Status of User-Centric E-Governance Practices in North India

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Abstract

Information and communication technologies (ICT) suggest to the government new possibilities for providing citizens better and more efficient services according to their convenience. In the modern age of online services, the citizens may expect better services from the government. The user centric approaches of the government services motivate the user to utilize and avoid criticism. The user needs to be placed at the center of development, and provisions need to be in place for electronic public services. Simultaneously, it is required to check the impact of the new services on customers. User satisfaction may have a definite decisive influence on large-scale adoption and use of E-government services. This paper attempted to find out the extent of use and impact of e-governance on the welfare services of the government in six Indian states- Chhattisgarh, Haryana, Himachal Pradesh, Punjab, and Uttarakhand.

Key words: ICT based services, E-governance, government Internet services, Internet

JEL Classification: D73, G30, G38

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Information communication technology (ICT) in government agencies as well as educational and research institutions makes a smooth effort for an efficient, quick, and honest dissemination of information to the public and other agencies for performance of government administrative activities. The significance of ICT in governance has been identified the world over. E-governance focuses on various elements of good governance such as transparency, accountability, participation, social integration, and for the betterment of the public financial management and growth (Roman & Colle, 2002).

In the present time, the advancements in information and communication technologies (ICTs) are changing the various components of human life. The changes in ICTs have shown a positive impact in the process of public service delivery and socioeconomic formation of society. E-governance applications in the recent past, in India, have demonstrated their positive impact in reducing the processing costs, increasing transparency, and supporting economic development by income generating projects, by expanding agricultural productivity, and bringing about improvements in health and education sectors, all of which promote the overall quality of life of people (Saxena, 2005). E-governance is the use of information technology (IT), in particular, the Internet, the wide area networks, and mobile computing to deliver public services in a much more convenient, customer oriented, cost effective, and altogether different way (Douglas, 2001).

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Lately, the terms "governance" and "good governance" are being gradually used in development literature. Bad governance is being continuously identified as one of the main causes of all evils within our societies. Major international financial institutions and donors put emphasis on reforms that ensure good governance and make it a condition while sanctioning loans and aids. The concept of 'governance' is not new, but it is as old as human civilization. In simple words, governance means the procedure of decision-making and the process by which decisions are implemented (or not implemented). The word governance can be used in different contexts such as corporate governance, international governance, national governance, and local governance. According to Sealy (2003), good governance has nine major characteristics : participation, rule of law, transparency, responsiveness, consensus oriented, equity and inclusiveness, effectiveness and efficiency, accountability, and equity and inclusive. It ensures that corruption is reduced, the views of minorities are taken into consideration, and that the voices of the most vulnerable in society are considered in decision-making. It is also being aware towards the current and future needs of the society.

Islam (2003) argued that countries having better information flows had better quality governance. Better penetration of media provides timely information related to various aspects of government activity, on how these decisions will be implemented, information on the consequences of these decisions, and made voters aware about political choices and influenced their casting of votes. Furthermore, the presence of Freedom of Information (FOI) laws define a framework for the sharing of information that may influence how countries are governed. Governance is related with the ability of people to demand and receive the information they need and the availability of economic data. The absence of creation, organization, and sharing of information hampers governments in policymaking. For good governance, two things are required ; first, the strategic infrastructure required for e- governance and integrated vision of leadership ; and second, planned best practices that are needed to close design-reality gaps and to steer e-governance projects from failure to success.

In the early 1990s, and thereafter, IT was replaced by ICT with a purpose to extend the use of wider sectoral applications to reach rural areas and to include private sector and NGOs in this process (Mistry, 2010). Inclusion of ICT in governance is not so easy. It comes with its own challenges in key areas- people, processes, technology, and resources. To deal with it, India needs a 'bigger and better' front-end with a 'smaller and smarter' back end (Second Administrative Reforms Commission, 2008).

