Children and Cyclone Gaja: Understanding the Impact and Policy Recommendation for Child Centric Disaster Risk Reduction

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Local Governance of Municipal Solid Waste Management — A Case Study of Jalandhar City (Punjab), India

MPLADS: To Scrap or To Re-Invent?
Aims and Scope

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Contents

Children and Cyclone Gaja: Understanding the Impact and Policy Recommendation for Child Centric Disaster Risk Reduction
Balu I 2

Empirical Assessment of the Quality of Governance in Bodoland Territorial Area District of Assam in India: A Perception Based Study
Nicodim Basumatary and Bhagirathi Panda 12

Trends in Enrollment in Primary Education in Telangana State – A Brief Review
B. Madhuri Smitha 30

Right to Information Act 2005: Suo Moto Disclosure – A Reality Check of Central Government Organisations
Mukesh Pal and Pooja Jain 39

Unraveling ‘Smart’ Urbanization: Understanding Theories and the Concept
Gauri Kopardekar 48

Untangling Public Sector Motivation from Public Service Motivation: Can the Government Office be Rejuvenated
Kamal K. Jain and Sonali Gupta 64

Management of ICT Enabled Services in Rural Areas Provided by Government Organizations through Maha E-Seva Kendra
Deepa R. Ingavale 83

Local Governance of Municipal Solid Waste Management – A Case Study of Jalandhar City (Punjab), India
Amanjot Kaur and Ramanjit Kaur Johal 99

MPLADS: To Scrap or To Re-Invent?
Palakh Jain, Chavi Asrani and Ashita Allamraju 118
India can truly be a great democracy if it is able to provide ease of living to its population living in its remote and far off villages and town. Merely having elected government in place is not a sufficient pre-requisite, citizens living in this great country should also be able to access all the facilities and services which they are entitled for. Indian governance is now confronting this issue with all its might and will. There are many challenges to be overcome especially at the local levels, like providing proper infrastructure, job opportunities, safety and security to women and young girls all these aspects are very important to be achieved for the much needed fillip.

Therefore it is necessary that along with having an elected government to look after local affairs, there needs to be good governance prevailing so that all the issues and challenges can be resolved. Local government is the government closest to the common people. Local governments have the advantage to involve in day-to-day life and problems of ordinary citizens and have the local knowledge and local interest which are essential ingredients for democratic decision making. They are also necessary for efficient and people-friendly administration. The advantage of local government is that it is very convenient for the people to approach them for solving their problems both quickly and without having to spend monetary resources.

For the local governance to improve there is need to strengthen the requisite infrastructure facilities and services in order to have ease of living. The current issue of the Journal provides a peek view on some of the key issues confronting governance in India especially with a focus on local governance. The articles on urbanization, solid waste management and disaster management have thrown light on the policy aspects and governance challenges faced by citizens.

Dr Geeta Potaraju
Dr A Sridhar Raj
Children and Cyclone Gaja: Understanding the Impact and Policy Recommendation for Child Centric Disaster Risk Reduction

Balu I*

Abstract
The young children are extremely vulnerable to natural and manmade hazards. Cyclone Gaja, which made landfall in Tamil Nadu in the wee hours of November 2018, has claimed losses of life, livestock and livelihood. The Present study has been conducted to reveal the impact of Cyclone Gaja among the children. The Descriptive research method was adopted in this study. Qualitative secondary data has been collected from online sources. The study found that the children suffered without proper food and due to lack of safe shelter. The Children also lost their school materials and notebooks etc. Beyond that there was no social security for the children. Policy suggestions were recommended for ensuring child centric disaster risk reduction.

Keywords: Children, Cyclone Gaja, Disaster

Introduction
Children are extremely vulnerable natural and manmade hazards because of their physical, social and psychological nature. The powerful natural disasters like earthquake, cyclone, and tsunami can make severe immediate and enduring implication on health, assets and livelihoods which can have overwhelming consequences for children and their future. The families are already vulnerable due to less income, unsafe housing and population density. At the same time due to the sudden events of disaster the vulnerability is severe especially among the children. Causing child rights to become even more difficult to safeguard, as adults, Communities and governments do not fully appreciate the threats to their children’s Future or are increasingly powerless to fulfill their responsibilities to protect them’ (Polack, 2010)

The young children are less equipped to deal with deprivation and stress due to their particular physical, social and psychological characteristics (See Bartlett, 2008; Peek 2008). This makes them particularly vulnerable to the effects of disasters. In the late 1990s the number of children affected by the disasters was estimated at 66.5 million per year; climate change impacts projected to increase this to as many as 175 million per year in the coming decade. (Penrose and Takaki, 2006; Save the Children, 2009). Many micro level case studies were reported that children are most vulnerable to disasters. There is a contradictory result on impact

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of disaster. (Baez et al., 2010) identified that children are affected by disaster in both positive and negative ways.

The incidence of weather related disasters such as cyclones, droughts and floods have tremendously increased because of climate change and green house gas omission. One side the implication of disaster is increasing and another side crafting the new challenges like rising sea level, change in pattern of rain fall and temperature. New strategies need to be implemented for climate change adaptation and reducing children’s vulnerability to disaster.

The cyclone Gaja has set the tone towards the end of North East monsoon in India. A low pressure intensified into a cyclone made its landfall during the early hours on 16 November 2018 had hit six districts in the southern state, Tamil Nadu. The wind speeds reached as high as 120 km.ph during its landfall. A major disaster was averted due to the elaborate preparedness measures taken by the government supported by the civil society organizations. Approximately 150,000 vulnerable people were evacuated to relief camps along the coastal areas and fishermen were not allowed to go fishing. Despite elaborate preparedness measures, the wind speed and heavy rains have caused deaths, damages to houses and public infrastructure.

**Cyclone Affected Area**

Nagapattinam, Thiruvarur, Thanajvur, Pudukottai and Kodaikanal Division in Dindigul District were declared as Cyclone affected district. West Taluk of Dindigul district, Manaparai and Marungapuri Taluk of Tiruchirapalli district were declared as moderately affected in Gaja Cyclone. Dindigul, Karur, Cuddalore, Madurai, Sivagangai, Theni, Ramanathapuram and Trichirapalli districts were declared as mildly affected.

**Objectives**

This objective of this study is to elucidate the challenges and issues faced by children during and after Cyclone Gaja and suggest measures for child centric disaster risk reduction for various stakeholders.

**Methodology**

The Descriptive research method was adopted in this study. Qualitative secondary data has been collected from online sources. Gaja cyclone and children, Issues of children in Gaja cyclone, challenges of Children in Gaja cyclone were used as a Key word for searching the qualitative data. About 50 results were found but the investigator found only ten results was relevant and included in this study. The sources are news from daily, assessment report, Television news, magazines, and scroll articles. The data was collected after two months of the disaster occurred.

**Impact of Cyclone Gaja**

Cyclone Gaja created a huge loss of property. It left 12,298 cattle dead, Nearly 278,824 houses were fully damaged and the roofs of 62,996 huts were either fully or partially damaged. It uprooted about 1,132,686 forest and fruit bearing trees, which was the source of livelihood for agricultural labourers and small farmers. The electricity was totally shut down in the worst affected districts.
### Table-1: Impact of Cyclone Gaja

<table>
<thead>
<tr>
<th>Type of impact</th>
<th>Impact in No / Hectares</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of persons died</td>
<td>63</td>
</tr>
<tr>
<td>No of persons evacuated</td>
<td>307819</td>
</tr>
<tr>
<td>No of cattle died</td>
<td>12298</td>
</tr>
<tr>
<td>No of birds died</td>
<td>92507</td>
</tr>
<tr>
<td>No of huts completely damaged</td>
<td>278824</td>
</tr>
<tr>
<td>No of roof tiled houses damaged</td>
<td>62996</td>
</tr>
<tr>
<td>No of municipalities affected by public drinking water system</td>
<td>174</td>
</tr>
<tr>
<td>No of town panchayats affected by public drinking water system</td>
<td>270</td>
</tr>
<tr>
<td>No of village panchayats affected by public drinking water system</td>
<td>8522</td>
</tr>
<tr>
<td>No of trees uprooted</td>
<td>1132686</td>
</tr>
<tr>
<td>No of coconut trees cultivated in 3100 hectare affected</td>
<td>350000</td>
</tr>
<tr>
<td>Paddy field affected</td>
<td>32706 Hectare</td>
</tr>
<tr>
<td>Completely damaged boats</td>
<td>1419</td>
</tr>
<tr>
<td>Partially damaged boats</td>
<td>2625 Hectare</td>
</tr>
<tr>
<td>Agriculture and horticulture damage</td>
<td>88102</td>
</tr>
<tr>
<td>No of electric poles damaged</td>
<td>103508</td>
</tr>
<tr>
<td>No of electricity disconnected houses</td>
<td>5321506</td>
</tr>
<tr>
<td>No of transformers damaged</td>
<td>886</td>
</tr>
<tr>
<td>No of electricity distributing sub stations damaged</td>
<td>201</td>
</tr>
<tr>
<td>Govt of Tamil Nadu activated relief shelters</td>
<td>556</td>
</tr>
<tr>
<td>No of people accommodated in relief centre</td>
<td>307819</td>
</tr>
</tbody>
</table>

Source: Cyclone Gaja Assessment Report, 2018

### Vulnerable People

The Chart depict that Children and Women were more vulnerable in Gaja Cyclone. The reasons are diverse such as non-availability of safe drinking water, no electricity, absence of private place for open defecation continuous rainfall, absence of livelihood activities and above all lack of safe shelters to stay.

**Chart-1: Vulnerable People**

<table>
<thead>
<tr>
<th>Vulnerable People</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geographic</td>
<td>0.07%</td>
</tr>
<tr>
<td>Other</td>
<td>0.07%</td>
</tr>
<tr>
<td>Religious Minority</td>
<td>0.2%</td>
</tr>
<tr>
<td>Displaced</td>
<td>0.3%</td>
</tr>
<tr>
<td>Ethnic Minority</td>
<td>0.6%</td>
</tr>
<tr>
<td>Livelihood</td>
<td>1%</td>
</tr>
<tr>
<td>Orphans</td>
<td>3%</td>
</tr>
<tr>
<td>Youth</td>
<td>7%</td>
</tr>
<tr>
<td>Disabled (physical or cognitive)</td>
<td>7%</td>
</tr>
<tr>
<td>Students</td>
<td>8%</td>
</tr>
<tr>
<td>Adolescent Girls</td>
<td>9%</td>
</tr>
<tr>
<td>Pregnant Women</td>
<td>20%</td>
</tr>
<tr>
<td>All are Equally Vulnerable</td>
<td>24%</td>
</tr>
<tr>
<td>Elderly</td>
<td>53%</td>
</tr>
<tr>
<td>Women</td>
<td>59%</td>
</tr>
<tr>
<td>Children</td>
<td>64%</td>
</tr>
</tbody>
</table>

Source: Cyclone Gaja Assessment Report, 2018
Needs of Children

Chart-2: Need of Children

<table>
<thead>
<tr>
<th>Need of Children</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do Not Know</td>
<td>0.7%</td>
</tr>
<tr>
<td>Other</td>
<td>2%</td>
</tr>
<tr>
<td>Security (From...)</td>
<td>4%</td>
</tr>
<tr>
<td>Reunification with Family</td>
<td>4%</td>
</tr>
<tr>
<td>Love, Care</td>
<td>6%</td>
</tr>
<tr>
<td>Counseling, Psycho-Social Support</td>
<td>11%</td>
</tr>
<tr>
<td>Safe Places to Play</td>
<td>20%</td>
</tr>
<tr>
<td>Access to Safe School</td>
<td>21%</td>
</tr>
<tr>
<td>Electricity</td>
<td>27%</td>
</tr>
<tr>
<td>School Uniform, Supplies</td>
<td>28%</td>
</tr>
<tr>
<td>Clean, Sanitary Environment</td>
<td>33%</td>
</tr>
<tr>
<td>Access to Qualified Health, Medical Care</td>
<td>38%</td>
</tr>
<tr>
<td>Clothes, Footwear</td>
<td>46%</td>
</tr>
<tr>
<td>Access to Safe Water</td>
<td>63%</td>
</tr>
<tr>
<td>Food</td>
<td>75%</td>
</tr>
<tr>
<td>Safe Place to Sleep</td>
<td>82%</td>
</tr>
</tbody>
</table>

Source: Cyclone Gaja Assessment Report, 2018

There were three vital needs of children affected in Gaja Cyclone i.e. safe place to sleep, access to safe water and access to quality medical services.

Food for Child

The disaster impacts may reach households in many ways. There are two potential roots in which disaster can negatively impact on nutrition such as the reduction in household income which directly leads to lower food consumption and indirect impact on food availability or relative price of food generating the same effect. In Mexico earth quakes caused 27.4 percent “food poverty”. (Fran Seballos, Thomas Tanner, Marcela Tarazona and Jose Gallegos, 2011).

The studies reported that quality of food, preparation of hygienic meals and safe cooked food were the major demand of the people who stayed in shelter homes. The children below five years were also forced to eat the same food prepared for all other people and it affected their health. Due to income deficit and death of milch animals the families were not able to provide milk to the children.

Ms. Priya, a young graduate from Sadayan Kottagai village reported that only one meal a day could be cooked in relief camps. Children from interior villages, resembling a war zone, were suffering the most as there was barely any milk or food for them.

S Santhi, who lost her hut and cattle, said her village had been completely devastated by cyclone and for them to recover it would take many years. “Now, what we need is proper food and clothes. We are unable to survive in the camps without food. Most of our children are tired and have fainted. We cannot even get milk for them,” she told with tears in her eyes.

“Usually, we buy milk for just Rs 30. For the last two days, we are purchasing it for Rs.300. The government should deploy dairy development department officials to ensure hassle-free milk supply,” S Arangulavan of Pudukkottai told Hindustan Times.
Safety and Security of Children

The study depicts that the children, lactating mothers, pregnant women have no safe place or security. The government run shelters are hugely crowded, makes no privacy for women and uncomfortable for children. Most of these shelters also do not have electricity. The conditions in the shelters are insecure. Children were more vulnerable to bites by mosquitoes and to other water borne diseases.

Children & Education

Studies reported that, the destruction of education related infrastructure such as schools, complementary resources and note books create negative impacts on education. As a result of this the parents may take the children out of school or to putting the children in to work to increase household income. They also reported that the disaster can make positive impact on education where by the natural hazard can change the opportunity cost of education and it may increase the child enrolment in education because of reduced market rate. Studies also illustrated that, disaster can impact on positively and negatively on child education but the present study found only negative impact on education. (Fran Seballos, Thomas Tanner, Marcela Tarazona and Jose Gallegos, 2011)

The children lost their books, and school materials. They were unable to go to schools as most of the schools are either damaged or converted into relief camps. The children remain tensed and fearful due to exams approaching soon. It’s teen traumatic for children.

Most of the schools were functioning as make shift relief camps. The children too lost their learning materials. The children from the affected villages did not return to school. The children are currently undergoing huge trauma as their counterparts in the non-affected.

Priya, a young graduate from Sadayan Kottagai showed her home, a heap of debris, under which lie buried her family’s meager possessions – clothes, utensils, school bags and books. Nearby, elderly women and children shivered in the cold.

Heavy rain in cyclone affected area led to a huge loss of study materials including notebooks and textbooks and other stationeries. Mr. M Saravanakumar, a Class VI student from Vaaimedu mentioned that “Many of our books are soaked and our bags wet and damaged. Class notes in our notebooks have become illegible due to exposure to the rain and preparing for exams is now difficult,”

“We want new bags as the zippers of our bags have come apart after water damaged it. Drawings in our notebooks have also been erased,” said G Kavipriya, a Class IV student from Melapadagai. K Shanmugam Shanmugam, an education activist, said, “There was already a clear shortage of textbooks for a few subjects. We have often resorted to photocopying of books that were supplied in June. Officials should convey to warehouses if books are not supplied in time”.

Depression and Anxiety among Children

The children still heard the howling of the wind or sound of tree falling. They were in depression and anxiety, reported by Pudukkottai District mental health programme coordinator cum district psychiatrist Dr.R.Kartik Deivanayagam.
Customs Lead to Death

Among the casualties of Cyclone Gaja, was a 14-year-old girl who died near Pudukottai as she was left isolated in a structurally unsound makeshift hut during the storm. The girl, Vijaya, was kept isolated in a small hut as she had hit puberty and according to the custom, had to stay there till all the rituals could be completed.

Her father, Selvaraj, was a poor farmer of Anaikkaadu village near Pattukottai in Tanjore district and lived on the grove where he worked. His daughter, Vijayalakshmi, had recently turned 14 years old and attained her puberty a week before cyclone. As per tradition, they built a small hut near their house. They planned to take the girl back inside their home after three days.

However, tragedy struck on November 16 as Cyclone Gaja crossed Vedaranyam coast impacting Pattukkottai and its surroundings on that day. In the wee hours of the morning, a coconut tree fell on the hut and hit the girl on the chest. Her screams were drowned by the rough weather outside and her family could not hear her cries for help.

When the family members came out to check the impact of the storm, they found their child lying with serious injuries. The frantic parents then cut the tree and took out Vijaya’s body and rushed to Pattukottai government hospital. The child was declared brought dead and her body was handed over to the family a day later after post mortem. Even in this modern world, the villagers were practicing the dangerous customs which leads to the death of the child. After the early warnings also the parents never thought of safe guarding their children and gave importance to the customs. Improper evacuation, unawareness of parents and absence of local government leads to the death of a girl child.

Lack of Social Protection

A family of landless daily wage labours lost everything in devastating calamity of Gaja Cyclone. They were forced to sell their 12 years old son to the local farm owner as a bonded labour. Mr. Chandru, Farm owner allegedly bought the child as a bonded labour for worthless amount. The parents were forced to sell their child due to the huge loss in Gaja Cyclone.

The matter came to light when Sub-Collector AK Kamalkishore brought it to the attention of child line authorities who initiated an investigation into the matter. Reports suggest that the boy had been working as a farm hand for the past 20 days after his parents decided to sell him as a labour in return for a “measly amount”.

A team of divisional child line officials reached the spot and rescued the boy who was then produced before the sub-collector on Monday and given a certificate releasing him from bonded labour. Police action has also been directed against the farm owner who allegedly bought the boy from his parents. The boy was sent to a children protection home in Thanjavur by efforts of district child welfare officer Umadevi and Assistant Labour Commissioner of Tiruvarur, Baskaran. Meanwhile, a police investigation into the matter is underway. A calamity can change the life of vulnerable people particularly affecting the children but this is the worst incidence happened to the child in cyclone affected area.
Disaster Response from Children

Seventh standard student of private school from Katpadi Mr. Sushanth has handed over his six-month savings of Rs 9,300 to officials at the Collectorate in Vellore for Gaja Cyclone relief work. He began saving the money to offer a shawl to his favorite actor on December 12. While he was eagerly waiting to present the shawl to Rajinikanth, he came to know of the onslaught of cyclone Gaja through newspapers and television channels.

Sushanth said “I was upset to hear about the trail of destructions left by cyclone Gaja. I saw farmers suffering from the loss of livelihoods in news channels. I also saw kids of my age were suffering for milk and food. The plight of the families is far greater than what I wish to donate. So, I thought that the amount donated would be of some use to the people affected by the cyclone,”

“We told our students about cyclone Gaja and the damage it brought upon the lives of many farmers and their families. The students realised the plight of the people and pitched in their donations.” Said Sushanth’s mother S Priya to Times of India.

Donating Toys and Savings

Ms. Tamizhini, six years old, who studies in a Coimbatore city school, said she saw the news and photograph of how children like her were suffering post Cyclone Gaja, as all their belongings had been destroyed. “This provoked me to help them in some way and I decided to give my savings,”. She has come forward to donate her toys to children in Gaja-hit districts. “I saw that children’s toys were also washed away, so I decided to give my toys to them,” she said. She has donated around 15 of her toys. She also has broken her piggy bank and taken out Rs 12,404 from it and donated for Cyclone Gaja relief measures which she had saved over two years.

Her parents told that they have inculcated Savings and Helping tendency to their daughter.

Further they said, since her first birthday her parents gave some money which was saved by her. Tamizhini donated her savings through her school teacher for cyclone Gaja relief. She said other children too should come out to help people affected by cyclone.

Response from Kindergarten Student

Om Sadhana School located at Madurai District of Tamil Nadu has initiated to instill a habit of disaster response amongst their children. They sent a circular to students with list of items required for victims of Cyclone Gaja. The school children were supported to give the circular to their parents and asked money to support Cyclone Gaja relief work. Mr. Bharathwaj, UKG student of Om Sadhana School said he took money from his grandfather and purchased the materials mentioned in the circular. He said in vernacular language that “Delta area la puyal vanthurucham anka yarukkume ethuvume ellayam athan nanka soap, brush and paste ellam enka school moolama kuduthom” means the victims of Cyclone Gaja lost everything so we have sent soaps, brushes, and toothpastes through our school to help them.
Corporation Initiative to Motivate the Children

The Trichy Municipal Corporation has been collecting relief materials for Cyclone Gaja affected farmers of Delta. A boy from Shanmuga Nagar submitted Rs 750 worth of relief materials for farmers of Delta area. Pranav’s father Senthilkumar said “from the last two years Pranav was saving money which he had got as a pocket money. After seeing the visuals of victims of cyclone Gaja, he told us he want to buy relief material for victims of cyclone”. Listening to his words, the Shanmuga nagar welfare association arranged to meet the Trichy corporation officials for submitting the materials. The corporation officials received the material and provided a bicycle worth of Rs.3,500 to him as a token of appreciation. This practice motivated other students also to donate for a calamity.

Recommendation

Monitoring School Drop Outs

The Gaja cyclone has damaged the boats, coconut trees, and all other livelihoods of farmers and fishermen. Many people have reported that it will take many years to reconstruct the houses and their livelihoods. Since every one lost their livelihood and there was no source of income led to school dropouts of the children. So the concern department needed to monitor the attendance of the children and take necessary steps then and there to avoid the issue of school dropout.

Arresting Child Labour

As the farmers, daily labours and fisher men also lost their livelihood and they were in need of huge money so they may sent their children for livelihood activity to meet the economic needs. Already certain bonded labour cases were seen, so the concerned department needed to create awareness on child labour act to protect children from labour works.

Counseling to Children

The review of literature depicts that children were in depression and anxiety. The stakeholder’s needs to appoint trained counselors to ensure the good mental health of the children in cyclone affected area. With counseling, games and competitions also can be organized for children to come out of the depression.

Improvement in Preparedness

As a part of preparedness in disaster management cycle, it is observed that the State Disaster Management Authority (SDMA) and State Disaster Response Force (SDRF) were focused only on evacuation of the people from cyclone but the disaster response and preparedness has been not done actively. The SDMA should ensure availability of milk for Children, Child friendly shelter / relief camps, medical facilities and playing materials as a part of disaster preparedness and response.

Awareness on Superstitious Belief / Worst Customs

The awareness needs to be created on child related superstitious belief to ensure safety and security of children. During the evacuation the local government should ensure that all children were evacuated they were in safe place.
Preparation of Child Centric Vulnerability Mapping

The State Disaster Management Authority should prepare a child centric vulnerability mapping at state level. This will help the SDMA to identify the area highly vulnerable and take necessary steps in disaster management cycle. The child centric vulnerability mapping also can be done at district level and with reference to specific disaster.

Inclusion of Children in Disaster Management Committee

The children need to be included as member in disaster management committees to include their voices and ensure their rights. This will also help to make them resilient and reduce their vulnerabilities. Further separate Disaster management committee also can be promoted with children at village level.

Construction of Child Friendly Protection Centre

Personally the investigator has observed that there are many cyclone protection centres which are not child friendly. In future all the cyclone protection centres should be altered as child friendly centres and when new cyclone protection centres are constructed it should be ensured as child friendly protection centre.

Including Disaster Management Curriculum in School

Disaster management should be included as a subject in school curriculum. This will create awareness among the children and empower them.

Recognizing Children as Agents of Change

The adults and practitioners should recognize children as a change agent. Acknowledging children’s inputs before, during and after disasters, their capacities and perspectives, and the wider benefits will also help families and communities with wider benefits crucial for children’s participation in Disaster Risk Reduction.

Conclusion

The children are more vulnerable in disaster and it also proved here with data. During the disaster management, the children are not given enough focus so they suffer like anything due to lack of milk, improper food and discomfort accommodation. The disaster management stakeholders should give enough concentration on children during the rehabilitation, reconstruction and preparedness phase of disaster management cycle.

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Empirical Assessment of the Quality of Governance in Bodoland Territorial Area District of Assam in India: A Perception Based Study

Nicodim Basumatary1
Bhagirathi Panda2

Abstract
Governance as an institution has come out to be one of the most pressing challenges in the entire debate of economic development syndrome today. The present paper attempts to evaluate the state of governance quality from the perceptions of the citizens in Bodoland Territorial Area District (BTAD) of Assam in India. In particular, various components of governance have been used in the study such as exercise of franchise, profile and conduct of political representatives, decentralisation, law and order and internal security, access to justice and judicial accountability, effectiveness of administration and basic public service delivery, prevalence of economic environment and welfare of the poor and vulnerable.

The present study used data from the field survey of 400 household in both rural and urban areas of two districts namely Kokrajhar and Udalguri in BTAD during February to May 2018. The method of analysis uses indices constructed from the primary data.

The study observes that the state of governance in Bodoland Territorial District is good as on an average about 53% feel that there is good governance. Assessing the quality of governance dimensional wise, we observed that Economic and Social Quality of Governance Dimension (ESQD) and Political Quality of Governance Dimension (PoQD) are showing poor performance. When it comes to rural versus urban performance in governance it is observed that rural areas are doing much better in all aspects, the indicator of which is that the first two ranks are occupied by the rural villages.

Keywords: Administrative, BTAD, Economic and Social, Governance, Legal and Judicial, Perception, Political

Introduction
Governance as an institution has come out to be one of the most pressing challenges in the entire debate of economic development syndrome today. The World Bank in the 1990s started to redirect their development policy attention towards improvement in institutional buildings basically the governance institution. A significant shift in this direction can be found in the World Bank (1989) analysis.

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due to the lack of progress in Africa whereby various weaknesses in governmental institutions, including corruption, lack of accountability, and denial of human rights, created conditions which prevented or impeded development (Wilson, 2000).

According to the World Bank “Governance is defined as the manner in which power is exercised in the management of a country’s economic and social resources”. The Worldwide Governance Indicators (WGI) consists of six composite indicators of broad dimensions of governance covering over 200 countries since 1996. According to Kaufmann, Kraay & Mastruzzi (2010) also called KKM approach, these dimensions are: Voice and Accountability, Political Stability and Absence of Violence / Terrorism, Government Effectiveness, Regulatory Quality, Rule of Law and Control of Corruption. These indicators are based on several hundred variables obtained from 31 different data sources, capturing governance perceptions as reported by survey respondents, nongovernmental organizations, commercial business information providers, and public sector organizations worldwide.

According to UNDP (1997) “Governance is viewed as the exercise of economic, political and administrative authority to manage a country’s affairs at all levels. It comprises mechanisms, processes and institutions, through which citizens and groups articulate their interests, exercise their legal rights, meet their obligations and mediate their differences”. The core characteristics of good governance as identified by UNDP (1997) are: Participation, Rule of law, Transparency, Responsiveness, Consensus orientation, Equity, Effectiveness and efficiency, Accountability and Strategic vision.

In India there are few institutions and scholars who attempted to evaluate governance on the basis of its dimensions. Mathew, C.K et al. (2017) identified 10 themes encompassing 25 focus subjects spread over 68 indicators in order to developed a Public Affairs Index (PAI) for the Indian states. The principal components of good governance such as rule of law, benign policy environment, fostering market for growth, public services, social sector responsibility, accountability, information, etc., have been considered for developing the index. Their analysis revolves around ranking and comparing of states on various dimensions. An important contribution of this study is that all the states in India have been included and subsequently their analyses are separated based on small and large states. This gives scope for target policy intervention to respective states.

Mundel et al. (2016, 2012) in their study used output of the quality of public service delivery as the measure of the quality of governance in Indian states. The main dimensions of quality of governance used in their study pertain to infrastructure service delivery, social service delivery, fiscal performance, law and order, judicial service delivery and quality of legislature. On the basis of these dimensions they prepared an index of governance quality and ranked states of India. Mundel et al. (2016) found that there is relative stability over time of groups of good- and bad-performing states. Adel Daoud (2015) attempted to examine how well quality of governance measures are used by Mundel et al. (2012) explains variation of poverty in general and child poverty in particular. The results confirmed that higher QoG in Indian states is associated with less child poverty.

The present paper attempts to evaluate the state of governance quality from the perceptions of the citizens in Bodoland Territorial Area District (BTAD) of Assam
in India. In particular, various components of governance includes exercise of franchise, profile and conduct of political representatives, political decentralisation, law and order and internal security, police administration, access to justice and judicial accountability, effectiveness of administration, basic service delivery, prevalence of economic environment and welfare of the poor and vulnerable.

This study while evaluating quality of governance has the benefit of increasing the knowledge about citizens’ satisfaction with the provision of diverse public goods and services. Our assumption is that public perceptions about various components of governance are shaped by their perception level or actual experience which in turn may be influenced by the level of quality of public services. However, this paper does not specify any government or organisations accountable for the performance in public services as it simply evaluates attributes of governance performance on the basis of perception of the people.

Thus, the two important questions that this paper attempts to address are: What is the state of Governance Quality in BTAD? And, which dimensions of Governance have been in a better state of affairs?

In the following, the study has been structured as follows: Section 2 outlines the Contextualisation of the study, Section 3 discusses the framework for measuring the quality of Governance, Section 4 discusses data and methodology of the study, Section 5 discusses the results and findings of the study and finally, Section 6 gives the conclusion.

**Contextualisation of the Study**

In the independent India, the idea of local governance began in 1952 with the launch of the community development programme in compliance with the provisions of the directive principles of state policy pertaining to establishment of village Panchayats as units of self government. Since then there has been various reforms in the theory and practices of local governance beginning with the suggestions of the Balwantri Mehta Committee (1957). The 73rd and 74th Amendments to the constitution created a new chapter in the process of democratic decentralisation in the country. According to these amendments the responsibility for taking decisions regarding activities at the grass root level which affects people’s lives directly would rest upon the elected members of the peoples themselves (GoI, 2007). The panchayati raj / municipal bodies have been given permanency as entities of self government with a specific role in planning for economic development and social justice for the local area. The practice of local governance in north eastern region of India is a product of the constitutional provisions through sixth schedule. The sixth schedule provides for administration of certain tribal areas in north east India as autonomous entities. These areas are governed through autonomous district council which have a wide ranging legislative, executive and judiciary functions. The Bodoland Territorial Area District (BTAD) which is under the proposed study is one of its kinds.

The significance of the study lies in its setup whereby BTAD is an underdeveloped area in terms of various social and economic development indicators. The area under the Bodoland Territorial Council (BTC) jurisdiction is called the Bodoland Territorial Area District (BTAD). BTC is an autonomous territory within the state of Assam in India, which has been created in February 2003 through
Memorandum of Understanding (MoU) between the Union government of India, State Government of Assam and the then militant group Bodo Liberation Tiger Force (BLTF). BTC was created in order to provide constitutional protection under Sixth Schedule to the said Autonomous Body; to fulfil economic, educational and linguistic aspirations and the preservation of land-rights, socio-cultural and ethnic identity of the Bodos; and speed up the infrastructure development in BTC area (BTC Accord 2003).

In this context, important dimensions pertaining to measuring the quality of governance is a broad manifestation in several institutions such as Political, Law and Order, Administration and Public service delivery as well as Economic and Social development. Therefore, in order for public to evaluate better, agency / institutions must perform and the government must govern better: more transparency, accountability and responsibility...which means better governance will get higher grade (Diamond, 2007).

It is a tedious job to identify criteria for evaluating quality of governance and it takes a mixed practice-theory approach to identifying such evaluation criteria especially in developing countries. Therefore, evaluation criteria identified for use in such settings must be easily accessible; facilitating an observation-based analysis as the approach recognizes that local governments in developing countries face their own special issues (Andrews et al., 2005)

**Framework for Measuring the Quality of Governance**

The empirical approach to the study of the quality of governance at the local level needs to consider the economic and social setting of the study area. In recent years, the Department of Administration Reform and Public Grievances (DARPG), Government of India in partnership with Centre for Good Governance (CGG), Hyderabad endeavoured to prepare the Good Governance Index (GGI) framework. The framework of GGI aims to put forth a comprehensive means of computing an index to measure governance across states and rank them accordingly. In the absence of established theoretical framework of governance and economic development in India, we have adopted the framework from the DARPP (2009, 2017)) which was developed keeping intact the Indian political economy context. This framework encompasses and is in congruent with the principles and constituents of the quality of governance of the World Bank and UNDP, thus making it a globally competent one. However, we have modified the framework according to the suitability and need of our study thus contextualising the approach. There are four dimensions of governance pertaining to measuring Quality of Governance (QoG) that have been used in this study namely Political (PoQD), Legal and Judicial (LJQD), Administrative and Public Service Delivery (APSDQD) and Economic and Social dimensions (ESQD). These dimensions of the quality of governance (QoG) pertaining to this study has been discussed in the following and depicted through Figure-1.

