 13.8 | 57.2 | 1.3 | 23.0 | 4.6 | 100.0 |

Source: Field data.

the respondents (57.9%) were satisfied, and 14.5 per cent aired the view that they were highly satisfied. The factors that contributed to their enchantment were the operator duly providing them with an acknowledgement with a unique ID number, date and time of the request, date of service delivery along with the name and mobile number of concerned official to whom the request/grievance will be sent, sending SMS alerts along with tracking reference number, and App notifications; penalising the staff for inordinate pending of the request and the citizen being reimbursed for such a lapse, intimation of shortfall notice through SMS alerts, intimation of reasons to the citizen in the case of rejection.

However, close to one-fourth (23.7%) of the respondents expressed their unconcealed dissatisfaction with this particular aspect of accountability. It being so, a small segment of the respondents (3.9%) felt that they were highly dissatisfied. They further reported that the issues like non-intimation of the reference number, non-receipt of SMS alerts, absence of any sort of action against the defaulting/erring official, shortfall intimation not being served through SMS alerts, and reasons for rejection not being mentioned in the remarks column accounted for and enhanced their dissatisfaction.

Table 5 unfolds the satisfaction levels of households on the grievance redressal mechanism of CSMS. While more than half of the households (57.2%) revealed that they were satisfied, close to one-seventh (13.8%) mentioned that they were highly satisfied. The reasons ascribed include pre-mapping, i.e., stating in clear terms to the effect that which type of

grievance goes to which officer and also specifying the area, registering each and every complaint along with its date, time; reference number, mentioning the mobile numbers of concerned officials, the possible date of resolution, uploading the photos relating to grievance depicting the pre-complaint position and the other one after the solving the same. Besides these, the feedback option that enables them to give a rating on a scale of one to five and its inherent provision of penalising the underperformer further endeared the programme.

At the other end stood a close to one-fourth of the households (23%) who opined that they were dissatisfied with the grievance redressal system. Apart from this segment, a few of the respondents (4.6%) felt that they were highly dissatisfied. A few of the households (1.3%) remained neutral. The reasons that evoked such a negative response embrace complaints not being registered online at a few places, and at other some places want of proper action despite complaints being registered, lack of a proper mechanism that enables the citizen to appeal against defaulting or erring field staff; want of a proper mechanism that allows the citizens to go for appeal in case their problem remains unsolved at the level of the municipality (Table 5).

### Satisfaction levels with respect to efficiency in CSMS

Table 6 reflects the data related to satisfaction levels of respondents on quickness and accuracy in service delivery. It was observed that nearly three fourth (73%) of respondents were either satisfied (62.5%) or highly satisfied (10.5%) with quickness and accuracy in service delivery. It was also evident that more than one fourth (26.9%) were either dissatisfied (24.3%) or highly dissatisfied (2.6%).

The respondents reported causes for their dissatisfaction and they were lack of coordination between Registration and Municipal Departments with regard to mutation requests, being asked by the officials repeatedly to upload the same documents in MeeSeva, Sub Registrar Office, MRO Office and CSMS and the technical problems.

It is also inferred from Table 6 that nearly three fourth (73.1%) of households were either satisfied (58.6%) or highly satisfied (14.5%) with regard to the reliability of services being provided through CSMS. Out of 152 respondents, 24.3 per cent were dissatisfied, and only a few respondents, i.e., 2.6 per cent, were highly dissatisfied.

Further, Table 6 provides the data related to satisfaction levels of households on cost reduction through CSMS. Data shows that more than two-thirds (69.7%) of respondents were either satisfied (57.9%) or highly satisfied (11.8%) on this aspect. On the other hand, more than

