

# E-Governance in Local Authority – A Pilot Study with Reference to Tirupur City, Tamil Nadu

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## Abstract

Information and Communication Technology (ICT) is rapidly gaining the center stage for future world economic growth and development. The advances in information and communication technologies and their related infrastructure apparatus provide opportunities to transform the relationship between government and citizens and business in new ways that contribute to the attainment of good governance. The advancement in ICT not only acts as an engine for economic growth, it also enhances the potential for the delivery of social services and the effectiveness of government administration. In addition, the use of ICT may lower transaction costs both for citizens and government operations and make public services more affordable to people at large. India being the largest democracy in the world, has much to gain from e-Governance, especially when citizen participation in governance is one of the features of the fully evolved stage of e-government. Government of India has for the past three decades (1985-2015) widely acknowledged that expanded use of ICT in the public sector can offer important benefits such as improved planning and monitoring mechanisms, cost savings through rationalization, and more effective administration and delivery of certain public services. E-governance needs to transform all levels of government but the focus should be on local governments since local governments are the closest to citizens, and constitute for many, the main interface with upper tiers of government. The relationship of citizens and local authorities tends to be one based on proximity as the interests at stake for both parties are closely intertwined concerning issues such as public services, local development, education etc. Thus, e-governance based administrative reforms in local governments can have maximum impact on citizens as well as employees working in Panchayati Raj.

**Keywords :** E-Governance, Panchayati Raj, E-Government, Local Authority

## I. INTRODUCTION

Developing countries especially aspire to harness the ICT revolution to improve public services, share local and global knowledge, and participate in the promising global software and information technology (IT)-enabled services industries, thus making governance more efficient and effective. “E-Government refers to the use of information technologies that have the ability to transform relations with citizens, businesses, and other arms of government agencies. These technologies can serve a variety of different ends: better delivery of government services to citizens, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. The resulting benefits can be less corruption, increased

transparency, greater convenience, revenue growth, and/or cost reductions”. E- Governance has become an integral part of public sector transformation as Information and Communication Technology (ICT) has helped to deliver more modern services for citizens and businesses and is about a process of reform in the way of government work, sharing information, and delivering services to internal and external clients. It enables active citizen involvement by informing the citizens, representing the citizens, encouraging them to vote, consulting them as required and, encouraging their participation. In short, e-government applications improve the communication between administrators, citizens, and businesses leading to improved governance, public sector management, access to economic and social opportunities thereby bridging the digital divide within a society and between countries.

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## II. STATEMENT OF THE PROBLEM

Even though the state of Tamil Nadu witnessed several setbacks in the evolutionary process of decentralized planning, it is one of the prominent states in India that has evolved a methodology of decentralized planning and sought to implement it after the enactment of the Tamil Nadu Panchayats Act 1994 and Tamil Nadu District Municipalities Act 1920. Most of the first generation problems have been sorted out to a great extent in Tamil Nadu. First generation problems include difficulty in convincing the political and administrative elites of the need for genuine decentralization; actual transfer of resources to local governments, even if there is agreement on formal forms of decentralization, and elite capture – by which the local elite takes over the control of local governments, and decentralized allocation of resources.

Now the vexing issue is to resolve the second generation problems of improving efficiency and effectiveness, designing of incentives for stakeholders to align their interests with those of society as a whole and ultimately creating institutions that lead to sustainable welfare of local people that the state currently deals with. The ultimate objectives of good governance can be fulfilled only if the local people are taken into confidence in governance process. The development administration at local level has to ensure the participation of everyone in the society, enhance accountability of governance authority, responsiveness of civic society in discharging its responsibility related to societal development, efficient mobilization and utilization of resources for the well-being of society and implement the long cherished goal of equity and inclusiveness. The infusion of modern ICT into governance space has been transcending all walks of life beyond recognition. This motivated the researchers to find out the awareness, acceptance, and satisfaction of e-governance in Panchayati Raj.

## III. OBJECTIVES OF THE STUDY

The main objectives of the study are the following:

1. To find out the various services provided by government to the citizens at the panchayat level.
2. To find out the awareness level of e-Governance and NeGP (National e-Governance Plan) from the perspective of Panchayati Raj.
3. To measure the satisfaction level about accounting software (PRIA Soft/PRIMITIVE Soft) implemented in village panchayat at Tirupur district.