**Political Quality Dimension**

Political Quality of Dimension (PoQD) accordingly looks at the quality of political contestation, conduct of individuals and institutions representing the people, use and abuse of political authority, decentralization of powers and citizen’s faith in the political system from the perception of individuals in different sections of
society. This component has been captured by the questions: whether they have voted in the last council election, whether there were any incentives offered by any political parties in cash / kind or whether election was held in a peaceful environment. Other political dimension of governance pertains to asking the public about the accessibility to the elected leaders, their transparency and accountability, and performance / functioning of the Village Council Development Committee (VCDC), Town council / Municipalities.

Legal & Judicial Quality Dimension

The state is vested with coercive power to maintain law and order and it is the responsibility of the state to ensure that everybody has access to speedy justice. Both of the above have a vital implication for economic activity. When the general law and order is seen to be poor, investors, businesses, etc. stay away from the state, thus affecting its ability to provide suitable economic environment and employment opportunities to its people. Under Legal and Judicial Quality of dimension (LJQD), we seek to assess prevailing law and order where in citizens’ lives and property are generally safe and secure. This component has been captured by asking the questions related to trust in the police / judiciary and other security measures served by the administration.

Administrative and Public Service Delivery

Provision of public services is the most important function of the state. The citizens, particularly the poor and disadvantaged among them, depend on the government for a host of services viz. primary healthcare, education, water and sanitation, basic infrastructure, etc. For the majority of population, this reflects governance – good or otherwise. The Administrative and Public Service Delivery Quality of Dimension (APSDQD) is captured by asking the respondents about their accessibility to the public services, the nature of response to the needs of the general public and their grievances, perceptional level of corruption etc.

Figure-1: Framework of Governance Quality Analysis

Source: Adapted with modification from D.A.R.P.P (2009)
Economic and Social Dimension

The Economic and Social Quality Dimension (ESQD) pertains to the ability of the state to take care of the vulnerable sections of the society and to create conducive climate for economic activity to take place across different sectors of the economy. As the present study is the case of agrarian society, so, governance is also reflected in the state’s ability to provide support to the primary sector (agriculture & allied activities). This component pertains to those aspects of economic governance which affects the livelihood of the people within the territory and includes general investment climate, credit facility, infrastructure, etc. The test of governance also lies in the vulnerable segments such as the poor, women, children, minorities, etc. This component has been captured by asking the respondents whether they avail benefits of social security schemes such as monthly ration, housing, etc. And also, respondents were asked about their treatment in public places due to being different in religion, caste / community, etc.

Thus the basic framework of quality of governance assessment in this study will constitute the above mentioned dimensions that have been depicted in Figure-1. According to the objective of the study, we have structured questionnaires and used in the field survey for data collection. Accordingly there are four dimensions comprising of ten components and forty-eight indicators in the analysis.

Data and Methodology

Study Area and Data

Bodoland Territorial Area District (BTAD) which is the study site of this paper is situated on the lower Assam within India’s North Eastern Region. It comprises of four districts (Kokrajhar, Chirang, Baksha and Udalguri) and has a population of about 3,155,359 (in lakh) and an area 8,821.68 sq.km (Census 2011). Our study area is exclusively two districts of BTAD namely Kokrajhar and Udalguri which has been purposively selected. Kokrajhar has been selected because it is the headquarter of BTAD, and it represents one of the most backward districts of India in terms of socio-economic developmental fronts (Planning Commission, 2005). Udalguri is another district that has been selected for the purpose of our study in order to have a more representative sample of both population as well as geography wise and it is also farthest from the BTAD headquarter.

The multistage sampling design has been used for the selection of the seventeen villages to carry out the research at the household level including two urban wards. Four hundred households are randomly selected from the sampled villages and from each household an adult member above 18 years is chosen as the respondent.

The present study used data from the field survey of 400 household in both rural and urban areas of two districts namely Kokrajhar and Udalguri in Bodoland Territorial Area District (BTAD). The method used to collect the data was a direct personal investigation through scheduled questionnaire. Field survey was conducted by the author during February to May 2018.

Scale of Measurement

This study uses Likert scales (Likert, 1932) for assessing the citizens’ perception about governance quality. Likert scales are usually used in assessing the perception / attitudinal characteristics in social science research. The original Likert scale
used a series of questions with five response alternatives: strongly approve (1), approve (2), undecided (3), disapprove (4), and strongly disapprove (5).

The Likert scale used in our study for assessing governance quality has been ranged from strongly disagree to strongly agree with the codes ranging from 1-5. The codes assigned have been as follows: strongly agree = 5, Agree = 4, neither disagree nor agree = 3, Disagree = 2, strongly disagree = 1. The questions have been framed in such a way that the strongly agree response carry the highest positive impact on the quality of governance and strongly disapprove carry the largest negative impact on the quality of governance. The maximum and minimum scores in each dimension as per our study is shown in Table-1.

The reliability tests show that Cronbach’s Alpha is .73 for 48 items / indicators of governance, thus implying that there is internal consistency within the items under study describing the perceived quality of governance.

**Table-1: Maximum and Minimum Scores in Each Dimension**

<table>
<thead>
<tr>
<th>Governance Dimension</th>
<th>Number of indicators (items)</th>
<th>Maximum</th>
<th>Minimum</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political (PoQD)</td>
<td>14</td>
<td>70</td>
<td>14</td>
</tr>
<tr>
<td>Legal and judicial (LJQD)</td>
<td>10</td>
<td>50</td>
<td>10</td>
</tr>
<tr>
<td>Administrative (APSDQD)</td>
<td>16</td>
<td>80</td>
<td>16</td>
</tr>
<tr>
<td>Economic &amp; Social (ESQD)</td>
<td>8</td>
<td>40</td>
<td>8</td>
</tr>
<tr>
<td>Total=4</td>
<td>48</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Method of Analysis**

Our method of analysis is set up in the respondent’s opinion on various dimensions of governance and construction of Quality of Governance Index (QoGI). To construct QoGI we followed the summated scale scores for each dimension under index construction. As the Likert scale used in our study for assessing governance quality has been ranged from strongly disagree to strongly agree with the codes: strongly agree = 5, Agree = 4, neither disagree nor agree = 3, Disagree = 2, strongly disagree = 1; hence, total sum of scores will be high for the dimensions that has the highest response to strongly agree code and vice versa. For instance, administrative and public service delivery dimension has 16 indicators; therefore, if all the items are responded as strongly agree then the maximum score for this dimension will be 80 (16 * 5) while if all the items are responded as strongly disagree then the minimum score for this dimension will be 16 (16 * 1). This method of summing the scale is same for all the dimensions with variation in the maximum and minimum values according to the items in each dimension (see Table-1).

**Method of Index Construction**

In order to obtain the Quality of Governance Index (QoGI), we follow the following steps:

**Step 1:** The response to each indicator of a dimension has been summed up to get the Dimensional Score

**Step 2:** Dimensional score obtained has been divided by the number of indicators of each dimension to get the average dimensional score.

**Step 3:** Having derived the average dimensional score, we have standardised the values by the following method:
\[ X_{ij} = \frac{Actual\ value - Minimum\ value}{Maximum\ value - Minimum\ value} \] ……………… (1)

Where, \( X_{ij} \) is the standardised score of \( j \) dimensions; \( j=1,2,3,4; i=1,2,3,...,400 \)

**Step 4:** Having obtained the standardised scores \( (X_{ij}) \), the next step is weighing. We have used the method of Principal Component Analysis to derive the weights for each dimension.

We computed weighted dimensional governance scores as follows:

\[ Z_{ij} = W_{ij}X_{ij} \] ……………… (2)

Where, \( Z_{ij} \) is the weighted dimensional score of \( j \) dimension; \( W_{ij} \) is the weight derived from the PCA and \( X_{ij} \) is the actual score of the dimension and \( j = 1,2,3,4; i = 1,2,3,...,400 \)

**Step 5:** Finally, the Quality of Governance Index \( (QoGI) \) will be the combined average of the \( Z_{ij} \) i.e.

\[ QoGI_i = \frac{\sum(Z_{ij})}{N} \] ……………… (3)

Where, \( QoGI_i \) is the Quality of governance Index; \( i=1,2,3,...,400 \) and \( N=4 \), total number of dimensions.

The value of the composite Quality of Governance Index \( QoGI_i \) lies between 0 and 1. The value closer to 1 shows higher level of quality of governance and value closer to 0 represents the worst quality of governance.

**Classification of Quality of Governance According to the Perceptions of Respondents**

Since this paper evaluates the quality of governance in a multidimensional framework corresponding to a particular locality, it is our interest to classify the proportion of respondent’s evaluation on quality of governance as excellent, good, poor, and very poor. This exercise gives us an idea of the state of governance quality according to \( QoGI \) score. We proposed to measure with the help of following criteria.

1. Excellent: if \( QoGI_{ij} \geq (Mean + S.D) \)
2. Good: if \( (Mean) \leq QoGI_{ij} < (Mean + S.D) \)
3. Poor: if \( (Mean - S.D.) \leq QoGI_{ij} <(Mean) \)
4. Very Poor: if \( QoGI_{ij} < (Mean - S.D.) \)

Where, \( QoGI_i = Index\ value\ of\ i\ households; i=1,2,3,...,400 \)

Mean = mean of \( QoGI_i \) and S.D = Standard deviation of \( QoGI_i \)

The values of Mean and Standard deviation are .31 and .07 respectively.

Thus, on the basis of scores in \( QoGI_i \), state of Quality of Governance (QoG) are classified as Excellent, Good, Poor and Very Poor.

The above mentioned methods of index construction and classification of Quality of Governance (QoGI) have been done at the household level. These values have been used at the aggregated level to examine the state of the QoG in the study area.
Results and Discussion

Demographic and Respondents Profile

According to our sampling design, we have two districts, seventeen villages and 400 households. It is observed from Table-2 that Kokrajhar constitutes 52.5% of the sampled population and Udalguri constitutes 47.5%. The study area comprises of more than 75% of rural population and the proportion of male respondents is more than 67%. Among the social groups in the sampled population ST and OBC which constitutes the highest proportion with 37.8% and 37.7% respectively; whereas proportion of SC and General groups is 7% and 17.8% respectively. Among the respondents the age group of 31-40 and 41-50 years comprises of more than 60% and about 6.8% belong to the age group above 60 years; the rests belong to either 21-30 or 51-60 age groups.

Table-2: Respondents Profile

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>District</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kokrajhar</td>
<td>210</td>
<td>52.5</td>
</tr>
<tr>
<td>Udalguri</td>
<td>190</td>
<td>47.5</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td>Urban</td>
<td>97</td>
<td>24.2</td>
</tr>
<tr>
<td>Location</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rural</td>
<td>303</td>
<td>75.8</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td>Female</td>
<td>131</td>
<td>32.8</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>269</td>
<td>67.3</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td>General</td>
<td>71</td>
<td>17.8</td>
</tr>
<tr>
<td>SC</td>
<td>28</td>
<td>7</td>
</tr>
<tr>
<td>ST</td>
<td>151</td>
<td>37.8</td>
</tr>
<tr>
<td>OBC</td>
<td>150</td>
<td>37.5</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td>20-30</td>
<td>55</td>
<td>13.8</td>
</tr>
<tr>
<td>31-40</td>
<td>119</td>
<td>29.8</td>
</tr>
<tr>
<td>41-50</td>
<td>127</td>
<td>31.8</td>
</tr>
<tr>
<td>51-60</td>
<td>72</td>
<td>18</td>
</tr>
<tr>
<td>&gt;60</td>
<td>27</td>
<td>6.8</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td>Farmer</td>
<td>106</td>
<td>26.5</td>
</tr>
<tr>
<td>Daily wage labourer</td>
<td>57</td>
<td>14.3</td>
</tr>
<tr>
<td>Government Service</td>
<td>51</td>
<td>12.8</td>
</tr>
<tr>
<td>Self employed</td>
<td>30</td>
<td>7.5</td>
</tr>
<tr>
<td>Trader/ Retail business</td>
<td>71</td>
<td>17.8</td>
</tr>
<tr>
<td>Earning Pension</td>
<td>11</td>
<td>2.8</td>
</tr>
<tr>
<td>Private Service</td>
<td>74</td>
<td>18.5</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
<tr>
<td>Married</td>
<td>377</td>
<td>94.2</td>
</tr>
<tr>
<td>Widow/widower</td>
<td>15</td>
<td>3.8</td>
</tr>
<tr>
<td>Never married</td>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>400</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field survey data, 2018

The main sources of income of the households’ have been divided into seven groups viz. farmer, daily wage labourer, government service, self employed, trader / business, pensioner and private services. More than 40% of the households’ main sources of income are from farming and daily wage labouring. Private services
accounted for about 18% and about 17% indulge in trade/business; while there are about 12% of households who had government services, 7.5% are self employed and 2% lived on pension.

Marital status of the respondents shows that about 94% are married, 3.8% are widow/widower and 2% never married/yet to be married.

**Analysis of the Quality of Governance in BTAD**

To assess the Quality of Governance in the study area we present the descriptive statistics of the Quality of Governance (QoG) Index and dimensional indices as shown in Table-3. The mean value of QoG is .31 with standard deviation .07 indicating that on average there is good QoG in the study area. The index appears to be negatively skewed towards left and the kurtosis is positive (.35). Among the four dimensional indices, it can be observed that the mean of the indices ranges from .24 (ESQD) to .37 (LJQD) with standard deviation between .08 to .13. Meanwhile, it is observed that ESQD (.24) and PoQD (.28) has mean index score of less than that of QoG index. This implies that these two dimensions are showing poor performance than overall average Quality of Governance. On the other hand it is observed that on average LJQD (.37) and APSDQD (.36) are performing better with its mean value higher than QoG.

<table>
<thead>
<tr>
<th>Dimension of Governance</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>PoQD</td>
<td>400</td>
<td>0.00</td>
<td>.62</td>
<td>.28</td>
<td>.10</td>
<td>.144</td>
<td>.580</td>
</tr>
<tr>
<td>LJQD</td>
<td>400</td>
<td>0.00</td>
<td>.71</td>
<td>.37</td>
<td>.13</td>
<td>.068</td>
<td>-.087</td>
</tr>
<tr>
<td>APSDQD</td>
<td>400</td>
<td>0.00</td>
<td>.73</td>
<td>.36</td>
<td>.13</td>
<td>-.175</td>
<td>.099</td>
</tr>
<tr>
<td>ESQD</td>
<td>400</td>
<td>0.00</td>
<td>.48</td>
<td>.24</td>
<td>.08</td>
<td>-.057</td>
<td>.352</td>
</tr>
<tr>
<td>QoG</td>
<td>400</td>
<td>.06</td>
<td>.53</td>
<td>.31</td>
<td>.07</td>
<td>-.116</td>
<td>.359</td>
</tr>
</tbody>
</table>

Source: Author(s) calculation

Thus on the basis of descriptive statistics we find that on average QoG in the study area is good, however, while investigating dimensional indices we observed that ESQD and PoQD are showing poor performance than overall QoG and on the other hand LJQD and APSDQD is showing better performance than overall QoG in the study area.

**Figure-2: Showing the Mean and Standard Deviation of Indices Across the Study Area**

The mean and Standard Deviation (SD) of the indices has been shown through line chart in the following Figure-2, where upper line represents the mean of
governance dimensions. It can be observed that among the indices it is in the case of ESQD that the line deeps down while on average QoG appear to have a lowest SD showing that there is little variation in the mean values across the study area.

On the basis of the index of Quality of Governance score by each individual we have attempted to display the state of governance quality in the study area through the Figure-3.

**Figure-3: Classification of Quality of Governance in BTAD**

It has been observed that about 17% of the respondents perceived that the quality of governance in BTAD is excellent, while 36.55% of the respondents feel that quality of governance is good. About 33% and 12% of the respondents perceive that the quality of governance on average is Poor and very poor respectively. This implies that on average combining poor and very poor state of QoG, about 46% of the responses feel that QoG is poor, whereas, on the other hand, according to the perceived assessment of the people about 53% of the responses feel that on average the QoG is good in the study area.

**Correlation Analysis**

It has been observed from the Table-4 that correlation the diagnostics among the dimensional indices are all positive and significant at .01% level of significance. This implies that all the dimensional indices are connected and have positive contribution to the overall Quality of Governance Index (QoG). However, it is observed that correlation between LJQD and ESQD is zero, signifying that there is no correlation between them which needs further investigation. With respect to correlation between QoG and its components we observed that LJQD has the highest correlation (.74), followed by APSDQD (.73) and PoQD (.60) and the lowest correlation is with ESQD(.46) which indicates a strong degree of connection between these dimensions. The positive and significant correlation across dimensions of governance indicators signifies that the components are attributes of QoG.
Empirical Assessment of the Quality of Governance in Bodoland Territorial Area District of Assam in India: A Perception Based Study

Table-4: Correlations

<table>
<thead>
<tr>
<th></th>
<th>(PoQD)</th>
<th>(LJQD)</th>
<th>(APSDQD)</th>
<th>(ESQD)</th>
<th>(QoG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Political Dimension (PoQD)</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Law and Judicial (LJQD)</td>
<td>.30**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Administration and Public service delivery (APSDQD)</td>
<td>.27**</td>
<td>.26**</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Economic-Social Dimension (ESQD)</td>
<td>.00</td>
<td>.18**</td>
<td>.25**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Quality of Governance (QoG)</td>
<td>.60**</td>
<td>.74**</td>
<td>.73**</td>
<td>.46**</td>
<td>1</td>
</tr>
</tbody>
</table>

N = 400 400 400 400 400

**. Correlation is significant at the 0.01 level

Source: Author(s) Calculation

Analysis of Quality of Governance Village-wise

In order to assess the Quality of Governance (QoG) at the village level, we computed Village wise Quality of Governance Index as well as Dimensional indices and ranking of villages have been done on the basis of QoG score depicting the overall state of governance in the village. The following Table-5 shows the attainment of village in different dimensions of governance. The last row below in the table shows the average values of indices in the study area.

With respect to QoG it can be observed from Table-5 that eleven villages (i.e. 64.7%) have a score above or equal to the average .31 which is the average value of the study area; while five villages (35.3%) in the study area score below average of .31. Debargaon in Kokrajhar district and Naptipara in Udalguri district are placed in the first and second rank according to their score in QoG. It needs mention here that we have taken four decimal points in order to put the village in order of their values as two decimal points does not allow us to rank in order due to overlapping of values between two or more villages. In comparison to the overall study area across all dimensions including QoG, Debargaon has higher than average scores, thus signifying that this village is having one of the best governance across the study area. Similarly in the case of Naptipara, we observed that it has higher than average scores in all dimensions except for APSDQD (.26) which is below average of the study area (.36). It implies that in the areas of public service delivery and other aspects of administration, people perception about the quality of performance is less than other dimensions of governance.

Table-5: Assessment of Quality of Governance

<table>
<thead>
<tr>
<th>Name of Block</th>
<th>Dimensional index</th>
<th>QoG Index</th>
<th>Rank*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nepalpara (Dotma)</td>
<td>0.24 0.38 0.4 0.27</td>
<td>0.33</td>
<td>5</td>
</tr>
<tr>
<td>Debargaon (Dotma)</td>
<td>0.28 0.41 0.37 0.27</td>
<td>0.33</td>
<td>1</td>
</tr>
<tr>
<td>Dotma Pt.-II (Dotma)</td>
<td>0.29 0.42 0.33 0.23</td>
<td>0.32</td>
<td>7</td>
</tr>
<tr>
<td>Pachim Dangarkuti (Dotma)</td>
<td>0.21 0.41 0.34 0.23</td>
<td>0.3</td>
<td>13</td>
</tr>
<tr>
<td>Khajurbari (Dotma)</td>
<td>0.25 0.29 0.33 0.22</td>
<td>0.27</td>
<td>15</td>
</tr>
<tr>
<td>Magurmari (Dotma)</td>
<td>0.31 0.35 0.39 0.25</td>
<td>0.32</td>
<td>6</td>
</tr>
<tr>
<td>Ravapara (Dotma)</td>
<td>0.36 0.18 0.2 0.25</td>
<td>0.25</td>
<td>17</td>
</tr>
<tr>
<td>Narabari (Dotma)</td>
<td>0.33 0.37 0.34 0.21</td>
<td>0.31</td>
<td>10</td>
</tr>
<tr>
<td>Andurjhar Pt.I (Bilasipara)</td>
<td>0.24 0.23 0.32 0.25</td>
<td>0.26</td>
<td>16</td>
</tr>
<tr>
<td>Name of Block</td>
<td>Dimensional index</td>
<td>QoG Index</td>
<td>Rank*</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-------------------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>Ward No. 5 (Kokrajhar)</td>
<td>0.3</td>
<td>0.31</td>
<td>11</td>
</tr>
<tr>
<td>Rangaon (Khoirabari)</td>
<td>0.27</td>
<td>0.31</td>
<td>9</td>
</tr>
<tr>
<td>Jhargaon (Khoirabari)</td>
<td>0.29</td>
<td>0.3</td>
<td>14</td>
</tr>
<tr>
<td>Tokankata (Kaligaon)</td>
<td>0.25</td>
<td>0.31</td>
<td>8</td>
</tr>
<tr>
<td>Kalaigaon Town (Kaligaon)</td>
<td>0.28</td>
<td>0.33</td>
<td>4</td>
</tr>
<tr>
<td>Jhilika Khat (Kaligaon)</td>
<td>0.3</td>
<td>0.33</td>
<td>12</td>
</tr>
<tr>
<td>Naptipara (Kaligaon)</td>
<td>0.44</td>
<td>0.33</td>
<td>2</td>
</tr>
<tr>
<td>Ward No. 2 (Udalguri)</td>
<td>0.29</td>
<td>0.33</td>
<td>3</td>
</tr>
<tr>
<td>BTAD (Study area)</td>
<td>0.28</td>
<td>0.31</td>
<td></td>
</tr>
</tbody>
</table>

Source: Author(s) calculation

Note: *Ranking here is based on the value of QoG with 4 decimal points.

Accordingly, Andhurjhar (.26) and Ravapara(.25) which belongs to Kokrajhar district have been placed in the last two positions respectively. Geographically these two villages are very far from the district headquarter in comparison to other sampled villages within the district. This was also our objective that we should be able to capture diversity in the state of governance quality within the study area. These two villages have a very low score in other dimensions of governance. For instance, Ravapara scored very low in LJQD, APSDQD and ESQD while it scored high in PoQD (.36); this implies that in the case of political dimension it is performing well while lacking in the rest. In the case of Andurjhar, the score is very low in PoQD, LJQD, and ESQD, while it scores high in APSDQD; implying that in terms of public services and other dimensions of administration, it is doing very well.

Now examining the QoG between two urban towns namely Kokrajhar Ward no.5 and Udalguri Ward no.2, we find that Udalguri occupies the second place in the ranking while Kokrajhjar is placed in the 11th position. In all the dimensions of governance including QoG Udalguri scored above average of the study area as a whole, whereby it is observed that this area achieved a very high score in APSDQD (.41) which is a very good symptom that in the areas of public service and other administrative areas the town is doing very well. However, when we examine the value of QoG in Kokrajhar ward no.5, which also has equivalent QoG score of the average study area as a whole, it scored lower than average in ESQD. This implies that relatively people’s perception in areas of Economic and social dimensions of governance like welfare of the poor, perception about economic environment, etc. is little less as compared to other areas of governance.

While examining at the village level QoG, it can be said that on average in rural areas governance performance is better than that of urban areas as the first two ranks are obtained by the rural villages.

Thus we observed that as per the result of the study, there is little divergence across the study area in the quality of governance measured by four dimensions. However, diversity can be observed in the rural-urban comparison as the rural areas are performing better in many aspects of governance.

Analysis of Results with Charts

In the following Figure-4 we have displayed the above analysis with the help of Radar chart. The Figure-4 shows the village wise scores of QoG in which we can
observe the fluctuation of different villages in the performance of QoG. On close examination of the chart it is found that Ravapara, Andurjhar and Kahjurbari scores lowest in overall Quality of Governance (QoG), while the rest of the villages are on the same line.

On examining the relative score of QoG and PoQD it can be observed that Magurmari, Ravapara, Narabari and Naptipara villages have performed above the overall QoG, implying that PoQD is having a satisfactory performance.

Comparative scores of QoG and LJQD in each village depicts that there is a higher performance of LJQD than average QoG in most villages. This implies that LJQD is a very important component in the analysis of QoG. However it is very clear that Ravapara and Andurjhar scores are lower than the average QoG which is why it is inside the QoG circle.

From the Figure-4, it appears that APSDQD is another very important component of QoG as in most of the villages it has performed above the QoG. Except the case of Ravapara and Naptipara, all other villages lie above the QoG circle. This signifies that in the overall assessment of governance quality, this aspect of governance is very vital that shaped public perception on governance.

However, it appears from the Figure-4 that performance in ESQD dimension of governance is not very satisfactory because except the village Naptipara and Ravapara, all the villages in the study area lie inside the circle of QoG. This implies that on an average more emphasis needs to be given to deliver this aspect of governance. It may also be said that in the overall assessment of the QoG, this dimension has a very low contribution, which does not imply that it is less important but that the performance of this dimension is poor in the perception of the respondents.

Thus, through the analysis of results with the help of radar chart it came to light that except for ESQD, all the other three dimensions lie above the QoG circle which signified their state of performance and its importance in shaping the public perception about quality of governance across the villages. It has also come to light that more emphasis needs to be given in the areas of economic and social welfare dimensions of governance.

**Figure-4:** Quality of Governance in Study Area

<table>
<thead>
<tr>
<th>Dimensional Score of Governance &amp; Quality of Governance Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Udalguri Ward No. 2</td>
</tr>
<tr>
<td>0.50</td>
</tr>
</tbody>
</table>

Empirical Assessment of the Quality of Governance in Bodoland Territorial Area District of Assam in India: A Perception Based Study
Classification of Quality of Governance

In this study, we have attempted to classify the Quality of Governance in the villages of BTAD on the basis of a composite multidimensional approach. The analysis suggests that the state of QoG varies widely across the villages. In this section we have attempted to evaluate QoG classifying them into four categories viz. Excellent, Good, Poor and Very Poor as shown in Table-6. The last column of the table shows the decision classification i.e. on average terming the QoG as Good or Poor in a particular village.

**Decision rule:** if Excellent + Good > Poor + Very Poor, then QoG is classified as Good; and if Excellent + Good < Poor + Very Poor, then QoG is classified as Poor.

Our study finds that according to the opinion on various dimensions Debargaon with 29.2% rating as excellence in QoG is the highest across the villages. This is followed by Magurmari with 28.6% rating QoG as Excellent. It is found that these two villages have only 4.2% and 7% rating QoG as very poor respectively. Therefore, according to decision rule, as the rating of Good and Excellent is higher in these two villages, they are classified as having a Good Quality of Governance.

Whereas on the other hand, there is nil percentage that rated QoG as excellent in Khajurbari and only 3.6% rated QoG as excellent in Jhargaon. On average more than 50% rated QoG as poor and very poor in these two villages respectively; hence they have been classified as villages having poor QoG.

**Table-6: Classification Quality of Governance**

<table>
<thead>
<tr>
<th>Name of Block</th>
<th>Excellent</th>
<th>Good</th>
<th>Poor</th>
<th>Very Poor</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nepalpara (Dotma)</td>
<td>22.6</td>
<td>41.9</td>
<td>25.8</td>
<td>9.7</td>
<td>Good</td>
</tr>
<tr>
<td>Debargaon (Dotma)</td>
<td>29.2</td>
<td>41.7</td>
<td>25</td>
<td>4.2</td>
<td>Good</td>
</tr>
<tr>
<td>Dotma Pt.-II (Dotma)</td>
<td>8</td>
<td>52</td>
<td>36</td>
<td>4</td>
<td>Good</td>
</tr>
<tr>
<td>Pachim Dangarkuti (Dotma)</td>
<td>18.2</td>
<td>18.2</td>
<td>45.5</td>
<td>18.2</td>
<td>Poor</td>
</tr>
<tr>
<td>Khajurbari (Dotma)</td>
<td>0</td>
<td>23.1</td>
<td>61.5</td>
<td>15.4</td>
<td>Poor</td>
</tr>
<tr>
<td>Magurmari (Dotma)</td>
<td>28.6</td>
<td>21.4</td>
<td>42.9</td>
<td>7.1</td>
<td>Good</td>
</tr>
<tr>
<td>Ravapara (Dotma)</td>
<td>5</td>
<td>15</td>
<td>50</td>
<td>30</td>
<td>Poor</td>
</tr>
<tr>
<td>Narabar (Dotma)</td>
<td>26.7</td>
<td>33.3</td>
<td>13.3</td>
<td>26.7</td>
<td>Good</td>
</tr>
<tr>
<td>Andurjharpal (Bilasipara) (Dotma)</td>
<td>8.3</td>
<td>16.7</td>
<td>25</td>
<td>50</td>
<td>Poor</td>
</tr>
<tr>
<td>Ward No. 5 (Kokrajhar)</td>
<td>17.8</td>
<td>37.8</td>
<td>24.4</td>
<td>20</td>
<td>Good</td>
</tr>
<tr>
<td>Rangagaon (Khoirabari)</td>
<td>20</td>
<td>33.3</td>
<td>33.3</td>
<td>13.3</td>
<td>Good</td>
</tr>
<tr>
<td>Jhargaon (Khoirabari)</td>
<td>3.6</td>
<td>39.3</td>
<td>42.9</td>
<td>14.3</td>
<td>Poor</td>
</tr>
<tr>
<td>Tokankata (Kaligaon)</td>
<td>13</td>
<td>43.5</td>
<td>30.4</td>
<td>13</td>
<td>Good</td>
</tr>
<tr>
<td>Kalaigaon Town (Kaligaon)</td>
<td>17.9</td>
<td>43.6</td>
<td>33.3</td>
<td>5.1</td>
<td>Good</td>
</tr>
<tr>
<td>Jhilita Khat (Kaligaon)</td>
<td>20</td>
<td>13.3</td>
<td>53.3</td>
<td>13.3</td>
<td>Poor</td>
</tr>
<tr>
<td>Naptipara (Kaligaon)</td>
<td>22.2</td>
<td>27.8</td>
<td>44.4</td>
<td>5.6</td>
<td>Good</td>
</tr>
<tr>
<td>Ward No. 2 (Udalguri)</td>
<td>21.2</td>
<td>48.1</td>
<td>26.9</td>
<td>3.8</td>
<td>Good</td>
</tr>
<tr>
<td>BTAD</td>
<td>17</td>
<td>36.5</td>
<td>33.8</td>
<td>12.8</td>
<td>Good</td>
</tr>
</tbody>
</table>

Sources: Author(s) calculation
The data reveals that in urban areas like Kokrajhar ward no.5 and Udalguri ward no.2, most rated QoG in good category i.e. 37.8% and 48.1% respectively. As the total rating of excellent and good is more than poor and very poor, they have been classified as Good in QoG.

Similarly, there is a large variation across the villages when it comes to rating the QoG. Five villages namely Pachim Dangarkuti, Khajurbari, Ravapara, Andurjhar, Jhargaon, and Jhilikakhat have been classified as poor in terms of QoG. It needs to be mentioned here that; data reveals 80% rated QoG as poor or very poor; implying that there is severe deficit of governance in these Villages.

However, on average 12 villages i.e. above 70% including two urban areas, the result shows that they are classified as Good in Quality of Governance. Thus there are more than 70% of the villages in the study area where the state of Quality of Governance appears to be good and hence may be termed as satisfactory.

**Conclusion**

In conclusion we highlight some of the important findings from our analysis as follows:

- On the basis of this study, the state of governance in Bodoland Territorial District is good as the perceptual classification shows that on an average about 53% feel that there is good governance. Whereas, on the basis of about 46% of the respondents, the Quality of Governance (QoG) in the study area is considered as poor.

- Assessing the quality of governance dimensional wise, we observed that Economic and Social Quality of Governance Dimension (ESQD) and Political Quality of Governance Dimension (PoQD) are showing poor performance. This result illustrates the need for efficient delivery and penetration of economic and social services like old age pensions, housing facilities, toilets etc. and creation of conducive economic environment by reducing the number of bandhs / hurtles along with an improvement in the delivery of political goods. On the other hand, Legal and Judicial Dimension (LJQD) and Administrative and Public Service Delivery dimensions (APSDQD) are showing better performance in the study area. The positive feedbacks in these dimensions includes security of life and property, trust in the government and the police, accessibility and satisfaction of public services like transportation, roads, health care, etc.

