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## ADOPTION AND IMPLEMENTATION OF E-GOVERNANCE FOR ADMINISTRATION AND SERVICE DELIVERY BY THE STATE GOVT. OF WEST BENGAL IN THE URBAN DEVELOPMENT DEPARTMENT

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### Abstract

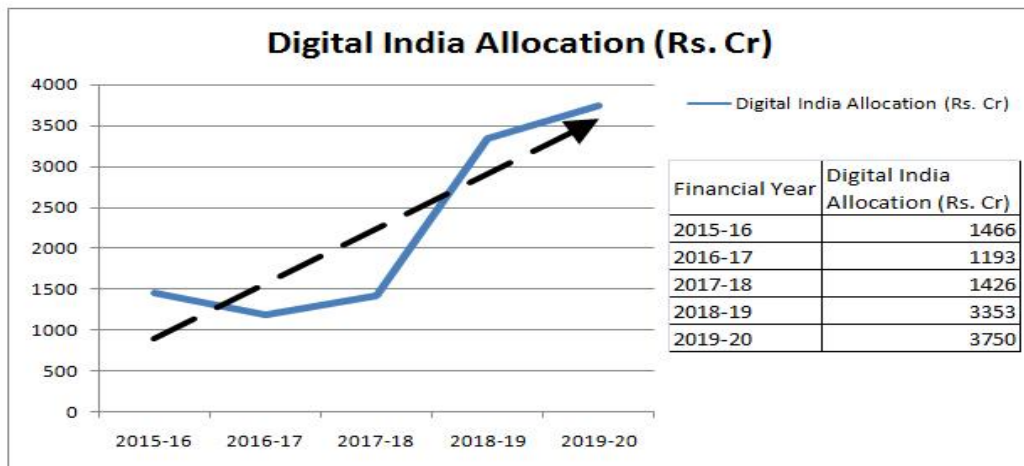
In this paper the adoption of e-governance by the government in state sector of West Bengal and the implementation of such technology namely, e-governance towards citizens' service deliveries by the Urban Development department have been researched upon within its limited scope. In this paper, e-Governance programs by the Urban Development department have been explored and different perspectives of status, growth and implementation of such projects have been analysed. In the paper, the factors that are responsible to create challenges behind implementing e-Governance programs by the Urban Development department have been identified and there upon the different ways in which those challenges are hindering the growth or success of e-Governance in the urban service delivery have been identified. In the end, this research paper made an effort to identify the different ways to overcome these challenges. In the end it has been concluded how e-Governance has been widely and strategically accepted in the Urban Development department but there is a clear requirement of establishing a visible plan before implementing e-governance in the department.

### e-Governance in India and Government's adoption

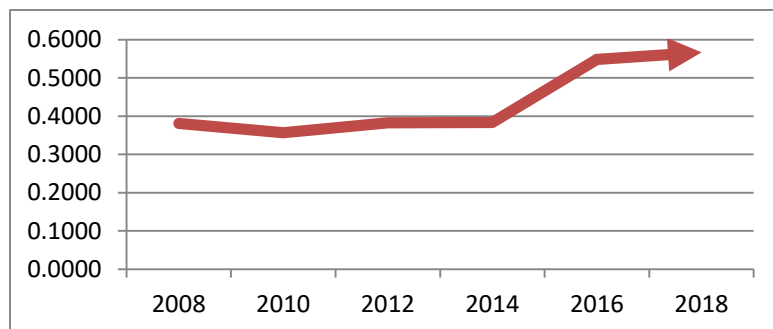
The e-Governance started making its impact felt in India with the development of the Institution called National Informatics Centre (NIC) in the late 20th century and followed by the launching of National e-Governance Plan (NeGP) in the early 21st century. The Government of India at first established the Dept. of

Electronics in 1970. Then in 1977 the establishment of National Informatics Centre (NIC) was the first initiative at the government level focussing on information as well as the communication of those information. In 2006, National e-Governance Plan was launched by the Govt. Since 2010, Government of India is regularly spending a major share of the national budget in developing ICT infrastructure. In FY 2011-12, Department of Information Technology spent Rs. 259 Crores towards e-Governance; In FY 2012-13, the spending was Rs. 424 Crores; In FY 2013-14, the spending increased to Rs. 700 Crores; In FY 2014-15, Govt. of India made a pan-India launching of Digital India with a Rs. 500 Crores outlay.

