G2C E-GOVERNANCE PROJECT IMPLEMENTATION AT LOCAL LEVEL IN A PUNE DIVISION CONTEXT

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Abstract

Success of e-Governance projects depends on the use of Information and communication Technology (ICT) in the mobilization of government resources and the utilization of these resources with the aim of providing better service. This paper deals with the e-Governance awareness; purpose to use e-Governance services and problems faced by citizens in using e-Governance services provided by Government - to- Citizen (G2C) e-Governance projects at local level with special reference to Pune Division.

Objectives

1. *To understand citizen's awareness regarding e-Governance services.*

2. *To find the purpose to use e-Governance services by the citizens.*

3. *To study about the problems faced by citizens in using e-Governance services.*

Hypotheses

1. *There is equal level of awareness between rural and urban citizens' about the e-Governance services.*

2. *There is significant difference in use of e-Governance services by the citizens in urban and rural area.*

3. *Various e-Governance services like accessing information, performing online transactions and posting grievances or feedback are used almost to the same extent by the citizens in urban and rural area.*

Research Methodology

A structured questionnaire based on the research model was used for data collection. The data is collected through interviews and questionnaires. The method used for selection of sample is stratified sampling method in which sample units are divided into five districts.

Findings

It can be inferred that awareness about e-Governance system is high. There is association between purpose of use of e-Governance services and area of citizen. There is association between awareness of e-governance services and area of citizen also there is association between use of e-Governance services and area of citizen. It is inferred that citizens faced 'security or privacy concerns' as highly ranked problem factor to use e-Governance system.

Keywords : e-Governance, ICT, Municipal council, Municipal Corporation, Pune Division.

Introduction

Electronic Governance (e-Governance) is no more a buzzword but a reality as countries all over the worldwide have shown interest in harnessing governance with state-of-the-art Information and Communication Technology (ICT), in order to foster better governance. ICT is rapidly changing the society and the mode of governance in the 21st century. Public sector organization at national, state and local level implement number of e-Governance services for the convenience of the citizens, out of which citizens can avail services "Anytime, Anywhere". In today's IT world, technology is moving very fast and due to the competitive environment the mindset of the citizens is changing equally fast. Citizens seek more convenience, lower cost and time expenditures, and freedom from cumbersome and problematic procedures. The citizens

are also more open to accepting new mechanisms that deliver the maximum benefit to them. e-Governance is the application of information and communication technologies to transform the efficiency, effectiveness, transparency and accountability of informational and transactional exchanges within government, between government and government agencies of national, state, and local levels, citizen and businesses, and to empower citizens through access and use of information.

The internet is expanding at a rapid pace and it has already been a player in the government offices, business, economy, entertainment and social groups all over the globe. The rise in internet use all over the world has unlocked various new businesses, products, and services. The internet is changing and it will continue to do so. The number of internet users is increasing day by day. To use e-Governance services, the citizen must be computer literate with an interest in the internet. If citizens have adequate knowledge of computers and internet they can easily use e-Governance services for their regular transactions by saving costs and effort. For administrative purpose, Pune Division is divided into five districts, Pune, Sangli, Solapur, Kolhapur and Satara. G2C services are provided to the citizens so they can avail the services efficiently and cost effectively. Municipal Corporations at Pune, Sangli, Solapur, Kolhapur and Municipal Council at Satara have implemented e-Governance Project at Local level. From each district one city is selected as urban area and one village is selected as rural area. E-Governance project at Municipal Corporation / Council provide services in traditional way through CSC/ kiosk and through e-Governance. Various departments under Municipal Corporation and Municipal Council are providing online services.

The objectives of the paper are as follows:

1. To understand citizen's awareness regarding e-Governance services.

2. To find the purpose to use e-Governance services by the citizens.

3. To study about the problems faced by citizens in using e-Governance services.

In consistent with the objectives, following hypotheses were formed and tested:

1. There is equal level of awareness between rural and

urban citizens' about the e-Governance services.

2. There is significant difference in use of e-Governance services by the citizens in urban and rural area.

3. Various e-Governance services like accessing information, performing online transactions and posting grievances or feedback are used almost to the same extent by the citizens in urban and rural area.