- Village wise analysis of the quality of governance depicts that on an average all the villages seem to be doing well in different dimensions of governance where more than 64.5% of the villages in the study area are performing above the average of BTAD as a whole, which implies that only 35.5% of the villages are performing below the average of BTAD. The ranking of villages on the basis of Quality of Governance index depicts that there is very little differences amongst the index value of villages which implies that there is no much divergence in the governance quality across villages.

- The best performers in quality of governance are Debargaon and Naptipara which belong to Kokrajhar and Udalgury districts respectively. Debargaon is performing well above the average in all dimensions of governance, while in the case of Naptipara the main drivers of governance performance are...
Political (PoQD), Legal and Judicial (LJQD) and Economic and Social (ESQD) dimensions of governance and it has surprisingly low score in Administrative and Public service delivery dimension (APSDQD) where other villages seem to be performing well. However, the twist in the case of Naptipara is that while the rest of the villages scored very low in Economic and Social dimension of governance (ESQD), it has the highest score of .33. The high score in ESQD implies satisfactory performance with respect to services like the old age pensions, provisions of houses and toilets, etc and existence of social harmony amongst the diverse religions and communities.

- When it comes to rural versus urban performance in governance it is observed that rural areas are doing much better in all aspects, the indicator of which is that the first two ranks are occupied by the rural villages. This implies that there is better QoG in the rural areas of the study area. The reason for better governance in rural areas may be due to the existence of satisfactory public service and people centric development approach of the agents whereby people feel their involvement in matters of developmental activities. However, this finding needs further research to examine what factors drive better governance in rural areas as compared to rural areas. This is one limitation of this paper.

**References**


Abstract
Education makes a significant contribution to the growth of an economy. It builds human capital, rises incomes, productivity and employability which paves the way for all-round development of a nation. Universal primary education is one of the laudable goals that all the countries have promised to achieve. India has committed itself to the goal of universalisation of primary education. It has made considerable progress. This paper examines the enrollment in primary schools in the state of Telangana from 2004-05 to 2013-14. It was found that during the study period the enrollment in primary schools depicted a fluctuating trend. There was a perceptible decline in the enrollment of government schools while the enrollment in private schools increased. The Overall GER (Gross Enrollment Ratio) improved in the state.

Keywords: Enrollment, Gross Enrollment Ratio, Primary Education

Introduction
Every human being is entitled to have a right to education. Education is an important tool which brings out the innate potential of an individual. Education plays a major role in rising human capital, productivity incomes, employability which leads to economic growth. In addition to giving the above monetary gains education has a long lasting effect on people’s lives. It makes them healthier and helps the individuals to have more control on their lives. Education helps in building social capital. Education is the only way to create institutions based on inclusion and shared prosperity.

It is an acknowledged fact that education acts as a safeguard for human dignity. It serves as a strong foundation for freedom, justice and peace. Education helps individuals to raise their aspirations and provides them the capability to extract their potential in reaching those aspirations. The benefits to a society from education are monetary and nonmonetary. Education builds human capital which translates into economic growth. The economic growth achieved when all individuals in the society are educated helps to reduce poverty and inequality and the society as a whole becomes more inclusive. The positive effects of education steers the individuals towards a higher level of political engagement, trust between the members of the society and tolerance. Education leads to creating a civic agency which can further create a political constituency for including institutions, strengthening the social contract between the state and its citizens.

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Education builds human capital. Human capital which enhances growth in two ways, first by improving the capacity to absorb and adapt new technology which will effect short to medium term growth and second by categorizing the technological advances that drive sustained long term growth. Widespread education may boost the economic growth of low and middle income countries put them on par with the advanced countries. Through quality education the low and middle income countries can adapt and absorb the technologies that are available which will further provide an impetus to their economic growth. Growth accounting analyses also suggests that education can explain significant share of growth.

Impact of education on growth is long lasting. Countries that have sustained growth for decades have shown a great commitment to expanding education, infrastructure and health. It is well known that education leads to growth and growth expands better educational opportunities, the East Asian countries in particular flags education and human capital as factors in their rapid growth.

Over the last 50 years in most low and middle income countries there has been a rapid expansion in schooling. In some countries this expansion has been unprecedented. Schooling has expanded almost universally. In 1970 the gross primary enrollment rate was 68 per cent in sub-Saharan Africa and 47% in south Asia. By 2010 that rate was above 100% in both regions. These numbers reflect the progress made in nearly all countries regardless of regime type, rate of economic growth, or quality of governance. As a result most children today enroll in primary school and every new cohort of young people spends more time in school than previous ones. The enrollment gap between low and high income countries are closing. By 2008 the average low income country was enrolling students in primary school at nearly the same rate as the average high income country.

Between 2000 and 2014 the number of out of school children fell by about 112 million. At the same time the share of girls enrolled in basic education reached a historic high. Between 1991 and 2007 in the developing world the ratio of girls to boys in primary and secondary school rose from 0.84 to 0.96. It is also worth noting that gender parity is yet to be achieved, 62 million girls between the ages 6 and 15 years are still out of school, with the highest concentrations in west and south Asia and sub Saharan Africa. By 2014 the primary enrollment rate of girls in low income countries was at 78%, but their completion rate was only 63%.

The strongest schooling expansions have occurred at the primary level, leading to a sharp increase in the demand for secondary education. In 2014, an estimated 61 million primary school age children and 202 million secondary school age youth, with a disproportionate share from poor households, were out of school. Only about a quarter of the poorest children in low income countries, compared with three quarters in the richest, complete primary school. These gaps are even larger when disaggregating by gender, where the double exclusions from gender and poverty mean that only 25 per cent of the poorest girls in low income countries complete primary school.

**Primary Education in India:** Article 21-A of the Constitution of India and its consequent legislation, the Right of Children to Free and Compulsory Education (RTE) Act, 2009 became operative in the country on 1st April 2010. The RTE Act confers the right to elementary education on all children, in the age group of 6-14 years on the basis of equality of opportunity in a formal school which satisfies certain essential norms and standards. All States and U.Ts have notified
their State RTE Rules. The centrally sponsored scheme of Sarva Sikhsa Abhiyan (SSA) supports States UTs in their efforts to implement the RTE Act.

The SSA Programme is being implemented since 2001 for universalization of elementary education. It has made significant progress in achieving near to universal access and equity. Progress in achieving the goal of universal access under SSA has been consistent over the years. Over the years 2,04,740 primary schools have been sanctioned, of which 8 were sanctioned in 2016-17.

Girls education: RTE-SSA provides a clear thrust and special focus on education for girls and children belonging to disadvantaged groups and weaker sections. The general interventions under SSA apply to all girls and children belonging to disadvantaged and weaker sections; these include ensuring availability of primary and upper primary schools within the habitation as prescribed under the RTE Rules, uniforms, textbooks, etc. Special Training interventions are also largely focused on girls and disadvantaged groups, because it is this category of children who are most deprived of opportunities to pursue their education.

**Review of Earlier Studies**

Sudhanshu Handa (2002) examine the relative importance of supply and demand factors in determining school enrollment using Probit estimates.

The dependent variable is whether the child was enrolled in school at the time of the survey. Independent variables are characteristics of individual child (age); household characteristics that capture access to resources, differences in taste for schooling, and opportunity costs; and a vector of school infrastructural characteristics.

It was found that number of schools in the administrative posts had a significant effect on boys but not on girls enrollment, while the number of cement rooms had a significant effect on girls. Proximity to a school is a highly significant determinant of enrollment. Household characteristics like adult having completed EP 1 (5th grade), access to resources measure by per capita consumption has an impact on enrollment. The pupil teacher ratio had an insignificant effect on enrollment on EP 1 students, the number of trained teachers had a positive and significant effect. The study concluded that building more schools or rising adult literacy would have a larger impact on enrollment rates than interventions that raise household income.

Aimee Chin (2005) evaluates the reforms of operation black board (providing a second teacher to one – teacher primary school) in India, using the difference-in-differences approach. The study was conducted for the pre-OB period (1986) and post-OB period (1993).

The paper found that between one-quarter and one-half of the OB teachers were sent to one teacher school. The rest were utilized in ways the central government had not intended. It was also found that teachers per primary sections did not significantly change after OB. It was found that girls primary school completion rate increased by 1.60 percentage points for each OB teacher.

Janine Huisman and Jeroen Smits (2009) study the determinants of primary school enrollment in 30 developing countries using multi-variate logistic regression analysis. The dependent variable is a dummy variable that represents whether one or zero children (aged 8-11) are enrolled in school. Explanatory variables at three levels of aggregation like family – fathers employment, mothers employment,
fathers education, mothers education: district level – such as pupil teacher ratio and the percentage of female teachers; National level – national GDP, per capita.

It was found that family with wealth, more educated parents, fathers with white collar job significantly increases the enrollment. A higher percentage of female teachers increase the chances of enrollment of girls.

Hau Chyi and Bo Zhou study (2014) study the effects of tuition reforms on enrollment ratios in rural China from 2002 – 2006 using difference-in-difference method. The study investigates the policy effects on all school aged children and further try to find whether the policy effects will have greater impact on the populations which is likely to get benefitted. The dependent variable is the dummy variable school it, which equals 1 if individual ‘I’ was in school at that time in year ‘t’ and zero otherwise. Independent variables are tuition control two-waiver-one – subsidy, and control variable which includes (Z_{it}) a Childs gender, the mothers completed years of education, per capita household income and so on.

The study finds that tuition control had a minimal effect on primary and junior high school enrollment. It was also found that tuition waivers, free text books and living expense subsidies had a significantly positive effect on school enrollment of rural girls but not rural boys. The provision of tuition waiver for all rural children since 2006 improved the enrollment of children who were less likely to have enjoyed two-waiver-one subsidy.

Martin Foureaux Koppensteiner (2014) examine the effect of automatic grade promotion in primary schools using a difference-in-difference approach. Total score for an individual is the dependent variable. Independent variables are a set of covariates controlling for individual characteristics, a set of exogenous covariates for class and school characteristics.

The paper finds that automatic promotion reduces academic achievement by 6.7% of a standard deviation. The quantile DiD estimates reveal that a large set of students are impacted by the policy change and not just the least performing students.

Julian Cristia, Alejo Czerwonke, Pablo Garofalo (2014) estimates the effect of technology on enrollment, repetition and dropout rates in Peru using DiD approach. The study period was between 2001 and 2006. The dependent variable is enrollment, repetition and dropout rate. Independent variables are a vector of time varying controls such as no. of teachers per classroom, students per teacher, and students per sections etc. Dummies for school year, grade and sex were used.

It was found that access to technology i.e. computer and internet access did not have any effect on enrollment, repetition and dropout rate.

Diane L. Putnick, Marc H. Bornstein (2015) examined the relation of children’s work at home (household chores), work outside the house on enrollment in 30 low and middle income developing countries (LMIC). Significant negative relation was found between each form of child labour and school enrollment. The relations were more consistent for family work and household chores than work outside the house.

Kassandranera Birchler, Katharina Michaelowa (2015) study, an analysis of aid effectiveness for primary education, coverage and quality using generalized method of moments (GMM) regression. A series of 5 regressions like Arellano & Bond – Blundell and Bond were used to find the effect of aid on enrollment. The dependent variable is the net primary enrolment rate (NER). The explanatory variable is the EDUCAID. Control variable is the lagged NER (L.NER), recipients
expenditure on education as percentage of GNI; pupil teacher ratio and the share of the population under age 15 etc. study period is 1996 to 2010.

The paper finds that the increase in education aid by 1% growth helped primary enrollment grow by about 0.06%. The most robust effect on enrollment was found to be the aid in education facilities and training. In addition, there is evidence for complementarities between aid for primary and secondary education.

Marcos Delprato, Amita Chudgar (2018) investigates the private public school performance gaps and whether the differences in systemic factors such as competitive pressure, administrative autonomy and staffing practices may help explain this performance gap in Australia, Portugal and Spain. Matching approaches were used to identify a subsample of public and private students in each country who exhibited the same observable student and family characteristics. In addition to OLS, Counterfactual decomposition analysis was used to find out where the effect of systemic school factors varies and by where a student is a low or a high performer. For each country OLS regression has been estimated with test scores as dependent variable, dummy variable for school type and a variable which includes a set of students and family exogenous characteristics as explanatory variable.

The paper found that competition had a small effect and additional support provided to teachers is not linked to differential performance by private and public school students. Teacher sanction was a consistent factor in explaining the learning gap in Australia only, principals sanction was relevant only in Spain while in Portugal accountability was negatively correlated to the learning gap. It was also found that accountability at the classroom teacher level matters more in Australia; in countries like Spain where learning was more homogenous, accountability at the school level was more important in explaining the learning gap.

Data, Methodology and Results

This article analyses the trends in primary school enrollment in Telangana state from the year 2004-05 to 2013-14. The data has been obtained from district report cards of National Institute of Educational Planning and Administration. The study is limited to only the government and private primary schools. The trends have been depicted using tables and graphs for the study period.

Table-1: Total Enrollments

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrollments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>2465876</td>
</tr>
<tr>
<td>2005-06</td>
<td>2387124</td>
</tr>
<tr>
<td>2006-07</td>
<td>2429743</td>
</tr>
<tr>
<td>2007-08</td>
<td>2384792</td>
</tr>
<tr>
<td>2008-09</td>
<td>2456400</td>
</tr>
<tr>
<td>2009-10</td>
<td>2433576</td>
</tr>
<tr>
<td>2010-11</td>
<td>2477390</td>
</tr>
<tr>
<td>2011-12</td>
<td>2481431</td>
</tr>
<tr>
<td>2012-13</td>
<td>2365488</td>
</tr>
<tr>
<td>2013-14</td>
<td>2305072</td>
</tr>
</tbody>
</table>

Source: District Report Cards on Elementary Education 2004-05 to 2013-14, National Institute of Educational Planning and Administration.
In 2004-05 the number of students enrolled in primary education were 24,65,876. In the 10 year period i.e. 2004-2014 there were minor fluctuations in the enrollment. In 2005-06 the number of students enrolled was less by around 78,000. In the subsequent year it declined by 42,000. In 2007-08 it again fell by 44000. In 2008-09 it rose around 70000. In the next year minor decline was observed. In 2010-11 it rose by around 40000. In 2011-12 minor decline was noticed. In 2012-13 a major shift took place where the enrollment declined to 23,65,488 from 24,81,431 a difference of 1,16,000 was observed. In 2013-14 enrollment declined by 60,000. The fluctuations observed in the enrollment are not distinct. Overall the enrollment in primary education has not registered major changes.

The possible explanation for the fluctuations could be migration. When people migrate to other regions admission in schools may take some time, to that extent enrollment could decline. In rural areas if there is reduction in agricultural production the incomes of the people would fall. Issues of admission of their children will gain less priority than searching job which will be first priority. In urban areas due to slow down in economic activity the income levels of the people fall. This could result in lower enrollment.

**Table-2: Govt Enrollments**

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrollments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>1590528</td>
</tr>
<tr>
<td>2005-06</td>
<td>1459753</td>
</tr>
<tr>
<td>2006-07</td>
<td>1446938</td>
</tr>
<tr>
<td>2007-08</td>
<td>1331518</td>
</tr>
<tr>
<td>2008-09</td>
<td>1368088</td>
</tr>
<tr>
<td>2009-10</td>
<td>1344743</td>
</tr>
<tr>
<td>2010-11</td>
<td>1321795</td>
</tr>
<tr>
<td>2011-12</td>
<td>1316167</td>
</tr>
<tr>
<td>2012-13</td>
<td>1228393</td>
</tr>
<tr>
<td>2013-14</td>
<td>1199661</td>
</tr>
</tbody>
</table>

Source: District Report Cards on Elementary Education 2004-05 to 2013-14, National Institute of Educational Planning and Administration.

**Table-3: Pvt Enrollments**

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrollments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>875348</td>
</tr>
<tr>
<td>2005-06</td>
<td>927371</td>
</tr>
<tr>
<td>2006-07</td>
<td>982805</td>
</tr>
<tr>
<td>2007-08</td>
<td>1053274</td>
</tr>
<tr>
<td>2008-09</td>
<td>1088312</td>
</tr>
<tr>
<td>2009-10</td>
<td>1088833</td>
</tr>
<tr>
<td>2010-11</td>
<td>1155595</td>
</tr>
<tr>
<td>2011-12</td>
<td>1165264</td>
</tr>
<tr>
<td>2012-13</td>
<td>1137095</td>
</tr>
<tr>
<td>2013-14</td>
<td>1105411</td>
</tr>
</tbody>
</table>

Source: District Report Cards on Elementary Education 2004-05 to 2013-14, National Institute of Educational Planning and Administration.
The enrollment figures depicted in the above graphs are the Government and private school enrollment combined.

**Government School Enrollment:** The Government School enrollment (Fig. 2) from 2004-05 to 2005-06 declined noticeably. From then onwards a clear downward trend can be observed in enrollment of children in Government Schools.

**Private School Enrollment:** In contrast the number of children enrolled in private schools (Fig. 3) gradually improved from 2004-05 to 2011-12. In 2012-13 and 2013-14 a marginal decline in private school enrollment can be observed.

**Enrollment in Primary Education in India**

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrollments</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>118296540</td>
</tr>
<tr>
<td>2005-06</td>
<td>124615546</td>
</tr>
<tr>
<td>2006-07</td>
<td>131853637</td>
</tr>
<tr>
<td>2007-08</td>
<td>134132183</td>
</tr>
<tr>
<td>2008-09</td>
<td>134377734</td>
</tr>
<tr>
<td>2009-10</td>
<td>133405581</td>
</tr>
<tr>
<td>2010-11</td>
<td>135207057</td>
</tr>
<tr>
<td>2011-12</td>
<td>137099984</td>
</tr>
<tr>
<td>2012-13</td>
<td>134784272</td>
</tr>
<tr>
<td>2013-14</td>
<td>132428440</td>
</tr>
</tbody>
</table>

Source: Elementary Education in India, progress towards UEE. Flash statistics. National University of Educational Planning and Administration.

When we look at the enrollment in primary education in India we find that there are minor changes in the ten year period. From 2004-05 up to 2008-09 minor improvements were recorded. In the subsequent year there was a small decline. In the next two years i.e. 2010-11, 2011-12, we again find minor improvements. In the last two years of the study period we find a minor decline in enrollment. It can be said that there are minor fluctuations in the primary school enrollment in India. In the Telangana state too the fluctuations in enrollment are not distinct. Therefore the trends in Telangana enrollment are similar to that of the national picture.

**Table-5: Gross Enrollment Ratio in Telangana Districts**

<table>
<thead>
<tr>
<th>Year</th>
<th>Adilabad</th>
<th>Hyderabad</th>
<th>Karimnagar</th>
<th>Khammam</th>
<th>Mahaboobnagar</th>
<th>Medak</th>
<th>Nalgonda</th>
<th>Nizamabad</th>
<th>Rangareddy</th>
<th>Warangal</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004-05</td>
<td>97.5</td>
<td>86.1</td>
<td>87.9</td>
<td>77.8</td>
<td>99.3</td>
<td>92.8</td>
<td>91.1</td>
<td>89.6</td>
<td>102.1</td>
<td>91.7</td>
</tr>
<tr>
<td>2005-06</td>
<td>118.1</td>
<td>109.9</td>
<td>128.6</td>
<td>94.3</td>
<td>112</td>
<td>109.6</td>
<td>104.8</td>
<td>106.7</td>
<td>134.5</td>
<td>108.7</td>
</tr>
<tr>
<td>2006-07</td>
<td>123</td>
<td>71</td>
<td>104</td>
<td>99</td>
<td>118</td>
<td>111</td>
<td>106</td>
<td>108</td>
<td>144</td>
<td>111</td>
</tr>
<tr>
<td>2007-08</td>
<td>122</td>
<td>116</td>
<td>102</td>
<td>98</td>
<td>108</td>
<td>111</td>
<td>102</td>
<td>106</td>
<td>147</td>
<td>110.8</td>
</tr>
<tr>
<td>2008-09</td>
<td>124.5</td>
<td>119</td>
<td>99.9</td>
<td>98.5</td>
<td>113.4</td>
<td>110.8</td>
<td>101.5</td>
<td>106.5</td>
<td>150.3</td>
<td>108.5</td>
</tr>
<tr>
<td>2009-10</td>
<td>125.9</td>
<td>110.7</td>
<td>97.3</td>
<td>98.5</td>
<td>119.8</td>
<td>114.3</td>
<td>101.7</td>
<td>109.3</td>
<td>162</td>
<td>105.5</td>
</tr>
<tr>
<td>2010-11</td>
<td>129.3</td>
<td>119.2</td>
<td>97</td>
<td>97</td>
<td>122.9</td>
<td>120.6</td>
<td>105.9</td>
<td>110.7</td>
<td>166.5</td>
<td>106.2</td>
</tr>
<tr>
<td>2011-12</td>
<td>115.8</td>
<td>117.8</td>
<td>104.4</td>
<td>97</td>
<td>122.9</td>
<td>100.3</td>
<td>103.4</td>
<td>105.6</td>
<td>113.1</td>
<td>110.4</td>
</tr>
<tr>
<td>2012-13</td>
<td>112.5</td>
<td>118.9</td>
<td>98.2</td>
<td>98.2</td>
<td>94.1</td>
<td>99.7</td>
<td>100.2</td>
<td>103.6</td>
<td>125</td>
<td>106.4</td>
</tr>
</tbody>
</table>

The gross enrollment ratio (Table-5) in all districts of Telangana in general are improved. It is observed that in all districts except Karimnagar there is a reduction in GER in the year 2012-13 and 2013-14. In Karimnagar the GER showed variation over 10 year period. In terms of GER in the year 2013-14 Rangareddy recorded highest score, Mahaboobnagar registered the lowest.
Conclusion
It is a well known fact that education enhances the capabilities of an individual. Education plays a vital role in human capital formation which in turn accelerates the economic growth of a country. Every economy aims to provide basic education to all its citizens. All the economies of the world focused on providing primary education and also providing free access to all children of primary school going age. The world over the enrollment in primary schools has increased. In India also there is a perceptible and clear improvement in the enrollment of students in primary schools. In the period 2004-05 to 2013-14 the enrollment in Primary Schools in 10 districts of Telangana showed minor fluctuations. The enrollment in Government Schools in the same period gradually declined and it was perceptible. On the other hand the enrollment in private schools increased during this period. Overall it can be concluded that after examining the trends in enrollment in Telangana minor changes can be observed. The trends in enrollment in the state are similar to that of national picture.

References
District Report Cards on Elementary Education 2004-05 to 2013-14, National Institute of Educational Planning and Administration.


Abstract
After 13 years since the RTI Act was passed by the parliament in 2005, the Act has yet to achieve its basic aims of transparency through sharing of maximum information by government organization with public at large. One of the most significant provision of RTI Act is Suo Moto Disclosure detailed in Section 4(1)(b). This paper measures the implementation of Section 4(1)(b) in selected central government organizations by scanning the website of these organizations to find out availability and updation of suo moto disclosures. The findings have been discussed with probable reasons for identified lapses in suo moto disclosure publication and updation by central government organizations. Finally, few recommendations have been made to make the implementation of suo moto disclosure information under RTI Act more effective and relevant.

Keywords: Information Updation, RTI Act, Suo Moto Disclosure, Website Survey

Introduction
The Right to Information Act, simply known as RTI, is a revolutionary Act that aims to promote transparency in government institutions in India. The Act came into existence in 2005, after sustained efforts of anti-corruption activists. It is termed revolutionary because it opens government organisations up for scrutiny. Equipped with knowledge about RTI, a common man can demand any government agency to furnish information. The organisation is bound to provide the information, that too within 30 days, failing which the officer concerned is slapped with a monetary fine. (“About RTI - Read Complete Guide by RTI Experts - OnlineRTI.com,” n.d.)

RTI Act has been passed in Parliament of India on 15th June 2005. The Act came into effect on 12th October 2005 and is hailed as one of the most effective tools to bring transparency into the system and promote information sharing between government and public at large.

Under RTI Act, the following categories of organizations are defined as public authorities for the purpose of providing information. A “public authority” is any

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2 Asst. Professor, SGRR University, Dehradun, Uttarakhand, and can be reached at dr.pujajain@gmail.com
authority or body or institution of self government established or constituted by
or under the Constitution; or by any other law made by the Parliament or a State
Legislature; or by notification issued or order made by the Central Government
or a State Government. The bodies owned, controlled or substantially financed by
the Central Government or a State Government are also public authorities. Non-
Government organisations substantially financed by the Central Government or a
State Government also fall within the definition of public authority. (Ministry of
Personnel, 2013)

Suo Moto Disclosure

Under RTI Act, the public authority should provide maximum information to
the public suo moto. In chapter II of Right to information Act, the obligations of
public authorities in respect of publication of information have been defined under
section 4 (1) (a), (b), (c) & (d) and 4(2), 4(3) and 4(4). (“Right to Information Act
(India),” n.d.)

(Ministry of Personnel, 2013) in its office memorandum have directed the public
authorities that “Every public authority should provide as much information suo
moto to the public through various means of communications so that the public
have minimum need to use the Act to obtain information. Internet being one of the
most effective means of communication, the information may be posted on the
website. Further the categories of information to be made available have also been
defined in the same office memorandum.

Section 4(1)(b) of the Act, in particular, requires every public authority to publish
following sixteen categories of information: (Ministry of Law and Justice, 2011)

• the particulars of its organisation, functions and duties;
• the powers and duties of its officers and employees;
• the procedure followed in the decision making process, including channels of
  supervision and accountability;
• the norms set by it for the discharge of its functions;
• the rules, regulations, instructions, manuals and records, held by it or under its
  control or used by its employees for discharging its functions;
• a statement of the categories of documents that are held by it or under its control;
• the particulars of any arrangement that exists for consultation with, or
  representation by, the members of the public in relation to the formulation of its
  policy or implementation thereof;
• a statement of the boards, councils, committees and other bodies consisting of
two or more persons constituted as its part or for the purpose of its advice, and
as to whether meetings of those boards, councils, committees and other bodies
are open to the public, or the minutes of such meetings are accessible for public;
• directory of its officers and employees;
• the monthly remuneration received by each of its officers and employees,
  including the system of compensation as provided in its regulations;
• the budget allocated to each of its agency, indicating the particulars of all plans,
  proposed expenditures and reports on disbursements made;
• the manner of execution of subsidy programmes, including the amounts
  allocated and the details of beneficiaries of such programmes;
• particulars of recipients of concessions, permits or authorisations granted by it;
• details in respect of the information, available to or held by it, reduced in an electronic form;
• the particulars of facilities available to citizens for obtaining information, including the working hours of a library or reading room, if maintained for public use;
• the names, designations and other particulars of the Public Information Officers.

**Objective of the Paper**

The original purpose of the RTI Act was to bring transparency in the working of government departments and make information available to the public at large. One of the most important provision of RTI Act is to achieve this objective is suo moto disclosure. This paper would like to measure the status of suo moto disclosure as well as timely updation by central government departments and PSUs. More than 13 years has been passed since the RTI Act was passed by the parliament, the status of suo moto disclosure by the central government will be an indication of implementation of RTI Act in true letter and spirit.

**Research Methodology**

The suo moto disclosures are supposed to be uploaded on the internet to make them available and accessible to the public. Accordingly, we will make a list of all central government ministries as well as the subsidiary departments and PSU working under those ministries and will select 12 Central Government ministries/PSUs/Departments through stratified random sampling. We will select 4 Ministries, 4 Departments and 4 PSUs under central government and will scan their website in detail to search for suo moto disclosures and status of updation by these organizations. The search or scan will be made from a common information seeker point of view and under the appropriate place i.e. disclosure under RTI Act in the website. Finally the results will be compiled to analyze the status of disclosures and their timely updation. As the regular updation is required in Section 4(1) (b) ix, x & xvi, we will search/scan updation in these three documents only. Finally based on the results, few recommendations will be made to ensure better implementation of RTI Act by Central Government. The following organizations were selected based on stratified random sampling through the use of random sampling tables.

**Table-1: List of Central Government Organizations Selected for Website Survey**

<table>
<thead>
<tr>
<th>Ministries (Total 51)</th>
<th>Departments (Total 55)</th>
<th>PSUs (180 scheduled CPSE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ministry of Corporate Affairs</td>
<td>Department of Bio Technology</td>
<td>BEML Ltd.</td>
</tr>
<tr>
<td>Ministry of Tribal Affairs</td>
<td>Department of Public Enterprises</td>
<td>MMTC Ltd.</td>
</tr>
<tr>
<td>Ministry of Mines</td>
<td>Department of Posts</td>
<td>PEC Ltd.</td>
</tr>
<tr>
<td>Ministry of Earth Sciences</td>
<td>Department of Fertilizers</td>
<td>Rail Vikas Nigam Ltd.</td>
</tr>
</tbody>
</table>

**Results / Discussion**

Organization wise detailed survey is attached as Appendix A - C wherein organization wise website survey can be seen. The following table 2 & 3 summarizes the suo moto information availability as well as updation status respectively.
Table-2: Availability of Suo Moto Information

<table>
<thead>
<tr>
<th>Parameters</th>
<th>Ministries</th>
<th>Departments</th>
<th>CPSEs</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Suo Moto Disclosure Availability (Complete Details)</td>
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<td>1</td>
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<td>Suo Moto Disclosure Partial Availability</td>
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<td>4</td>
<td>7</td>
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<td>3</td>
<td>2</td>
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<td>2</td>
<td>0</td>
<td>3</td>
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<td>Availability of Public Information Officers names RTI 4(1)(b) xvi</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>12</td>
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</table>

Table-3: Updation Status of Suo Moto Disclosure (Numbers reflect count of those organisations wherein suo moto information was available as well as updated)

<table>
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<tr>
<th>Parameters</th>
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<td>0/2</td>
<td>0/0</td>
<td>0/3</td>
</tr>
<tr>
<td>Public Information Officers names RTI 4(1)(b) xvi</td>
<td>2/4</td>
<td>¼</td>
<td>4/4</td>
<td>9/12</td>
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</tbody>
</table>


From the above, it is obvious that adaptation of basic premises of RTI Act is not yet done by Central government organizations. Information to be disclosed under Suo Moto disclosure is completely adopted by only 5 out of 12 organisations surveyed. In terms of availability of suo moto complete information, the status of central government ministries are much better compare to departments and public sector enterprises. On the front of availability of information on website in respect of two most important parts of suo moto information i.e. Availability of Directory of Officers and Employees RTI 4(1)(b) ix and Availability of Public Information Officers names RTI 4(1)(b) xvi, the performance of central government ministries is again better compared to departments and public sector enterprises. However, all three performed very poorly on Availability of Monthly remuneration of officers and employees RTI 4(1)(b) x wherein either no information is available or incomplete information is made available to common public. However, on the updation of information front, the performance of public sector enterprises is better compared to ministries and departments. Even the names of Public information officers have not been regularly updated in ministries and departments. The remuneration of officers and employees was not updated in a single case.

The specific findings while scanning and searching for information on the websites from a public perspective is as follows:

• The directory of officers and employees only consist of name of the officers and their contact number whereas as per the Act, the officers and employees names and contact details should have been mentioned under RTI details. Like in case
of MMTC Ltd., the website consists of names and contact details of GM level officers only.

- In most of the cases, the monthly remuneration of employees was not available on the website under RTI section. Only system of remuneration like Pay Scale has been published which do not serve the purpose of conveying total remuneration details to common public. Like in case of Department of Posts, MMTC Ltd. and several other websites, only the pay scales are displayed. In cases, wherein the remuneration has been mentioned, the updation of the information has not been done.

- In almost all the websites, the list of CPIO, APIO had been displayed but the date of uploading/updation of the list/webpage has not been mentioned. Therefore, the displayed list is updated or not cannot be readily ascertained. In few cases, the information was cross checked through available directory of officers and employees and it was found that the PIO list was not updated.

- In almost all the website of Ministries, Departments and CPSEs, it was tough to find out the link of RTI as every website has its own scheme of displaying of links/information. In several websites like RVNL Ltd. and BEL Ltd., the researcher has to resort to Google search help to identify the requisite page.

- The Suo Moto disclosure manuals should be in an easy to understand format with precise information. In many website, a lot of information has been uploaded in the manuals making it redundant for the purpose of RTI. Like in Ministry of Mines website, the RTI Manuals consist of 80 pages and efforts required to extract relevant information from such vast data defeat the purpose of RTI Act itself.

- Many websites were simply uploading the office order for appointment of CPIO/APIO rather than displaying the names and contact address of current CPIO/APIO which potentially confuse the information seeker.

**Conclusion**

In line with the basic premise of making information easily accessible to common public, the link for RTI on different government website should be at a specific/common place with its size, manner of display need to be pre-fixed so that common public can easily access the requisite information.