In the last 5 years Govt. of India also continuously increased budget allocation towards Digital India suggesting government's interest in adopting information technology based digital services for citizens.



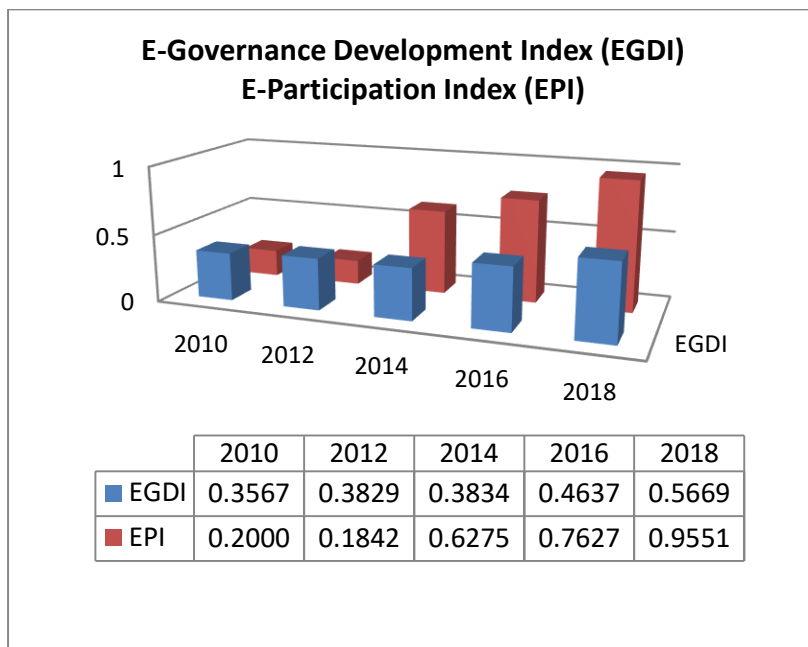
According to United Nations E-Government Index (EGDI) survey of last 10 years, as done every 2 years, India has since a steady growth in EGDI, a composite index based on the weighted average of three normalized indices, e.g. Telecommunication Infrastructure Index, Human Capital Index and Online Service Index.



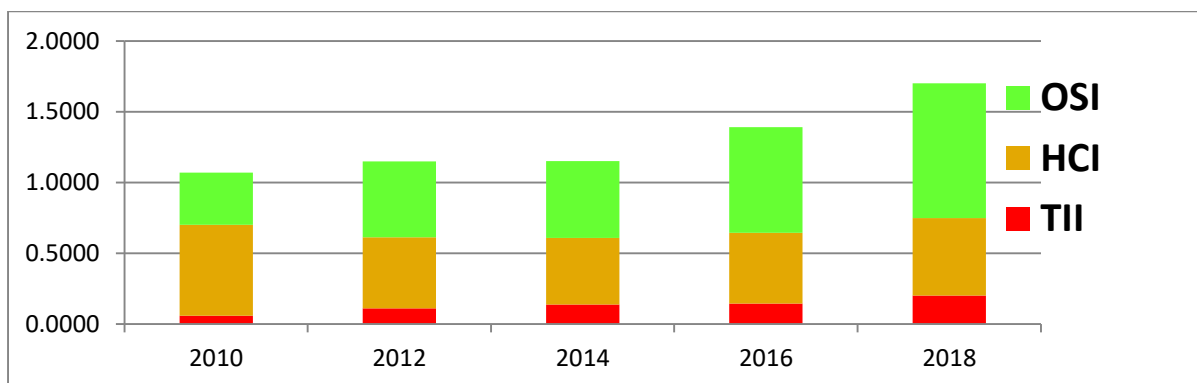
Year	EGDI
2008	0.3814
2010	0.3567
2012	0.3829
2014	0.3834
2016	0.5484
2018	0.5669

As EGDI for India increased, the country's ranking among e-governance ready nations steadily grew from 124 in 2012 to 96 in 2018.