Review of literature

According to Heeks (2002), Information Communication Technologies (ICT) can be defined as 'Electronic means of capturing, processing, storing and communicating information. ICT may be computer hardware, software and networks. They also include intermediate technologies like radio and television, literate technologies like books and newspapers and organic technologies based on human body like brain and sound waves'.

According to Riley, T.B. (2003), Governments are specialized institutions that contribute to governance. 'e-Governance', has evolved as an information-age model of governance that seeks to realize processes and structures for harnessing the potentialities of Information and Communication Technologies (ICTs) at various levels of government and the public sector and beyond, for the purpose of enhancing good governance (Okot-Uma, R.W., 2000).

Wangpipatwong et al. (2008), has suggested empirically that perceived usefulness, perceived ease of use and computer self-efficacy directly enhanced citizens' continuance intention to use e-Government. In addition, they found that perceived ease of use indirectly enrich continuance intention through perceived usefulness. Heeks (2003), brought to attention the high failure rate of e-Government projects. His working estimates that 35% of e-Government projects in developing countries were total failures, 50% were partial failures and 15% were successes. It is argued that e-government initiatives are failing due to a lack of understanding regarding effective planning, development and deployment, (Gupta and Jana, 2003), while others assert that the project goals are too ambitious given existing capacity. Lack of awareness, lack of marketing by the government organizations, traditional mindset etc are some of the factors attributed

to low use of portals (Gupta, M.P., Kumar P. and Bhattacharya J. (2004). According to Sang, S., et.al (2010), the key problem associated with the high failure rate of e-Government projects is the lack of awareness about the potential factors that may help citizens to adopt e-Government services.

Research methodology

A structured questionnaire based on the research model was used for data collection. The data is collected through interviews and questionnaires. The scope of research is limited; the survey is undertaken by obtaining a stratified sample and convenience sample. The method used for selection of sample is stratified sampling method in which sample units are divided into five districts. Each district is divided into urban and rural area. The sample consists of 2000 citizens of Pune Division from urban and rural area. Table No.1 shows details

Table No. 1: Selection of Sample

Sample Area			Number (N)
Pune District	Urban Area	Pune City	200
	Rural Area	Ambegaon Budruk	200
Sangli District	Urban Area	Sangli City	200
	Rural Area	Wategaon	200
Solapur District	Urban Area	Solapur City	200
	Rural Area	Bhaliwani	200
Kolhapur District	Urban Area	Kolhapur City	200
	Rural Area	Valiwade	200
Satara District	Urban Area	Satara City	200
	Rural Area	Saongaon	200

H1: There is equal level of awareness between rural and urban citizens' about the e-Governance services.

To test the hypothesis about association between awareness of e-Governance services and area of citizen following null hypothesis is designed.

H01: There is no association between awareness of e-governance services and area of citizen.

H11: There is an association between awareness of e-governance services and area of citizen.

Bivariate frequency distribution is obtained and is presented in the following Table No. 2.

Table No 2: Table No. 2: Bivariate distribution of No. of citizens according to awareness of e-Governance and area

Area	Count	e-Governance Awareness		
		NO	Yes	Total
Rural	Actual Count	531	469	1000
	Expected Count	437	563	1000
Urban	Actual Count	343	657	1000
	Expected Count	437	563	1000
Total	Actual Count	874	1126	2000
	Expected Count	874	1126	2000

Chi-square value= 71.828   p value= 0.020 Degree of freedom= 3.841 Result = Significant

It is seen that actual count of citizens aware about e-Governance is less than expected count in rural area where as that actual count of citizens aware about e-Governance is more than expected count in urban area. To test above null hypothesis chi-square test is applied. Results indicate that calculated value is greater than table value at 5% l.o.s. Therefore test is rejected and subsequently H01 is rejected. It is concluded that there is association between awareness of e-Governance services and area of respondent.

H2: There is significant difference in use of e-Governance services by the citizens in urban and rural area.

To test the hypothesis about association between use of e-governance and area of citizens following null hypothesis is designed.

H02: There is no association between use of e-governance services and area of citizen.

H12: There is an association between use of e-governance services and area of citizen.