The information under the suo moto disclosures should be periodically updated on the website. Further, the date of updation should also be mentioned alongwith the information so that the common public can get latest information. Especially the dynamic information like section 4(1)(b) ix, x and xvi of RTI Act should at least be updated with updation date mentioned alongwith.

There is an immediate need to sensitize the government organization for proper updation of information pertaining to monthly remuneration of officers and employees RTI 4(1)(b) x as proper and updated information was not available even in a single website during the above survey.

The different information required to be disclosed under section 4(1) (b) suo moto information should be mandatory and available under the suo moto link on the websites. If the information is displayed somewhere else on the website pages, then the link should be made available under suo moto information. Like in many cases, the directory of officers and employees was not available under suo moto information nor a link was provided.
The government should make/publish a manual for display/updation/clarification of information under RTI for all government organizations so that uniformity may be brought in and the RTI Act can be made more effective and beneficial through better implementation.

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Right to Information Act (India) (n.d.). [Available at: http://rti.gov.in/webactrti.htm]

## Appendices

### A. Ministry Website Survey

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<tr>
<th>Ministry Name</th>
<th>Corporate Affairs</th>
<th>Tribal Affairs</th>
<th>Ministry of Mines</th>
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<th>Updation Status</th>
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<th>Updation Status</th>
<th>Available (Yes/No)</th>
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<tr>
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<td>(xvi)</td>
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Relevant Website Page Link
- [http://www.dbtindia.nic.in/rti/](http://www.dbtindia.nic.in/rti/)
- [https://dpe.gov.in/rti/information-under-section](https://dpe.gov.in/rti/information-under-section)
- [https://www.indiapost.gov.in/VAS/Pages/RTI/RTI.aspx](https://www.indiapost.gov.in/VAS/Pages/RTI/RTI.aspx)

Suo Moto Disclosure Manual Availability
- Partial Information Available
- Partial Information Available
- Partial Information Available
- Partial Information Available

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Department Name

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<td>Department of Posts</td>
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<tr>
<td>Department of Fertilizers</td>
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C. CPSE Website Survey

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Unraveling ‘Smart’ Urbanization: Understanding Theories and the Concept

Gauri Kopardekar*

Abstract
Urbanization is an inevitable phenomenon. Urbanization is a complex process that involves different dimensions. It includes movement of people, change in occupational structure, change in behavioural pattern, social values and also is a matter of perception. The paper tries to unravel social, political and economic elements that together make urbanization as a multi-layered concept. In order to understand this complexity, the paper tries to focus on different demographic, social, political and economic theories of urbanization. Urbanization is closely related to industrial development and seen as an outcome of economic development. But urbanization in developing countries may show different patterns. In post-independent India, early urbanization has shown different leaning while in post liberalisation era, there are different trends of urbanization. Also the state has an important role to play as a facilitator of urbanization. The process of urbanisation has evolved a new reality with introduction of Smart Cities and other newer concepts like sustainable and network cities. This paper is an attempt to understand the discourse about ‘Smart' urbanization.

Keywords: Smart City, Theories of Urbanization, Trends of Urbanization, Urbanization

Introduction
Today’s world is centered around urban reality. Historical evidence suggests that urbanization process is inevitable and universal (Datta, 2006). According to United Nations, 54 per cent of the world population lives in urban areas. World Bank has reported that 96 percent of all urbanization by 2030 will occur in the developing world (Runde, 2015). India’s future is also urban. As per the Census, India’s urban population was 377 million in 2011 and has grown at 31% in the last decade. UN-backed report quotes India as on the “brink of an urban revolution” with its population in towns and cities expected to reach 600 million by 2031. The current trends and pattern of Urbanization reveal that urban growth is largely taking place on the fringe of cities, mostly in unplanned manner and is already imposing high costs (UN, 2014). Considering the inevitability of urban phenomenon, it is an attempt to understand the urbanization process and to review literature on different

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theories about urbanization and about relationship of urbanization and industrial
development. Also it is an effort of understanding how newer dimensions of
urbanization are evolving and newer concepts like ‘Smart Cities’ are taking
concrete shape.

Defining Urban and Urbanization

The term ‘Urban’ is very complex and has been defined in various ways. As the
term draws content from multiple disciplines and as it has its roots in diverse
backgrounds, it becomes an extensive and multi-layered phenomenon. The
concept of ‘urban’ is studied from different dimensions. The concept of ‘Urban’
has been defined mainly in demographic and sociological parlance. Also the term
‘Urban’ includes elements from social, economic, geographical, political and
administrative practices. It also is a process of structural change.

UN World Urbanization Report describes the process of urbanization, or “urban
transition”, as a shift in a population from one that is dispersed across small
rural settlements in which agriculture is the dominant economic activity towards
one where the population is concentrated in larger, dense urban settlements
characterized by industrial and service activities (UN, 2015).

Sage Encyclopedia of Social Theory defines urbanization as the process
whereby large number of people congregates and settles in an area, eventually
developing social institutions, such as businesses and government, to support
them. It observes that urban areas, or those pockets of people and institutions, are
generally characterised as relatively dense settlements of people. Furthermore, it is
claimed that they sometimes originate from the effort by authorities to consciously
concentrate on power, capital, or both at a particular site.

How the term ‘urban’ has been defined? Or what can be called as an ‘urban area’?
Demographically, the term ‘Urban’ focuses on the size and density of population
and nature of work of the majority of the adult males. The Census of India defines
a place as urban if (a) it has been accorded the official status of an urban area and
thus has an elected urban local body (Statutory towns), or (b) if it as an area having
a population of more than 5000 population, where more than 75% of the male
main workers are engaged in non-agricultural activities, and the density is greater
than 400 persons per sq. km (Census Towns). Also there are urban agglomerations
and outgrowths around urban areas (Census, 2011; Pradhan, 2013).

There are several aspects of urbanization leading to (a) the emergence of new
social relationships among people in cities and between people in cities and those
in villages through a process of change; (b) rise and fall of cities with change in
political order; (c) growth of cities based on new productive processes, that alter
the economic base of the city and (d) physical spread of cities with the infl ow of
migrants coming in search of means of livelihood and as well as a new way of
life. All these processes enrich by the influences from other parts of the world
(Ramachandran, 1995).

Urbanization can be said as a process of change. It is a process that leads to
movement of people, change in the form and changes in attitudes. Urbanization
refers not only to change of place but also change in behavior patterns, change
in the thinking, behavior and social values (Kopardekar, 1986). Cities are
economically dynamic places not only because of the agglomeration effects
commonly considered, but also because they are places where ideas spread and

49
people learn about new goods or new ways of doing things (Bhattacharya, 2002). Urbanization can be seen as an index of transformation from traditional rural economies to modern industrially developed ones.

Amitabh Kundu perceives urbanization as a multi-layered concept due to its scale, diversity and because of the nature of contestation. Hence, literature on forces, causes and process of urbanization is available in abundance. Scholars from different disciplines have studied the phenomenon of urbanization from different angles. For understanding this important idea, I have tried to understand different theories that bring out the essence of the concept.

While discussing the concept of ‘urban’, many theorists have discussed and explored the concept of city. City traces back its existence in ancient civilizations. City finds its existence in all the historical developmental perspective. A city can be seen as a complex structure. Cities have gained prominence in economic and developmental discourse. Different areas don’t show uniform urbanization levels and processes. However, cities have found their rightful place in the development agenda. Many a times, urban and city, both the terms have been used interchangeably. So, the paper tries to draw insights from the discussions that cover the concept of ‘urban’ as well as the concept of ‘city.’

**Demographic Changes Leading to Urbanization**

Political scientists as also sociologists focused more on patterns of rural life as compared to urban reality. Urban as a focal area came into social science discipline in 1960s, mainly as part of demographic studies in geography and also in planning studies.

Demographically, urbanization takes place when there is growth in population and change in occupational patterns. Kingsley Davis has mentioned three stages of urbanization. Initial stage is characterized by rural traditional society with predominance in agriculture and dispersed pattern of settlements. Stage two refers to acceleration stage where basic restructuring of the economy and investments in social overhead capitals including transportation, communication take place. Proportion of urban population gradually increases from 25% to 40%, 50%, 60% and so on. Third stage is known as terminal stage where urban population exceeds 70% or more. At this stage, level of urbanization remains more or less same or constant (Datta, 2006).

Population theories like Demographic Transition Theories show relationship between demographic evolution and industrialization. Industrially developed nations undergo four stages viz. (1) Preindustrial Societies having low population growth; (2) Early Industrialization with significant population growth; (3) Advanced Industrialization and Urbanization with very little population growth and lastly; (4) Post-industrialization with birth rates decline as more women are employed and raising children becomes more costly (Boundless). The demographic changes are carried out in an administrative system. The administrative and political factors often act as an initial stimulus for urban growth; which is then taken ahead by the growth of commercial and industrial activities.

**Social Theorization of Urbanization**

The classical theories of urban sociology have been derived from the works of European sociologists like Karl Marx, Tonnies, George Simmel, Max Weber and
those of American sociologists like Park Burgess, Louis Wirth and Redfield. For Tonnies, the great city, a metropolis is a paradigm of an inhuman social environment. The urban has been accepted as a frame of reference and the urban society as a specific mode of social organization that became the object of scientific study.

Marx and Engels viewed the concentration and misery of the mass of workers in the new urban agglomerations as a necessary stage in the creation of a revolutionary force. For them pauperization and material degradation was one aspect of urbanization, but equally important was the destruction of the social nexus of the traditional community and its replacement by the utilitarian world of the city (Jayapalan, 2002).

Urban Sociological Theories present Marxian view as macro-sociological perspective i.e. people in preindustrial, traditional societies were generic and were tribal beings. But the rise of a city was seen as a transition from barbarism to civilization. When people realized importance of political and economic freedom, they got engaged in productive specialization. This led to conflicts and problems of inequality (York University, 2007).

According to Marxist theory ‘urbanization is the ‘natural outcome of the development of the productive forces as well as the launch pad for sustaining that development.’ It rejects the rural and separates it from his understanding of the city. According to Marx, urbanization has ‘rescued a considerable part of population from the idiocy of rural life’. While 19th century capitalism was dominating the urban space, for Marxist theory, the ultimate point which urbanization would possibly reach is communism and the revolution of the proletarian classes. Marx describes it as the center of division of labor which enables industrial capitalism to reproduce (Ahmed, 2004 and Quizlet). Marxist theory focuses entirely on finance and industrial capital and interprets every conflict as a “class conflict” even though the primary battle in cities is between land-based growth coalitions trying to increase “rents” and neighborhoods that are trying to defend their use values (Domhoff, 2005).

‘Urban Sociology’ cites Sociologists from Tonnies to Wirth developed counter-theory to Marxist theories of development. Tonnies explained the impact of the market economy on traditional forms of social association; the implications of urbanization and the development of the state for the conduct of social life and the mechanisms of social solidarity in an individualized society. Simmel observed that the money economy of cities destroyed the social life. Weber and Wirth explained how mass urbanization abolished opportunities for political participation. Charles Booth and Rowntree threw light on the inhuman and debasing lifestyle of the city (Jayapalan, 2002).

Writings of Mills and Neo-Marxists like Marcuse and Fromm bring out how conditions of capitalist urbanization damage personality, destruct social involvement and lead to apathy and alienation. Max Weber developed his theory of city as a critique of metropolis. To Weber, metropolis is the paradigm of an inhuman, debasing social environment. Mass urbanization nullified opportunities for political participation, which was one of the crucial characteristics of the city. Weber gives a cumulative definition of the city in his ideal-type construct. He develops three perspectives on city viz.: (a) Sociological perspective: From the sociological perspective, “anonymity” is the defining criterion of city; (b) Economic perspective: To Weber, “market center” is central to his economic
definition. He develops economic typology of city: consumer city versus producer
city, industry city versus merchant city and admits that actual cities represent
mixed types and are classified by their predominant economic components. A city,
then, is always a market center. However, Weber underlines that not all settlements
in which trade organizations are practiced may be described as cities; (c) Political,
administrative and legal perspective: from economic definitions he turns to the
political and administrative conceptions of the city as a corporate body with a
given territory, having military control (Ahmed, 2004).

Weber describes a process in which the developments of the rational-legal
institutions that characterize the modern city enable the individual to be free from
the traditional groups and therefore develop his individuality. He emphasizes the
autonomy and separateness of the urban community (Ahmed, 2004).

Max Weber implies that the city is partially autonomous and the urban economic
policy is determined for inhabitants, not by them, Marx develops a similar critical
approach towards this uneven aspect of the city. For Marx, it is the domination of
bourgeoisie which “anti-democratizes” the city in Weberian notion. For Weber,
there is a clear cut distinction in the city between inhabitants and administrative-
political organizations. On the contrary, Marx argues that there are classes
struggling with each other and it’s the dominant class which makes use of political
organizations (Ahmed, 2004).

Louis Wirth elaborated a theory of urbanism as a way of life, analyzed the
impact of concentration of numbers on society’s culture, breakdown of family ties,
individualism and competitiveness, diversity of social commitment, anonymity,
utilitarianism, role segmentation and social instability (Patel & Deb, 2006).

**Political Framework for Analyzing Urban Development**

There are models of urban growth that show how cities grow and develop. Though these models provide structural changes and spatial growth, these are supplemented by political decision making. Political economy and policymaking framework focus on urbanization and policy making. There are perspectives on population and urbanization that bring out conflicting views that emphasizes the role of power, wealth and profit motive in development of urban areas. It also refers to the capitalism contributing to migration of rural inhabitants to cities.

Urban political economy focuses specifically on the relationship between the
“local state” (urban and suburban governments) and capital, both local and global. However, this relationship does not exist in a local vacuum; the behavior of cities, states, and other nations as well as the actions of national and international capital has profound impacts on this relationship (Keiser, 2006).

There are different post-war theories of urban politics analyzing the balance of
power inside the political structures of major cities and for discovering the identity
of decision-makers. These theories are based on the study of American cities. The
contending theories of city governance viz. “pluralist” and “regime” theories
presented competing models to describe urban government providing scope for
community participation (webatomics)

Robert Dahl’s 1961 “pluralist” study of New Haven politics proposed that elite
and special interest groups may have originally dominated the city power structure,
but continual reforms allowed for an increasingly pluralistic arrangement of
decision-making to include the public. Dahl’s theory of pluralism claims that the
democratic process allows for widespread participation in the governance of cities (webatomics).

The competing “regime” theory advanced by Floyd Hunter challenges Dahl’s pluralist ideas and argues that the elite always dominate the governance of cities. The regime theory advanced by Hunter in his study of Atlanta demonstrated that city officials depend upon the close relations with business leaders to maintain political power and to push forward their development projects. Hunter describes his study as “regime theory” because he focused on the hierarchies inside political regimes. Regime theory investigated urban development policy and urban political and economic restructuring (Horan, 1997).

**Economic Foundation of Urbanization**

Encyclopedia of Life support systems in its note on ‘Demography’ points out a theory of Self generated or endogenous urbanization. This suggests that urbanization requires two prerequisites viz. a. generation of surplus products that sustain people in non-agricultural activities, and b. achievement of level of social development that allows large communities to be socially viable and stable. In a demographic sense this theory focuses on rural-urban population shift as the foundation of urbanization, but it identifies industrialization as the basic driver behind the movement of rural population to urban in search of jobs.

Two theories emerged in the 1980s to explain the Urbanization through economic development. First idea was the “public choice” theory advanced by Paul Peterson in his 1981 book, City Limits. Peterson stated that urban politicians and governing regimes are subordinate to the overall economic principles that force cities to compete to capture new investment and capital.

In 1987 John Logan and Harvey Molotch published Urban Fortunes as the criticism of Peterson’s ideas. Urban Fortunes described the combination of entrepreneurs and urban politicians as ‘Growth Machine’, a powerful, pro-development network of business interests and local politicians. Molotch in 1976 studied urban growth in terms of urban land use. Urban growth machine theory suggests that pluralistic interests drive the objective of growth of a city. The growth is related to land that has been commoditized. Key premise of the theory is that the actors and organizations which are termed as local growth machines, all have an interest in local growth and its effects on land value and also compete for scarce mobile capital investment, while simultaneously attempting to gain the tacit support of local public for such urban growth (Rodgers, 2009).

Logan and Molotch argue that the close relationship between local politicians and the business world creates the growth machine and fuels its ability to overpower weaker forces attempting to influence the development process. Logan and Molotch also identified the costs and externalities created by the growth machine’s drive for economic development that were absent from Peterson’s theory. These theories are revolving around a focal point of how the people participate in the economic development process (Boundless). The growth machine theory observes urban growth is driven by a coalition of interest groups who all benefit from continuous growth and expansion. This theory pointed out that the land was not empty field but is associated with specific interests – commercial, sentimental, and psychological (Boundless).
Thomson school of Sociology explains that structural functionalist approach focusing on how industrialization as a social process changes the demographics and population growth. The development of urban areas is functional for societal development (go.vsb).

David Harvey focused on urbanization and understood the process as that of capital accumulation. He argues that land is a commodity and that it has peculiar qualities, necessary to human life, land is essential to capital accumulation and circulation. City growth is associated with changing investment strategies as capital moved from manufacturing to land development.

Urbanization is the essential outcome of the process of economic development. It involves a shift from the conventional production methods to technological encroachment in production and ancillary income generation engagements. The term urbanization is closely related to the process of industrialization. In the West the accelerated Urbanization was largely the result of industrialisation. Urbanization is related to an essential outcome of the process of economic development. It involves a shift from the conventional production methods to technological encroachment in production and ancillary income generation engagements (Mengi, 2015).

Similar view about Urbanization has been explained as it is a natural by-product and facilitator of industrial development. By shifting people out of subsistence agricultural production and into higher value-added activities that require increasing specialization and exchange, the process of Urbanization was seen as contributing to the economic transformation of societies (Fox, 2013).

It is understood that the acceleration of Urbanization generally takes place with corresponding acceleration of economic growth. Urbanization is promoted by (i) economies of scale in production particularly in manufacturing; (ii) the existence of information externalities; (iii) technology development, particularly in building and transportation technology; (iv) substitution of capital for land as made possible by technological developments (Mohan, 2006) Urban theorists suggested that spatially-defined regions helped to solidify and isolate class relations within the modern city, moving the middle class away from the urban core and into the privatized environment of the outer suburbs (Boundless, 2015).

In demographic and economic literature, urbanization is frequently used as an indicator of economic development. There is a very intricate relationship between urbanization and development. State of World Population 2009 shows that the more developed countries are all highly urbanized countries; the least developed countries are all low on urbanization. However, while the level of urbanization in the more developed countries has almost stabilized, in the less developed countries urbanization is occurring at a fast pace. A high rate of growth of urban population in the least developed countries shows that their urban populations are growing due to both natural increase (births – deaths) and rural to urban migration. Several of them are urbanizing at a rate which is higher than the rate at which the developed countries had urbanized.

Urbanization, industrialization and development are parallel processes. The changes are symmetrical. Agricultural society was a village society. Industrialization caused urbanization by providing better opportunities to work in the urban areas. Better employment situation, better wages and charm of city life attracted people to move towards cities and urbanization started. This is the reason why more developed countries which started urbanizing in 19th century
are the most urbanized countries today. Less developed countries, most of which were colonies of the developed countries did not experience industrialization and remained less urbanized. It was only in the second half of the twentieth century when they became independent, that they started building the infrastructure, providing various services to their population and developing industry. Then they started urbanizing (Boundless). On the other hand, cities promote development and industrialization. The reasons are associated with high density of population, economy of scale, culture that promotes creativity and innovation and makes the individual free from traditional institutions, provides greater participation in global processes, better transportation and communication facilities, better infrastructure and conditions that promote need for achievement.

‘A Brief Guide to Modernization Theory’ explains that Modernization is a process that involves industrialization, urbanization, rationalization, bureaucracy, mass consumption, and the adoption of democracy. During this process, pre-modern or traditional societies evolve into the contemporary Western societies (Thoughtco). Kasarda and Crenshaw observe that modernization approach asserts that concentration and megacity growth are a function of development, and that very large cities help a nation to concentrate its meager financial resources efficiently until such time as resources and growth allow deconcentration and regional spread (Kasarda & Crenshaw, 1991). The theory of Modernization had a wider set of assumptions. It states that technology is more important than social organization in shaping urbanization and pattern of modernization within and between developing and developed countries are likely to converge through cultural diffusion. Urban growth is driven by industrialization, technological progression, information penetration, cultural diffusion in developing countries. But the positive outcomes were challenged by depressing reality of economic and spatial inequality and other social problems. When the modernization theory failed to account for conditions and consequences for urbanization in developing countries, theoretical alternative of dependency and world-systems perspective came as an alternative thinking.

Urbanization in the Developing Countries

Global theories try to explain how urbanization must have taken place in the past or how it is taking place in contemporary situation. But these different frameworks cannot give a one-fits-all theoretical framework that can be made applicable to all the regions all the time. Also the theories of globalization do contribute towards urbanization. There are contrasting trends of urbanization in the West and the East and striking differences in the trends of urbanization in the developed and developing countries. A great deal of studies has been done on urbanization in the third world especially by Latin American scholars like Lubell in 1984, Mears in 1988, Bruckner in 1990, Kasarda & Crenshaw in 1991(Henderson, 2002). It is observed by these scholars that demographics alone does not explain the trends of urbanization, rather urbanization is both a manifestation of development processes and an important explanatory variable in most major theories of social and economic change in the Third World (Kasarda & Crenshaw, 1991).

The demographic theory of the urban transition explains that in the pre-transition period characterized by high birth and death rates and the urban population is sustained only through rural-to-urban migration. With improvements in public
health, death rates begin to decline; the urban population grows not only because of rural-to-urban migration, but also due to natural increase as well. In most regions, including in sub-Saharan Africa, the process of urbanization has tended to occur in tandem with the declining mortality and fertility rates that characterize the demographic transition, giving support to the notion that the urban transition is better explained as a demographic phenomenon than strictly as an economic one (UN, 2015).

Rapid urban growth in the less developed regions has occurred within a context of high population growth because of expansion of urban localities through the transformation of rural settlements into urban ones (UN, 2015).

Economic development, which has traditionally been viewed as the primary driving force behind urbanization, can accelerate the process but is not a necessary condition for it to occur. In sub-Saharan Africa’s urban transition, economic development has not been a sole cause of urbanization in the 1980s and 1990s (Fox, 2013). In Europe and Northern America, rapid urbanization over the late-nineteenth and twentieth century was observed to accompany the industrial revolution and rapid economic growth. While generally weaker association between urbanization, industrialization and economic development has been observed in many parts of Latin America and the Caribbean and Asia as well. Also urbanization has proceeded in many countries despite slow or even negative economic growth (UN (2013b), 2015).

Cities of developing world can’t be represented as they are misfit into western definitions and categories. But a new interest in the cities of developing world was aroused as some cities began to do better and exceed the economic growth of the West (Shaw, 2012). Cities were dominated by industry in urban transition of developed countries while in developing countries like India, service sector along with industry and also informal sector in the city economy has contributed (Mohanty, 2014).

**Urbanization in India and Role of the State**

The state in the third world countries has very important role to play and often initiates the growth process. Funds flow from the centre to state to develop metropolitan centres. The state has control over land prices, land ceiling and development of master plans. Political process influences the state interventions. State is controlled by the interests of the capitalist class and doesn’t work for the interest of all. State decisions are guided by the logic of capital accumulation. The state acts as an agent of capitalist class (Deb, 2006). Manuel Castells argues that the state plays a critical and central role in the organization of the four spheres that define advanced capitalist society: production, consumption, exchange and politics. The state mediates between various elements and engages in dialectical relationships with capitalist interests, elite groups. Theorizing urban means theorizing contemporary advanced capitalist society. (Patel, 2006)

It is observed that though the role of the state is diluted due to privatization, the state can’t remain aloof in urbanization process. The state agencies facilitate some development and growth. Vote-bank politics is connected to city growth. Unauthorized buildings and settlements outside the purview of planning are seen to get promises for regularization. Lack of proper land records and maps are responsible as no open spaces can be traced especially on the fringes. Land
regulations are so ambiguous that give the state greater discretionary powers and deciding legality of the land (Shaw, 2012).

Newly independent states in 1940s -50s followed the colonial legacy of centralization and state centric model superseding the local governments. In the post-war urban agenda primacy for rural development was given due to a concern for migration. In 1970s, national population planning policies for city development were adopted for population re-distribution and decentralization. Such policies overlooked economic forces behind urbanization. A new approach was adopted by paying attention to rising economic sectors drawing a city into mainstream of economic development (Harris, 2015).

Shaw observes that city expansion was largely ad-hoc and informal in India. Dual pattern of urban development was inherited by the post-colonial state. In early decades of independence, more new towns were created. City building process was a planned response by the authorities as also unplanned extension made by poor and middle classes to get rooted in the cities. Urban population and migratory population were absorbed in cities during 60s and 70s rather than expansion of city limits and inclusion of fringe areas. But there is a significant change since 1980s where urban population and urban areas are growing fast, especially the metros are expanding laterally. It is observed that smaller cities show population growth in the core while large metros are showing growth on the periphery. This also suggests that there is an increasing and more complex interaction with the surrounding rural areas and gradual changes in their land use and occupations, transforming them into semi-urban or ‘peri-urban’ area (Shaw, 2005).

Since the decades of 80’s, there are newly emerging patterns of urban growth in India. These trends reveal how cities and metros are growing outwards, how land use is getting changed. Since 1991, opening up of economy in India has stimulated the development of such cities and led to the creation of new hubs of urban growth with the growth of computer software, electronics and related sunrise sectors (Shaw, 1999). Also in post liberalization period, the urbanizing patterns show different elements. The process of globalization and increasing investments in various economic sectors has led to the significant growth in manufacturing activity as also decline in agriculture related employment opportunities. This resulted into densification of urban areas (Sivaramakrishnan, Kundu and Singh, 2005).

New industrial policies seek support of corporate leaders promoting public-private partnership in city development especially by investing in infrastructure development like airports, fly-over, ring railways, metro etc. Also the private platforms have been used as a vehicle of transformation of the city (Nair, 2006). Shaw observes that the investment coming in India and its uneven distribution has impact on the urban growth. The public sector has played a complementary role to the private investments as government investment has targeted areas favoured by the private sector. Also middle and upper middle income groups from large metro cities have been targeted as market by manufacturers of consumer products and services (Shaw, 1999).

**Evolving Urban Reality by Recognizing Newer Forms**

Urbanization being a complex process, involves the state for facilitation, however, urban growth and management have been rarely at the centre of development
planning in India (Sivaramakrishnan, 2011). However, in post liberalization era, the state has been compelled to focus on the ‘City’. As urbanization has taken place along with emergence of urban challenges, newer concepts for urban management like Smart city, Organic city, Green city, Inclusive city, Network city developed by James Heitzman (Nair, 2006), Natural city (Soni and Virmani, 2014) Sustainable city (Suri and Birch, 2014) and People-friendly city (Jha & Siddiqui, 2000) have emerged. Sustainable Cities Index 2015 developed by a private organization, Arcadis also focuses on the triple bottom-line approach (by John Elkington) of balancing economic, social and environmental needs of world’s leading cities. These concepts have evolved as a result of a growing awareness about different new and practicable solutions may be with the help of technological solutions.

According to Jha and Siddiqui, Indian cities are not only the engines of techno-economic growth, but also the crucibles of debate, discussion and discourse – a repository of national conscience and will. Hence, concerted efforts need to be taken to enhance the quality of life for the inhabitants (Jha & Siddiqui, 2000). The city should be an equitable space allotting formal place to the poor that can be done with the help of technology.

Soni & Virmani have equated a city with a self-regulating organism. According to the duo, a city should evolve as a Natural City which is able to manage itself and be self-sustaining, with a single energy input – like food for us and the sun for the earth. Also the city should be of optimal size which would be located near river flood plains ensuring natural water-landscape, integrating farming into urban area for cultivating fruits, vegetables and fodder. Their model of a natural city is for correcting the problems arising out of evasive urbanization (Soni & Virmani, 2014).

Suri and Birch have emphasized that due to growing urban spaces and urban inhabitants, India must show leadership, vision and genuine commitment to the Sustainable Cities and Human Settlements goals while building 100 Smart Cities (Suri & Birch, 2014). Cities can become sustainable if second rung cities and towns are developed with a greater zeal and by investing more in their infrastructure development. Such locations can be termed as sustainable as they may require lesser funds for development as compared to larger cities and also the development process reaches to the people at a lower cost.

The new urban discourse has necessitated concerted efforts for overcoming challenges of urbanization and for ensuring equity, inclusiveness and sustainable development of the urban reality around us.

**Smart City: The Evolving Urban Reality: Is It a ‘Smart’ Choice?**

In globalised era, newer concepts require no time to reach and become ‘fashionable’. ‘Smart’ city is such a new instrument for achieving economic development based on Western model, got acceptance. Definition of the concept of a Smart city is not universally accepted meaning the concept differs according to the context. But features of being ‘smart’ have been discussed in the literature on ‘Smart City’. ‘Smart’ is associated with use of technology, systematic networking, operational ease in day-to-day life in urban areas. Basically the term ‘city’ or the ‘urban’ itself brings out the essence of perception. City life is considered to be livable, full of facilities, providing economic opportunities, a sought-after life-style, a
destination to be achieved. Adding the adjective ‘Smart’ provided an added aura to the concept of city. Smart city is one that uses information technology to solve urban problems. Technology is seen to be the answer for efficient management of urban areas. Government of India projects ‘Smart cities as the instrument for building smart India’.

The literature on ‘Smart’ city focuses on decentralization and devolution of power, citizen engagement and participation, incentivization, use of ICT for allowing efficient allocation of energy and resources. It is the dream of Government of India to bring about Urban renaissance in India.

**Smart Cities Mission** was launched in 2015 by the Ministry of Urban Development, Government of India with an aim for an ‘Urban Renewal’. Smart City Mission is the flagship mission of Government of India that lays down the Urban transformation 2014-18 three-level strategy to take advantage of the opportunities presented by our cities. This mission has been introduced to address the issue of ease of living by an increased use of digital technology to improve the urban infrastructure and services. Under the mission, the Centre has allocated Rs 500 crore to each of the 100 cities in which, such an amount is matched with a grant of the same amount by the respective state governments. A total of 100 smart cities have been selected on the basis of their performance on the ‘Smart City Challenge’.

It was the first time that the Government of India selected a competitive base for the selection of cities. The initiative is split into two different categories (1.) Greenfield or new cities getting smart built since a large component of their infrastructure is yet to be developed and (2.) Brownfield or existing cities with well-established economic and social engines become smart by ensuring incremental improvements in existing infrastructure.

Smart city mission wishes to make 100 cities across the country into citizen-friendly and sustainable cities by improving on a dozen of matrices like transport, spatial planning, water supply, sewage and sanitation, solid waste management, storm water drainage, electricity, telephone and wi-fi connectivity, fire preparedness, educational infrastructure and healthcare. But in India all cities can not fit into a particular category due to wide differences of population size, physical and structural features, economic and social composition, political dynamics, and cultural complexities. This structural feature makes it difficult to have achievable benchmarks (Shaw, 2012).

The celebration of the government adopting such a drive has veiled other equally important concerns. Announcement of 100 smart cities can be seen as more of an electoral gimmick as it has helped the NDA government to bind the urban middle-class and convince the electorate that their urban aspirations are being taken care of. Majority of the cities selected are located along the major urban corridors (Bhide & Burte, 2015) so are on the cusp of change, so it becomes an easier job for the government to develop such cities having potential to become a satellite town by having Greenfield or Brownfield development. But such pushy appeals my conceal the possible fears of people getting displaced, large tracts of agriculture land getting converted into residential zones and other land uses which are golden eggs fetching good fortunes.

All such projects require a continuous funding for a longer period as gestation period for infrastructure development is a lengthier one. However, it is observed
that less funding has been allocated year on year for such a flagship scheme. With a special mention of Smart Cities, in 2014-15, Union Budget allocated Rs. 7,060 crore for smart cities however, it was cut down sharply to Rs. 143 crore in the 2015-16 Budget. Again in the 2016-17 Budget, the resource allocation got increased to Rs. 3,205 crore but now there was more focus on Atal Mission for Rejuvenation and Urban Transformation (AMRUT) scheme than the smart cities. 2017 Budget allocated Rs. 4,000 crores while 2018 Budget assigned Rs. 6,169 crores. In 2019, however there is a 7% hike as Rs. 6,600 crore have been allocated for the smart cities (Moneycontrol & Economic Times). Government of India estimates that urban India would require Rs. 39 lakh crore over next 20 years to achieve universal service delivery in its ever-growing urban areas (Gumber, 2015). Considering the declining financial outlays for a single mission of smart cities, it seems a challenge for achieving ‘smart urbanization.’