4. To find out the impact of e-governance in gram sabah.
5. To assess the progress of e-governance in panchayats Tirupur district from the perspective of local authority.

## IV. SCOPE AND NEED OF THE STUDY

The scope of the present study was wide and encompassed almost all important aspects of e-governance activities involving operations of Panchayati Raj. The application of various information and communication technologies (ICTs) made deep inroads into private and public lives of human beings. It has made an indelible imprint on citizen-state relations and interactions for good governance. The impact is felt in all layers of governance from village level to national and global level. The study covers various panchayat level services provided to citizens. The study period was from August 2011 to July 2015.

## V. RESEARCH METHODOLOGY

This is a pioneering empirical research conducted to understand the functions and effectiveness of e-governance in Panchayati Raj. A combination of primary data as well as secondary research was used to achieve the research purpose. The questionnaire was prepared in a structured form on the basis of objectives and data collected from panchayati raj secretaries in Tirupur district by visiting the panchayat offices. This study was basically a pilot study. There are 265 village panchayats in Tirupur district. For the purpose of the study, 50 panchayats were selected and the data were collected from the secretaries working in panchayati raj offices. Convenience sampling method was used in the study. Statistical tools such as reliability test, simple percentage analysis, two-way analysis, and Garret ranking technique were used in this study.

## VI. REVIEW OF LITERATURE

As a backdrop of the study, published literature on various aspects of government projects both national and international were reviewed and presented in a comprehensive capsule.

Bhattacharyya [5] published his article on e-governance in rural West Bengal (India). The objective of his research paper was to explore the impact of IT as an enabling force in its efforts to meet the present and

emerging challenges of the digital age on the rural people in West Bengal (WB). In WB, Burdwan (Bardhaman) district had been selected for implementing the country's first rural e-governance pilot project. The paper argued that introduction of rural e-governance in Burdwan is likely to generate development gains only when it is closely adapted to the needs and capacities of the panchayats. The primary focus of this study was on the executive authorities responsible for implementing e-governance at the rural level. The researcher went to 30 people of three villages who were below the poverty line with a structured questionnaire that provided ample opportunity to measure the socio-economic needs of the local people and to correlate those needs with the gains of e-governance and finally, the researcher concluded that e-governance was in the development stage.

Michael, Vandebeek, and Gemino [6] published their article on building citizen trust through e-Government. Governments around the world continue to invest in the internet, and have largely adopted the mantra of service efficiency. Their study aimed to study challenges by showing initial support for the salience of political self efficacy as it leads to trust in government. Individuals with *a priori* trust in government, and correspondingly high levels of internal self efficacy will have these reinforced through electronic interaction with their governments. The reverse also holds: distrustful, low self-efficacy individuals will not increase their trust, irrespective of the medium of interaction. They concluded that if politicians aim to increase trust, they would be better served by focussing on non-web-based courses of action. The bureaucracy, seeking efficiency in service delivery, is better served by doing the same, perhaps at the expense of improvements in website performance.

A doctoral thesis by Sardesai [7] was based substantially on three major CCEG projects implemented in Maharashtra. These projects were: 1) briefing of the case study 'Land Records Computerization in Maharashtra (LRC); 2) importance of land records in India; and 3) briefing of the case study 'Online Examination for 12<sup>th</sup> class students in the subject of Information Technology, SSC Board'. According to research, e-governance projects are sustained if funds allocation is planned yearly with appropriate enhancements depending upon project status. Objectives of the citizen centric e-governance projects are mainly defined from an organization's point of view, so, citizens

are not fully satisfied. Reduction in corruption and transparency is expected by citizens which is mostly missing from e-governance applications. Since the data in e-governance applications on which citizens services are offered have a high rate of error, citizens face a lot of harassment in retrieving the data. Discontinuation of the manual system has not been planned, hence the two systems are running in parallel, creating confusion, and additional problems. Hiring the services of vendors without proper monitoring and clear terms and conditions creates additional issues for computerization. Part implementation of e-governance applications does not offer all benefits to citizens. Sharing of databases / interaction across departments does not happen due to which integrated services are not a reality. Citizens still have to visit a number of locations for different services. Regular enhancements of e-governance applications are not planned after rollout. If the transfer of a project leader / departmental head happens in between before release, the project gets discontinued. Delays at government level in amending laws make important projects ineffective. Committees are functional only till the release of the package, therefore, issues in implementation remain unattended.