Bivariate frequency distribution is obtained and is presented in the following Table No. 3.

Table No. 3: Bivariate distribution of citizens according to use of e-Governance and area

Area	Count	Use of E-Governance		
		No	Yes	Total
Rural	Actual Count	773	227	1000
	Expected Count	619	381	1000
Urban	Actual Count	465	535	1000
	Expected Count	619	381	1000
Total	Actual Count	1238	762	2000
	Expected Count	1238	762	2000
Chisquare value= 201.120 p value= 0.0000 Degree of freedom (5%l.o.s.) = 3.841 Result = Significant				

Result = Significant

In rural area actual count of citizens using e-Governance is less than the expected count whereas in urban area the actual count of citizens using e-Governance is more than the expected count. To test above null hypothesis chi-square test is applied.

Results indicate that calculated value is greater than table value at 5% l.o.s. Therefore test is rejected and subsequently H02 is rejected. It is concluded that there is association between use of e-Governance services and area of respondent.

H3: Various e-Governance services like accessing information, performing online transactions and posting grievances or feedback are used almost to the same extent by the citizens in urban and rural area.

To test the hypothesis about association between purpose of use of e-Governance services and area of citizen following null hypothesis is designed.

H03: There is no association between purpose of use of e-Governance services and area of citizen.

H13: There is association between purpose of use of e-Governance services and area of citizen.

To test null hypothesis chi-square test is applied and result of test are presented in Table No. 4.

Table No. 4: Chi square test for purpose to use E-Governance services and area of citizen

Purpose of use of e-governance	df	Calculated chi square value	Tabulated chi square value	Result
To get information	1	181.426	3.841	Significant
To use online service	1	177.009	3.841	Significant
To give feedback	1	183.248	3.841	Significant

For purpose of use of e-Governance to get information the Chi-square calculated value is 181.426 and table value at 5 percent level of significance is 3.841 at degree of freedom 1, results indicate that calculated value is greater than table value hence result of test is significant.

For purpose of use of e-Governance to use online services the Chi-square calculated value is 177.009 and table value at 5 percent level of significance is 3.841 at degree of freedom 1, results indicate that calculated value is greater than table value hence result of test is significant. For purpose of use of e-Governance to give feedback the Chi-square calculated value is 183.248 and table value at 5 percent level of significance is 3.841 at degree of freedom 1, results indicate that calculated value is greater than table value hence result of test is significant.

Therefore test is rejected and subsequently H03 is rejected. It is concluded that there is association between purpose of use of e-Governance services and area of respondent.

Hence the hypothesis "Various e-Governance services like accessing information, performing online transactions and posting grievances or feedback are used almost to the same extent by the citizens in urban and rural area." is rejected.

Findings

The data is analyzed based on various characteristics like awareness of e-Governance system, mode of awareness, and purpose of use of e-Governance services. To know about the citizen's in Pune Division, one need to study the general background which covers their area, gender and occupation classification. Such a background is essential to ascertain their knowledge about awareness and use of the e-Governance system. Table No. 5 shows distribution of number of citizens according to demographic features.

Table No. 5 : Distribution of No. of Citizens according to demographic features

Demographic feature		No. of Citizens	Percent
Age	Young	388	19.4
	Middle	1238	61.9
	Elderly	374	18.7
Gender	Male	1097	54.9
	Female	903	45.2
Area	Urban	1000	50
	Rural	1000	50
Occupation	Service	506	25.4
	Self Employed	260	13.0
	Agriculture Related	559	28.0
	Unemployed	521	21.6
Total		2000	100

To study the factors influencing citizens to use e-Governance an equal proportion of 1000 citizens each from rural and urban area were selected. The percentage of male citizens is more than the female. It is clear that the ratio of male citizens is higher than female. 559 respondents are from agriculture whereas, 154 respondents belong to retired category, 506 are from service, 260 are self employed and 521 are unemployed who represent either house wife or student in unemployed category. It can be inferred that 28 percent citizens are involved in the agricultural related activities and represent majority whereas 7.7 percent of citizens are retired citizens.

• **Awareness about e-Governance**

An attempt was made to study the awareness of citizens about the e-Governance system. Citizens were requested to furnish the information about their awareness about e-Governance which is shown in Table No. 6.