E-participation is defined "as the process of engaging citizens through ICTs in policy, decisionmaking, and service design and delivery to make it participatory, inclusive and deliberative". EPI is based on: (i) e-information – availability of online information; (ii) e-consultation – online public consultations, (iii) e-



India's E-Governance Development Index grows depending on application of e-governance, presence of framework, access to related ICT and education infrastructure etc., readiness to use those to deliver public services. The EGDI, which assesses e-government development at the national level, is a composite index based on the weighted average of three, namely, Telecommunications Infrastructure Index, Human Capital Index (HCI), Online Service Index (OSI).



However, from 2015 onwards, Government of India decided to delink e-Governance as a centrally sponsored scheme and state governments are entrusted upon with shared investments for research and development, innovation and building infrastructure.

The central government started e-district mission mode program and under this project, citizen-centric service deliveries have been improvised and disseminated with the support of IT and implementation of IT enabled Common Service Centres under the State government's administration. It was conceptualised that through this state implemented IT enabled service deliveries, citizens will be served up to their doorsteps.

### Successful e-Governance in Government sector by central government

The Government of India formed the two ministries of Electronics and Technology and also that of Communication and Information Technology since July, 2016 for adoption of different e-governance related policies and executes e-governance based administration.

The implementation style has been modified according to the rural and urban base for citizen service deliveries. For example, in rural service deliveries, provisions to facilitate agriculture, land record

management, panchayat etc. have been emphasized. In case of urban service deliveries, online municipal service applications, online tax and other payments, traffic management information etc. have been given importance.

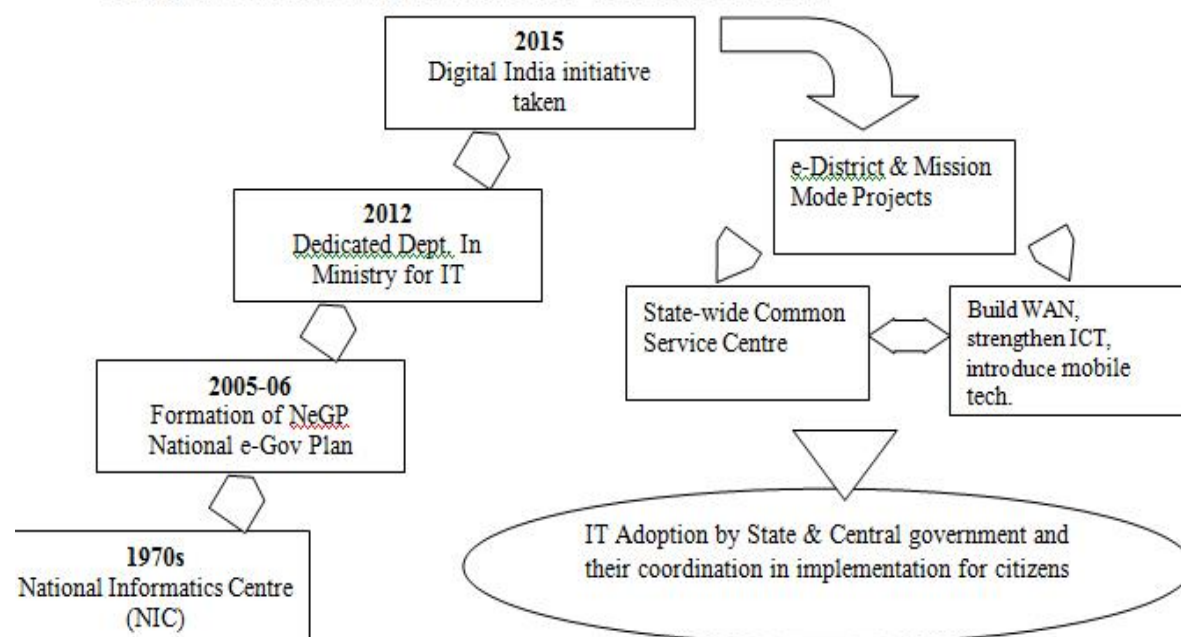
There are many successful e-governance initiatives taken up in the Government sector. For example, the launching of the Aadhaar program to enrol the biometric identifying data of the 1.2 billion strong national population through 12-digit unique UIDAI number was one of the critically acclaimed step taken to provide to people fairer access to government benefits and services. The Aadhar is claimed to have a cover of nearly 90% of population.