Heeks (2001) outlined the three main contributions of e-governance: improving government processes (e-administration); connecting citizens (e-citizens and e- services); and building external interactions (e-society). He further reasoned that most e-governance initiatives fail due to two reasons : first, the strategic challenge of e-readiness that includes the availability of six types of infrastructure - data systems, legal, institutional, human, technological, and leadership & strategic thinking. Second, the failure in bridging design-reality gaps and adoption of best practices in e-governance projects in order to avoid failure and achieve success.

Lal (1999) suggested that ICT could be helpful in sustaining e-governance in three ways. First, ICT can support in complex decision making, communication, and decision implementation ; second, through automation of tedious tasks done by humans, and finally, through creating new tasks and processes that did not exist before, but can increase both efficiency and effectiveness. He further argued that when ICT is properly aligned with the goals of governance, it can improve both efficiency and effectiveness of governance.

Popper (2003) concluded that widespread use of ICT in e-governance is one of the major contributors in reinforcing a knowledge society. It enhances transparency in the processes and procedures concerning the relationship between the state and the citizen. A knowledge-based society will increase economic growth and wealth creation, and entrepreneurship and innovativeness. Furthermore, social cohesion and sustainability will increase with the widespread use of ICT in e-governance.

Dada (2006) suggested that gaps exist between the current reality and the future of e-governance systems in developing countries. These gaps are classified in three categories: first, the hard-soft gap refers to the gap between the technology and the social context in which it is used; second, the private-public gap means that what

works in the private sector, that may not work in the public sector; and last, the country context gap refers to the gap that arises from the application of the same e-governance systems for both the developing and developed countries.

Coursey and Norris (2008) examined the utility of normative models for understanding the actual development of e-government. They found that these models did not accurately describe or predict the development of e-government, at least among American local governments. These models, though intellectually interesting, are purely speculative, having been developed without linkage to the literature about information technology and governments.

Chen and Thurmaier (2008) examined how the governments should finance the development of e-transactions, as e-government evolves into the transactions stage. They suggested a flexible pricing framework which embodies both the firm's and the government's perspectives.

Kulchitsky (2001) highlighted the possibility that public and IT managers in developing countries may be designing IT-for-decision-making initiatives based on unrealistic assumptions. Though, IT and public managers from developing countries argue that there is no ideal model for IT and decision-making activities, their vision of what needs to be done is based on positive assumptions that they, along with stakeholders, possess all the relevant information needed to design and implement the most appropriate strategy to improve organizational decision making in public institutions.

Akhter, Onishi, and Kidokoro (2007) argued that most e-government projects within developing countries employ high-technology intervention, whereas the citizens are not ready for this. They concluded that stakeholders' participation, not IT, is the major driving factor for success of any project. An understanding between the citizens and a government body is must for triumph of e-government.

Kalsi, Kiran, and Vaidya (2008) argued that Indian citizens today are interested in the deliverable outputs from the government services. They want to see a single face of the government and availability of all government services from a single kiosk.

Objectives of the Study

The government offices in six states : Chhattisgarh, Delhi, Haryana, Himachal Pradesh, Punjab, and Uttarakhand have ICT components for providing different services to the people. The purpose of the present paper is to examine the condition of ICT infrastructure and its accessibility for using the ICT based services. The study also aims to explore the level of awareness among the masses about the government policies and major areas of e-governance services and their usage. The study also endeavours to find out the satisfaction level of the population with the dealing of government offices and to identify the major problems and issues associated with the good governance in these states.

Methodology

Keeping in mind the objectives of the study, a questionnaire that covers the ICT infrastructure available, means of communication, e-governance facilities, satisfaction of users towards government offices, awareness among citizens about the welfare policies, major areas of service delivery, and major problems faced by citizens were developed. The questionnaire was based on a 5-point likert scale. The sample includes 900 individuals (150 in each state), who came to different government offices for some work. They were randomly approached by us and were requested to fill the questionnaire developed by us. The sample included both men and women in the age range of 25-50 years and belonged to rural, semi-urban, and urban areas.