Table No. 6: Distribution of No. of citizens according to their awareness about e-Governance system

Purpose of use of e-governance	df	Calculated chi square value	Tabulated chi square value	Result
To get information	1	181.426	3.841	Significant
To use online service	1	177.009	3.841	Significant
To give feedback	1	183.248	3.841	Significant

It is seen that 1126 citizens are aware about the e-Governance and 874 are not aware about the e-Governance. It can be inferred that awareness about e-Governance system is high. 56.3 percent of citizens are aware and 43.7 percent are unaware about the e-Governance system.

• **Use of e-Governance system**

Citizens can avail services viz. online information, online services and online grievance redressal or feedback services through the G2C e-Governance project provided by the public sector organizations at national, state and local level. The Public sector organizations also provide e-Governance services to citizens through kiosks/ CSC. Citizens have to walk to kiosks to make the transactions. It might increase their cost as well as take time. Citizens can avail services manually at the Public sector organization office. The manual system might increase the cost as well as travel time.

Table No. 7 shows distribution of number of citizens according to use of e-Governance services. It is seen that 38.1 percent of citizens are using e-Governance services and 61.9 percent citizens are still using traditional way of manual system to do the transactions.

Table No.7: Distribution of citizens according to use e-Governance

Use of e-Governance Services	No of Citizens	Percent
Yes	*762*	*38.1*
No	*1238*	*61.9*
Total	*2000*	*100*

• **Purpose to Use e-Governance services**

To study the citizen's purpose to use e-Governance services information is collected from citizens and is classified into two categories 'Yes' and 'No'. Table 8 shows distribution of number of citizens

Technology (ICT) problems according to purpose to use e-Governance services. It is seen that out of 2000 citizens, 730 citizens use e-Governance services to get online information, 514 citizens use for availing online services and 283 citizens use to post feedback.

It can be inferred that citizens prefer to get online information over performing online transactions and get feedback. Citizens can get the information anywhere and anytime and thus do not have to visit the public sector organization and can save cost, time and effort.

• **Information and Communication faced by the citizens**

To study the Information and Communication Technology (ICT) problems faced by the citizens in use of e-Governance data was collected from citizens in Pune Division. It is presented in Table N

It is inferred that citizens faced security or privacy concerns as highly ranked problem factor to use e-Governance system. The first five ranked ICT problems faced by citizens are 'Security or privacy concerns', 'Don't know about this facility or service', 'Lack of infrastructure', 'Not felt required to use online services' and 'Network failure'.

Conclusion

ICT infrastructure, awareness about ICT, benefits of ICT while transacting with government are some factors that contribute positively towards use of e-

Governance services. These factors may be different at urban and rural

area. ICTs and new media technologies have become inevitable in e-Governance but not easy to implement and hence needs to be planned carefully for their successful implementation.

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Table No. 8: Distribution of No. of citizens according to purpose to use of e-Governance services

Purpose to use e-Services	No. of users	Percent	No. of non-users	Percent	Total
To get information	730	36.5	1270	63.5	2000
To use online services	514	25.7	1486	74.3	2000
To give feedback	283	14.15	1717	85.85	2000

Table No. 9: Distribution of No. of citizen according to problems faced in use of e-Governance services

Problems	Yes	Percent	No	Percent	Average	Rank	Total
Lack of infrastructure	515	25.75	1485	74.25	25.75	3	2000
Costly internet connection	116	5.8	1884	94.2	5.8	8	2000
Not sure of to get delivery of service in time	65	3.25	1935	96.75	3.25	9	2000
Only few services are provided	59	2.95	1941	97.05	2.95	10	2000
Unreliable electricity supply	182	9.1	1818	90.9	9.1	6	2000
Network failure	402	20.1	1598	79.9	20.1	5	2000
Security or privacy concerns	1116	55.8	884	44.2	55.8	1	2000
Grievances are not handled at kiosk satisfactorily	133	6.65	1867	93.35	6.65	7	2000
Not user friendly	50	2.5	1950	97.5	2.5	11	2000
Not felt required to use online services	425	21.25	1575	78.75	21.25	4	2000

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