Chapter 13
Benefits and Challenges of E-Governance for Service Delivery in Nepal

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Introduction

The recent Nepal's Millennium Development Goals (MDG) Report 2010 shows an encouraging profile for achieving its goals. At the same time, it is also an irony that many Nepali people are still living with the lowest life expectancy and having a large share of undernourished children. Despite that the country has made significant progress in different sectors, development has still been significantly unequal across the regions and social groups. Marginalization of low-caste Hindu and rural people and those belonging to other ethnic and religious groups has been common (Askvik et al. 2011: 4). Quite often, these people are left out of the mainstream development process with little access to public services and responses from the policy makers and implementers (Riaz and Basu 2010: 9). It is, therefore, expected that the introduction and or institutionalization of information and communication technology (ICT) in public administration would improve public services, promote more inclusion of marginalized groups, and establish citizen-friendly governance (Snellen 2007: 398). It is a means to reinvent government by modernizing its information processing capacity to make its decisions and accessibility more citizens friendly (Silcock 2001: 88). The result is the introduction of e-government. Increasingly, it is now applied both internally, that is, to fulfill the functions of politics and public

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administration, and externally to link public organizations to the demands and needs in the environment, that is, to citizens and businesses. On the one hand, it is introduced to provide more information about services to citizens and more choice options, and on the other hand, for improving transparency and accountability in government functions. ICTs are changing the way the government does business for the people. In this context, "e-Government is seen to be a lever for the transformation of government" (UN report 2008: 2). It is argued that e-governance makes public administration more open, flexible, and easily accessible by citizens without even meeting officials in public. Morover, for e-governance to be an interactive and a user-friendly process requires citizen's access to ICT facilities as well as minimum skills in computer use. In other words, ICT infrastructure and computer literacy are essential ingredients for the success of e-governance.

Within the organization, it enhances automation and thereby more routinization, and standardization which may enhance efficiency and predictability of public actions. Externally, it connects the organization with the environment, enhances interaction and improves citizen-public organization-bureaucracy interface. This in turn, as argued, may enhance responsiveness of public organization to respond to the needs of citizens. In other words, deployment of e-government in public organizations is more concerned with efficiency in decision making and, on the other hand, to improving quality of services. Along with this, the purpose of e-government is to enhance democratic norms and make citizens more inclusive and empowered. The application of ICT in education, health service delivery, and information dissemination from public organizations such as citizen's charter is few of the development areas worth to mention. The ICT has in many ways changed the way people think, live, and perform their activities; the way society manages its affairs; and the way state operates and carry out its function. It is also an important means to increase citizen's trust in public institutions by making decision making more inclusive ensuring people's participation in the process of governance. The revolution in ICT development is often referred to as technological determinism in which technology is considered as the cause of social and organizational changes (Houmberg 2008: 2).

In Nepal, the public, private, and the nonprofit entities have applied ICT for some time now for improving their performances. The e-policy in Nepal focuses on using e-government especially for the delivery of programs and services and the usage of information infrastructures for improved internal administrative procedures. To augment the e-governance initiatives, a number of legal instruments have been introduced and necessary institutional mechanism has been created. In Nepal, ICT is to play important roles for economic development and poverty alleviation efforts which are the primary goals of MDGs. For this, telecommunication sector has been taken up as *an* important factor for rural agricultural development and expansion of markets. Nepal also uses MIS (management information system) to improve public sector governance and service delivery such as land management, public finance, procurement, and tax collection, in addition to disaster management activities. Further, targeting poor and rural people, Nepal has also launched telecenters or Community Information Centers programs for incorporating them in order to bring them in the mainstream of development process.

In this context, this chapter, discusses the benefits and challenges of implementation of ICT to augment services that help to fulfill the MDGs in Nepal. The focus of this chapter is on two aspects of e-government in Nepal: (a) internal efficiency of public organizations for the improvement of public services, that is, quality of services, and (b) accountability of public officials and hence empowerment and more inclusion of citizens in the decision-making process.

Internal efficiency refers to introduction of ICTs in the daily works of public officials. To what extent their routine responsibilities and duties are automated and standardized to increase efficiency. It mainly includes proper distribution of responsibilities in order to reduce time, ensure standard and regularity in the production and delivery of services to ensure quality.

Accountability of public services means to what extent ICT is used to ensure responsiveness of public officials to the environment, that is, citizens and society. This includes exchange of and access to information through e-mails, websites, and home pages that citizens use and browse to learn about different aspects of the public organization, for example, types of service provision, time schedule for a service provision, and how to lodge a complaint with a public office. On the other hand, officials learn about the demand and needs of citizens, what complaints citizens usually lodge. Improvement of public services refers to maintaining a proper standard in terms of uniformity, timeliness, and quality services.