The incomplete questionnaires were dropped from the analysis, therefore, the responses of 710 (132 from Delhi, 108 from Haryana, 121 from Himachal Pradesh, 130 from Punjab, 117 from Chhattisgarh, and 102 from

Table 1. Demographic Profile

Group	Number	Percentage
Gender		
Male	494	69.58
Female	216	30.42
Marital Status		
Married	502	70.7
Unmarried	208	29.3
Area of Residence		
Rural	180	25.35
Semi-Urban	372	52.4
Urban	158	22.25
Education		
Graduate	302	42.53
Under graduate	223	31.41
literate	185	26.06
Income		
Tax payer	315	44.37
Non Tax payer	352	49.58
BPL	43	6.05

Table 2. Computer and Internet Access Facility

S. No.	Computer and Internet Access	Numbers	%
1	Computer with Internet	188	26.47
2	Laptop with Internet	113	15.91
4	Cyber Café	91	12.81
5	No Internet Access	325	45.77
6	Other	93	13.09

Uttarakhand) respondents comprised the final sample of the study. The data collection for this study was conducted between July - September 2015.

Data Analysis and Results

(1) User Demography : The demographic profile of the respondents is given in the Table 1. The average age of the respondents was between 30 - 35 years. The Table 1 reflects that the total sample size for the present study is 710 respondents, and out of this sample, 494 (69.57 %) respondents were men and 216 (29.57 %) respondents were women ; 502 respondents (70.70 %) were married and 208 respondents (29.29 %) were single ; 180 (25.35%) respondents belonged to the rural areas, 372 respondents (52.39 %) belonged to semi-urban areas, and 158 respondents belonged (22.25 %) to urban areas ; 302 respondents (42.53 %) were educated upto the graduate level or more, 223 respondents (31.40 %) were undergraduates, and 185 (26.05 %) respondents were literate ; 315 (44.36 %) were taxpayers, 352 (49.57 %) were non-tax payers, and 43 (6.05 %) respondents belonged to BPL (below poverty line) families.
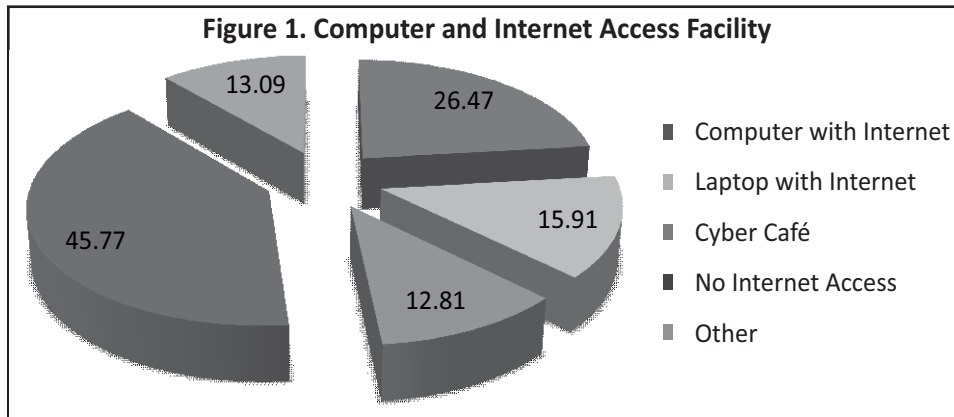
Figure 1. Computer and Internet Access Facility

13.09

26.47

45.77

15.91

12.81

- ■ Computer with Internet
- ▪ Laptop with Internet
- ■ Cyber Café
- ■ No Internet Access
- ▪ Other