The vehicle that would ensure such transformation is considered to be the ‘Creative class’. This is an idea of entry and perpetuation of the elite in the name of creative class also such leadership revolves around the core and periphery dualism. Industry in general has sensed a big new market opening up (Burte, 2014). Information Technology and Real Estate Industry, in particular, have taken the lead as these sectors have sensed a huge business opportunity for them in the future (Bhide & Burte, 2015). IT sector may consider this as an opportunity to develop technological solutions, possibility of experimentation at one location that may get replicated at other hundreds of places while the real estate sector may benefit because of the excessive increase in land price.

Also the concern for inclusive and equal growth share for all the stakeholders may get marginalized as they don’t have voice and capacity for forwarding their interests. As there are no proper channels developed for people participation, it remains a myth. Also such thrust on creative class may undermine the role of elected Urban local bodies as also state governments going on a back foot. Once the room is created for public-private partnership, the governmental agencies are outweighed by the private interests.

Urban governance in India has been an area of concern as it is far from democratized. Informalisation of economy (Kundu & Mohanan, 2009 and Mohanty, 2014) has remained a feature of Indian urbanisation that is not taken care of in the smart discourse as also an entry to global capital through technology, investment and under the garb of development at local level handles the urban challenges high-handedly.

Smart cities cannot be claimed as the first step as earlier efforts of developing medium towns by introduction of scheme of Integrated Development of Small and Medium Towns (IDSMT) could not reap benefits. Jawaharlal Nehru National Urban Renewal Mission (JNNURM) was the first scheme launched by the Government of India in 2005 for improving urban life with Rs. one lakh crore outlay for renewal of 65 cities in India. It can be seen as a first step towards urban renewal, development of urban infrastructure on a national level. But it is observed that though the intentions were benevolent the optional and mandatory reforms were not completed as per the commitment (Gumber, 2015). This shows the lack of work-culture and zeal on the part of governmental agencies to fulfill the obligations in the right earnest.
Smart cities basically focus on making cities livable by employing smart technology. City is a structure comprising people. Figures are pouring on locations having wi-fi, bandwidth, emergency call boxes etc. however, there is a silence on number of public toilets and washrooms to be constructed for the residents. Also informal economy finds no place as an authentic stakeholder. People make the cities vibrant urban spaces but an excessive emphasis on technology may undermine the people, the real content of the cities. E-governance is the buzzword but the governance, when becomes more technology-driven, may not make the concept of smart urbanization people-friendly. Hence, the focus needs to be on building institutional, economic, social, physical infrastructure that would make the city livable (smart cities).

One can say that the idea of smart city is yet to be evolved fully. The urban ecosystem needs to be cultivated by not only providing a dreamy vision but should have reasonable assessment of the reality and employing proper measures for grooming such newer concepts. Smart urbanization is the need of the hour.

Urbanisation would become SMART when it is Stakeholder-driven, achieved through Managing and monitoring services to city dwellers, by Adapting to the changing needs of residents and not protecting the private interests alone, by Refraining from being selective and by becoming inclusive that Targets positive outcomes for all the categories of stakeholders.

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Untangling Public Sector Motivation from Public Service Motivation: Can the Government Office be Rejuvenated

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Abstract
High motivation for public sector jobs has not necessarily translated into high motivation for public service in India. Hence, we make a case to untangle public sector motivation from public service motivation. This is an exploratory article that analyses the scholarly discourse on public service motivation (PSM) to draw parallels as well as contrasts with the contextual realities in India. Further, it draws on Peter Senge's concept of leader's shared vision and cites examples where the leaders' shared vision has enhanced the spirit of services among the public sector employees and general public. This contributes towards the literature on PSM by bringing in voices from a society with “tough governance settings” that scholars find underrepresented in extant literature. It lends support to the call for the third wave of research in PSM that takes into account multiple incentives as motivators to work in the public sector.

Keywords: Public Administration, Public Service, Public Service Motivation

Introduction
More than 60% of India’s total workforce in the organized sector works in the public sector (Niti Aayog 2015). The Public Sector comprises establishments of Central Government, State Government, Quasi-Government (Central), Quasi-Government (State) and Local Bodies. A government job¹ is much sought after across all cadres of society. Despite opening up of the economy, the advent of the IT, BPO, BPES sector, and the spurt in the services sector, the attractiveness of public sector as an employer in India is so far unsurpassed.

There is almost an insane demand for government jobs among Indian job seekers – it is not uncommon to find even PhD holders applying for positions that require no more than basic reading and writing skills.

A sampling of news from leading news dailies in India provides a glimpse of the lure of taking up a government job (The figures in news are reported in lakhs.

1 lakh = 1,00,000) –

• Graduates, postgraduates and even PhD holders are among the 23 lakh people who responded to an advertisement seeking applications for 368 posts of peons in the Uttar Pradesh government secretariat. The minimum

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qualifications for a peon are school education and bicycle-riding skills and the job has a monthly salary of about Rs 16,000. (September 17, 2015 Hindustan Times)

- 34 PhD holders and 12,000 engineers are among applicants for a 4th grade government job advertised by the Madhya Pradesh government. The eligibility requirement for the job is 10th pass. (June 23, 2016, ZeeNews India)

- Over nine lakh aspirants, including those with PhD, post graduate and engineering degrees, have applied for the post of about 14,000 police constables in Madhya Pradesh. The minimum qualification for the post is Higher Secondary. Of the 9.24 lakh candidates, 1.19 lakh are graduates, 14,562 are post graduates, 9,629 engineers and 12 with Doctor of Philosophy (PhD), according to the data of Madhya Pradesh Professional Examination Board (MPPEB), which will conduct the examination. (June 26, 2016 Economic Times)

- In Uttar Pradesh, as many as five lakh aspirants, including graduates and post graduates, have applied for 3,275 posts of ‘safai karamchari’ (sweepers) in Kanpur Municipal Corporation. (Aug 9, 2016 Indian Express)

- In Uttar Pradesh, Municipal corporations across the state received 18 lakh applications for 40,000 sweepers. The Kanpur Municipal Corporation (KMC) alone was flooded with seven lakh applications against its 3,275 vacancies for safai karamcharis. A staggering five lakh of them were graduates and postgraduates...The prerequisites: should pass Class 8, know how to ride a bicycle and how to wield a broom. (September 2, 2016 Hindustan Times)

- Many MBAs, other post-graduates and BTechs are among the 1.10 lakh candidates braving the morning chill to take the practical examination of cleaning drains to bag jobs as contractual sweepers (safai karmcharis) with the Allahabad Municipal Corporation (AMC).

- The aspiring sweepers are competing for 119 vacancies in Allahabad and around 100 in every district across the state. The minimum qualification for the job is reading and writing abilities in Hindi. (Dec 9, 2016 Times of India)

- Graduates, postgraduates and even PhD holders are among the 25 lakh candidates who responded to an advertisement seeking applications for 6,000 Group D posts in the West Bengal government secretariat. The minimum qualification for the post is elementary school certificate and the age limit is 40. The job has a monthly salary of about Rs 16,200. (Jan 30, 2017 Times of India)

- Large number of Kashmiri youth flock for recruitment in army for the second straight day today, a large number of Kashmiri youth participated in a drive in Anantnag for recruitment in the army, significantly on a day when separatists had given a call for march to this district which was the epicentre of the ongoing unrest in the valley. Defying dictats from the separatists and militants for keeping away from the security forces, more than 12000 Kashmiri youth have registered online for the recruitment rally. (September 22, 2016 Economic Times)

The Indian society represents an interesting case study for analysing the attractiveness of employment in public sector. A closer look at the instances cited above shows that the lure of the Sarkaari Naukri, the government job, appears to exist across castes, religions, regions and social strata in the Indian society. In parts of the world where dignity of manual labour is respected, no job is considered beneath oneself. But caste conventions in India commonly afflict the masses and certain higher castes consider it menial to take up jobs of sweepers and sanitation...
workers. However, government posts frequently see applicants even from higher castes who are traditionally known to shun such jobs. In one instance, in response to Kanpur Municipal Corporation’s advertisement for 3265 sanitation workers, nearly half a million candidates applied and about 50% of them belonged to the upper castes.

The most ironical example is perhaps the one where overt anti-national stance and political ideology has also not held back next of kin of leaders of separatist groups from seeking employment in the government as shown in the sample below –

Syed Salahuddin, whom the United Stated has designated as a “global terrorist”, is the ‘supreme commander’ of Kashmiri militant outfit Hizb-ul-Mujahideen. His four sons and two daughters are employed in government jobs in the state. (http://indiatoday.intoday.in/story/hizbul-chief-syed-salahuddins-family-lives-cosy-life-in-kashmir/sources/1/713465.html)

Syed Ali Shah Geelani, one of the senior separatist leaders in Kashmir, is known to have used his “influence” to secure a government job for his grandson. His son was also working in a government department. (https://timesofindia.indiatimes.com/india/rules-bent-to-give-govt-job-to-geelanis-grandson-during-2016-kashmir-unrest/articleshow/57458650.cms)

The dash for public sector jobs in India would ordinarily appear to be the result of overall job scarcity in the society, an appreciation for the power and prestige that comes with being employed in the government and material benefits of pay, perks and pension.

One would have been inclined to believe that the zeal to seek public sector jobs is carried into the jobs as well to manifest as on-the-job performance and commitment to serve the public. And that this would lead to more productivity and better delivery of public services. But that doesn’t seem the case given the suboptimal state of delivery of public services in India (Muralidharan 2007). It is hard to be living in India and not have suffered the callousness of street-level bureaucrats – cops, patrolmen, clerks, tax auditors, line workers – these are the ones we as public frequently interact with while dealing with government agencies.

The high demand for public sector jobs does not seem to have resulted in high public service. Perhaps there is more to understanding the motivations for working in the public sector than meets the eye. And perhaps in the improved understanding are the possibilities to enhance good government and better provisioning of public services in India.

To understand the motivation to take up public sector jobs, one is inclined to turn to the scholarly literature. There has been an extensive international research on employment sector preference. Various theoretical approaches such as person – organization fit and the attraction-selection-attrition theoretical framework have been put forward (Wright & Pandey 2008). In relation to Public Sector, nearly last three decades of scholarly discourse purports Public Service Motivation (PSM) as the most popular and well recognized theory to understand the decision to join the Public Sector (Jin 2013).

The Present Image of Sarkari Daftar – Insights from Extant Literature

Think of a Sarkaari daftar², a government office, and the image that comes to
mind is that of an unflattering slow workplace, strewn with files and uninterested employees. If we were to capture the general perceptions about a public sector employee in India we are likely to have a sample such as below:

- Public employees are lazy, security seeking bureaucrats who are insensitive to the needs of the public they serve.
- Government jobs are safe havens for the lazy.
- Public employees are so secure in their jobs that they do not have to be concerned with putting forth an honest day’s effort.
- In government offices, people come to work late, take long breaks, leave early and generally do not work very hard or put forth much effort.
- Government employees are uncaring, inflexible in service provision, and generally inept in dealing with the public.
- Their actions are either inappropriate, incomplete, or untimely.

For those familiar with the state of public services and institutions in India, the above statements will not appear surprising. But what might be a surprising revelation is that the above statements were used to depict the public sector employees in USA. These are extracted from the scholarly discourse on the state of public administration in USA a few decades ago (Baldwin 1984; Baldwin 1987; Baldwin 1990; Buchanan 1975; Frank & Lewis 2004). It was an era marked with decline in public confidence in American institutions, particularly the civil service. The eroded image of public service and employees was of paramount concern to the public administration community (Baldwin 1984; Baldwin 1990).

**Reasons for People to Perform Public Service in Public Sector**

Scholars and practitioners in the quest to understand the reasons for public sector performance and perception, have compared the efficiencies of private sector with those (or lack thereof) in the public sector. Some scholars have investigated the effect of some of the classical characteristics of public sector such as red tape, multiplicity of goals and leadership turnover (Baldwin 1987) on perceived lack of employee motivation in the public sector. Over time, two streams of thought have developed that almost are two opposite ends of the spectrum.

One stream of scholars purports that working in public sector is nothing but business as usual – with the employees driven by self interest rather than any intrinsic motives. While recognizing the structural constraints that are unique to public sector organizations, various studies disputed the idea that these constraints were responsible for the below par motivation among the employees (Buchanan 1975). This thought eventually evolved into the Public Choice theory which dismantled the notion of “romantic man or political man” (Kelman 1987). The public choice theory, often alternatively referred to as “the economic theory of politics”, essentially applies the tools and methods of approach of economic theory to the political or government sector. Service ethic, it was said, was more of an aspiration than a reality. In essence, people act everywhere as they do in marketplace. The idea of Public Choice may have fetched one of the proponents, James Buchanan, the Noble Prize in 1986 but it also garnered its fair share of criticism.
Public Service Motivation

The other section of scholars, dissatisfied by the purely materialistic brush that was used to paint the public employees, continued to search for the elusive ingredient which they believed formed the motivational base of public service. The demoralizing effect of negative stereotyping of public employees was of grave concern for these scholars. Studies sought to debunk the stereotypes associated with the public sector employees and investigate their preference for higher pay versus preference for meaningful public service (Baldwin 1984; Baldwin 1987; Naff & Crum 1999). In a hard hitting rebuttal of Public Choice, Kelman (1987) talked of “Public Spirit” – a behaviour motivated by the desire to choose good public policy. Staats (1988) argued public service was more than an occupational category… “‘Public service’ is a concept, an attitude, a sense of duty – yes, even a sense of public morality”. Rainey (1982), while admitting that financial and other extrinsic rewards are highly valued by many public sector employees, argued that the sense of being involved in worthwhile public or social service was the greatest incentive for many public managers. He was the first to use the term public service motivation and recognize it as a multifaceted concept that needed to be assessed in-depth.

By the time Public Service Motivation (PSM) was identified as a construct and got its first definition in 1990, it had acquired wholly altruistic tones with the motives grounded in nationalism, loyalty to country, social equity, self sacrifice and “patriotism of benevolence”. PSM was defined as “an individual’s predisposition to respond to motives grounded primarily or uniquely in public institutions and organizations” (Perry & Wise 1990). As a multifaceted construct, PSM was deemed to have multiple dimensions – each dimension grounded in one of the three types of motives – rational, normative and affective.

The three main propositions put forth regarding PSM were –

• The greater an individual’s public service motivation, the more likely that the individual will seek membership in a public organization.
• In public organizations, public service motivation is positively related to individual performance.
• Public organizations that attract members with high levels of public service motivation are likely to be less dependent on utilitarian incentives to manage individual performance effectively.

Subsequently Perry (1996), developed a 24 item measurement scale that for the first time operationalised the concept of Public Service Motivation as a multi dimensional construct grounded in four dimensions corresponding to the three types of motives – attraction to public policy making (rational), commitment to public interest (norm based), compassion (affective) and self sacrifice (affective). In nearly last three decades of scholarly discourse, Public Service Motivation (PSM) has become the most popular and well recognized theory to understand the decision to join the Public Sector (Jin 2013).

It is noteworthy that all these motives, even the ones termed as rational, have very strong elements of pro-social or “others oriented” behaviour. The “real” rational motives of pay, power and prestige are conspicuously absent from the typology offered by Perry and Wise. The concept of PSM has its roots in intrinsic motivations, and has almost a wholly altruistic meaning.
However, most motives are neither purely altruistic nor purely self centred. The need to earn wages to subsist and to sustain one’s family is a fundamental motive to seek employment. It is a rational motive that need not be discounted. It might hold as much, if not more significance than altruism in motivating an individual to work in the public sector. And that was perhaps the most conspicuous exclusion from Perry & Wise’s (1990) assessment of motivational bases of public service.

Thus public service motivation may not be the strongest driving factor to seek work in the public sector. And therefore, the paper agrees with (Perry 2014) that consideration of multiple incentives is an essential next step in the third wave of research on public service motivation.

Exploring the Motivation to Join and the Motivation to Perform in a Government Job

In this section, the motivation to join the public sector and to perform once selected for the job are analysed in the light of the concept of PSM.

Motivation among Individuals to Join the Public Sector

The origins of PSM lie in the notion that public sector generally provides less appealing benefits than the private sector and to understand what it would take to motivate talented individuals to join the public sector (Naff 2011). PSM has largely been analysed in the context of developed, western countries with high human development indices, market economies and availability of employment opportunities across multiple sectors beyond the public sector. Despite the fear that the best and the brightest were not desirous of working in the government, United States as a developed nation has superior public service delivery record and has consistently fared well on the global corruption perception index (Transparency International 2017). Public sector employment is 14.6% of the total employment (Brock 2001).

In contrast, attracting job applicants to public sector does not seem difficult in Indian context. The ground reality in many countries like India which deal with corruption issues, extreme poverty, political instabilities and job scarcity are much different from those in their western counterparts. The motivation to join public sector in these countries is often purely due to extrinsic motivations rather than altruistic and pro-social factors. Given that in such countries, the tremendous motivation to work in the public sector has not translated into the motivation for public service, a very basic and pertinent question that arises is how different is public service motivation from public sector motivation.

The international comparative PSM research has mostly focussed on contrasting Anglo-American and western European settings (Van der Wal 2015). The growth in cross-national research on PSM has raised questions among scholars about the degree to which the theory and research developed in one country could contribute to the understanding of PSM in other countries. Various studies suggested that cultural differences were likely to affect PSM, not only in its conceptual and operational definitions but also in its prevalence, antecedents and outcomes (Kim et al. 2013). However, there are few studies on PSM in developing world where working in the public sector is often more lucrative than working in the private sector because of higher materialistic benefits, job security, prestige and power associated with government jobs.
Chen & Hsieh (2014) observe that external incentives can be the main reason for job selection in public sector in Taiwan. Barsoum (2015) finds that the strong preference for public sector jobs in Egypt is primarily due to extrinsic factors of job security and other benefits and that the preference is deeply ingrained in the culture and manifests in a “generation-held respect for public sector employment”. Hyder’s (2007) study in Pakistan and Muralidharan’s (2015) findings in India indicate such strong preference for government jobs among the youth in these countries that they waste several years attempting to get into government jobs without gaining either meaningful skills or work experience. It is likely that the socio-demographic factors, economic conditions, cultural values and the functional state of public sector institutions in non-western countries affect the PSM levels and more importantly, have a greater influence than PSM in influencing an individual to join the public sector.

India does not have a problem motivating its workforce to join the public sector. More than 60% of India’s total workforce in the organized sector works in the public sector (Niti Aayog 2015). At every level, government jobs are much in demand. For instance, every year, over 4 lakh candidates compete through the UPSC exams for less than 1000 positions in the elite civil services. The entry into the elite civil services and allied services is through a rigorous system of examinations and interviews that only those with above average calibre are expected to tackle. The tough competition to enter the civil services “makes getting into Harvard look like a walk in the park” (Pritchett 2009). Even class 4 job positions receive high volume of applications. It is common to find graduates, postgraduates and even PhD holders applying for posts of peons, sweepers and other grade 4 employees – positions that require no more than school education with basic reading and writing skills. (Sample data shown at the beginning of the paper).

One would expect that the zeal to join the public sector will translate into the zeal to perform on the job. However that doesn’t seem to be the case. Bribery is common and scams involving bungling of government money are coming to light at an alarming rate. The country ranks 81 in the Global Corruption Perception Index 2017. It is technically impossible for corruption to flourish without the involvement of politicians and bureaucrats (Pande & Jain 2014). Thus putting to test first proposition of Perry & Wise (1990) that individuals with greater PSM are more likely to work in the government because of the opportunities it offers to provide meaningful service.

The high demand for the limited jobs has led to widespread prevalence of corruption in recruiting for public sector jobs (Muralidharan 2015). The candidates are willing to pay to improve their chances and ensuing corruption often renders moot the notion of choosing the best candidate. Question papers of examinations that are held for selecting candidates are frequently sold before the exams as sampled below:

The question paper for the examination to appoint government clerks and assistants on January 29 and February 5 were leaked and had gone viral on social media. (http://www.thehindu.com/news/national/other-states/ias-officer-held-for-paper-leak/article17365943.ece)

Haryana Civil Services (judicial) selection exam paper leaked (https://timesofindia.indiatimes.com/city/chandigarh/judicial-officers-
selection-paper-leak-sit-files-chargesheet/articleshow/62387028.cms)
Uttar Pradesh Provincial Civil Services paper leaked on WhatsApp
IPS trainee who aced ethics caught cheating
An Indian Police Service (IPS) probationer whose high score in the ethics
paper of the 2014 UPSC exam helped him secure an all-India rank of 112
was ironically caught cheating in this year’s civil services (main) exam with
high-tech gadgets.

The unethical means used to secure a job in the public sector defy the idea of
altruistic motivational bases to join the public sector and are contradictory to the
spirit of public service. The paper is in agreement with Muralidharan (2015) that
the candidates appointed this way are likely to be negatively selected on intrinsic
motivation (Shleifer & Vishny 1993) and work less hard since they would have
paid for their jobs (Akerlof 1982) and would be more likely to want to recover
their upfront cost of their investment through corruption or shirking.

Motivating Employees to Perform in Public Sector
An earlier section in the paper highlighted the perceptions about public employees.
The analysis of the reasons for these perceptions has been predominantly carried
out in the western context. While the perceptions are similar to what are prevalent
in India today, beyond that there is little contextual similarity.

The poor state of public services delivery in India is widely recognized. The
weaknesses are apparent in almost every function of the state, including policing,
water and sanitation, public health, and education (Pritchett 2009; Muralidharan
2015; Muralidharan 2007).

A leading doctor of a government hospital who was interviewed had the following
to say about appointing “over-qualified” applicants as attendants/cleaning crew at
a government hospital,

> When the posts are advertised, there is deluge of applicants. There are post
  graduate degree holders applying for jobs that require them to clean the
  rooms, change the linen, cleanup the trash. They very well know the “job
  profile” when they apply. But once they are appointed, they refuse to do
  any of the work saying they are “Master Degree holders”; it is beneath
  them to do this kind of work. Many a time, they get the patients’ attendants
  and accompanying family members to do their work. With a secure job and
  strong unionism, they carry on with complete dereliction of duties. The
  senior doctors and staff often turn a blind eye – sometimes because they
do not want to get into trouble with them, and sometimes because they also
have their own skeletons to hide.

Similar glaring inefficiencies in service delivery in India have been revealed by
various studies and surveys. A study conducted by Karthik Muralidharan in 2003
(with co-authors from Harvard University and the World Bank) using repeated
surveys of a nationally-representative sample of over 3,000 government-run
schools and 1,500 primary health centers across India, revealed that on a typical
working day, 25 percent of teachers in government schools and 40 percent of
medical workers in government health clinics are absent from work.
…this is a bare minimum estimate of the problem, because in many cases providers are present but not actively working. For instance, while 25 percent of teachers were absent, another 25-30 percent of teachers on the rolls were in school but not teaching and so less than half of the teachers were engaged in teaching activity. Since salaries account for over 90 percent of the non-plan budget in education, nearly half the resources allocated to education are potentially being wasted. (Muralidharan 2007)

Pritchett (2009) posits that there is rampant absenteeism, indifference, incompetence and corruption in routine services such as driving license, primary health care and schools as well as sophisticated services like networked irrigation and groundwater management. They illustrate how attendance, effort and ethics are compromised even for routine services through three studies on attendance of nurses in Rajasthan, practices of individuals providing healthcare in Delhi and the process of procuring driving license in Delhi.

Evidently, despite a strong democracy and the policy making capability of the brightest minds in the country, the administrative apparatus in India has failed to effectively deliver public services to its citizens. The weak institutional environment seems to have absolved the street level bureaucrats of accountability.

Is It A Lost Cause or Can the Public Sector be Energized?

Studies of Indian culture and behaviour often yield inconsistent and contradictory findings (Sinha & Kanungo 1997).

How does one reconcile the contradictions of a booming economy and democracy with world class elite institutions and yet chaotic conditions in service provision of the even the most rudimentary types? …India is today a flailing state – a nation-state in which the head, that is the elite institutions at the national (and in some states) level remain sound and functional but that this head is no longer reliably connected via nerves and sinews to its own limbs. In many parts of India in many sectors, the everyday actions of the field level agents of the state – policemen, engineers, teachers, health workers – are increasingly beyond the control of the administration at the national or state level. (Pritchett 2009)

Given that PSM is generally closely linked to altruism and pro-social behaviour, and corruption has its roots in self serving behaviour, does it imply the people seeking public sector jobs in India begin with a higher level of PSM and are socialized into corruption permissiveness because of institutional and organizational mechanisms at play. Or does it imply that corruption in public sector is taken as a norm and hence those with low levels of PSM and high corruption permissiveness attitude are drawn towards working in public sector.

It is reasonable to assume that not all those taking up public sector jobs in India are driven by purely selfish motives. Because if that were the case, there would be total anarchy and mayhem. India wouldn’t be the vibrant democracy that it is – home to people – from nine religions, 3000 castes, 25000 sub-castes; speaking 122 major languages and 1531 other languages, bound together with one spirit – being Indian. When the definition of larger good has to encompass so many variables, the terms social justice, one of the base dimensions of PSM, can take on a whole new meaning. At the same time, it is fair to assume that not all who participate in government functioning are driven by altruistic motives. Because if that were the case, nearly 22% of population would not be poor with lower/no access to basic
services (The World Bank 2016) and the country wouldn’t have a dismal ranking on corruption index.

A motivated, willing and skilful workforce in the public sector is no doubt essential for the efficient and effective delivery of public services and implementation of public policy in a country. What can be done to cultivate PSM among the employees? How do their PSM levels change as they are socialized into the environmental culture?

One of the fundamental assumptions in PSM research is that PSM not only drives performance in the public sector but also has a greater incentivizing effect than utilitarian incentives. If true, this is in contradiction with the current stance of the government which has substantially worked on improving the pay packages of public sector employees since the sixth pay commission. However, leapfrogged pay packages that are better than private sector packages have not yielded any discernible change in the public service delivery for the common citizens. Seventh pay commission has introduced more utilitarian incentives such as Non Functional Upgrade (NFU) which, even in the words of members of the pay commission themselves, “completely buries the concept of merit based career progression and undermines considerations of efficiency and accountability” (Government of India 2015). The situation in many ways appears similar to the US federal government’s failed love affair with the merit pay in the 1990s when the Performance Management and Recognition System (PMRS) ended.

Secondly, red tape and multiplicity of goals are known to result in lower performance among public sector employees. If the employees experience discrepancy between their expectations of making meaningful contributions to the lofty aims that attracted them to the service and the organizational reality, it is likely to affect their PSM.

Perhaps it’s time the government takes cognizance of the concept of PSM as a distinctive factor for superior performance in the public sector. Perhaps it’s time to devise measures to foster PSM to achieve higher performance in public sector organizations.

**Leaders New Work – Building Shared Vision**

There is evidence that the PSM of public employees is a result of not only individual sociohistorical background but also the organizational environment in which the employees find themselves (Moynihan & Pandey 2007). Thus organizations can strive to foster PSM among the employees and subsequently achieve higher performance.

Despite growing evidence that individuals are motivated to make a difference in the lives of others and that such pro-social motivations positively influence employee performance, many efforts to reform human resource management, particularly in government organizations, have taken the opposite approach – focussing on increasing financial rewards and strengthening bureaucratic control systems. Such economic responses to managing employee behaviour in the public sector may actually have limited or even negative impacts on employee performance (Paarlberg & Lavigna 2010).

So how can organizations seek to foster service motivation? This section takes a leaf out of Peter Senge’s work (Senge 1990) on learning organizations to suggest...
motivating employees by acting on a shared vision. Senge’s work expresses an inherent faith in the human spirit and people’s capacity for caring for others.

“It is not that people only care about their own self interest – in fact, peoples’ values usually include dimensions that concern family, organization, community, and even the world.” (Senge 1990)

It becomes the leader’s role to build the vision that is shared by the employees across the organization. The vision is built, not dictated. It always begins with the personal visions of individual employees, who may not agree with the leader’s vision. What is needed is a genuine vision that elicits commitment in good times and bad, and has the power to bind an organization together. Peter Senge contends, “building shared vision fosters a commitment to the long term”. People who truly share a vision are connected and bound together by a common aspiration.

Leaders can foster motivation by inducing creative tension in the organization. Seeing the gap between where one is (current reality) and where one aspires to be (the vision) generates a creative tension to act. Leaders can harness the power of creative tension to move the organization towards its vision. Creative tension fosters intrinsic motivation.

There are examples where shared vision has inspired people in organizations as well as society at large to act in the interest of the larger good.

• In the 1960s, India used to depend on food imports from America under the PL-480 scheme. During the 1965 war with Pakistan, the then US President Lyndon B Johnson sent a tough missive demanding that India stop the war and warning that if India did not relent then the US would stop providing wheat to the country. Lal Bahadur Shastri, the erstwhile Indian prime minister had then appealed to the nation to skip a meal a day to tide over the crisis. However, he ensured that he first implemented the system in his own family before appealing to the country. Only when his children sustained the fast, did he turn to the nation. The next day Shastri addressed the nation on the All India Radio exhorting the people to skip one meal a day. “We may go hungry, but not bow before the US,” he had said. The response to the request from Shastri, was overwhelming as even restaurants and eateries shut down on Monday evenings to observe Shastri Vrat. Apart from the absolute honesty and probity through which he led his life, Shastri’s credibility came from the fact that he led by example and himself skipped a meal every week before he asked the same off the citizens of India. (DNA India 2015, Times of India 2015, The Pioneer 2013). Shastri’s appeal painted the picture of an India that did not need US Aid to survive if every citizen was willing to forgo a meal once a week. The vision of self-dependence that he shared with the populace, extolled them to act in accordance.

• When President Kennedy set the goal of "landing a man on the moon and returning him safely to the earth" by the end of 1960s, he said in his address to the joint sessions of congress in May 25th, 1961. "In a very real sense, it will not be one man going to the moon - if we make this judgement affirmatively, it will be an entire nation. For all of us must work to put him there". The stakeholders evidently internalised this vision and were inspired to worked towards fulfilling it. Everyone – right upto the janitor who had to keep the white room perfectly clean – was working together as part of a team to put the man on the moon (NASA 2000).
A Case Study of State Financial Corporation

Rejuvenating the “dead” State Financial Corporation – Presented below is the example of a state financial corporation and how the head of the organization used the power of “shared vision” to turn around the “dead” corporation afflicted with the culture of non-performance. For the sake of anonymity, the corporation will be called as XY State Financial Corporation (SFC). The data has been collected through interviews with the employees and MD of SFC.

Scenario

State Financial Corporations are set up with the mission to provide medium and long term credit to industrial undertaking which fall outside the normal activities of Commercial Banks. The principle objective behind setting of SFC, is to provide medium and long term financial assistance to small and medium enterprises, particularly when normal banking accommodation is not available. The SFCs play a significant role in development of 1st generation entrepreneurs and in catalyzing the economic growth of the State. The SFC had been set up with the vision to promote industry and service sector in the XY state by catering to the financial requirements of these sectors in the Medium, Small and Micro Scale (MSME). The corporation is funded by central financial agencies such as the Small Industries Development Bank of India (SIDBI). It then further loans out the money to assist in the growth of local ventures. XYSFC was doing well and was rated among the best ten SFCs in the country. However, the state of XY was hit by militancy which caused a severe breakdown of economy and affected industry, business as well as the social fabric of the state. This hit the working of the SFC very badly. It went on a downward spiral for nearly 8 years when it started being called as a “dead” corporation. The work culture was entirely missing as employees had no work because no one would visit the office for loans. At this juncture, Vijay was appointed as the new Managing Director (MD) of XYSFC.

Vijay was aware of the dismal state of affairs and as soon as he joined he set about understanding the underlying reasons. He found that:

• The corporation was in arrears in respect of statutory audit for 8 years. No AGM had been held during that time.
• Due to the impact of militancy on local economy, SFC was unable to recover outstanding amount from its debtors who themselves had suffered losses. There were a large number of defaulters who either did not have the means or the will to repay.
• The refinance facility provided by central agencies like SIDBI had been stopped because of non-payment of outstanding amount by the corporation. SFC practically had no funds making it a “zero finance corporation”.
• The main function for which the corporation was created – to give out loans to local ventures – was at a complete standstill. Loan seekers did not approach the SFC because there was a general feeling (perpetuated by idle/non-performing employees) that SFC had no funds available and thus had stopped sanctioning of loans.
With no inflow or outflow of funds, the working at SFC was almost at a standstill. Employees carried about a learned helplessness that the situation was an unresolvable deadlock. Typical of the government job, *Sarkaari Naukri*, culture, they were simply getting wages without real work.

The corporation had not seen any human resource rejuvenation efforts ever. The employees had been stagnating with little for them to look forward to. No promotions had been made in the last eighteen years.

The tragedy of a militancy afflicted state is that militancy hides in its garb many organizational vices. However, Vijay set about fixing the issues systematically. For the scope of this paper, we will focus on the employee motivation aspect and just briefly touch upon the overall changes. Suffice it to say that through rigorous discussions, negotiation, board proposals and measures such as one time settlement schemes (supported by central government), penalty waiver, etc, Vijay was able to generate funds for the corporation. The audit backlog was cleared and the books of the corporation was brought up-to-date. There was positive word spread among the business community that SFC was back into financing deserving candidates.