## VII. ANALYSIS AND RESULTS

Before starting the main study, it was planned to conducting a pilot study in order to find out whether the research methodologies, instruments, processes, and plans were on the right track. Reliability and validity of the research instruments are very important for the reliability of the research. Therefore, **reliability test** was performed. On the basis of the result of reliability, the scale used to measure the variable appeared to be a valid and reliable measure for the purpose of the present study.

### A. Functions of village panchayat

Some of the important functions of a village panchayat are:

- ❖ Construction, repair and maintenance of village roads
- ❖ Extension of village sites and regulation of buildings
- ❖ Lighting of public roads and public places in built-up areas
- ❖ Construction of drains
- ❖ Cleaning of streets and improvement of sanitary condition of the village
- ❖ Construction and maintenance of public latrines
- ❖ Sinking and repairing of wells, excavation, repair and

maintenance of ponds or tanks, and the construction and maintenance of water-works for the supply of water

- ❖ Maintenance of burial and burning grounds
- ❖ Maintenance of parks and reading rooms
- ❖ Implementation of schemes such as Indira Awaas Yojana (IAY) and National Rural Employment Guarantee Scheme (NREGS).

**TABLE I**  
**DEMOGRAPHIC FACTORS OF THE RESPONDENTS**

S.No.	Particulars	No. of respondents	Percentage
1	Age	Below 30 years	11
		30-40 years	16
		More than 40 years	23
		<b>Total</b>	<b>50</b>
2	Gender	Male	44
		Female	6
		<b>Total</b>	<b>50</b>
3	Education level	School level	22
		Graduate/Diploma	14
		Post graduate	14
		Others	-
		<b>Total</b>	<b>50</b>
5	Completion of course in computer	No	42
		Yes	8
		<b>Total</b>	<b>50</b>
6	Income of respondent per month	Below Rs.10,000	37
		Rs.10,000 to Rs.20,000	11
		Rs.20,001 to Rs.30,000	2
		Above Rs.30,000	-
7	Revenue of Panchayat per annum	<b>Total</b>	<b>50</b>
		1-5 lakhs	6
		5-10 lakhs	15
		10-25 lakhs	17
		25- 50 lakhs	9
		Above 50 lakhs	3
8	Availability of computer at Panchayat	<b>Total</b>	<b>50</b>
		1	38
		2	12
		3	-
		4	-
		More than 4	-

## B. Resources for village panchayat

The important sources of revenue for the village panchayat are:

1) Tax revenue: Among the three tiers, the village panchayat alone has the power to levy taxes. House tax, profession tax and advertisement tax are the commonly levied taxes.

2) Non Tax revenue: Licensing fees for building plan and layout approval, fees and charges on dangerous & offensive trades, water charges, fees on cart-stands, fishery rentals, 2C patta fees, income from markets and fairs, ferries, fines and penalties etc.

3) Assigned and shared revenues: These revenues include the items pooled at the state level (local cess, local cess surcharge, surcharge on stamp duty and entertainment tax) which are released by the Director of Rural Development and Panchayat Raj to all the three tiers of the Panchayats including the village panchayats. Other items of assigned and shared revenues for the village panchayats include the seignior age fees (100%), lease amount (50% share) on minor minerals and social forestry auctions amount.

4) Grants: Central Finance Commission Grant, State Finance Commission Grant, development grants under centrally-sponsored and state schemes.

## C. Simple Percentage Analysis

The reliability of items if one item is dropped out of 16 items is given in the table VIII. For all the scales, the reliability is above 0.70 which means the scales constructed for the purpose are reliable.