Status of MDG Achievement in Nepal

One-third of the people in the globe particularly in developing countries are still fighting for their survival due to poverty and inadequate access to basic services (Dhakal 2005). To solve such issues, both local initiatives and the global partnership for development have been considered important. The UN global conferences of the 1990s and later in 2000 adopted Millennium Development Goals[1] (MDGs) and drew up a number of key global development goals and targets. The international development targets (IDTs) and also the Millennium Declaration of the 2000 of United Nations are the pronouncements of global commitment for putting the needs, rights, and aspirations of the people for enhancing the capacity to fight against poverty, disease, and environmental problems.

In Nepal, the Tenth Plan (2002–2007) and the PRSP (Poverty Reduction Strategy Paper[2]) objectives were directed in line with meeting the MDG goals. Later, the

[1] Eight major Millennium Development Goals (MDGs) declared in 2000 are eradicate poverty and hunger; promote gender equality and empower women; achieve universal primary education; reduce child mortality; improve maternal health; combat HIV/AIDs, malaria, and other diseases; ensure environmental sustainability; and develop a global partnership for development (Source: United Nations Country Team of Nepal, 2002, p. 1).

[2] Poverty Reduction Strategy Papers (PRSP) is a document describing the country's macroeconomic, structural and social policies, and programs over a 3-year or longer horizon to promote broad-based growth and reduce poverty.

Table 13.1 Key development and MDG indicators and their values for Nepal

S.No.	Indicator	Value	Year	2015 target
1	Population size (projection in millions)	27.5	2009	–
2	Population growth rate (projection in average)	1.94	2009/10	–
3	Life expectancy at birth (year)	63.69	2006	–
4	GNI per capita (US$)	472	2008/9	–
5	Real GDP growth rate (average)	3.95	2008/9	–
6	Inflation rate	13.2	2008/9	–
7	Human development index	0.509	2006	–
8	Population below national poverty line (percent)	25.4	2009	21
9	Proportion of employed people living below US$1 (PPP) per day	221	2010	17
10	Underweight children aged under 5 years (%)	38.6	2006	29
11	Literacy rate (15–24 years)	86.5	2008	100
12	Net enrolment rate in primary education	93.7	2009	100
13	Infant mortality rate	41	2010	36
14	Under-five mortality rate (per 1,000 live births)	50	2009	54
15	Maternal mortality ratio (per 100,000 live births)	229	2009	213
16	HIV/AIDS prevalence for 15–49 years (percent)	0.49	2007	–
17	People using wood as their main fuel (percent)	68.4	2008	–
18	Energy use per unit GDP (toe/mRs)	24.8	2007	–
19	Commercial energy use per unit GDP (toe/mRs)	3.7	2007	–
20	Area under forest coverage (percent)	39.6	2009	40
21	Population with sustainable access to improved water source (percent)	80	2010	73
22	Population with sustainable access to improved sanitation (percent)	43	2010	53

Source: GoN/National Planning Commission and United Nations Country Team of Nepal (2010); also see UNDP (2009), CBS (2009), NRB (2009), NPC (2010), MOHP et al. (2007), DOE (2009), NFHP (2010), FHD (2009), NCASC (2009), MOF (2008), DFRS (1999), DWSS (2010)

Three-Year Interim Plan (2008–2010) also renews Nepal's commitment to the MDGs. The progress reports of the MDG in 2005 and again in 2010 indicate that Nepal is likely or potentially be in line with meeting the MDG goals, however, services in all areas and to all social groups are not taking place and remains a big challenge for the government. The present development and the MDG indicators and their values give a mixed picture of Nepal's status of development and MDG in progress (see Table 13.1).

Despite the improvement in MDGs indicators, Nepali people have the lowest life expectancy in Asia, it has the largest share of undernourished children, and most importantly, development has been significantly unequal across social groups – an aspect that is not reflected through MDG indicators that measure national averages. Ensuring equitable growth is one of the key challenges at this point. To bridge this gap, improvement in governance with its application of ICTs would be expected to be able to address such issues.

Methodology

To generate the primary information, two Internal Revenue Offices located in Kathmandu were selected as units of analysis. In Nepal, the application of ICT is still in a formative stage. The Inland Revenue Department (IRD) in Kathmandu is considered one of the leading organizations to use ICT in its day-to-day business in Nepal. The respondents were both among the service providers and service receivers. The effective size of the respondents was 10 officials (8 tax officers and 2 chief tax officers) from among the service providers and 47 service receivers (initial plan was 100 respondents from among the service receivers). These service receivers were selected randomly on some particular days during the study period from among those who approached these offices. They responded to a questionnaire survey. In addition, some in-depth interviews were carried out with some respondents to supplement the information gathered through the questionnaire. Data was collected during the first week of October 2010.