The employee grievances were also looked into. The office was shifted from a shabby building to a workplace with adequate basic amenities which had been lacking earlier. The district branches (spread across the various districts of the state) were upgraded and their heads were promoted to the status of Chief Managers. The promotions were effected down to the level of Junior assistants, creating a positive vibe all across the levels. The district branches were encouraged to manage their operations more autonomously. They were made responsible to earn their own revenue and pay their own salaries rather than depend on the head office for everything. This motivated the branch heads to recover outstanding loans from defaulters with rigor and also to sanction loans to deserving, good candidates.

The idleness and non-functional situation over eight years had also resulted in indiscipline among the employees. Vijay had to deal with some mischief mongers strictly by moving them out of the corporation. This sent a strong message that the new MD means business. While he was willing to work for the betterment of the employees and the general public, he wouldn’t take indiscipline lightly.

XYSFC had got some oxygen back into its system and it started to breathe and come back to life. The same set of people who had become non-workers during the last eight years were now driving the corporation forward. They felt responsible and accountable for the working of their departments. SFC was back in business!

**Analysis**

This scenario occurred in a state-owned corporation. The employees in the corporation are directly appointed and retire from the service. By all practical means, it is a secure government job. Government departments are often least quoted as examples for employee motivation. In that sense, the processes and changes that Vijay brought about in SFC to turnaround the corporation and motivate the employees are commendable. That he did this against the backdrop of militancy when the economy as well as social fabric of the state was in disarray, is all the more remarkable. While leading by example does make a difference to employee performance in public sector, we look at the theoretical underpinnings of the change in motivation levels of the corporation employees.
The biggest challenge in this scenario was to shake the organization out of its helplessness and bring in the belief that the organization and its people can and should work towards the mission for which SFC was created. The hopelessness can perhaps be judged from the fact that what was expected of the employees was not the achievement of some earth-shattering goals. Rather it was the basic performance of duties that had been neglected in the trouble torn state. However, even meeting the expectations of an assigned job was not an easy task under the circumstances. For instance, recovering the dues from defaulters came with heightened risk under the shadow of militancy. With funds running dry at XYSFC and no agency willing to bet on it any further, the corporation had almost become defunct.

In this situation, Vijay’s efforts was first aimed at providing the hygiene factors in the form of decent workplace premises, physical working conditions, infusion of funds to do the work SFC was created for and serving the larger community by enabling loans for new ventures. He emphasised that being idle and helpless was not an option. The corporation had a role to play in rebuilding the state that was struggling to return to normalcy. The employees’ individual goals to keep the work going, were essential for the corporation as a whole to survive and also be a force in the community.

Secondly, Vijay also worked on factors such as promotional opportunities, opportunities for growth, recognition, responsibility and achievement which the employees started finding intrinsically rewarding. These are the motivational factors which egged the employees to resuscitate the dying corporation.

Thirdly, it is well recognized that intentions – as articulated in terms of specific and seemingly difficulty goals – are a potent motivating force (Locke & Latham 2002). In this case, Vijay lead by example by undertaking the ambitious goal of generating funds for the corporation to give it some semblance of a working entity. The fund infusion brings the opportunity for the employees to contribute to the mission of the corporation – something that had been absent for many years. After a long time, the employees have been provided specific, tangible goals – to recover debt from the defaulters; to sanction loans to rightful candidates. While these might sound like regular job goals rather than challenging and difficult goals, these must be understood in the context of the working conditions in the state at the time. And in the situation, the goals did serve as motivators, because, they made people to compare their present capacity to perform with that required to succeed at the goal. Had the employees not risen up to the challenge, the corporation was likely to have slid back into the abyss that it had been in for eight years. And a next revival would have been more difficult as even the agencies that had agreed to support XYSFC this time would have lost confidence by then. For the employees, these goals were no ordinary goals but were the pathways to survival. SFC getting back into business also provided a sense of esteem and achievement to the employees of SFC as they started now had something to offer to the larger community. Previously, they had long felt demoralized about being associated with a “dead” corporation with no hopes of resuscitation. In our cultural context, motivation is essentially a social phenomenon and social recognition is a strong motivator to achieve goals.

By listening to the grievances of the employees, creating a career growth path for them and effecting promotions after eighteen long years, Vijay brought about
a feeling of being treated with dignity, concern and respect (interactional justice). Because of this, the employees were able to better identify with the vision and were willing to take on more responsibility (e.g., District offices responsible for their salaries and revenue) and work towards organizational goals. Vijay always emphasised to the employees how their work was contributing to State building. In meetings he would elaborate on the benefits to the citizens of the State if State develops and highlighted the contribution that SFC could make in the development of the State. He effectively used one of the components of Perry’s (1996) PSM model - a desire to serve the public interest: In other words, having a sense of obligation to society. His narrative about promoting SMEs in the State as a means of progress for all was found very appealing.

Research suggests the importance of encouraging public employees to feel that they are personally contributing to an organization that performs a valuable service. “It is important to communicate to them the centrality of their role in the organization and the real benefits that their contribution makes to the society – an organizational trait that is currently unfamiliar to many public employees” (Moynihan & Pandey 2007). For a leader, it means creating a clear, consistent picture about the organization’s goals and objectives. The goal may appear to be as routine as issuing a driving license. But what is important is to show the broader picture of why it cannot be dealt with casually. People are driven by the urge to be part of something larger than themselves, of being connected, of being generative.

An oft narrated inspiring story is one of Christopher Wren, one of the greatest English architects.

One day Christopher Wren was walking, unrecognised, through the men working on the building of St. Paul’s cathedral in London, which he designed.

“What are you doing?” he asked one of the workmen. The man replied, “I’m cutting a piece of stone.” As he walked, he asked the same question to another man, and the man replied, “I’m earning five shillings two pence a day.”

To a third man he addressed the same inquiry, and the man answered, “I am helping Sir Christopher Wren build a beautiful cathedral.”

That man shared Wren’s vision. He could see beyond the cutting of stone, beyond the earning of his daily wage, to the creation of a work of art – the building of a great cathedral.

Here’s the point: No matter how large or small the role, every individual is contributing to the larger story unfolding within the organisation. And when the entire team embraces such an attitude and belief system, incredible things happen. That is the power of shared vision. In the hands of Public sector managers, shared vision is powerful tool that can be used to nurture the motivation for public service. Public employees are more motivated to do their work when they have clearly understood and the challenging tasks that they feel are important and achievable (Wright 2007).
Conclusion

The concept of Public service motivation holds a universal appeal. Public services affect everyone in the society – whether one is a scholar, a manager, a CEO or a politician – all are citizens impacted by the delivery (or non-delivery) of public services. Whether a person drives a luxurious Ferrari or a budget sedan, they have to drive on the same road. A bad quality road acts as a status equalizer that will impact the experience of both the rich and the not-so-rich driver. The onus to provide a metalled, long lasting road lies with the government. The activities it undertakes to construct the road requires efforts from various levels of the government workforce, policy makers and street level bureaucrats. This requires a sound head (policy makers) and strong limbs (field level agents) that understand the vision that the head has crafted and work in-sync for the larger public good. A motivated, willing and skilful workforce in the public sector is no doubt essential for the efficient and effective delivery of public services and implementation of public policy in a country.

By citing the case study of a SFC, the paper contributes to the field of management by arguing that rallying employees towards public service by signalling them their contribution in nation and society building is an underutilized approach.

This paper contributes towards the literature on Public Service Motivation by bringing in voices from a society with “tough governance settings” that have been hitherto under represented (Van der Wal 2015; Barsoum 2015). Second, it presents the contrast between motivation for public service and the motivation of public sector jobs to make a case for deeper research to examine one of the core assumptions of PSM – that individuals with greater PSM are more likely to seek jobs in public sector. The dismal state of public services calls for deeper research to understand if the concept of service motivation has imploded under pressure from self interest and materialistic attitudes. Third, by giving examples of the effect of shared vision on work motivation of public sector employees, it provides support to the importance of inspiring employees by communicating to them how their work benefits the society. As presented in the paper, the strong motivation for working in public sector is not matched with the motivation for public service. It is proposed that the concepts of learning organizations be applied to fill this gap. More than monetary incentives, there is a need to bring in human values to workplace. One of the ways this can be done, is if the leaders build a shared vision across the organization. Shared vision helps to inspire employees with compelling, consistent, clear pictures of their work outcomes and can be used as means to increase the “service motivation” in public sector work. The spirit of Public service must be nurtured in public sector organisations. It cannot be assumed as pre-existing among the millions who line up to join the public sector workforce.

Finally, the paper makes a case to untangle public sector motivation from public service motivation. Public sector will not be able to provide employment for the teeming billions of the world. Governments of the world are striving to promote entrepreneurship with the intent to create jobs and promote innovation. However, to encourage people into entrepreneurship and employment with agencies other than public sector, will also require understanding how to reduce the lure for public sector jobs and channelize the youth into alternate employment instead
of wasting several years attempting to get into government jobs without gaining either meaningful skills or work experience. Nevertheless, if people were to work in public sector, they will have to be regularly reinforced with the value of public service and the importance of their contribution towards nation building.

Notes

1 The article uses the terms public sector and government interchangeably.

2 Sarkaari is government, Daftar is Office in Hindi. In India, organisations or offices where work is slow or inefficient are often synonymized with saying that the place works like a Sarkaari Daftar or government office. The use of this term in the paper title is meant to highlight the dire need of understanding what can be done to rejuvenate public sector working.

3 Pay Commission is set up by Government of India, and gives its recommendations regarding changes in salary structure of its employees. Since India’s Independence, seven pay commissions have been set up on a regular basis to review and make recommendations on the work and pay structure of all civil and military divisions of the Government of India.

4 All India Radio is India’s national broadcaster. It is one of the largest broadcasting organisations in the world in terms of the number of languages of broadcast, the spectrum of socio-economic and cultural diversity it serves - reaching nearly 92% of the country’s area and 99.19% of the total population (http://allindiaradio.gov.in/Default.aspx).

5 Vrat means Fast in Hindi. Shastri Vrat refers to the fast that the populace undertook in response to Lal Bahadur Shastri’s call.

6 Name Changed

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Management of ICT Enabled Services in Rural Areas Provided by Government Organizations through Maha E-Seva Kendra

Deepa R. Ingavale*

Abstract
The present research paper studies the application of ICT in government offices of rural areas of Kolhapur district. The main objective of implementation of e-governance project in rural areas is to provide the government facilities and services to the rural citizens at the village level. Implementing the ICT based project in rural areas is a challenging task. The data is collected from government officials and Village Level Entrepreneurs who operate the CSCs in rural areas of Kolhapur. Different issues related to Maha e-Seva project like managerial, organizational, personnel and infrastructure are discussed in the present study. As it is the study of e-governance it assesses the management of services provided to the citizens by the government. The various strategies employed by the government in implementing e-governance project for effective management of the services and facilities in rural areas are studied.

Keywords: Common Service Centers, E-Governance, Maha e-Seva Kendra, National e-Governance Plan

Introduction
Developments in the fields of Information and Communication Technology (ICT) has been taking place at a faster rate. With the developments in ICT, it has become important to use ICT by the government to make the governance more transparent and citizen centric. The use of ICT by the government for various purposes is called as e-governance. e-governance is used to improve the efficiency and effectiveness of public administration system by combining the Information and Communication Technology with multimedia to provide the efficient services to citizens as well as business organisations at affordable cost and in less time. E-governance has made it possible to improve the interaction between government and citizens (G2C), government and business organisations (G2B), and government to government (G2G) more responsive, convenient, transparent, and economical (World Bank, 2013).

Government is trying to unite e-government with their overall economic and social development objectives. Government is taking efforts to implement e-governance in rural areas to deliver services online in spite of several infrastructural problems which will help to alleviate poverty. Further efforts are made to use ICT applications which will help to reduce poverty, empower rural people and improve government responsiveness towards poor people who do not

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have access to government services (Bhatnagar, 2009). Initially, the e-governance activity started with offering information related to different programmes and schemes by the government departments to the public through its different websites. The scope has been further extended to getting dynamic information, making utility bills payment, receiving the government services like file taxes, obtain government certificates, licenses etc. This has enabled organisational revolution, simplicity of public services, speed of delivery, and increased the citizen participation (Prabhu, 2015). E-governance can help rural citizens in many ways such as reducing the cost of agricultural inputs, getting the better price for farm produce, receiving information about the various economic activities, issuing of certificates and licenses etc. Government organisations are using ICT in rural areas for increasing efficiency and improved delivery of services.

In India the Government of India established National Informatics Centre (NIC) as an apex institution at national level for catalyzing and coordinating all e-government activities and projects in government body at the central, state and district level. Similarly state governments have established their Information Technology Departments which are basically coordinating all the activities of e-governance projects within the state (Prabhu, 2015). National e-governance plan was formulated by Government of India in May 2006. Common Service Center (CSC) is a major e-governance initiative implemented on a large scale under the National Common Minimum Programme. Through CSCs e-governance is implemented in various areas like health, education, entertainment, telemedicine as well as other private services to provide various public services to the citizens. The public services provided through these CSCs include application forms, various government certificates and payment of utility bills like telephone, electricity and water bills, mobile television recharge (National e-Governance Plan).

Maharashtra state established Directorate of Information Technology (DIT) in 1998 to promote ICT and e-governance in the state. Maharashtra Government has implemented e-governance project in the various government offices to improve the delivery of government services in transparent manner. Government has adopted Public Private Partnership Model for the implementation of these projects. Private software companies provide the ICT infrastructure and the services at the different locations to cater the citizens. Amongst the various projects Maha e-Seva project is aimed to provide the services such as various online certificates to the people residing in Maharashtra. Maha e-Seva project is implemented in urban as well as in rural areas under the Revenue Department.

**Literature Review**

Patil (2010) conducted a study of progress, development and strategy of government organizations regarding e-governance in Maharashtra state with the special reference to Nasik district. The major findings of the study were that majority officers, heads and section officers of the government organisations were not technically sound and infrastructure available was not sufficient to implement e-governance successfully. The number of Common Service Centres was inadequate to meet the citizen’s demand; also there was a lack of coordination between SETU and other departments of government. Pani et al (2009) in their research on e-governance in Assam mentioned that the e-governance vision of Orissa was to
establish a government system to achieve more transparency and accountability in public services delivery to facilitate moral progress of all citizens. The major objectives of the study were to find out how e-governance helped in achieving good governance and to analyse beneficiaries of e-governance. From the study the researcher had concluded that e-governance can be more successful if participation of beneficiaries is more in e-government. Bhatnagar et al (2008) in his research paper on ‘Impact Assessment of e-Governance Projects: A Benchmark for the Future’ mentioned on an impact measurement of three state-level e-governance projects viz. vehicle registration, property registration, and land records by considering twelve states, and three national level projects executed by the Income Tax Department, the Ministry of Corporate Affairs, and Regional Passport Offices. According to their study Land Record computerisation project have delivered the majority of the benefits to the citizens among the three projects. MCA project implemented by the Ministry of Corporate Affairs has become successful in providing the benefits to the users the most among the national projects. Naik et al (2012) found in their research article on ‘Fostering inclusive growth through e-Governance Embedded Rural Telecenters (EGERT) in India’ that because of low e-literacy, low penetration of computer and internet connectivity the telecenters are the becoming the major locations to provide e-governance services to rural people. These telecenters can collect the data and manage the data of the various government initiatives which can be utilised for decision making by the policy makers. De (2006) conveyed a study on evaluation of e-Government Systems: project assessment vs. Development Assessment. The study was based on ae-governance project named as Bhoomi in the Karnataka State. He focused on the different aspects of project viz. economic viability, change management, process efficiency, costs reduction of e-Governancemechanism and benefits, and aspects related to user friendliness for potential and transparent transactions. Kumar et al (2010) has revealed the study on information system audit and framework for e-governance applications. He has studied the present scenario of e-governance, performance of e-governance and e-procurement services of government. He concluded that the e-governance procedure and polices paid crucial role in enhancing the role of basic structural procedure compared to computer system and Andhra Pradesh is the leading state which implements e-governance services to various areas and sectors.

Literature review shows that majority of the research had been conducted in the areas like progress and development of e-governance, impact analysis on the functioning of government offices, effectiveness of e-governance, etc. It makes clear that there is a relative lack of studies with interdisciplinary approach. The present study is interdisciplinary which deals with the use of ICT, governance and social aspects of its use. Besides, whenever new innovative projects are implemented, the need is to conduct studies to assess their success or failure. The present research study focuses on the key issues of e-governance i.e. its implementation, execution, employee involvement, problems in implementation.

**Objectives of the Study**

- To study the use of ICT in government offices in rural areas of Kolhapur with respect to Maha e-Seva Kendra.
• To assess the facilities and services provided to the rural communities.
• To study the management of ICT enabled services and facilities offered by government organizations in rural areas.
• To study the problems and challenges in implementing e Governance in rural areas of Kolhapur.

Hypotheses
For the present study, researcher has formulated the following alternative hypotheses:
• ICT enabled services in rural areas are effectively managed at organizational (district) level.
• Service processes are effectively managed with the help of ICT enabled services in rural areas.
• Training helps to provide ICT enabled services effectively in rural areas.
• Infrastructure is developed to provide ICT enabled services effectively in rural areas.

Scope and Limitations of the Study
Present research study is focused on the Kolhapur District of Maharashtra State. There are 12 tehsils in Kolhapur district rural areas of all 12 tehsils are considered for the study. From each tehsil 5 villages are selected to collect the data. The data is collected from government officials and Village Level Entrepreneurs who operate the Maha e-Seva Kendra. The study highlights on the various issues related to implementation of e-governance in rural areas. The issues covered are services and facilities provided to rural society through the Maha e-Seva Kendras, management of ICT enabled services, effect of IT use on the functioning of the government offices at the village level. Study does not focus on the technical aspects of the e-governance like software development, its implementation and maintenance. Urban areas are excluded from the study. Collection of the data from the rural areas was a challenging task because of the transportation problems. Also it was difficult to locate the sample respondents. However an attempt has been made to collect the data as per the sample design.

Research Methodology
The present study is related to the application of e-governance in rural areas in Kolhapur District. There are 12 Tehsils in Kolhapur district; the rural areas from these tehsils are taken for the research study. For the present research study Multi-stage sampling technique is used to select sample respondents. In the first stage all 12 tehsils are selected from Kolhapur District for the present research study. The number of Maha e-Seva Kendra is different in all the Tehsils so to maintain uniformity, in the second stage five Maha e-Seva Kendras located in the villages from each tehsil has been selected randomly. For the study of management practices of e-governance project primary data is collected from Village Level Entrepreneurs (VLEs) of the selected Maha e-SevaKendras and Tehsildars / Nayab Tehsildars of tehsils. Village Level Entrepreneurs of the selected Maha e-Seva Kendra are considered for research study, the sample size of VLEs is 56. Tehsildars / Nayab Tehsildars of all the twelve tehsils are taken for the study but researcher could get the data only from 11 Tehsildars/ Nayab Tehsildars.
Based on the review of literature relevant to e-governance, a questionnaire was designed to collect the necessary data from respondents. Two different sets of questionnaire were prepared to collect the data from VLEs and Tahsildar / Nayab Tahsildar. Nominal as well as interval scale is used depending upon the nature of questions.

The data was collected during the period of October 2016 to February 2018.

**E-Governance at Maha e-Seva Kendra**

Government has established Maha e-Seva Kendra to provide the government certificates viz. income certificate, nationality and domicile certificate, birth and death certificate, 7X12 certificate, caste certificate, non-creamy layer certificate etc. The number of Maha e-Seva Kendra for each tehsil depends on the population of that particular tehsil. Aim of this project is to make all government services available to the common man in his locality, through common service delivery outlet and to ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man. In Kolhapur district Maha e-Seva project was implemented on 15th August 2008 at a village Vadange in Karveer Tehsil. There are 343 approved Maha e-Seva Kendra out of which 155 centers are functioning in Kolhapur district. This project is partnered with Maha Online Ltd. Maha Online Ltd. appoints Village Level Entrepreneurs to provide the online services. VLEs are required to invest initially to provide necessary arrangement for setting up of office, computer and internet connectivity. Maha Online Ltd. provides the training to these VLEs. The VLE provides the government services through ‘Maha e-Seva Kendra’ to the society.

VLEs of Maha e-Seva Kendra fill the required online form and collect the documents from the citizens. Citizens make necessary payment at e-service center. These documents are sent to Tehasildar office for verification. After assessment of documents VLEs can generate online certificate at their respective centers.

*Structure for the implementation of e-governance at Maha e-Seva Kendra is as follows:*

```
Collector
  ↓
RDC (Nodal officer) – Monitors through Online Monitoring Tool (OMT)
  ↓
Regional Officer (PrantAdhikari)
  ↓
Tehasildar
  ↓
Nayab tehasildar
  ↓
Village Level Entrepreneur
```
Government services are provided through Maha e-Seva Kendra. Maha e-Seva Kendras are operated by the Village Level Entrepreneurs (VLEs) independently. Investments in premises, computer / laptop, printer, internet connection are done by the VLEs. Technical support related to software is provided by the Maha Online Ltd. Maha Online appoints district coordinators to provide the technical services to VLEs. Village Level Entrepreneurs are the service providers to the citizens. They are not the employees of the government; they function as the private operators. After appointment as VLE, they register through Maha Online and their login is created on web portal. There is a prepaid system where VLEs are required to recharge through their login. After recharge they can provide the services to the citizens through their login.

**Analysis and Interpretation**

Primary data is analysed by using the statistical techniques and presented by using tables and graphs. The data is analysed in two sub parts – in first part data collected from officers is analysed and in the second part data of VLEs is analysed.

Cronbach’s Alpha Reliability test was conducted to test the reliability of the scale.

**Table-1: Reliability statistics of pilot study**

<table>
<thead>
<tr>
<th>Sample Population</th>
<th>No. of Items</th>
<th>Cronbach’s Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Officers</td>
<td>9</td>
<td>0.878</td>
</tr>
<tr>
<td>VLEs</td>
<td>20</td>
<td>0.913</td>
</tr>
</tbody>
</table>

It can be seen from the above table that Cronbach’s Alpha for all three data set is more than 0.7 therefore the questionnaire is administered for the further research.

**Present Situation of Maha e-Seva Kendra**

Table-2 shows the present situation of Maha e-Seva Kendra. The data is collected from officers / Tehsildars / NayabTehsildars.

**Table-2: Present Situation of Maha e-Seva Kendra**

<table>
<thead>
<tr>
<th>Present Situation</th>
<th>Responses</th>
<th>No. of respondents</th>
<th>Percentage of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sufficient Number of Maha e-Seva Kendra are functioning in the area to provide government services to the citizens</td>
<td>Yes</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>Overloading of work at a specific Maha e-Seva Kendra</td>
<td>Yes</td>
<td>6</td>
<td>54.5</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>5</td>
<td>45.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>11</td>
<td>100.0</td>
</tr>
<tr>
<td>Demand for government services is high during a particular period of the year</td>
<td>Yes</td>
<td>10</td>
<td>90.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>1</td>
<td>9.1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>11</td>
<td>100.0</td>
</tr>
<tr>
<td>Certificates are issued to citizens carrying digital signature</td>
<td>Yes</td>
<td>11</td>
<td>100</td>
</tr>
<tr>
<td>Financial assistance is provided from the state level for this project</td>
<td>Yes</td>
<td>8</td>
<td>72.7</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3</td>
<td>27.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>11</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table-2 shows that 100% respondents mentioned that there is sufficient Number of Maha e-Seva Kendra are functioning in the area to provide government services to the citizens. According to 54.5% officers there is an overloading of work at a specific Maha e-Seva Kendra because the population located in these areas is more and the demand for government services is also more so it leads to overloading of work. As per 45.5% respondents there is no overloading of work because the existing Maha e-Seva Kendra can provide the services to the citizens residing in these areas. According to 90.9% officers, demand for government services high during a particular period of the year. The demand is more during the May to August month as during these months documents are required for educational purposes. All officers agreed that certificates are issued to citizens carrying digital signature so that there will be no fraud because documents can be verified on the website of Maha Online and documents can be issued online to citizens which will save time and cost. 72.7% respondents mentioned that financial assistance is provided from state level to develop infrastructure at nodal office.

**Functioning of Maha e-Seva Kendra**

**Table-3: Details Regarding the Functioning of Maha e-Seva Kendra.**

<table>
<thead>
<tr>
<th>Parameters</th>
<th>No. of respondents</th>
<th>% of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment made in Maha e-Seva Kendra</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rs. 50,000 to 100,000</td>
<td>18</td>
<td>32.1</td>
</tr>
<tr>
<td>Rs. 116,000 to 120,000</td>
<td>3</td>
<td>5.4</td>
</tr>
<tr>
<td>Rs. 121,000 to 125,000</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td>Rs. 125,000 to 130,000</td>
<td>2</td>
<td>3.6</td>
</tr>
<tr>
<td>Rs. 131,000 to 135,000</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td>Rs. 136,000 to 140,000</td>
<td>2</td>
<td>3.6</td>
</tr>
<tr>
<td>Rs. 146,000 to 150,000</td>
<td>6</td>
<td>10.7</td>
</tr>
<tr>
<td>Above Rs. 200,000</td>
<td>20</td>
<td>35.7</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Ownership of the premises of the Maha e-Seva Kendra</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Owned</td>
<td>12</td>
<td>21.4</td>
</tr>
<tr>
<td>Rented</td>
<td>44</td>
<td>78.6</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Rent (cost) paid for premises</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>15</td>
<td>26.8</td>
</tr>
<tr>
<td>Rs. 500-1000</td>
<td>13</td>
<td>23.2</td>
</tr>
<tr>
<td>Rs. 1100-1500</td>
<td>12</td>
<td>21.4</td>
</tr>
<tr>
<td>Rs. 1600-2000</td>
<td>2</td>
<td>3.6</td>
</tr>
<tr>
<td>Above Rs. 2000</td>
<td>14</td>
<td>25.0</td>
</tr>
<tr>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table-3 shows that 32.1% VLEs have invested Rs. 50,000 to Rs. 100,000 in setting up Maha e-Seva Kendra. They have basic facilities like computer, printer and internet connection. 35.7% and 10.7% VLEs have other facilities in the Maha e-Seva Kendra like laptop, inverter, biometric machine, internet dongle, photo copy machine, lamination machine etc. Therefore their investment is higher which ranges from Rs. 146,000 to Rs. 150,000 and even in some cases more than Rs. 200,000.

It can be interpreted that 21.4% respondents owned the premises of Maha e-Seva Kendra whereas 78.6% respondents are having the premises on rent. Majority of them are setting up their business first time, they don't have owned premises.
It also shows that 26.8% respondents have not responded to the question as they don’t pay rent or there is no cost. 23.2% and 21.4% VLEs are paying Rs. 500 to 1000 and Rs. 1100 – 1500 rent. 25% VLEs are paying above Rs. 2000 as rent of premises which adds to their cost.

**Technical Facilities Available at Maha e-Seva Kendra and Support Provided to VLEs**

Table-4 shows the various technical facilities available at Maha e-Seva Kendra and support provided to VLEs by the Maha Online and District collector office –

**Table-4: Facilities Available at Maha e-Seva Kendra**

<table>
<thead>
<tr>
<th>Facilities Available at Maha e-Seva Kendra</th>
<th>Responses</th>
<th>No. of Respondents</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Availability of computer</td>
<td>Yes</td>
<td>56</td>
<td>100</td>
</tr>
<tr>
<td>Availability of printer</td>
<td>Yes</td>
<td>56</td>
<td>100</td>
</tr>
<tr>
<td>Availability of Laptop</td>
<td>Yes</td>
<td>34</td>
<td>60.7</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>22</td>
<td>39.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Availability of Internet</td>
<td>Yes</td>
<td>52</td>
<td>92.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Availability of Other Technical facilities</td>
<td>No</td>
<td>28</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>Additional facility</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Photo copy Machine</td>
<td>12</td>
<td>21.4</td>
</tr>
<tr>
<td></td>
<td>Lamination Machine</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>Scanner</td>
<td>8</td>
<td>14.3</td>
</tr>
<tr>
<td></td>
<td>POS</td>
<td>3</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>PVC printer</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Alternate source of electricity supply is available if electricity supply gets interrupted</td>
<td>Yes</td>
<td>38</td>
<td>67.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>18</td>
<td>32.1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Alternate source of internet connection available if there is any problem in internet connectivity</td>
<td>Yes</td>
<td>34</td>
<td>60.7</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>22</td>
<td>39.3</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Number of employees working in the maha e-Seva Kendra</td>
<td>1-2</td>
<td>46</td>
<td>82.1</td>
</tr>
<tr>
<td></td>
<td>3-4</td>
<td>7</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>5-6</td>
<td>2</td>
<td>3.6</td>
</tr>
<tr>
<td></td>
<td>More than 6</td>
<td>1</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Technical assistance provided by maha online Ltd. is sufficient</td>
<td>Yes</td>
<td>49</td>
<td>87.5</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>7</td>
<td>12.5</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Training received for operating the software/providing the services</td>
<td>Yes</td>
<td>53</td>
<td>94.6</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Training regarding the documentation is provided.</td>
<td>Yes</td>
<td>52</td>
<td>92.9</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>4</td>
<td>7.1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
<tr>
<td>Training helps to provide the services to the citizens through e-governance</td>
<td>Yes</td>
<td>53</td>
<td>94.6</td>
</tr>
<tr>
<td></td>
<td>No</td>
<td>3</td>
<td>5.4</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>56</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Table-4 shows that in all Maha e-Seva Kendras computers and printers are available. In 60.7% Maha e-Seva Kendras along with computers laptops are also available where the population is more to provide the services at faster rate. In 92.9% Maha e-Seva Kendra broad band internet connection is available whereas in 8.1% Kendra broad band internet connection is not available as these are located in remote areas. They use internet dongle, smart phone for internet connection. 50% Maha e-Seva Kendra does not have other technical facilities. 21.4% and 14.3% Maha e-Seva Kendra have photo copy machine and scanner to provide the other services to citizens. According to 67.9% respondents’ alternate source of electricity supply is available if electricity supply gets interrupted. Back up facility like inverter, generator is available. 39.3% respondents mentioned that alternate source of internet connection is not available in case of problems related to internet connectivity. This creates the problem in providing the services and certificates to the citizens in time. According to 60.7% respondents, alternate source of internet used by them is smart phone, internet dongle. 82.1% respondents said that the number of employees working in Maha e-Seva Kendra is 1 to 2. As the services are provided through online platform, 1 to 2 employees can provide the services to the citizens. 87.5% respondents mentioned that technical assistance related to hardware, software is provided by Maha Online Ltd. 94.6% and 92.9% respondents mentioned that training has been given to them for operating the software and providing the services regarding the documentation respectively for the effective delivery of the services. According to 94.6% respondents, training helps to provide the services to the citizens through e-governance platform. 46.4% respondents face difficulties like delay in getting certificates from Tehsil office, non-availability of the required documents, local level politics etc. in operating the Maha e-Seva Kendra. According to 91.1% respondents there is a co-ordination between Maha Online Ltd. & District Administration. The coordinators have been appointed by the Maha Online Ltd. who are working as the liaison officer between Maha e-Seva Kendra / Maha Online Ltd. and District Administration. 96.4% VLEs mentioned that e-governance helps them to provide better services to the citizens.

Other Services Provided by Maha e-Seva Kendra

Table-5 shows the other services provided by Maha e-Seva Kendra and training provided to VLE.
Table-5 shows that apart from the government services, other services are provided to the citizens. 94.6% Maha e-Seva Kendra accepts the electricity bill payments from citizens. 71.4% Maha e-Seva Kendra provide all types of mobile/DTH/Data card recharge facility. 26.8% Maha e-Seva Kendra provide the payment facility of life insurance premium, At 55.4% Maha e-Seva Kendra filling of online exam application form is also available. Other services include online application for PAN Card, Ration Card, Issue of Bond, and Affidavit.

Issues Related to Service Delivery, Infrastructure and Technical Facilities

Table-6 shows the various issues related to Service Delivery, Infrastructure and Technical Facilities available at Maha e-Seva Kendra.