**TABLE II**  
**AWARENESS OF E-GOVERNANCE AMONG SECRETARIES WORKING IN PANCHAYAT RAJ**

Awareness about e-governance activities	Very high	7	14
	High	12	24
	Moderate	20	40
	Low	6	12
	Very low	5	10
<b>Total</b>		<b>50</b>	<b>100</b>
Awareness about NeGP	Very high	2	4
	High	11	22
	Moderate	18	36
	Low	10	20
	Very low	9	18
<b>Total</b>		<b>50</b>	<b>100</b>

**TABLE III**  
**IMPACT OF E-GOVERNANCE IN GRAM SABAH**

Number of people participated in Gram Sabah	Below 400	40	80	Impact of e-governance in Gram Sabah	Very High	1	2
	401-600	8	16		High	3	6
	601-1000	1	2		Moderate	15	30
	Above 1000	1	2		Low	25	50
					Very Low	6	12
<b>Total</b>		<b>50</b>	<b>100</b>	<b>Total</b>		<b>50</b>	<b>100</b>

**TABLE IV**  
**PERCEPTION ON E-GOVERNANCE**

1. Implementation of E-governance applications has helped to improve the image of the government.
2. Computerization of public service has led to an impersonalization of services
3. Rural citizens benefit greatly from computerization of Government services.
4. Reduced cost of service
5. Faster and better communication
6. Easy retrieval and processing of data
7. As an aid for easy and quick decision making
8. Greater reach and accountability
9. Better utilization of resources
10. Ensuring of wider participation
11. Exchange of information with citizens, business and other government departments
12. Speed and efficient delivery of public services
13. Improving internal efficiency
14. Restructuring of administrative process
15. Improving quality of services
16. Changing attitude of employees

**TABLE V**  
**PERCEPTION ON E-GOVERNANCE**

Reliability Statistics	
Cronbach's $\alpha$	No. of Items
0.916	16

Please refer tables I, II and III for the analysis.

#### **D. Reliability Analysis**

Cronbach's  $\alpha$  is the reliability coefficient. Here 0.916 says there is high reliability among the items. N (table IV) is the number of items (16) in this scale.

Table VI gives the analysis of whether reliability improves if any particular item is dropped.

**TABLE VI**  
**ITEM-TOTAL STATISTICS**

Item-Total Statistics				
Perception factors	Scale Mean if item deleted	Scale Variance if item deleted	Corrected item-total correlation	Cronbach's $\alpha$ if item deleted
A16_1	62.6429	96.238	0.634	0.910
A16_2	62.6786	94.004	0.766	0.905
A16_3	63.5714	99.217	0.545	0.913
A16_4	62.8214	94.078	0.799	0.904
A16_5	62.2500	109.306	0.263	0.918
A16_6	62.3214	107.041	0.449	0.915
A16_7	62.3929	103.655	0.606	0.912
A16_8	62.8571	94.275	0.862	0.903
A16_9	63.0357	90.925	0.812	0.903
A16_10	62.9643	94.628	0.772	0.905
A16_11	62.3929	108.247	0.395	0.916
A16_12	62.5357	104.554	0.472	0.914
A16_13	62.7857	101.508	0.509	0.914
A16_14	62.4643	99.739	0.628	0.910
A16_15	62.5714	101.217	0.531	0.913
A16_16	63.1071	94.988	0.623	0.911

Note: A16\_1 to A16\_16 represent the factors listed in table IV.

**TABLE VII**  
**REASONS FOR SLOW PROGRESS OF E-GOVERNANCE IN PANCHAYATI RAJ**

S.No.	Factors
1	No printer
2	No networking
3	Limited use of service by citizen
4	No server/ server related issue
5	No wiring/ electrical issues
6	No front office
7	Computer shortage
8	Lack of computer knowledge among employees
9	High implementation cost



**TABLE VIII**  
**RELIABILITY STATISTICS AND ITEM-TOTAL**  
**STATISTICS**

Reliability Statistics				
Cronbach's $\alpha$			No. of Items	
.776			9	
Item-Total Statistics				
Factors for slow progress	Scale Mean if item deleted	Scale Variance if item deleted	Corrected item-total correlation	Cronbach's $\alpha$ if item deleted
A32_1	30.8750	28.650	0.598	0.734
A32_2	30.6250	34.783	0.464	0.755
A32_3	30.3125	41.296	0.040	0.800
A32_4	30.4375	38.663	0.367	0.769
A32_5	30.7500	34.867	0.474	0.753
A32_6	31.1875	24.963	0.929	0.659
A32_7	31.1250	31.983	0.718	0.718
A32_8	29.8750	42.917	-0.111	0.824
A32_9	30.3125	32.763	0.689	0.724

Note: A32\_1 to A32\_9 represent factors listed in table VII.