Table 3. Availability of Means of Communication

S. No.	Means of Communication	No.	%
1	Color TVs	554	78
2	Mobiles	546	76
3	Radio	127	17.8
4	Other	29	4

Figure 2. Availability of Means of Communication

4%

17.80%

78%

76%

- ■ Color TVs
- ▪ Mobiles
- ■ Radio
- ■ Other
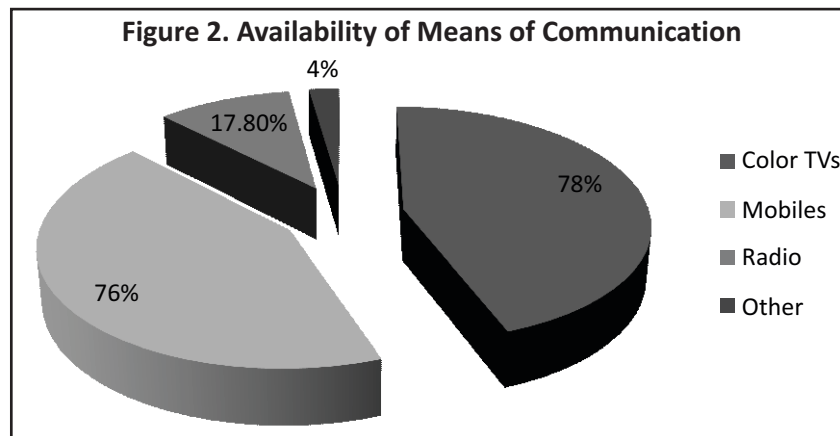
(2) ICT Practices and Awareness : The second part of the questionnaire consisted of questions related to ICT practices and awareness among the respondents selected for this study from the states under study. The first objective is to find out the availability of Internet access to the people of the six states under consideration. The results are depicted in the Table 2 and Figure 1. It can be inferred that majority (45.77%) of the respondents did not have Internet access at their homes or offices, 26.4% of the respondents accessed the Internet on their computers, 15.91% of the respondents had laptops with instant Internet access ; 12.8% of the respondents accessed the Internet through cyber cafés, and 13.09 % of the respondents accessed the Internet through other means.

(3) Availability of Means of Communication : The second objective of the study is to know what means of communication other than Internet are available to people in these states. The results are depicted in the Table 3 and Figure 2. It can be inferred that TV is the biggest means of communication that was used by 78% of the respondents followed by mobile phones (used by 76% of the respondents) , 17.8 % of the respondents used radio,

Table 4. Sources of Information about Social Welfare Schemes and Policies

Means of Awareness	Nos.	%
Radio	84	11.8
TVs	188	26.4
Newspaper	278	39.1
Government Website	147	20.7
Panchayat	56	7.8
Friends/Relatives	510	71.8
Any other	26	3.6

Figure 3. Sources of Information about Social Welfare Schemes and Policies
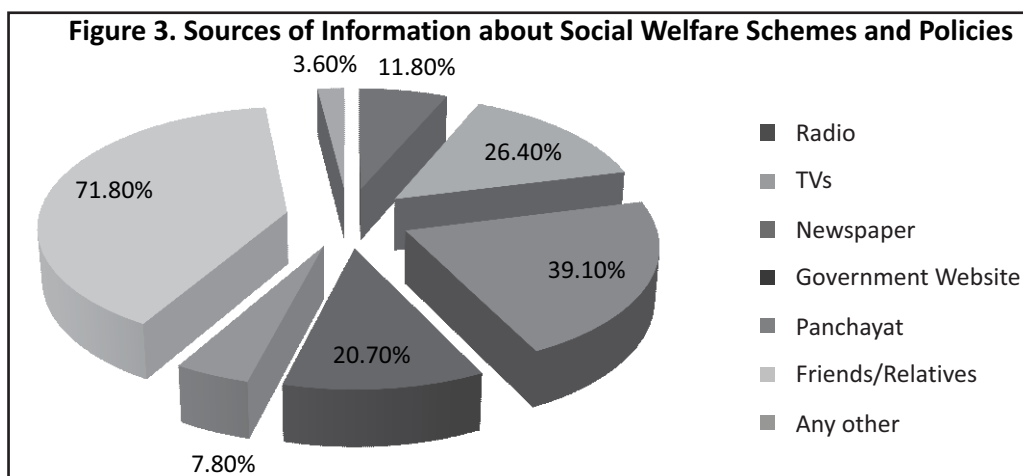
and only 4% of the respondents used other means of communication. Hence, it is observed that overall, people had good access to means of communication.