Table-6: Issues Related to Service Delivery, Infrastructure and Technical Facilities

<table>
<thead>
<tr>
<th>Statement Related Service Delivery, Infrastructure and Technical Facilities</th>
<th>Mean Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>This venture has provided you an opportunity in establishing yourself as an entrepreneur in a profitable manner</td>
<td>4.0000</td>
</tr>
<tr>
<td>e-Governance has increased the speed of delivery of services</td>
<td>4.3571</td>
</tr>
<tr>
<td>e-Governance has increased the ease of access to services</td>
<td>4.3393</td>
</tr>
<tr>
<td>It has increased fast document handling</td>
<td>4.3929</td>
</tr>
<tr>
<td>It has reduced paper work</td>
<td>4.0714</td>
</tr>
<tr>
<td>Transparency has been increased</td>
<td>4.3750</td>
</tr>
<tr>
<td>It has helped to increase revenue</td>
<td>4.2679</td>
</tr>
<tr>
<td>E-governance has increased quality of services</td>
<td>4.5179</td>
</tr>
<tr>
<td>Sufficient hardware and equipment are available</td>
<td>4.3750</td>
</tr>
<tr>
<td>Sufficient space is available at center</td>
<td>4.2321</td>
</tr>
<tr>
<td>There is continuous electricity Supply</td>
<td>4.2143</td>
</tr>
<tr>
<td>High speed internet facility is available</td>
<td>4.0000</td>
</tr>
<tr>
<td>The application software used is user friendly</td>
<td>3.6964</td>
</tr>
<tr>
<td>The application software is flexible to add new functionalities</td>
<td>4.1786</td>
</tr>
<tr>
<td>The application software is error free</td>
<td>4.2679</td>
</tr>
<tr>
<td>All civic services are integrated &amp; embedded</td>
<td>3.4464</td>
</tr>
<tr>
<td>Online application and back office application are integrated</td>
<td>3.8750</td>
</tr>
<tr>
<td>High speed data transfer facilities are available</td>
<td>4.2143</td>
</tr>
<tr>
<td>It combines data from multiple source and gathers that information to achieve inference</td>
<td>4.0714</td>
</tr>
</tbody>
</table>
Table-6 shows that mean value of the majority statements is more than 4.0 which means that Village Level Entrepreneurs have positively agreed regarding the various aspects of Service Delivery, Infrastructure and Technical Facilities.

**Hypothesis Testing**

For the present study 4 hypotheses are formulated. Hypotheses are tested by using techniques like Z-test, One sample T Test.

**Alternate Hypothesis H1: ICT enabled services in rural areas are effectively managed at organizational (district) level**

To test this hypothesis the data is collected from officers (Tehsildars / Nayab Tehsildars) by formulating 8 statements related to the status of e-governance implementation at district headquarter i.e. collector office. The hypothesis is tested with Z test.

$H_1: p > 0.6$

$H_0: p < 0.6$

Table-7 shows the Z value regarding the management of ICT enabled services at organizational level.

**Table-7: Z Value Regarding the Management of ICT Enabled Services at Organizational Level**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>Z Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>e-governance has increased clarity in decision making process at local level</td>
<td>2.1</td>
</tr>
<tr>
<td>2</td>
<td>Required support is provided from district level authorities</td>
<td>2.1</td>
</tr>
</tbody>
</table>
| 3       | The responsibilities regarding e-governance are properly allocated at different level | 1.66 | H1: p > 0.6
| 4       | Guidelines are provided to VLEs regarding functioning of center             | 1.66    |
| 5       | Guidelines are provided to the other clerical staff with respect to the e-governance | 1.18 | H0: p < 0.6
| 6       | Assessment of quality standards of e-governance is done at regular intervals | 1.66    |
| 7       | There is a co-ordination among the local, state and central e-governance initiatives | 1.66 |

Source: Compiled by researcher

The hypotheses is tested at 5% level of significance. The critical value of Z 0.05 = 1.64.

To test the hypothesis ‘ICT enabled services in rural areas are effectively managed at organizational (district) level’, 7 sub hypotheses are formulated which are related to the implementation of e-governance at district level. Z test is applied for these 7 sub-hypotheses. Z value of 6 sub-hypotheses are above 1.64 therefore hypotheses is accepted. So it can be concluded that the hypothesis ‘ICT enabled services in rural areas are effectively managed at organizational (district) level.’ is accepted.
Alternate Hypothesis H2: Service processes are effectively managed with the help of ICT enabled services in rural areas.

The hypothesis is tested by using One Sample t Test. The data is collected from officers using five point likert scale. 7 statements are formulated to collect the data related to service process from officers (Tehsildars / Nayab Tehsildars)

Table-8 shows One-Sample Statistics –

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E-governance has increased the speed of delivery of services</td>
<td>11</td>
<td>4.5455</td>
<td>0.52223</td>
<td>0.15746</td>
</tr>
<tr>
<td>2</td>
<td>E-governance has increased the ease of access to services</td>
<td>11</td>
<td>4.4545</td>
<td>0.68755</td>
<td>0.20730</td>
</tr>
<tr>
<td>3</td>
<td>It has increased fast document handling</td>
<td>11</td>
<td>4.3636</td>
<td>0.92442</td>
<td>0.27872</td>
</tr>
<tr>
<td>4</td>
<td>It has reduced paper work</td>
<td>11</td>
<td>3.6364</td>
<td>1.36182</td>
<td>0.41060</td>
</tr>
<tr>
<td>5</td>
<td>Transparency has been increased</td>
<td>11</td>
<td>4.5455</td>
<td>0.52223</td>
<td>0.15746</td>
</tr>
<tr>
<td>6</td>
<td>E-governance has increased accountability.</td>
<td>11</td>
<td>4.6364</td>
<td>0.50452</td>
<td>0.15212</td>
</tr>
<tr>
<td>7</td>
<td>E-governance has eliminated agents.</td>
<td>11</td>
<td>4.2727</td>
<td>1.00905</td>
<td>0.30424</td>
</tr>
</tbody>
</table>

Source: Compiled by researcher

Table-8 shows that mean value of the statement related to increased speed of service delivery, ease of access, fast document handling, increased transparency, accountability, and elimination of agents is above 4 which denote that the respondents agreed that e-governance leads to manage service processes efficiently. Mean value of the statement ‘e-governance has reduced paper work’ to 3.6364 which shows that respondents are neither agree nor disagree with the statement.

Table-9 shows One Sample Test.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>T</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>E-governance has increased the speed of delivery of services</td>
<td>3.464</td>
<td>10</td>
<td>0.006</td>
<td>0.54545</td>
<td>0.1946 to 0.8963</td>
</tr>
<tr>
<td>2</td>
<td>E-governance has increased the ease of access to services</td>
<td>2.193</td>
<td>10</td>
<td>0.053</td>
<td>0.45455</td>
<td>-0.0074 to 0.9164</td>
</tr>
<tr>
<td>3</td>
<td>It has increased fast document handling</td>
<td>1.305</td>
<td>10</td>
<td>0.221</td>
<td>0.36364</td>
<td>-0.2574 to 0.9847</td>
</tr>
<tr>
<td>4</td>
<td>It has reduced paper work</td>
<td>-0.886</td>
<td>10</td>
<td>0.397</td>
<td>-0.36364</td>
<td>-1.2785 to 0.5512</td>
</tr>
<tr>
<td>5</td>
<td>Transparency has been increased</td>
<td>3.464</td>
<td>10</td>
<td>0.006</td>
<td>0.54545</td>
<td>0.1946 to 0.8963</td>
</tr>
<tr>
<td>6</td>
<td>E-governance has increased accountability.</td>
<td>4.183</td>
<td>10</td>
<td>0.002</td>
<td>0.63636</td>
<td>0.2974 to 0.9753</td>
</tr>
<tr>
<td>7</td>
<td>E-governance has eliminated agents.</td>
<td>0.896</td>
<td>10</td>
<td>0.391</td>
<td>0.27273</td>
<td>-0.4052 to 0.9506</td>
</tr>
</tbody>
</table>

Source: Compiled by researcher
Table-9 shows that p value of statements increased speed of service delivery, increased transparency, and increased accountability is less than 0.05. Whereas p value of the statements increased ease of access, fast document handling, reduced paper work, and eliminated agents is more than 0.05. This shows that there is improvement in the service processes in few aspects. Therefore hypothesis ‘Service processes are effectively managed with the help of ICT enabled services in rural areas’ but it is rejected.

**Alternate Hypothesis H3: Training Helps to Provide ICT Enabled Services Effectively in Rural Areas.**

To test this hypothesis the data is collected from Village Level Entrepreneurs (VLEs) by formulating 3 statements related to the training provided to VLEs for the implementation of e-governance in rural areas. The hypothesis is tested with Z test.

H1: p> 0.6
H0: p< 0.6

Table-10 shows the Z value regarding the training provided to VLEs.

**Table-10: Z Value Regarding the Training Provided to VLEs.**

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>Z Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Received training for operating the software/providing the services</td>
<td>4.3</td>
</tr>
<tr>
<td>2.</td>
<td>Training regarding the documentation is provided</td>
<td>4.1</td>
</tr>
<tr>
<td>3.</td>
<td>Training helps to provide the services to the citizens through e-governance</td>
<td>4.3</td>
</tr>
</tbody>
</table>

Source: Compiled by researcher

The hypotheses is tested at 5% level of significance. The critical value of Z 0.05 = 1.64.

To test the hypothesis ‘training helps to provide ICT enabled services effectively in rural areas’, 3 sub hypotheses are formulated which are related to the training provided to VLEs regarding the implementation of e-governance in rural areas. Z test is applied for these 3 sub-hypotheses. Z value of all sub-hypotheses is above 1.64 therefore hypotheses is accepted. So it can be concluded that the hypothesis ‘training helps to provide ICT enabled services effectively accepted in rural areas.’

**Alternate Hypothesis H4: Infrastructure is Developed to Provide ICT Enabled Services Effectively in Rural Areas**

The hypothesis is tested by using One Sample T Test. The data is collected from Village Level Entrepreneurs (VLEs) using five point likert scale. 12 statements are formulated to collect the data related to infrastructure development in rural areas from VLEs.
Table-11 shows One-Sample Statistics -

Table-11: One Sample Statistics

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sufficient hardware equipment are available</td>
<td>56</td>
<td>4.3750</td>
<td>0.72770</td>
<td>0.09724</td>
</tr>
<tr>
<td>2</td>
<td>Sufficient space is available at centre</td>
<td>56</td>
<td>4.2321</td>
<td>0.91435</td>
<td>0.12219</td>
</tr>
<tr>
<td>3</td>
<td>There is continuous electricity supply</td>
<td>56</td>
<td>4.2143</td>
<td>0.98561</td>
<td>0.13171</td>
</tr>
<tr>
<td>4</td>
<td>High speed internet facility is available</td>
<td>56</td>
<td>4.0000</td>
<td>1.17551</td>
<td>0.15708</td>
</tr>
<tr>
<td>5</td>
<td>The application software used is user friendly</td>
<td>56</td>
<td>3.6964</td>
<td>1.40026</td>
<td>0.18712</td>
</tr>
<tr>
<td>6</td>
<td>The application software is flexible to add new functionalities</td>
<td>56</td>
<td>4.1786</td>
<td>1.02881</td>
<td>0.13748</td>
</tr>
<tr>
<td>7</td>
<td>The application software is error free</td>
<td>56</td>
<td>4.2679</td>
<td>0.90435</td>
<td>0.12085</td>
</tr>
<tr>
<td>8</td>
<td>All civic services are integrated &amp; embedded</td>
<td>56</td>
<td>3.4464</td>
<td>1.38721</td>
<td>0.18537</td>
</tr>
<tr>
<td>9</td>
<td>Online application and back office application are integrated</td>
<td>56</td>
<td>3.8750</td>
<td>1.45305</td>
<td>0.19417</td>
</tr>
<tr>
<td>10</td>
<td>High speed data transfer facilities are available</td>
<td>56</td>
<td>4.2143</td>
<td>1.00389</td>
<td>0.13415</td>
</tr>
<tr>
<td>11</td>
<td>It combines data from multiple source and gathers that information to achieve inference</td>
<td>56</td>
<td>4.0714</td>
<td>0.96967</td>
<td>0.12958</td>
</tr>
<tr>
<td>12</td>
<td>If there are any problems related to operation of software technical assistance is provided immediately</td>
<td>56</td>
<td>4.0000</td>
<td>1.20605</td>
<td>0.16116</td>
</tr>
</tbody>
</table>

Source: Compiled by researcher

Table-11 shows that mean value of the statements regarding availability of internet facility, space in the centre, high speed internet, supply of electricity, application software, high speed data software is above 4 which means that VLEs agreed that development of infrastructure leads to provide services efficiently. But the standard deviation for all the statements is high. From this it can be interpreted that few VLEs had given positive response regarding the infrastructural developments. Further the t-value is calculated to test the hypothesis.

Table-12 shows One-Sample Test.

Table-12: One-Sample Test

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Parameters</th>
<th>T</th>
<th>Df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>95% Confidence Interval of the Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sufficient hardware equipment are available</td>
<td>3.856</td>
<td>55</td>
<td>0.000</td>
<td>0.3750</td>
<td>0.1801 - 0.5699</td>
</tr>
<tr>
<td>2</td>
<td>Sufficient space is available at centre</td>
<td>1.900</td>
<td>55</td>
<td>0.063</td>
<td>0.2321</td>
<td>-0.0127 - 0.4770</td>
</tr>
<tr>
<td>3</td>
<td>There is continuous electricity supply</td>
<td>1.627</td>
<td>55</td>
<td>0.109</td>
<td>0.2149</td>
<td>-0.0497 - 0.4782</td>
</tr>
<tr>
<td>4</td>
<td>High speed internet facility is available</td>
<td>0.000</td>
<td>55</td>
<td>1.000</td>
<td>0.0000000</td>
<td>-0.3148 - 0.3148</td>
</tr>
<tr>
<td>5</td>
<td>The application software used is user friendly</td>
<td>-1.622</td>
<td>55</td>
<td>0.110</td>
<td>-0.30357</td>
<td>-0.6786 - 0.0714</td>
</tr>
<tr>
<td>6</td>
<td>The application software is flexible to add new functionalities</td>
<td>1.299</td>
<td>55</td>
<td>0.199</td>
<td>0.17857</td>
<td>-0.0969 - 0.4541</td>
</tr>
<tr>
<td>7</td>
<td>The application software is error free</td>
<td>2.216</td>
<td>55</td>
<td>0.031</td>
<td>0.26786</td>
<td>0.0257 - 0.5100</td>
</tr>
<tr>
<td>8</td>
<td>All civic services are integrated &amp; embedded</td>
<td>-2.986</td>
<td>55</td>
<td>0.004</td>
<td>-0.55337</td>
<td>-0.9251 - -0.1821</td>
</tr>
<tr>
<td>9</td>
<td>Online application and back office application are integrated</td>
<td>-0.644</td>
<td>55</td>
<td>0.522</td>
<td>-0.12500</td>
<td>-0.5141 - 0.2641</td>
</tr>
</tbody>
</table>
Table-12 shows that p value of statements - availability of hardware equipment, error free application software, integrated and embedded civic services, is less than 0.05. Whereas p value of the statements - availability of space at Maha e-Seva Kendra, continuous electric supply, high speed internet facility, user friendly and flexibility to add new functions in application software, integration of online application and back office application, high speed data transfer facilities, combines data from multiple source and gathers that information to achieve inference, providing software assistance is more than 0.05. This shows that there is perfection in few of the infrastructural issues. There is a need to develop and strengthen infrastructural facilities viz. physical infrastructure, internet connectivity, electricity supply, and user friendly software. Therefore hypothesis ‘Infrastructure is developed to provide ICT enabled services effectively is rejected in rural areas’.

Conclusion

Implementation of e-governance in India faces a major challenge of digital divide. Digital divide means the lack of availability and access of ICT facilities viz. internet connectivity and computers to rural and poor people. Use of ICT by government offices in rural areas lead to improving the lives of the rural people. The major thrust of the study is to assess the use of ICT by the government offices to provide citizen centric services to the citizens in rural areas. The study reveals that e-governance has provided self-employment opportunity to the rural youths. VLEs provide the other services like electricity bill payment, mobile recharge, various exam application forms filling through online mode etc. which adds to their income and also benefits to the rural citizens. From the study it can be concluded that e-governance has been effectively implemented in the rural areas of Kolhapur. Though through CSCs government is able to create the employment opportunity, there is a need to increase the commission or payment of the VLEs which will help them to operate CSCs viably. There is a need to develop a continuous electricity supply in rural areas. For high speed internet there is a need to develop optical fibre network in rural areas which will increase the internet speed and thus improves efficiency of service delivery by reducing the time required for online transactions. Audit of CSCs should be done at regular intervals to assess their efficiency. Audit should be done considering various aspects like number of government certificates issued, to be taken for service delivery, accuracy, maintenance of hardware and...
software, number of pending cases, citizen feedback etc. Audit will ensure the consistency in service delivery process at all CSCs. It will also throw light on the performances of the CSCs and government control on the CSCs.

References


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Local Governance of Municipal Solid Waste Management – A Case Study of Jalandhar City (Punjab), India

Amanjot Kaur1
Ramanjit Kaur Johal2

“Cities should respect nature, consider the urban ecological environment as an asset, integrate environmental issues into urban planning and administration, and accelerate the transition to sustainable development. They should promote the use of renewable energy source and promote environment friendly manufacturing. Cities and their citizens should join together to create sustainable lifestyle and an ecological civilization in which people and environment co-exist in harmony”

(United Nations Department of Economic and Social Affairs (UNDESA), (2012).

Abstract

Solid Waste Management is an important environmental and health service delivered by urban local bodies. This paper is aimed to study the working of the solid waste management system in Jalandhar city (Punjab State). The variables studied were – waste segregation, primary collection mechanism, secondary storage, transportation, treatment, disposal, monitoring, complaint redressal and awareness generation of municipal solid waste management in Jalandhar city. The various provisions were assessed on the basis of Solid Waste Management Rules, 2016. The primary data was collected using semi-structured interview schedule, focus group discussions and an observation checklist. Additionally, visual images were used to support the findings of the study. Medical Officer of Health, Sanitary Inspector of Municipal Corporation Jalandhar, 80 residents, 35 waste workers, a former Sarpanch and residents of Warriana village constituted the sample of the study. The major policy prescription is to view and understand the problem of waste management holistically as acknowledged in the conceptual framework of solid waste management. Waste segregation at source is one of the critical problems in Jalandhar city; therefore, efforts are required to understand and address this holistically with strict implementation of Solid Waste Management Rules, 2016.

Keywords: Environmental Governance, Environment and Health Hazards, Local Governance, Public Awareness, Solid Waste Management, Waste Segregation

Statement of the Problem

Solid waste management (SWM) is one of the fundamental and essential services provided by urban local bodies in the country. It is an intrinsic part of public health and sanitation and as per the Indian Constitution falls within the administrative and legislative purview of the states (Department of Economic Affairs, 2009). The
74th Constitutional Amendment, 1992 transferred the responsibility for collection, treatment and disposal of municipal waste from state government to urban local bodies (ULBs). This period can be termed as the era of “New Federalism”. Thus, Urban Local Bodies deploy their infrastructure, manpower and funds to undertake the task of solid waste service delivery (Ministry of Urban Development, 2012).

Furthermore, there are various implications of solid waste management as it is intertwined in the political, institutional, social, financial and economic aspects of Indian society. A wide range of individuals, groups and organisations are concerned with solid waste management as service users, service providers, intermediaries and regulators. These include household communities, non-governmental organisations, informal private sector entities (rag-pickers), educational institutions, private and government commercial institutions, health institutions, citizens, and external support agencies (Schubeler et. al, 1996).

Solid waste management is one of the most neglected areas of the urban development in India. The magnitude and density of urban population is increasing rapidly and consequently civic bodies are facing considerable difficulties in providing services to citizens. As per estimates, 115,000 tons of solid waste is generated per day and a 5 percent yearly increase is noted. Municipal bodies spend about 5-25% of their budget on solid waste management. In spite of heavy expenditure, the present level of service is so low that there is threat to public health in particular and environment in general (European Business and Technology Centre, 2011).

**Conceptual Framework of Solid Waste Management**

Schubeler et al (1996) has developed the conceptual framework of municipal solid waste management as shown in Figure-1. The functioning of solid waste ‘systems’ and the impact of related development activities depends on their adaption to particular characteristics of the political, social, economic and environmental context of the respective city and country.

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*Figure-1: Conceptual Framework of Solid Waste Management*

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Source: Schubeler et al, 1996

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3 New Federalism is the devolution of certain political power back to the States.
Scope of Municipal Solid Waste Management: The scope of municipal services includes planning and management with special emphasis upon strategic management; legal and regulatory framework; public participation; financial management including cost recovery, budgeting, accounting; institutional arrangements including private sector participation, disposal facility; waste generation by focusing on waste characteristics such as source, rates, composition and waste minimization strategies; and waste handling including waste collection, transfer, treatment and disposal and special wastes’ management (medical, industrial, electronic etc.).

Actors and Partners in Solid Waste Management: It is important to look at the roles, responsibilities and specific interest of various actors and partners in solid waste management. A wide range of individuals, groups and organisations are concerned with MSWM as service users, service providers, intermediaries and / or regulators such as households, non-governmental organisations, local government, national government, private sector, informal private sector and external support agencies.

Strategic Aspects of Solid Waste Management: In order to achieve effective and sustainable solid waste management development strategies must go beyond purely technical considerations to formulate specific objectives and implement appropriate measures with respect to political, institutional, social, financial, economic and technical aspects of municipal solid waste management.

• Political aspects are largely related with the formulation of goals and priorities, determination of roles and jurisdictions and the legal and regulatory framework.
• Institutional aspects encompass the distribution of functions and responsibilities and correspond to organizational structures, procedures, methods, institutional capacities and private sector involvement in the service provision.
• Social aspects include the different patterns of waste generation and handling of households, community based waste management and social conditions of waste workers.
• Financial aspects are concerned with budgeting and cost accounting, capital investment, cost recovery and cost reduction.
• Economic aspects emphasize upon impact of services on economic activities, cost-effectiveness of municipal solid waste ‘system’, macro-economic dimension of resource use, conservation and income generation.
• Lastly, technical aspects are concerned with the planning and implementation and maintenance of collection and transfer systems, waste recovery, final disposal and hazardous waste management (Schubeler et al, 1996).

Methodology

Research Design
Mixed method approach was followed in this research paper by using both qualitative and quantitative techniques. Good research often requires the use of a combination of qualitative and quantitative approaches. Quantitative research involves the use of numbers to describe things – involving the statistical analysis of collected data. Whereas, qualitative approaches “view social phenomenon
holistically”. Additionally, it is noted that the “more complex, interactive and encompassing the narrative, the better qualitative study is” (Creswell, 2011).

**Data Sources and Methods / Procedures in Data Collection**

The study was based on primary data as well as secondary data.

**Secondary Data:** The secondary data was collected from various journals, books, reports of international and research organisations, magazines and newspapers. Wide range of internet sources were also referred to throughout the study.

**Primary Data:** The primary data was collected through interviews using separate semi-structured questionnaires, focus group discussions, and an observation checklist.

**Semi-structured Interview Schedule:** Semi-structured interview schedule facilitated a deep understanding of the various dimensions of the problem and also allowed participants to share their concerns and challenges. Semi-structured interviews were conducted with Medical Officer of Health of Municipal Corporation, Jalandhar; Sanitary Inspector; Households and former sarpanch of Warriana village (dump site location).

**Focus Group Discussions:** Focus Group Discussion is an essential part of qualitative research techniques and plays an important role in data collection strategy. A schedule was prepared to guide the focus group discussion with waste workers.

**Observation Checklist:** It is an essential part of ‘Systematic observation’ wherein as, Laws (2003) mentions, the observer looks for specified behavior at specific times and places and accordingly a checklist is prepared. Thus, an observation checklist was prepared while referring to annual report format of Solid Waste Management Rules, 2016. The various activities were observed over specified times i.e. waste collected in morning shifts; rag-pickers’ work at their times; transportation timings etc.

**Photography:** Visual images have great power and can facilitate discussion on issues for which it might be difficult to gain attention by more traditional means. The pictures of various spots related to the value chain of waste management, such as, rag-pickers collecting recyclables; collection points; secondary storage centers; dumping site; communities surroundings dumping site; various waste dumping / dirty spots of the city etc. were taken. Consent of the concerned persons was taken before photographing them.

**Sample Selection**

Jalandhar is one of the oldest cities in the country and in Punjab State. It has gone through rapid urbanization and developed into a highly industrialized centre of commercial activity in recent years. It has a high literacy rate of 85.46%. Jalandhar was the capital of Punjab from India’s independence (1947) until Chandigarh was built in 1953. It falls in the Doaba region (between the two rivers Beas and Sutlej) of Punjab State.

The sampling plan of the study is as follows:

- Medical Officer of Health and Sanitary Inspector of Municipal Corporation Jalandhar were selected to take an overview of solid waste management ‘system’ in the city.
- Former Sarpanch of Warriana village and residents living in the vicinity of the
dumping site were interviewed to understand the problems of residents living in close proximity to the dumpsite.

• Waste workers (approximately 35) at the different waste collection and storage centers, transportation and dumping sites participated in the focus group discussions.

• Households: As Table 1 shows, the city is divided into four parts by the Municipal Corporation, Jalandhar. Four wards, one from each of the parts, were selected on simple random sampling basis.

Table-1: Constituencies in Jalandhar City

<table>
<thead>
<tr>
<th>Name of Constituency</th>
<th>Ward Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>1,2,3,4,5,6,53,54,55,57,58,59,60,61,62,63,64,65,66,69,70,71,79,80</td>
</tr>
<tr>
<td>Central</td>
<td>7,8,9,10,11,12,13,14,15,16,17,18,19,20,48,49,50,51,52,56,57,67,68</td>
</tr>
<tr>
<td>West</td>
<td>32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,47,72,73,74,75,76,77,78</td>
</tr>
<tr>
<td>Cant</td>
<td>21,22,23,24,25,26,27,28,29,30,31</td>
</tr>
</tbody>
</table>


Data Analysis and Interpretation

The collected data was organised under waste management process categories such as segregation, collection, storage, transportation, dumping, monitoring, complaint redressal and awareness generation; further sub-categories were formulated. The data is presented using tables and pie-charts. The functional system of waste management was assessed on the basis of various provisions of Solid Waste Rules, 2016. APA 6th edition was used for referencing.

Layout of the Paper

The research paper is divided into five sections:

I. Statement of the Problem
II. Conceptual Framework of Solid Waste Management
III. Methodology for collection of primary data
IV. Solid Waste Management in Jalandhar City
V. Suggestions and Concluding Remarks

Solid Waste Management in Jalandhar City

The Municipal Committee, Jalandhar came into existence in 1867 and was raised to Class I in 1950 under the Punjab Municipal Act, 1911. It was further elevated to Municipal Corporation under the Punjab Municipal Corporation Act, 1976, by Punjab Government on 5 July 1977 (Municipal Corporation Jalandhar, n.d.).

Municipal Corporation Jalandhar (MCJ) comprises three parts – The Council headed by Mayor; Executive wing headed by Municipal Commissioner; and Standing Committees. The various departments of the Municipal Corporation Jalandhar were functionally organized and included land, health, house tax, water and sewerage, fire and library etc. The Health and Sanitation Department had the responsibility of managing the waste services in the city. As Figure 2 depicts, the Department was headed by Medical Officer of Health. Further, Chief Sanitary
Inspector and Sanitary Inspectors were responsible for monitoring the working of the Sanitary Supervisors. The Sanitary Supervisors supervised the working of Sanitary Jamadars and kept an eye over the functioning of the sweeping staff as well.

**Figure-2:** Hierarchy of Health Wing under Health and Sanitation Department, Municipal Corporation, Jalandhar

There are various stages in the system of solid waste management such as waste segregation at source, primary collection, secondary storage, transportation, treatment and disposal. The quality assurance systems, such as monitoring and complaint redressal mechanism, are acknowledged as the cornerstone for the success of service delivery. Similarly awareness generation is an essential duty of the Municipal Corporation. Thus, the functional system of municipal solid waste management, monitoring and complaint redressal mechanism and awareness generation activities are discussed in the forthcoming paragraphs.

**Waste Segregation at Source**

It is the most important functional aspect of waste management; however, also the most neglected in practice. This aspect has been accorded due significance in all the relevant contemporary laws of the country i.e. Swachh Bharat Abhiyan, 2014 and Solid Waste Rules, 2016. The Solid Waste Rules, 2016 envision waste segregation under three categories – dry, wet and domestic hazardous waste; accordingly, color coded bins have been recommended.4

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4 Segregation means sorting and separate storage of various components of solid waste, namely, bio-degradable waste or wet waste, non-biodegradable waste or dry waste including recyclable waste, combustible waste, sanitary waste, non-recyclable, inert waste, domestic hazardous waste, e-waste and construction and demolition waste.
Provision of waste storage at source: It is important to see how residents store waste at their premises, which is basically the foundation for the functioning of the waste segregation ‘system’. As Chart 1 demonstrates, majority of the respondents (64%) used plastic container / bag to store waste at home whereas 17% used metallic containers. 10% responded that they used both plastic and metallic containers. Metallic containers were largely used to keep paper or other dry waste items. 9% shared that they used other means i.e. buckets, utensils to keep waste at their premises.

Chart-1: Waste Storage at Home

<table>
<thead>
<tr>
<th>Plastic Container</th>
<th>Metallic Container</th>
<th>Both</th>
<th>Any Other Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>64%</td>
<td>17%</td>
<td>9%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Segregation into dry and wet waste: Further, it was also inquired whether residents separated waste into dry and wet waste. Swachh Bharat Abhiyan campaigns talked about dry and wet waste segregation. Chart 2 shows that largely residents (76%) did not segregate waste into dry and wet waste, whereas 24% responded that they kept different types of waste separately.

The researcher also tried to ascertain the reasons for not practicing waste segregation at source; it was revealed during informal discussions that there was inadequate provision to collect the segregated waste. Even when the residents segregated the waste, the waste collector mixed it at the time of waste collection.

Chart-2: Separate Storage of Dry and West Waste

Thus, it can be stated that waste segregation into dry and wet waste or biodegradable or non-biodegradable at the household level was sporadic and limited to aware and pro-active individuals only. A Sanitary Inspector of the Municipal Corporation mentioned that in order to ensure waste segregation, the process of integration of informal waste workers had started by issuing identity cards and registering them with the Municipal Corporation. However, workers had shown resistance to work as part of the Municipal Corporation.
Primary Waste Collection ‘System’

Primary collection refers to waste collection from the point of generation. There are four kinds of waste collection systems operational in the country: communal / community, block, kerbside and door to door. Each system has its own advantages and limitations. With regard to Jalandhar city, door to door waste collection was followed, as elaborated in the following paragraphs.

Waste Collection ‘System’: In Jalandhar city, majority (72%) of the respondents opted for door-to-door waste collection services and 26% were using community bin services (Chart 3). In the door-to-door collection system, the waste collector visited each house for waste collection and the service charges were paid as per the size of the plot. Delhi, Mumbai, Bangalore, Madras, Hyderabad, Chandigarh etc. were listed in the category of mega-cities which were marching towards the door-to-door waste collection system with the active involvement of non-governmental organizations and public-private-partnership mode (Sharholy et al, 2008). Community bin system is another largely prevalent practice across India wherein users put their garbage in the bins placed at fixed points in the locality which was collected by urban local body as per fixed, schedule.

Chart-3: Waste Collection System

Responsibility of Waste Collection: It was found that different actors, such as private contractors appointed by Mohalla Sudhar Committees, hired workers locality-wise. Informal waste workers continued to provide waste collection services in the city on their own and were directly paid by the residents / RWAs. The municipality sweeping staff was sweeping roads, streets, etc. As depicted by Chart 4 the door-to-door waste collection services were provided largely by the Municipal Corporation (67%), private contractors were named by 23%,and 10% shared that Mohalla Sudhar committees / Resident Welfare Associations had made efforts to provide door-to-door waste services in their localities.

The concerned officials of Municipal Corporation mentioned that MCJ was not involved in door-to-door collection services. As mentioned earlier, the process of integration of workers had been started. During informal discussions it was revealed that the general public assumed that MC was directly or indirectly involved in providing services in the city. It was observed that daily waste collection was largely practiced in the upscale sectors and newly developed colonies whereas waste was collected on alternate day basis in the remaining parts of the city.
Frequency of waste collection: Majority of the respondents (69%) said that waste was collected on a regular basis (Chart 5). In some localities, waste was collected on alternate days as highlighted by 26% respondents. In case of community bin system, residents (5%) visited nearby secondary storage center / community bin once a week, as these centers were not easily approachable.

Payment of waste collection charges: The waste charges varied based on plot size as well as situation of the house i.e. ground, first or second floor. There was no uniformity in the collection charges (Chart 6). Majority (47%) of the respondents paid less than Rs. 50 i.e. Rs. 20/30/40. 44% of the residents paid less than Rs. 100 i.e. Rs. 60/70/80. Few cases (9%) were found wherein the residents paid more than Rs. 100 and less than Rs. 200 i.e. Rs. 120/130.
**Type of vehicle used for waste collection:** As Chart 7 shows, majority of the respondents (74%) stated that waste from their houses was collected through rickshaws/tricycles. In some areas, auto-wheelers/tippers were used as shared by 14% respondents. In case of community bin system, 6% stated small trucks and 2% that tractor trolleys were used for collection. Certain cases (4%) were found wherein two-wheeler i.e. scooters were used for door-to-door waste collection.