Mobile Banking also saw a growth through the central government's affordable basic banking service named Pradhan Mantri Jan Dhan Yojana (PMJDY). In support to PMJDY, indigenous debit card RuPay has been introduced by National Payment Corporation of India (estb. 2012). Further, in order to enable PMJDY bank account holders to do internet banking using unified payments interface (UPI), central government of India made a mobile application to enable quick payment called Bharat Interface for Money (BHIM).

### e-Governance in West Bengal by the State sector

There are several successful e-Governance projects also in the government sector of West Bengal. Some of the successful projects are, (i) Project Banglarbhumi is a project by the Land & Land Records Dept. by which all the land related information including mouza maps and plot information can be identified online. (ii) Integrated Financial Management System comprises all aspects of treasury and budget functions including integration of receipt and expenditure accounts of the State. (iii) E-District portal, a single window system for Online Sanction of Building Plan and Development permission, Land Use Development & Control Planning etc. under Urban Development Dept (iv) Integrated online salary management system used by officials of school education for their salaries.

#### Concept and model of implementation of e-Governance in India



The above model has been conceptualised, keeping in mind the chronological steps taken up by the government in India to introduce e-governance with the help of introducing institutions to administer the

development, launch campaigns, build infrastructure and oversee the adoption process by both the implementing bodies of the government and the citizens.

Based upon the above schematic model, IT Adoption by the government in state sector of West Bengal and the implementation of e-governance towards citizens' service deliveries by the Urban Development department have been researched upon in the limited scope of this paper.

### **Objectives:**

- Exploring and analysing the different perspectives of status, growth and implementation of e-Governance programs by the Urban Development department
- Identifying factors that are responsible to create challenges behind implementing e-Governance programs by the Urban Development department
- Identifying the different ways in which those challenges are hindering the growth or success of e-Governance in the urban service delivery
- Identifying the different ways to overcome these challenges

### **Hypothesis**

- H1: e-Governance has been widely and strategically accepted by the urban development department as an effective mode of administration
- H2: Technology driven projects are being undertaken by the urban development department for effective service deliveries
- H3: A major portion of the employees in the concerned Govt. sectors are sufficiently aware about technology

### **Research Methodology: Coverage, Data Collection, Sample, Data Analysis**

**Coverage:** Cross-sectional data has been collected only from West Bengal urban areas and for a specific time period between 2006 and 2016.

**Data collection:** The sample population consists – The Urban Development Department alongwith organizations under this department viz. (1) Directorate of Local Bodies, (2) Municipal Engineering Directorate, (3) State Urban Development Agency, (4) Institute of Local Govt. and Urban Studies, (5) West Bengal Valuation Board; as well as 125 Urban Local Bodies/Municipal Bodies all over West Bengal. The officials, only at the managerial level and above have been considered. Personal interviews and Survey through Questionnaires with the officials at the Managerial level has been the primary source of data.

### **Data Analysis:**

Primary Data was collected for the span of 10 years. A Time-Series Analysis has been performed to analyse the success trend of e-Governance. The officials who are working with different successful e-governance projects in West Bengal have been interviewed and their projects' performance in the limited scope of this research has been researched. Different officials working in the different Development Authorities under Urban Development & Municipal Affairs' Department has been interviewed to seek information on successful

implementation of online Landuse Development & Control Planning system, online Water Connection sanctioning and Building Plan sanctioning system which directly involves citizens.