(4) Awareness Among Users about the Welfare Policies : The third objective of the study is to ascertain the sources of information about social welfare schemes and policies of the state and central governments. The results are presented in the Table 4 and Figure 3. It can be inferred that friends and relatives (71.80 %) were the biggest source of information about social welfare schemes and policies followed by newspapers (39.1%) and television (26.4%) , 20.7% people accessed government websites, 11.8% used radio to get information about these schemes,

Table 5. Use of E Governing Facilities

States	No		Yes		Total
	Nos.	%	Nos.	%	
Chhattisgarh	100	85.5	17	14.5	117
Delhi	62	47	70	53	132
Haryana	72	66.6	36	33.4	108
Himachal	85	70.2	36	29.7	121
Punjab	70	53.8	60	46.1	130
Uttarakhand	59	57.8	43	42.1	102
Total	448		262		710

Figure 4 . Use of E Governance Facilities
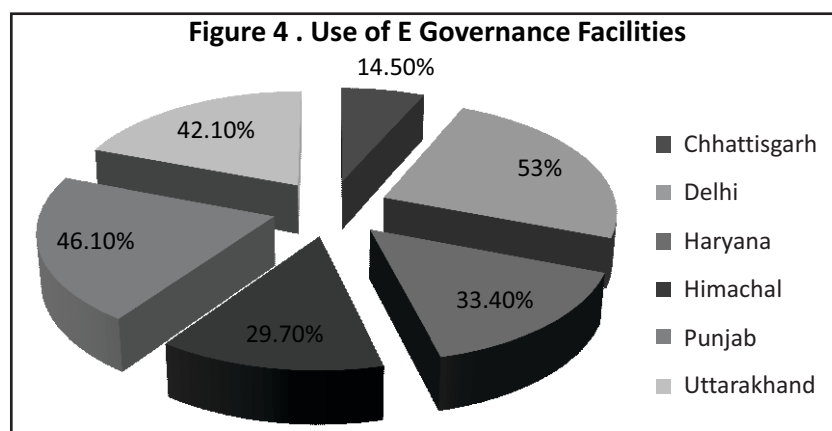
Table 6. Satisfaction Towards Government Offices

Level	Very Satisfied		Satisfied		Unsure		Dissatisfied		Very Dissatisfied		Total
Standards	59	8.3%	278	39.1%	89	12.5%	187	26.3%	97	13.6%	710
Accountability	15	2.1%	165	23.2%	103	14.5%	314	44.2%	113	15.9%	710
Openness	19	2.6%	198	27.8%	78	10.9%	322	45.3%	93	13%	710
Equality	35	4.9%	287	40.4%	63	8.8%	243	34.2%	82	11.5%	710
Review	10	1.4%	185	26%	178	25%	294	41.4%	43	6%	710
Clarity	12	1.6%	235	33%	67	9.4%	309	43.5%	87	12.2%	710
Control	9	1.2%	347	48.8%	54	7.6%	253	35.6%	47	6.6%	710
Information	16	2.2%	213	30%	77	10.8%	328	46.1%	76	10.7%	710
Structure	17	2.3%	269	37.8%	44	6.1%	326	45.9%	54	7.6%	710

7.8 % of the people came to know about the schemes through gram panchayats, and 3.6% came to know through other sources about these schemes.