TABLE 6:  SATISFACTION LEVELS WITH RESPECT TO EFFICIENCY IN CSMS

| Parameters | Highly Satisfied (5) | Satisfied (4) | Neutral (3) | Dissatisfied (2) | Highly Dissatisfied (1) | Total |
|---|---|---|---|---|---|---|
| Quickness and Accuracy | 16 | 95 | 0 | 37 | 4 | 152 |
| % | 10.5 | 62.5 | 0.0 | 24.3 | 2.6 | 100.0 |
| Reliability of the Service | 22 | 89 | 0 | 37 | 4 | 152 |
| % | 14.5 | 58.6 | 0.0 | 24.3 | 2.6 | 100.0 |
| Cost of Service | 18 | 88 | 4 | 37 | 5 | 152 |
| % | 11.8 | 57.9 | 2.6 | 24.3 | 3.3 | 100.0 |
| Easeness of Receiving | 28 | 79 | 4 | 35 | 6 | 152 |
| % | 18.4 | 52.0 | 2.6 | 23.0 | 3.9 | 100.0 |
| Direct contact with the Service Provider | 26 | 74 | 9 | 36 | 7 | 152 |
| % | 17.1 | 48.7 | 5.9 | 23.7 | 4.6 | 100.0 |
| Flexibility of Time | 25 | 83 | 3 | 35 | 6 | 152 |
| % | 16.4 | 54.6 | 2.0 | 23.0 | 3.9 | 100.0 |
| Timely Reporting of Progress | 14 | 91 | 2 | 32 | 13 | 152 |
| % | 9.2 | 59.9 | 1.3 | 21.1 | 8.6 | 100.0 |

Source: Field data

one-fourth (27.6%) were either dissatisfied (24.3%) or highly dissatisfied (3.3%). Only 2.6 per cent of respondents were neutral.

The respondents who were satisfied reported that the factors like the provision of registering the service request/grievance through the website, Citizen Buddy App, phone facility, regular SMS Alerts on the status of the application helped them in saving their precious time and travelling cost. The respondents who expressed dissatisfaction in the aspect of cost reduction opined that the reasons like non-availability of all the services online, the apathetic attitude of officials despite registering the service request/grievance through the App made them physically visit the office and as such no effective reduction in the cost.

Table 6 also unveils the data related to the opinion of the respondents on ease in receiving services through CSMS. Out of 152

respondents, a strong majority (70.4%) of households expressed either satisfaction (52%) or high satisfaction (18.4%). The respondents said that the features like 24 X 7 access, SMS alerts, App notifications, web access contributed to easeness in the delivery of services. On the other hand, a little more than one-fourth (26.9 per cent) felt either dissatisfied (23%) or highly dissatisfied (3.9 per cent), and then 2.6 per cent were neutral. The reasons for such dissatisfaction in their view were all the municipal services not being made online, non-receipt of acknowledgement and SMS alerts. It is also inferred from the data that almost two thirds (65.8%) of households expressed either satisfaction (48.7%) or high satisfaction (17.1%) for having direct contact with the Service Provider. The reasons attributed to their satisfaction are the quick resolution of their grievances/requests and the Service Provider creating awareness on the process and procedures of CSMS. At the same time, more than one-fourth (28.3%) were either dissatisfied (23.7%) or highly dissatisfied (4.6%). Only 5.9 per cent of respondents were neutral.

It can also be known from the above table that a very good majority (71%) of households expressed either satisfaction (54.6%) or high satisfaction and (16.4%) with regard to the flexibility of time in availing various services. At the same time, a little more than one-fourth (26.9%) of the households reported either dissatisfaction (23%) or high dissatisfaction (3.9%).

Table 6 also reflects the opinion of respondents on timely reporting of progress by the CSMS staff. Data shows that more than two-thirds of the respondents (69.1%) opined that they were indeed either satisfied (59.9%) or highly satisfied (9.2%) with regard to timely reporting to progress by the concerned staff.

At the other end of the spectrum lies less than one-third of the respondents (29.7%) who felt that they were either dissatisfied (21.1%) or highly dissatisfied (8.6%) in this particular aspect of timely reporting of progress. Reasons for their dismay include non-receipt of much-needed periodical SMS Alerts and non-intimation of reasons for rejecting service requests in the concerned remarks column (Table 6).