![Chart 7: Type of Vehicle used for Waste Collection](chart)

Therefore, it can be stated that door-to-door waste collection services were operational in the city and involved different stakeholders. Largely, tricycles and auto tippers were used for collection from residential areas. Waste charges varied based on plot size. However, the stakeholders were not systematically integrated with the formal system of waste management.

**Secondary Storage**

After collection of waste from residential areas, it was transported to the secondary storage centers. These centers were open or closed structures built by civic authorities at various locations in the city. The tricycles deposited the waste in nearby secondary storage/transfer station, from where it was collected by other vehicles. After the morning shift, all auto-tippers came at designated places from where their waste was loaded to the dumper placers. A Sanitary Inspector shared that there were 50 temporary waste depots / centers in the city.

It was found that there was no pucca or permanent provision to store waste; temporary arrangements were used in the city. Some areas – empty plots and roadside spaces – were identified as temporary storage centers (Figures 3 & 4). In certain cases, containerized sites were used in upscale sectors/markets in all three cities. Basic neat and clean conditions were not maintained at the secondary storage centers. The loading/unloading of waste was done by waste workers without using personal protective equipments. Manual loading of waste was largely practiced in such centers. Stray animals foraging for food made a mess at these centers (Figure-4).

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5 These are centralized facilities wherein waste is unloaded from smaller collection vehicles and re-loaded into larger vehicles (including in some instances barges or railroads) for transport to a disposal or processing site. This transfer of waste is frequently accompanied by some removal, separation, or handling of waste. In areas where waste is not already dense, waste materials may be compacted at a transfer station.
Waste Transportation

Transportation of municipal solid wastes includes carrying waste from transfer stations (permanent or temporary) to processing units or landfill sites. Hauled Container System (HCS) and Stationary Container System (SCS) were largely followed to transport waste.

Transportation Vehicles: Different type of vehicles, varying from bullock carts to compactors, ordinary trucks, tractor and trailers, dumper placers and tippers were used for waste transportation as shown in the Table-2.

Table-2: Vehicles for Waste Transportation

<table>
<thead>
<tr>
<th>Type of Vehicle</th>
<th>Nos</th>
</tr>
</thead>
<tbody>
<tr>
<td>JCB</td>
<td>13</td>
</tr>
<tr>
<td>Dumper Placer</td>
<td>12</td>
</tr>
<tr>
<td>Mini Truck</td>
<td>17</td>
</tr>
<tr>
<td>Truck tipper</td>
<td>18</td>
</tr>
<tr>
<td>Trallies</td>
<td>15</td>
</tr>
<tr>
<td>Dumper placer (small)</td>
<td>58</td>
</tr>
<tr>
<td>Dumper placer (big)</td>
<td>15</td>
</tr>
<tr>
<td>Wheel cart</td>
<td>521</td>
</tr>
<tr>
<td>Wheel Barrow</td>
<td>300</td>
</tr>
</tbody>
</table>

Source: Municipal Corporation Jalandhar

Processes followed for Waste Transportation: It was observed that vehicles’ movement was not monitored in terms of quantity of waste carried, number of trips made and optimum use of personnel. Global positioning system (GPS) had not been installed in the vehicles in order to track the vehicle movement. It was observed that unplanned routing of vehicles resulted in inefficient transport logistics. There was no defined route to transport waste to the dumping site. Waste was transported during the peak working hours and main routes / highly populated routes were largely followed for waste transportation. Overflowing secondary waste storage centers resulted from irregular and untimely waste transportation.

As Chart 8 depicts, majority (79%) of residents had witnessed waste spillage from the transportation vehicles, whereas 21% had not noticed it. Trucks and tractors had open beds; during transport, waste spills from the truck caused nuisance. Covers of any form – plastic or sheet or tarpaulin – were not used to cover the waste during transportation.
Waste workers shared that manual waste loading was practiced without use of personal protective equipment. Multiple handling of waste resulted in low labour productivity. Further, areas could not be serviced properly due to inadequate number of vehicles, as shared by concerned MC officials. Vehicles were poorly maintained because of inadequate workshop facilities and slipshod maintenance procedures. The problem led to frequent breakdowns and out-of-service trucks for long periods. Spare parts were not readily available because the procurement system was slow and cumbersome. The new types of vehicles could reduce the manual handling of waste; however, it continued to be widely practiced as these vehicles were limited in number (Table-2).

Thus, it can be stated that various type of transportation vehicles were used to transport waste. Vehicles were not covered, which resulted in waste spillage on the roads. Manual waste loading and unloading was practiced without use of personal protective equipments (PPE) by waste workers. PPE were not provided to workers by Municipal Corporation. Closed transportation of waste and GIS based vehicle Tracking System of Varanasi were considered a best practice in terms of transportation of waste.

Treatment and Disposal

Landfill management is a complex task. As the principles of sanitary land fillings were not followed, the existing dumping sites had shown the characteristics of uncontrolled and poorly managed dump sites. Research studies have shown that more than 90% municipal solid waste was dumped directly to the dumping site without having provision of treatment. No segregation was practiced at the various stages and other infectious waste (medical and industrial waste) was dumped along with municipal waste.

The waste of Jalandhar city was dumped at the Warriana dumping site without any provision of waste treatment. When interviewed, a former sarpanch of Warriana village highlighted a number of problems affecting the quality of life of residents living in Warriana village on account of proximity to the dumping site.

Impact of Dumping Site on the Quality of Life of the Citizens

The following problems affecting the quality of life were found due to presence of dumping sites in the selected cities of Punjab State:

- **Property Value**: The presence of a nexus of property dealers was an open secret.
Houses or plots were sold with an assurance that government was planning to shift the location of the dumping site. Thus, the present sites were presented as a unique opportunity to acquire land at a site that could soon see better days. However, the original inhabitants lamented that the land value was falling day by day as no one would choose to live in a filthy environment.

- **Social Life:** Social lives of the inhabitants were adversely affected as their relatives did not like to visit them. Additionally, they also faced problem in getting their children married. Infact, the Sarpanch claimed that brides moving here after marriage leave after some time on account of the toxic conditions they experienced.

- **Noise Pollution:** People suffered the noise of vehicles at the dumping site from mostly early morning till afternoon. However, some vehicles came in the evening as well. There were heavy and light vehicles carrying waste to the dumping site. The heavy vehicles had destroyed the approach road of the dumping site; the same was also used by the residents of Warriana village, Jalandhar.

**Figure-5:** Dumping site, Warriana Village, Jalandhar

- **Protest:** Public across the globe have registered complaints and protest against dumping sites in close proximity to habitations. Similarly, in Jalandhar city, there was huge public protest lead by a former municipal councilor which lead to building a boundary wall of the dumping site in order to demarcate it from the residential area.

- **Health Problems to nearby communities:** Good health is essentially linked with the state of environment in which one lives. Environment Protection Agency of United States of America aptly stresses on the relevance of intersecting human health and environment. Such situation leads to creation of health and environmental problems for the whole city especially for people living near dumping site. It was observed that waste compacting and leveling practices were not followed at the dumping site. Though, it was not possible to specifically detect the health impact on the nearby communities, Box 1 narrates a case of impact of Warriana dumpsite on the community’s health.
One research study was conducted in Jalandhar dumpsite that studied the worst affected areas that are in close proximity to the dumping site. Two villages, namely Suchi village and Warriana village were selected for the study. All these locations are very close to the dumping sites of MCJ. One more area that is some distance away from the dumping sites, ‘Pucca Bagh’, was also selected.

Diseases like malaria and diarrhea had been reported. A large number of residents, (90-95%), were found suffering from fever and diarrhoea more than once a year.

This is indicative of a strong to moderate health impact on the resident population due to the SW being dumped in their vicinity.

There is no established correlation of occurrence of these infections due to the smoking and drinking habits of the residents of these areas. Thus, the sole cause of these illnesses lies in the faulty disposal of the wastes closer to these locations.

Source: Puri, Kumar and Johal (2008)

Therefore, it can be stated that presence of a dumping site has affected the life of the public in numerous ways such as their socio-economic life, their quality of life on account of poor aesthetics and environment and health problems.

**Monitoring System**

Appropriate quality assurance systems are essential in order to ensure a continuous and efficient municipal solid waste management system. The continuous monitoring system ensures the performance of all components of the system at all stages i.e. storage and segregation, collection, secondary storage, transportation, processing and disposal. This might appear to be very cumbersome in the first place, but with a proper system in place things move quickly with assurance of quality.

**Figure-6: Monitoring of Physical System of Solid Waste Management**

**Tools / Methods followed for Monitoring**

*Surprise visits:* In order to ensure the daily waste collection and disposal services, surprise visits at the designated places i.e. secondary storage center, dumping site were made by the sanitary inspectors followed by Medical Officer of Health of Municipal Corporation Jalandhar.
**Attendance of workers:** The attendance of sanitary workers was marked. However, there were no records available of informal rag-pickers with the Municipal Corporation.

**Maintenance of daily collection and dumping records:** A daily register had been maintained at the dumping sites wherein entry of each vehicle was made along with other details i.e. trips/day, timings etc.

As shown in Table 1, the city has been divided into four parts – north, central, west and cantonment; accordingly wards have been divided in these parts. Sanitary Inspectors were assigned duties for the monitoring of the waste services. However, it was observed that there was lack of monitoring mechanism in the city. Piles of waste could be seen at every nook and corner. There was an empty plot in almost every locality which had developed into a dumping place over a period of time. Thus, there were gaps in service delivery at every stage of waste management – segregation, collection, storage, transportation and dumping.

**Complaint Redressal System**

Consumer grievance redressal is an important function of an efficient, responsive and transparent municipal body. It bridges the communication gap between the municipal bodies and the citizens and provides citizens a platform on which they can get their grievances redressed in a timely and transparent manner. It also serves as a means to measure the efficiency and effectiveness of municipal bodies as it provides important feedback to the ULBs on the working of the administration (Ministry of Urban Development, 2010).

In case of Jalandhar city, there are three ways to lodge complaints – through a phone call or message to given helpline numbers, website and filling a paper form by visiting the office. Municipal Corporation, Jalandhar had an active complaint redressal system having an online complaint redressal portal. The Sanitary Inspector shared that they received complaints through various channels such as offline mode (citizens visit their office), online portal, helpline number. They also received complaints through the ward councilors.

**Chart-9: Problems Faced with Regard to Waste Management**

![Chart showing waste management issues](image)

Majority of the residents (43%) responded that they faced the problem of absence of daily waste collection. 24% shared that they faced the problem of dumping of waste in their properties. 13% stated that they were not satisfied with the behavior of the waste collectors. 20% shared that they had not faced any problem with regard to waste management (Chart 9).
Further, the response was sought regarding lodging complaints with regard to waste related problems. 32% had not lodged any complaint, whereas 23% citizens were not aware about the concerned agencies that would handle complaints.

MCJ has launched an app mSeva wherein citizens can lodge complaints by using geo-tag – by capturing the picture and forwarding to the concerned officials. The status of the complaints can also be traced. Feedback provision was also provided to the citizens.

Thus, it can be stated that there were various formal channels to lodge complaints such as toll-free helpline numbers and mobile apps. However, such formal channels were under-utilized. Residents by and large complained to their ward councilor and to the members of resident welfare associations and then the complaints were brought to the notice of the Sanitary Inspectors. Residents found it quite difficult to lodge the complaints through offline mode. After the launch of Swachhata app, residents were more aware and found it easy to make complaints; they felt that this app had made the officials more accountable.

**Awareness Generation**

‘Informative drives’ were conducted by Municipal Corporation Jalandhar to create awareness in the major schools and colleges of the city. Discussions were held on dry and wet waste and composting of waste. Further, information was disseminated about the Swachhata Clubs, Swachhata Mobile App, Swachh Survekshan and other components of Swachh Bharat Mission. As Figure-7 shows, cleanliness drives were also organized in the city.

**Figure-7:** Swachh Bharat Abhiyan in Shaheed Bhagat Singh Colony, Ward No. 02, Jalandhar
Further, a regional level workshop on Swachh Bharat Mission had been conducted at the Meeting Hall of Municipal Corporation Jalandhar, to draw attention to the issue of cleanliness in the cities of Punjab for Swachh Survekshan. The officials of Punjab Government were guided by the visiting officials from Chandigarh about the various methods to improve the current scenario of cleanliness. Further, Joint Commissioner, Jalandhar had called a meeting with the NGOs of Jalandhar City to bring forth new ideas for the cleanliness of the city (Municipal Corporation Jalandhar, n.d.).

**Figure-8:** Posters depicting Waste Segregation Practices by MC Jalandhar

Additionally, the researchers also sought to understand the public acceptance and understanding of the concept of waste segregation at source and the familiarity with the terminology of solid waste management. Majority of the residents were aware about dry (86%) and wet (85%) waste. They shared that they had seen hoardings and pamphlets of different organisations (Border Security Forces, Schools, Colleges, Hospitals) about waste segregation in the city. Further, others had seen advertisements in the television and newspaper about dry and wet waste (Gillakurra and sukakurra). However, majority of the residents were not aware of the terms such as solid waste management (64%) and waste segregation (65%).

The researchers also came across different perceptions among residents about dry and wet waste. They go by the literal meaning of this term i.e. wet material/things (hair) are thought to be wet waste whereas dry material/things are dry waste. An official from Municipal Corporation also corroborated the same.

**Table-3:** (N= 80) General Public’s Familiarity with SWM Terminology

<table>
<thead>
<tr>
<th>Familiarity with the Terminology</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solid Waste Management</td>
<td>29 (36%)</td>
<td>51 (64%)</td>
</tr>
<tr>
<td>Waste Segregation</td>
<td>28 (35%)</td>
<td>52 (65%)</td>
</tr>
<tr>
<td>Dry Waste</td>
<td>69 (86%)</td>
<td>11 (14%)</td>
</tr>
<tr>
<td>Wet Waste</td>
<td>68 (85%)</td>
<td>12 (15%)</td>
</tr>
</tbody>
</table>

Awareness generation is a critical and an important aspect of solid waste management ‘services’. There were a couple of initiatives taken by the MC and other organisations in the city i.e. conducting informative drives, discussions with NGOs and organising expert lectures. However, it was observed that no systematic approach was followed to generate awareness; the awareness drives were organized in limited wards and on a few occasions. There is need to cover the households in the informative drives on a large scale and on a continuous basis as they are the
primary source of waste generation and clients of waste services as well. It was observed and highlighted in various research studies that “Swachh Bharat Abhiyan has put the solid waste at the fore front of functioning of Municipal Corporations”.

Suggestions and Concluding Remarks

Thus, it can be stated that waste segregation into dry and wet waste or biodegradable or non-biodegradable at the household level was sporadic and limited to a limited number of aware and pro-active individuals only. Various stakeholders were involved in managing door-to-door waste services. However, the stakeholders were not systematically integrated with the formal system of waste management.

Various types of transportation vehicles were used to transport waste. Manual waste loading and unloading was practiced without use of personal protective equipments (PPE) by waste workers. The absence of landfill waste dumping practices resulted in poor dumping site maintenance, which has affected the quality of life of the public in numerous ways such as their socio-economic life, noise pollution, poor aesthetics and environment and health problems. Moreover, there was lack of effective monitoring and an under-utilized complaint redressal mechanism in the city.

Awareness generation is a critical aspect of solid waste management ‘services’. There were a couple of awareness generation initiatives taken by the MC and other organisations in the city i.e. conducting informative drives, discussions with NGO’s and holding expert lectures. However, it was observed that no systematic approach was followed to generate awareness; the awareness drives were organized sporadically and in a limited number of wards.

Some suggestions to work towards a comprehensive waste management system in Jalandhar city have emerged from this study; a few are discussed in the following paragraphs.

• Door to door segregated-waste collection system should be started in Jalandhar with covered motorized vehicle having two compartments – one for organic waste and the other for non-organic waste; this is in response to the finding that there is no arrangement for the segregation of waste at source. Such an arrangement will help to process the waste effectively.

• All the organic waste from the household/mandi/hotel/markets should be sent to a composting plant instead of the dumping site.

• Municipal Corporation Jalandhar needs to supervise the functioning of all stages of waste collection system in the city.

• Awareness should be created among the masses to understand the health hazards of the wastes; this can be in partnership with resident welfare associations, NGOs and private contractors.

• Resident Welfare Associations should come forward for various activities such as awareness generation, composting, camps on waste minimization, segregation of waste and education about the harmful effects of waste; the Municipal Corporation should motivate them.

• Research and development should be carried out and focused on ‘minimization of waste’ strategies wherein educational and research institutions can play an active role.
• Rag pickers in the informal sector can be integrated into the formal system by training and employing them to conduct door-to-door collection of waste.

• Rigorous efforts and co-ordination from all stakeholders are essential ingredients of a successful solid waste management ‘system’.

Thus, it can be concluded that the need of the hour is to view the problem of waste management holistically, i.e. political, economic, socio-cultural and environmental contexts and all aspects of the SWM system (Figure 1). All stakeholders should respond to their roles and responsibilities as per Solid Waste Management Rules, 2016 wherein local government has an active and critical role. It is important to note that absence of the practice of waste segregation at source was found to be one of the critical problems in Jalandhar; multiple factors and conditions caused this lacuna. Thus efforts are required to understand and address this holistically. The findings of this case study can be utilised as a bases for hypothesising on the working of Solid Waste Management in other Indian cities.

References


MPLADS: To Scrap or To Re-Invent?

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Abstract

Member of Parliament Local Area Development Scheme (MPLADS) is a centrally sponsored program funded by the Government of India. It was initiated to empower the Members of Parliament (MPs) to develop their respective constituencies based on the local needs. This paper attempts to understand MPLADS and suggest that there is a need to reformulate the scheme to help MPs do their developmental duties more efficiently. The paper is divided into five sections. The first section attempts to throw light on the basics of MPLADS as a scheme – objective of the programme and working of MPLADS. The second section discusses the past trends about the utilisation of funds. The third section discusses the opinions in support of scrapping this scheme. The fourth section focuses on the need to have structured underlying research in an attempt to reinvent the program. The concluding section suggests that there is a need for a more structured approach towards collecting evidence at the level of the constituency.

Keywords: Constituency, Development, MPLADS, Scheme

Introduction

Research suggests that development drives electoral success rather than political rhetoric or caste. More than political propaganda it is constituency-based development that can ensure a candidate’s re-election and this can be testified by the fact that only about 3% of sitting Members of Parliament (M.P.) have served four or more consecutive terms from the same constituency. Now, M.Ps are obligated to interact more frequently with their increasingly aware constituents, thus necessitating better-designed constituency development plans capturing the socio-economic landscape of the respective constituency. Ideally, a prudent strategy which has an effective implementation can produce tangible gains for the citizens at the grass root level, which may be accomplished during the course of the five-year electoral cycle.

MPs are often contacted by their constituents for modest jobs of capital nature to be undertaken in their constituencies; thus the MPs urged that they should be able to counsel works to be done in their respective constituencies. Acknowledging...
this request, the “Member of Parliament Local Area Development Scheme,” also known as MPLADS was launched by the then Prime Minister P.V. Narshima Rao on December 23rd, 1993. The scheme aimed to make available certain funds to the MPs for counselling works to be carried out in their constituencies based on perceived local needs. The MPLADS thus helps fulfil the MP’s responsibility as an elected representative of his/her electorate in so far as it helps to ensure that their constituents’ developmental needs are sufficed. This may perhaps also impact the future electoral prospects of the candidate. India’s Parliamentary session has often witnessed debates contemplating a need to reformulate the MPLADS to enhance the efficiency of the program.

This paper attempts to understand MPLADS and suggests that there is a need to reformulate the scheme to help MPs do their developmental duties more efficiently. The paper is arranged into five sections. The first section gives the basics of MPLADS as a scheme – objectives of the programme and working of MPLADS. The second section discusses past trends concerning the utilization of funds. The third section discusses the opinions in favour of scrapping this scheme. The fourth section focuses on the need to have structured research in an attempt to reinvent the program. The final section concludes the paper by recommending that there is a need for a more structured approach towards collecting evidence at the level of the constituency.

**Basics of MPLADS**

Under MPLADS, a centrally sponsored scheme, MPs have a choice of suggesting the district collector of a nodal district in their electorate, development projects to the tune of INR 5 crore per year. The allocation of money under the scheme has been growing over the years. From INR 5 lakh per MP in 1993-94 to INR 1 crore per MP in 1994-95 to INR 2 crore per MP in 1998-99 and recently (in 2011-12) to INR 5 Crore per MP. A recent proposition for a five-fold rise in annual allocation under the MPLADS from INR 5 crore to INR 25 crore has not found favour with the Finance Ministry.

Under this scheme, MPs may also counsel works outside their electorates for development of assets that are admissible in the guidelines, for rehabilitation measures in the episode of “natural calamity of rare severity” in any part of the homeland for an amount not exceeding INR 10 lakhs, for each disaster. If the money is not spent in one year, it may be used during another. Rajya Sabha MPs may counsel works in one or more districts in the state from where they have been nominated. Money can be spent for the betterment of tribal area as well.

Further, to develop the areas inhabited by the disadvantage groups, the MPs must help monetarily to the tune of INR 75 lacs (15 per cent) and INR 37.5 lacs (7.5 per cent) for areas inhabited by scheduled caste and scheduled tribe respectively. This amount may be advised for work outside the constituency of MP but within their State of election. This is done if there is insufficient scheduled caste and scheduled tribe population in the respective constituency.

MPLADS can also be executed in areas affected by or prone to natural calamities. Lok Sabha MPs from the unaffected areas of the State may also provide monetary help up to INR 25 lakh per year in the affected areas in that State. In the case of
“Calamity of severe nature’ in any part of India, funds up to a maximum of INR 1 crore can be recommended by MP for the affected area. The decision of severity of the calamity rests with GoI.

To promote unity, harmony, and fraternity among people at the grassroots level, INR 25 lakh in a financial year can be recommended by MP for a place outside that State/UT, or outside the constituency within the State, or both.

Objective of the Scheme

As per the Ministry guidelines, “The objective of the MPLAD scheme is to enable MPs to recommend projects of developmental nature, with emphasis on the creation of durable community assets based on the locally felt needs, to be taken up in their constituencies. Right from inception of the Scheme durable assets of national priorities viz. drinking water, primary education, public health, sanitation and roads, etc. are being created. Currently, there are talks of increasing the sanctioned amount or scrapping this scheme completely.

Working of MPLADS

Organogram

Till October 1994, the MPLAD scheme was implemented under the control of the Ministry of Rural Development, and later the scheme was transferred under the Ministry of Statistics and Programme Implementation (MoSPI). The organogram concerning the working of MPLADS starts from MoSPI at the top followed by the state nodal department, the district authority \ and finally the implementing agency. The state nodal departments supervise and monitor the scheme while the district authorities have the responsibility of cost estimation, work scrutiny, identification of implementing agency and transfer of funds. The scheme mandates that Panchayati Raj Institutions be the preferred implementing agency. The district authorities make the selection of an appropriate implementing agency through which the funds sanctioned by the MP should be executed.

The recommendation / sanction of funds occurs in the following sequence:

Each MP sanctions funds to the district authority during the financial year. The district authority gets the eligible sanctioned works executed as per the established procedure of the State government. It may be noted here that the power to grant administrative sanction / approval continues to remain with the district authority.

Fund Release and Management

The annual entitlement of INR 5 crore is disbursed in two equal instalments by the GoI directly to the district authority of the concerned nodal district, these funds are non-lapsable and can be carried forward for utilization in subsequent years. However, if the funds are not released by GoI, they are carried forward for making releases in subsequent years’ subject to the eligibility criteria. The criteria say:

- The unsanctioned balance amount available in the account of district authority after considering the cost of all fund sanctioned is less that INR 1 crore
- The unspent balance of fund of MP concerned is less than INR 2.5 crore
- Utilization and audit certificate of the immediately concluded financial year have been furnished by district authority as per the annexure of MPLADS guidelines
MPLADS work must be completed within 18 months from the date of demitting office in case of Rajya Sabha MPs or dissolution of Lok Sabha. The district authority settles the account of concerned MP after completing all other formalities in three months’ time with the detailing of information furnished in Monthly Progress Report. If district authority does not finish the projects within 18 months, it will be required to complete the remaining work out of State/District funds and the district authority will be responsible for any lapse with this regard.

For the MPLAD scheme, district authority releases the funds to implementation authority as per the State government guidelines applicable. The implementation agencies also deposit the funds in the account of MP opened for this purpose in a nationalised bank. The amount of interest accrued on the funds released to the district authority is used for permissible works recommended by the concerned MP. The amount of interest accrued on funds released to the implementation authority calculated while arriving at savings for each work. The savings of each work is refunded to district authority within a month of completion of the work. The administrative expenses are calculated as 2 percent of the annual entitlement and are distributed amongst the following three: nodal district, implementing districts and state nodal department. Some of the ways in which these three entities can utilise the administrative expenses are – third-party inspection, monitoring of works, hiring consultants for data entry, creating awareness about the scheme among the public, purchasing stationery, office equipment such as a computer/telephone/fax/postal charges etc. For the purpose of administrative charges, a separate bank account in a nationalised bank is opened.

**Accounting Procedure**

The MPLADS funds account is managed by the district authority and implementation authority. The asset register is prepared by the district authority for listing different head wise list of works for which MPLADS funds were released. On completion of work, the implementation agency finalises the accounts and furnishes a completion report, utilization certificate and return the unutilized balance and interest amount to district authority within 30 days. The utilization certificate is furnished every year to the State Government and MOSPI as per the guidelines given in Annexure VIII. The accounts and Utilization Certificates are audited by Chartered Accountants or the Local Fund Auditors or any Statutory Auditors as per the procedure. Further, the Comptroller and the Auditor General of India undertakes the test audits and furnishes reports to district authority, MOSPI and the State Government.

**Monitoring**

MOSPI monitors the project work under MPLADS, the monitoring includes the updates on the position of funds released, cost of sanctioned funds utilisation, and receipt of Completion Report and utilization and audit certificates from district authority. The Nodal Department is responsible for coordination with the MOSPI. The State government assigns coordination and monitoring of MPLADS funds to a dedicated cell under a senior officer. The State / UT government may decide to training the district officers and can empower district authority with technical and administrative powers for implementation of the MPLADS.
The monitoring committee at the state level under the chairmanship of Chief Secretary / Development Commissioner / Additional Chief Secretary appraises the implementation progress with district authorities and MP at least once in a year. This Committee also examines the physical and financial progress of MPLADS funds provided in areas affected by natural calamities. The implementation authority provides a report on physical and financial progress of each work to the district authority every month with a copy marked to concerned State Department. This is done after the implementation authority visits the work spots to ensure that the timeline, procedures, and specifications are adhered to.

Performance of M.Ps
The end of a Parliament’s term is the appropriate time to evaluate how well the MPs have delivered the development promises during their five years in power. One of the test of the MP’s competence is how well the funds sanctioned under the MPLADS are utilised. Since 2008, internal audits done by MoSPI found that most MPs have not accomplished well in this test. The audits of the 15th Lok Sabha records that no MP was able to utilise the funds allocated for infrastructural development in his/her respective electorate.

Past Trends
A significant issue with the MPLADS scheme is that the data on fund utilization is not available publicly. In a recent order, the Central Information Commission directed MOSPI to make the data publicly available and analyse the data MP-wise, constituency wise and work wise. The data on MPLADS note that during 2015-16, an amount of INR 3,502 crore was released. As per the latest MPLADS Annual Report, since inception till 31st March 2017, INR. 43008.75 crore has been released under the Scheme. An aggregate expense of INR. 39904.26 crore has been incurred, with 92.78 percent of funds utilized till March 2017 as compared to 91.11 percent on March 2016. During the same period, in eight legislative constituencies, 438 projects were undertaken and only 159 works were accomplished, and less than INR 9 crores funds were utilised. Out of the funds released, 95 percent of the funds were utilised for the construction of community halls. Since inception till March 2017, approximately INR 21.10 lakh funds had been sanctioned, INR 18.48 lakh funds had been sanctioned and INR 16.50 lakh worth projects have been completed. The percentage of cumulative works completed over cumulative works approved is 89.31 percent till March 2017.

The district authorities have spent Rs 2,294.18 crore on the recommendations of Rajya Sabha members and Rs 5,304.32 crore on the proposal of Lok Sabha member during the 11th Five Year Plan (2007-12).

Opinions in Support of Scrapping this Scheme
There are many arguments on supporting the scrapping of the scheme. Critics argue that there is a violation of guidelines by MPs, DAs and IAs leading to ineffective utilization or misuse of funds. Further, poor monitoring mechanisms reduce the efficiency of the scheme. The scheme has also been challenged in the Supreme court because it violates the concept of separation of powers. The apex court observed that since the role of MPs is restricted to ‘recommending’ works
and the implementation is done by local authorities, the program does not violate the separation of powers.

There are cases where some MPs have accumulated personal assets with public funds whereas, there are strict guidelines on what they can spend on: drinking water, health, family welfare, sanitation, education, electricity, non-conventional energy sources, irrigation, roads, sports and disaster relief, among others. Over the previous two decades, the CAG has audited the scheme thrice and had advocated a mechanism to monitor the projects.

Some solicitors have also reasoned for abandoning the MPLAD Scheme by questioning the scheme and its constitutionality before the Supreme Court. The chief contentions before the Supreme Court were that the program debased the concept of separation of powers, as MPs become the members of the Executive, and the misappropriation of the funds assigned under the Scheme. But, the bench constituting of 5 judges of the Supreme Court maintained the validity of the scheme and dismissed the argument that the program violated the concept of separation of powers. The Court observed, “Even though the MPs have been given a seemingly executive function, their role is limited to ‘recommending’ funds and the actual implementation is done by local authorities. There is no removal of checks and balances, since these are duly provided and must be strictly adhered to by the guidelines of the Scheme and the Parliament. Therefore, the Scheme does not violate separation of powers.”

In spite of the Supreme Court affirming the validity of the program, there are constant demands for either scrapping or reinventing the program. As per the Evaluation Report of Planning Commission, sustenance of the created assets is another area of weakness of the scheme, which has however received less attention than it deserves. According to this report, despite the suggestion in the guidelines only 55 of the 103 collectors claimed that they could warranty some provision of upkeep before approving the funds. For several of the assets created there seem to be no arrangement, either physical or financial, for maintenance, and there is no accountability on the upkeep of the assets created.

In the year 2011, the Performance Audit Report No.31 on MPLADS reasoned that there is no point continuing with a program as it had failed to deliver and has only promoted the politician-bureaucrat-contractor nexus - the bane of India’s governance structure. As per this CAG report, “the fact that the funds under the scheme are non-lapsable leads to a large amount of unspent balance, which is rising over the years.” Reasons for this, cited by Collectors and development functionaries, include advice of fewer works by some MPs and inadequate allocation for individual works. One solution to this problem has been suggested by some of the MPs, is to make the fund lapsable and return the funds annually to the Ministry.

**Need for Structured Research**

We believe that the MPLAD Scheme should not be scrapped but instead the program requires effective restructuring. The fundamental reasons for inefficient fund utilisation may be addressed via systematic and rigorous examination. Recent statistics suggests that the MPs are not utilizing the funds available to them for spending on development of their constituency. One of the reason for this underutilisation of funds is that the development landscape of the constituency
is not supported by evidence and they do not know the know-how about the effective utilisation of funds. Since the majority of the MPs haven’t yet utilised their MPLAD funds, this calls for an opportunity to educate the MPs on fund utilising more efficiently. A major proportion of MPs, who spent significantly less amount from their quota of MPLAD fund, have criticized the district authorities for the delay in fund utilisation. There is a common allegation that the Local Area Development funds of MPs are being misused only to strengthen the vote banks of the party. These are issues and problems which may be addressed. If the intention is right towards economic progress and towards enhancing the livelihoods of people, the electorate may be developed after collecting research evidence based on rigorous empirical investigation and primary data.

New MPs are seen using grievance redressal mechanisms to prioritize their development agenda for the constituency. However, this approach is solely targeted problem-solving with no impact on improving the standard of living. Therefore, it is felt that a planned approach towards development based on the detailed primary survey, data analysis and empirical inquiry that also considers Central and State welfare schemes and the MPLADS may yield better outcomes in enhancing the livelihoods of their constituents.

**Conclusion**

The MPLAD scheme provides a feasible means for ground-level development. But, there is a paucity of data concerning the utilisation of the scheme, and hence a conclusion on whether the scheme should be continued or scrapped cannot be decided at. The recent direction to MOSPI by CIC to make available the fund utilization MP-wise, Constituency wise and work wise is a stride in the right direction. Once the fund utilization is analysed, aspects that result in its ineffective utilisation and those which can improve its effectiveness may be distinguished and addressed. Moreover, annual reports and end term reports on fund utilization may be made publicly available, to assist the constituencies to also participate in the decision-making process and need identification of works.

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