It has been identified by the Researcher that the Municipal Affairs' Dept and 5 companies underneath it is undergoing a change with e-Governance implementation in some forms or others. For example, this government department is providing e-governance as a part of Govt-to-Citizen services under which a system was build to provide online, Birth & Death Certificates and Trade Licenses at municipal areas by all 125 municipalities of West Bengal; The policy of adopting e-Governance for all the municipalities was initiated in 2005-2006 when Municipal Affairs' Dept and Ministry of Economic Affairs and Urban Development Department (Govt. of India). Research information was collected from the above mentioned directorate and 5 of its companies/councils.

The results from Interviews and Surveys have been studied through confirmatory factor analysis process to reach to a decision. Normalization Test has been performed for filtering the data. The Research Questions, here also mentioned as, 14 observed or measured variables were analysed against the 7 nos. of Hypotheses factors. Confirmatory factor analysis of the responses obtained from interviewing the officials were analysed based upon the 7 Hypotheses factors and a correlation among those hypotheses have been further analyzed to conclude that which are the Hypotheses are having a positive effect.

	Research Question	Hypothesis	
F-1	How Central Govt. is planning e-governance projects to be implemented by the states	H-1	e-Governance has been widely and strategically accepted in the Govt. sectors of Municipal Affairs, School Education and Higher Education under the study as an effective mode of administration
F-2	Is there a visible plan to achieve pre-determined e-governance objectives		
F-3	Are there varieties of procedures proposed to achieve the e-governance goals		
F-4	How better can Govt servants adapt themselves to the changing technology and environment		
F-5	Do implementing modern science & technologies improves levels of service deliveries	H-2	Technology driven projects evolved under Central Govt are being undertaken by the concerned State Govt. sectors for effective service deliveries
F-6	Do computerization and e-governance promotes service deliveries as smarter, faster and more empowered methods	H-3	A major portion of the employees in the concerned Govt. sectors are sufficiently aware about technology

Our objective is to see whether the model specified above is true in connection with the data collected. In confirmatory factor analysis it is assumed that the underlying factors are correlated to each other. It measures how similar (associated) two hypotheses are across the variables. Factor Correlation must be  $<0.85$  and range should be within 0 and 1. Out of the responses obtained from the analysis of the research question,

Skewness and Kurtosis values are found to be closer to 0 [Skewness from (-)0.24 to (+)0.49 i.e. in limit of thumb rule of  $-0.8 \leq |S| \leq +0.8$  and Kurtosis from (-)0.92 to (+)0.21 i.e. within limit of thumb rule of  $-3.0 \leq |K| \leq +3.0$ ].

When all the above criteria meet the acceptable range we go for parameters estimates.

### **Results obtained:**

All the above measures are more all less within the acceptable range.

Also, as from the result we saw that the questions “How Central Govt. is planning e-governance projects to be implemented by the states” and “Is there a visible plan to achieve pre-determined e-governance objectives” have a low association with the hypothesis “e-Governance has been widely and strategically accepted in the Urban Development department under the study as an effective mode of administration” (correlation being 0.283 and 0.118). Hence, based on this we can say that these two questions have lower effects than the other questions that are becoming challenges in implementing e-Governance in Govt. sectors.

Looking into the correlations among the factors we come to the conclusion that Hypothesis 1 and Hyp2 have a strong positive correlation (0.642), Hyp2 and Hyp3 too have strong association (0.731) between them.

As for Question F1 e-Governance has been widely and strategically accepted in the Govt. sectors of Municipal Affairs, School Education and Health under the study as an effective mode of administration. Then for Question F2, Technology driven projects evolved under Central Govt are being undertaken by the concerned State Govt. sectors for effective service deliveries. In regard to Question F3, A major portion of the employees in the concerned Govt. sectors are sufficiently aware about technology

The overall measurement indices such as chi square value (83.595), SRMR (0.05), RMSEA (0.044), CFI (0.946) etc are within the acceptable range. So, as a conclusion we can say that the data that is collected through the questionnaire gives enough evidence to support the hypotheses that are guessed from prior research studies.

### **Conclusion:**

e-Governance has been widely and strategically accepted in the Urban Development department but there is still dearth of planning in implementation. There is a clear requirement of establishing a visible plan before implementing e-governance in the Urban Development Department.