(5) Use of E - Governing Facilities : The fourth objective of the present study is to know the status of use of E governance facilities offered by the government offices. The results are depicted in the Table 5 and Figure 4. It can be inferred that majority of the respondents in the six states were not using e - governing facilities. The results also show that 85.5% respondents in Chhatisgarh, 70.2% in Himachal Pradesh, and 66.6% respondents in Haryana were not using the e - governing facilities offered by their respective government offices. Only a trend among the average usage of e- facilities was noticed that is supported by the analysis. The Table 5 shows that in Delhi, 53% ; in Punjab, 46.3% ; in Uttarakhand, 42.1% ; in Haryana, 33.4% ; in Himachal Pradesh, 29.7% ; and in Chhattisgarh, only 14.5% people used E-governance facilities.

(6) Satisfaction Towards Government Offices : Another objective of the study is to ascertain the level of satisfaction among the people towards the government offices of the states under study. For this purpose, the responses were recorded on nine parameters. The results are depicted in the Table 6 and Figure 5. The analysis reveals that 47.4% of the respondents were satisfied with the standards, 25.3% with accountability, 30.4 % with openness,45.3% with equality, 27.4% with review, 34.6% with clarity, 50% with control, 32.3% with information, and 40.1% with structure. On the other side, 39.9% people were dissatisfied with the standards, 60.1% with accountability, 58.3 % with openness,45.7% with equality, 47.4% with review, 55.7% with clarity, 42.2% with control, 56.8% with information, and 53.5% with structure. It shows that people were not quite satisfied with the government offices.
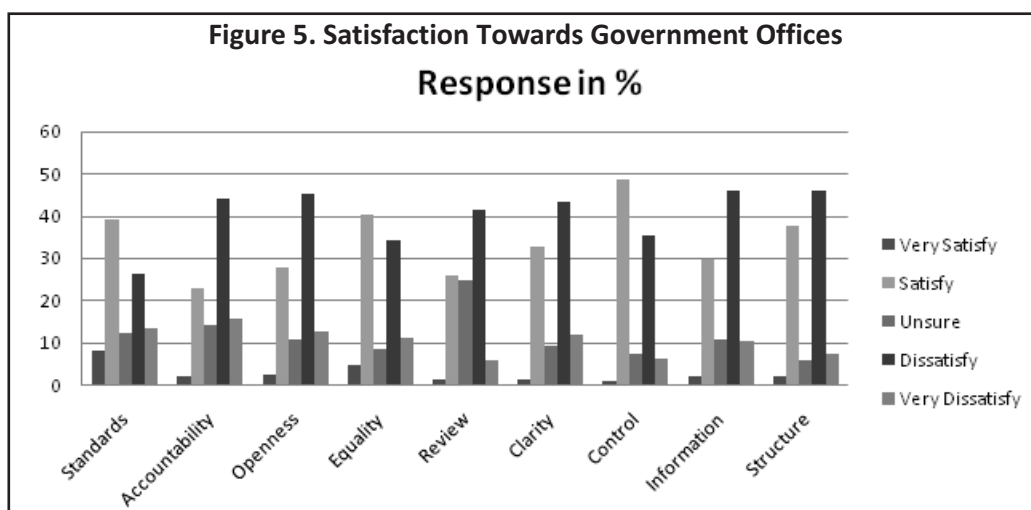
Figure 5. Satisfaction Towards Government Offices

Table 7. Major Problems Faced by Government Offices in Implementing ICT

Problems	Chhattisgarh		Delhi		Haryana		Himachal Pradesh		Punjab		Uttarakhand		Total Types
	No	%	No	%	No	%	No	%	No	%	No	%	
No printer	47	40.2	34	25.8	52	48.2	81	66.9	76	58.5	58	56.9	348
No networking	105	89.7	95	72.0	47	43.5	104	86.0	56	43.1	62	60.8	469
Dearth of clients	12	10.3	41	31.1	23	21.3	14	11.6	25	19.2	36	35.3	151
No server/ server-related issues	104	88.9	85	64.4	62	57.4	47	38.8	89	68.5	95	93.1	482
No wiring/ electrical issues	93	79.5	47	35.6	58	53.7	74	61.2	104	80.0	69	67.7	445
Computer shortage	88	75.2	125	94.7	102	94.4	97	80.2	103	79.2	82	80.4	597
Shortage of staff	49	41.9	57	43.2	53	49.1	84	69.4	100	76.9	84	82.4	427
Total	498		484		397		501		553		486		