*Testing of Hypothesis*

A two-tailed test has been carried out to examine the significant difference in each of the variables (time and cost) considered before and after the introduction of CSMS. The hypothesis formulated for the two-tailed test :

$$H_0 = X_b = X_a$$
$$H_1 = X_b \# X_a$$

Where $X_b$ and $X_a$ are the values of the variables (time and cost) before and after the introduction of CSMS. Further, a One-tailed test with the following hypothesis has been carried out to examine the significant difference.

$$H_0 = X_b = X_a$$
$$H_1 = X_b > X_a$$

Tables 7 include the mean and significant values of a one-tailed and two-tailed test.

## Results: Testing of Hypothesis

**$H_0$ (Null Hypothesis):** There is no significant difference in the time and cost before and after the introduction of CSMS.

**$H_1$ (Alternate Hypothesis):** There is a significant difference in the time and cost before and after the introduction of CSMS.

The Two-Tailed test rejects the Null Hypothesis ($H_0 = X_b = X_a$) in all the cases (service requests and grievances) in favour of the alternate hypothesis ($H_1 = X_b \# X_a$). It clearly establishes that after the introduction of CSMS, there is a difference in the time and cost of availing service requests and grievances in municipalities.

Further, a One-Tailed test was also conducted to test the null hypothesis. It rejects the null hypothesis ($H_0 = X_b = X_a$) in favour of the alternate hypothesis ($H_1 = X_b > X_a$). Hence it is proved that the time taken and cost incurred in availing service requests and grievances was more before the introduction of CSMS. It shows that the introduction of CSMS reduced the time and cost significantly in availing services.

## Discussion on Results

It can be summarised from the study that Citizen Services Monitoring System (CSMS) enhanced the public service delivery system. Awareness of CSMS was created through widespread publicity, stories in newspapers and posters at public places. CSMS improved the participation of the people in development activities by taking feedback and suggestions from people through multiple digital channels like website, citizen buddy app, phone calls etc. It promoted transparency in Municipal Administration due to digitalisation of services. CSMS increased the responsiveness of employees towards the needs of the citizens by scrupulously following the citizen charter. It enlarged or augmented the process of accountability through an online grievance redressal system, feedback mechanism on the performance of the employees. The programme also increased the efficiency levels in administration because of inbuilt systemic features like auto-escalation

TABLE 7: MEAN DIFFERENCE AND SIGNIFICANT VALUES OF ONE-TAILED AND TWO-TAILED TEST TO SERVICE REQUESTS OF CITIZEN SERVICES MONITORING SYSTEM (CSMS)

| Particulars | N | Time in days | | Mean difference | T | (Sig-1) | (Sig-2) | Cost in Rs | | Mean difference | T | (Sig-1) | (Sig-2) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Before mean | After mean | Before time | Before time | Before time | Before time | Before mean | After mean | After cost | After cost | After cost | After cost |
| Birth certificate | 10 | 11 | 3.8 | 7.2 | 33.0 | 0.000 | 0.000 | 325 | 20 | 305.0 | 3.54 | 0.003 | 0.012 |
| Assessment of Property Tax and allocation of door number | 42 | 26.6 | 12.4 | 14.2 | 39.9 | 0.000 | 0.000 | 350 | 71.57 | 278.4 | 7.08 | 0.000 | 0.000 |
| Transfer of property | 27 | 28.15 | 12.44 | 15.7 | 39.44 | 0.000 | 0.000 | 611.1 | 173.5 | 437.6 | 5.05 | 0.000 | 0.000 |
| Sanction of the water supply connection | 13 | 21.2 | 11.1 | 10.1 | 25.46 | 0.000 | 0.000 | 458 | 115 | 343.0 | 6.27 | 0.000 | 0.000 |
| Building permission | 13 | 46.9 | 26.92 | 20.0 | 38.90 | 0.000 | 0.000 | 507.7 | 147.5 | 360.2 | 10.54 | 0.000 | 0.000 |

Source: Field data.