#### E. Two Way Table

Please refer table IX for the analysis.

### EDUCATIONAL QUALIFICATION OF THE RESPONDENTS AND LEVEL OF SATISFACTION OF E-GOVERNANCE IN PANCHAYATI RAJ

With the aim of finding the degree of association between the educational qualification and the level of satisfaction of e-governance in Panchayati Raj, a two way table was prepared.

Table IX reveals that 22.73%, 14.29%, and 21.43% of the respondents are school pass outs, degree/diploma holders, and post graduates, respectively and have low level of satisfaction. 36.36%, 35.71%, and 42.86% of the respondents are school pass outs, degree/diploma and post graduate holders respectively, and have medium level of satisfaction. 40.91%, 50%, and 35.71% of the respondents have educational qualification of school pass-out, degree/diploma and professional/others respectively, and have high level of satisfaction.

**TABLE IX**  
**TWO-WAY TABLE**

Educational qualification	Level of satisfaction			Total
	Low	Medium	High	
School	5 (22.73)	8 (36.36)	9 (40.911)	22
Degree/Diploma	2 (14.29)	5 (35.71)	7 (50)	14
Post graduate	3 (21.43)	6 (42.86)	5 (35.71)	14
<b>Total</b>	<b>10</b>	<b>19</b>	<b>21</b>	<b>50</b>

#### F. Ranking

It is noted from table X that the problem of inadequate training programme was ranked first with the Garret score of 1114 points. It is followed by the problem of poor grade procurement of IT equipment with Garret score of 1021 points. The problem of high costs in training the local population about the use of software has the third rank. There is a problem of limited ICT infrastructure. Government should make more investment in e-governance, computerization of government services as otherwise benefits will reach only the rich and influential. Difficult to mobilize funds for full scale implementation have the fourth, fifth, sixth, and seventh ranks respectively.

### VIII. FINDINGS

The outcome of the pilot study was quite encouraging. Research methodologies, instruments, measurement

**TABLE X**  
**RANKING PROBLEMS IN E-GOVERNANCE**

S.No.	Requirements	Total score	Mean score	Rank
1	Limited ICT infrastructure	940	3.76	IV
2	Difficult to mobilize funds for full scale implementation	886	3.544	VII
3	Poor grade procurement of IT equipment	1021	4.084	II
4	Government should make more investment on e-governance	889	3.556	VI
5	High costs in training the local population about the use of s/w	956	3.824	III
6	Inadequate training programme	1114	4.456	I
7	Computerization of government services benefits only the rich and influential	938	3.75	V

scale, and processes used were on the right track. After getting positive result from the pilot study, it was decided to proceed with the main study. Majority of the respondents are highly satisfied with e-governance services. Even though the progress of e-governance in panchayati raj is slow, the panchayats effectively carried out their services.

## IX . SUGGESTIONS

On the basis of the analysis the followings suggestions are offered. Panchayat Raj secretaries faced problems such as inadequate training programmes, poor grade procurement of ICT equipment, limited ICT equipment etc. Therefore, it is suggested to government to provide adequate training programs, to add more computer systems and upgrade the system to pick up speed. It is found that the impact of e-governance at gram sabah is low. Hence, the government should create awareness among citizens regarding advantages of e-governance. This will enable panchayati raj to effectively carry out its services. Major e-governance initiatives such as online tender documentation system, e-submission of tender, website for panchayats, birth and death registration are implemented in town panchayat and municipality only. Government should take necessary steps to implement these initiatives in village panchayats also.

## X. CONCLUSION

An effective e-governance system at panchayats leads to the development of rural areas because villages are the backbone of India. The survey found that the progress of e-governance at panchayat level is slow because of inadequate training of employees, lack of computer knowledge of employees, limited network, and server related issues. Government should arrange more training programmes regarding e-governance. This study is basically a pilot study. In future this study may extend to cover all panchayats and municipalities to determine the status of e-governance.

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