(7) Major Problems : Another objective is to find out the major problems associated with the ICT application in good governance. For this purpose, seven major problems were identified and the results are presented in the Table 7.

The analysis of the Table 7 reveals that 75.2% respondents in Chhattisgarh, 94.7% in Delhi, 94.4% in Haryana, 80.2% in Himachal Pradesh, 79.2% in Punjab, and 80.4% in Uttarakhand perceived that shortage of computers was the biggest problem in implementing ICT effectively. The shortage of trained staff was the second biggest hurdle ; 41.9% people in Chhattisgarh, 43.2% in Delhi, 49.1% in Haryana, 69.4% in Himachal Pradesh, 76.9% in Punjab, and 82.4% in Uttarakhand perceived that there was a shortage of trained staff in government offices.

Going further, 88.9% people in Chhattisgarh, 64.4% in Delhi, 57.4% in Haryana, 38.8% in Himachal Pradesh, 68.5% in Punjab, and 93.1% in Uttarakhand reported server - related issues as a problem. Among the respondents, 89.7% people in Chhattisgarh, 72% in Delhi, 43.5% in Haryana, 86% in Himachal Pradesh, 43.1% in Punjab, and 60.8% in Uttarakhand perceived an absence of networking within offices as a problem. Among the respondents, 79.5% people in Chhattisgarh, 35.6% in Delhi, 53.7% in Haryana, 61.2% in Himachal Pradesh, 80% in Punjab, and 67.7% in Uttarakhand perceived that electricity or power supply was an issue. Among the respondents, 40.2% people in Chhattisgarh, 25.8% in Delhi, 48.2% in Haryana, 66.9% in Himachal Pradesh, 58.5% in Punjab, and 56.9% in Uttarakhand perceived that there was a shortage of printers in government offices. Among the

respondents, 10.3% people in Chhattisgarh, 31.1% in Delhi, 21.3% in Haryana, 11.6% in Himachal Pradesh, 19.2% in Punjab, and 35.3% in Uttarakhand perceived that there was a dearth of clients who availed the e-governance facilities.

Findings

Based on the data analysis, the following findings have been derived :

(1) A significant number of people did not have Internet facility to access ICT based services offered by the government.

(2) It is observed that the majority of the population was still using TVs for gathering information about the government welfare policies. However, mobiles phones were found to be the latest phenomenon of communication among the respondents of the study.

(3) The majority of the population under the states covered in the study were not using e-governance facilities ; rather, they preferred to visit the government office physically.

(4) It is found that most of the people were not satisfied with the government offices in terms of service delivery.

(5) It is also found that majority of the respondents became aware of government welfare policies and schemes through friends and relatives.

(6) With regards to the major problems in ICT based service implementation, it is found that unavailability of computers and no networking of the Internet facilities was the major problem that should be taken care of by the governments of the concerned states.

Policy Implications

This present study attempts to explore how state and central governments' policies interact with local factors to influence the development in ICT based services. The funding by state and centre governments for developing the IT infrastructure and the new policies for ICT based services should be increased. There is a need to examine the initial design of core services and staffing policies in local agencies for a positive influence of these policies on people, and it becomes more important when the central government is committed to bring technology in the implementation of social welfare schemes.

The problems associated with the present level of investment for ICT based services should be resolved in limiting access to these e-governance programs and failing to support high level of quality in local areas. The capacity or power of local level administration to promote these ICT based services should be increased at a level above and beyond the minimum standards set in the state or by the centre.