TABLE 8: MEAN DIFFERENCE AND SIGNIFICANT VALUES
OF ONE-TAILED AND TWO-TAILED TEST TO GRIEVANCE
REQUESTS OF CITIZEN SERVICE MONITORING SYSTEM (CSMS)

| *Particulars* | | *Time in days* | | *Mean difference* | *T* | *(Sig-1)* | *(Sig-2)* |
|---|---|---|---|---|---|---|---|
| | *N* | *Before mean* | *After mean* | *Before time* | *Before time* | *Before time* | *Before time* |
| Drain not cleaned, over flowing | 44 | 11.89 | 4.73 | 7.2 | 33.20 | 0.000 | 0.000 |
| Manholes | 18 | 9.72 | 2.5 | 7.2 | 32.36 | 0.000 | 0.000 |
| Road problems and issues | 31 | 11.06 | 4.71 | 6.4 | 23.51 | 0.000 | 0.000 |
| Drinking water problems | 12 | 11.08 | 3.5 | 7.6 | 24.54 | 0.000 | 0.000 |
| Non-functioning of street light | 15 | 10.07 | 2.13 | 7.9 | 40.56 | 0.000 | 0.000 |
| Others | 16 | 12.3 | 5.06 | 7.2 | 12.32 | 0.000 | 0.000 |

Source: Field data.

of files, provision for multiple channel access, i.e., website, mobile app., citizen service centre, phone call, and all these features culminated in increased accuracy, speed, reliability in service delivery and reduction in time and cost.

The study also brought out certain challenges like digital illiteracy and fewer levels of awareness in certain study areas, thus hindering the participation of people. Improper functioning of Citizen Buddy App is observed in some study areas. Also, it is observed that certain important services like the assessment of property tax were not brought under the ambit of CSMS. Citizens have complained of discriminatory assessment in levying Property Tax. Lack of interdepartmental coordination, bureaucratic hassles, inadequately trained staff are the major factors that impede the efficiency of the system.

## SUGGESTIONS AND THE WAY FORWARD

**Policy Suggestions for Strengthening the CSMS**

To ensure citizen-centred public service delivery, adequate measures and mechanisms have to be installed to bring interdepartmental coordination between Registration and Municipal Departments.

The online system has to be designed in such a way so as to make it foolproof so that physical visits by citizens are avoided or at least minimised.

It is further suggested to scale down the cumbersome procedures and re-engineer the processes incorporating the viewpoints of all the stakeholders. The corresponding laws, rules, regulations of Municipal Administration have to be changed. Administrative structures have to be redesigned so as to make them e-governance compatible.

All the Municipal services, including layout permissions, are to be necessarily brought under the purview of CSMS.

All the Municipal services must be delinked with MeeSeva, and Citizen Service Centre in the Municipality has to be made Single Window System to ensure quick delivery and avoid duplication of uploading the same documents in MeeSeva MRO office, Sub-Registrar Office.

It is also suggested that all the options of Citizen Buddy App/Website regarding citizen services and grievances are to be made clearer in the cases such as rejection or shortfall of documents. The reasons must be mentioned clearly, and wherever possible, simple and quick solutions are to be provided by the officials.

To bring in more transparency, all the municipal services are to be brought under the ambit of CSMS and ensure the full-length digitalisation of services.

Proper vigilance mechanisms have to be devised to check the instances like uploading of fake documents, discriminatory assessment of property taxes, thus ushering more transparency.

Action has to be initiated against those employees who were given a poor rating by citizens, and as a part of the carrot and stick policy, good performance has to be rewarded.

Feedback and suggestions offered by the citizens regarding the overall functioning of the CSMS ought to be given solemn consideration.

The name and designation of the appellate authority have to be clearly displayed in the Municipal Office so as to enable the citizens to complain in case the problem remains unresolved at the Municipal office level.

Adequate steps have to be undertaken to enhance the e-Participation Index through e-Information sharing, e-Consultation and e-Decision making.

## CONCLUSION

The study established emphatically that initiatives such as CSMS are working well and strengthening the roots of democracy. Now governance is at the doorsteps of households, and public services are just a click away. At the same time, it is also found that there exist formidable operational problems that invite earnest attention and certain shortcomings that can be overcome with interdepartmental coordination and oversight mechanisms at the state level. There is a need for more studies on the working of mobile apps in achieving the goals of governance.

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