Appropriate initiatives should be taken or innovative ways can be identified to meet the ICT needs of the population at large, like, proper infrastructure should be set up for these ICT based services, proper supply of electricity and staff should also be provided. Awareness campaigns by the public and private bodies should be conducted. Thus, this study provides the basis to examine the strategy which would support widespread excellence and innovation for these ICT based services.

Conclusion

The results of the present study reflect that a large number of population has no access to the Internet. This finding is consistent with the findings of studies conducted by Kalsi et al. (2008) , Yadav and Tiwari (2014), Singh (2008), and Singh and Sahu (2008). Therefore, the ICT facilities created by the governments do not get the desired results. If the governments intend to reach the common man, they have to increase the penetration of Internet infrastructure. There may be many ways to improve the IT infrastructure.

Another finding of interest is that a large population has good access to means of communication, but still, they rely more on friends and relatives to know about the social welfare schemes of the government. The major concern that arises is that only a very small number of people came to know about these schemes through the gram panchayats. The government agencies must involve the gram panchayats in the dissemination of information and implementation of the schemes. These initiatives should be taken at the ground level with the help of panchayats and Ward Committees so that the work is effectively carried out for the public with the help of the public. The promotion of community participation is essential, and it should be boosted through administrative efforts. It should be done at the local level with people's participation in decision making. The awareness with the progress and annual reports should be published by the government offices and Auditor-General's report under the states needs to be distributed among the people.

Another finding suggests that people were reluctant in using e-governance facilities. The reasons for this reluctance in using these facilities may be illiteracy, lack of awareness, or lack of necessary IT skills. This finding is supported by the results of the study conducted by Yadav and Tiwari (2014). It is suggested that the way the government organizes campaigns to spread awareness about the social welfare schemes, in a similar fashion, they should organize campaigns to make people aware about the e- governance facilities and to develop necessary IT skill in masses to make them capable to use these facilities. The government offices should offer personalized attention while dealing with the public; this may give a feeling of personal touch to the people. The government should encourage the people to use the e-governance facilities being offered by the different offices by using different means of communication.

A large number of people were found to be dissatisfied with the government offices. In the context of the Northern Indian states, the government offices should be proactive rather than neutral in case of public interest and helping the people. This finding is supported by Kalsi et al. (2008), Yadav and Tiwari (2014), and Singh (2008). It is suggested on the basis of this study that the government offices and the municipality should direct their employees to deliver prompt services to the public. The offices also require improving service quality as a whole.

Another finding signals towards the shortage of trained staff and IT infrastructure like shortage of computers, networking, and server related issues. The shortage of staff and the computers needs to be removed among the offices to implement the ICT applications and online based services for the public. This finding is also supported by the findings of Singh and Sahu (2008). The government should ensure continuous supply of electricity and power back up in case of power outages. In the absence of electricity, it is not possible to implement ICT based governance among the states. If governments want to bring transparency and effectiveness in e-governance, they have to create a sustainable IT infrastructure not only to handle the present load, but to bear the predicted load of the coming years.

Last but not the least, it is suggested that to ensure good governance through e- governance among the states, and to promote corruption free dealings by the government officials, the employees need to have proper skill training as well as appropriate educational background to perform well at their jobs.

Limitations of the Study and Scope for Future Research

The following are the limitations of the study : the present study is an exploratory study, and as in any cross-

sectional study, data collected at a single moment in time may limit the accuracy of the research. In addition, the scales used to evaluate the current status of ICT and good governance were self developed and included the common facilities available. Different states have different models to implement ICT in governance; therefore, it would be desirable to develop a scale to measure ICT and good governance on the basis of facilities available in that specific state. So, many ICT initiatives are being implemented by central and state governments to achieve good governance, therefore, such studies need repetition to gauge the actual scenario.

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