Government to E-Governance: Theoretical Discussion

ICT may look into the innovation and any application of technology such as for improving governance and its impact on better service delivery. Every public activity involves information generation, sharing, and dissemination and communicative aspect. In this regard, institutionalization of this capacity is a sine qua non for any public organization to be effective, efficient, inclusive, and responsive. The development of ICT or e-government may be argued to enhance this capacity of public organizations. Even more with increasing emphasis on accountability of public officials of their deeds, e-governance is likely to make the system more transparent, open, and accessible to citizens. This is because ICT helps tasks of public officials to be standardized, uniform, and more predictable. This removes uncertainty and ambiguity in the delivery of services.

Box 13.1 Features of Government, Governance, E-Government, E-Governance

Government superstructure, decisions, rules, roles, implementation, outputs
Governance functionality, process, goals, performance, coordination, outcomes
E-government electronic service delivery, electronic workflow, electronic voting, electronic productivity
E-governance electronic consultation, electronic controllership, electronic engagement, network societal guidance

Source: Donald F. Kettl (2002)

Four concepts, namely, government, governance, e-government, and e-governance, are commonly used in administrative literatures (also see Box 13.1). According to constitutional provision, the government is legitimized to exercise power and control. Thus, the government, in brief is taken as an institution that is formally constituted, bureaucratically organized, and constitutionally legitimized.

Governance as a concept started to gain prominence in the 1980s and is concerned with increasing interactions of three actors – state, market, and the civil society in subnational, national, and supranational levels. It is a process rather than a goal. Along with this process, good governance started to inspire policy debates as a means of securing development and growth, thereby requiring governments to be open and predicable. This openness and predictability of government functioning are further echoed in e-governance.

The terms of e-government and e-governance are often used interchangeably (Riley 2003). Therefore, e-government means extensive use of ICT in the production and delivery of political and public administrative functions (Silcock 2001: 88). This entails computerization internally in the enhancement of effectiveness, efficiency, and economy of public administration, especially in the production and implementation of policies. Second, the use of ICT is to bridge public organizations with society and businesses through creating websites and home pages for information, communication, and transactions with the environment. The introduction of e-mail, Facebook, and other network devices is to increase accessibility of citizens to public organizations and ensure democratic governance (Snellen 2007: 399–402). According to Nixon et al. (2010: xxv), "one of the key elements often mooted in the use and utility of e-government is the possibility of ICT to widen and deepen public consultation processes in decision making, hence improving policy outcomes." Simply stated, e-government is the use of ICT to transform the traditional public administration into a more accessible, transparent, effective, and accountable service-providing institution.

In the following, UN's five guiding principles show key notions of e-government (United Nations, 2002):

- Building services around citizen's choices
- Making government and its services more accessible
- Social inclusion
- Providing information responsibly
- Using IT and human resources effectively and efficiently

E-government does neither mean just putting more computers on the desks of government officials nor just establishing websites and Internet. It is utilization of ICT technology to support and stimulate good governance. In this regard, the major purpose of e-governance is to establish relationship between government officials and citizens providing greater access to government information and services by making the government accessible online as well as promoting citizen participation by enabling citizens to interact more conveniently with government officials. It includes access to government services, for example, by filling required documents through website; increasing government accountability by making its

operations more transparent, thereby reducing opportunities for corruption; and supporting development goals by providing business, rural and traditionally underserved communities with information, opportunities, and communication capabilities (Baev 2003). Thus, it increases the flow of information accelerating the process of decision making by optimizing resources and making the mechanism for decision making self-regulating.

The objective of e-governance is to support and simplify governance for all parties – government, citizens, businesses, and employees. Two major objectives of e-governance are "service to the public sector" and "efficient government." The "service to the public" fulfills the public's needs and expectations satisfactorily on the front-office side, by simplifying their interactions with various online services. The other objective "efficient government" helps for government operations to facilitate a speedy, transparent, accountable, efficient, and effective process for performing government administration activities. Significant cost savings (per transaction) in government operations can be the result.

Status of ICT Development in Nepal

The introduction of e-governance in Nepal has a short history. Its main objective is supporting good governance initiatives of the government by enhancing efficiency and effectiveness, improving information dissemination and service delivery mechanisms through use of ICTs, and stimulating the development and growth of ICT sector within the country. To implement the e-governance initiative, there is a need for infrastructure development, improvement of law and public policy, building e-literacy, enhance accessibility, ensure privacy and security, and development of workforce. In addition, there is a strong commitment from the leadership for the development and give attention for strategic investment, collaboration, and citizen participation. Once government makes strategies to transform the governance process, it must prepare to meet the significant challenges and opportunities that will arise during implementation. To augment the ICT initiative in Nepal, the government of Nepal (GoN) has made a number of efforts by bringing IT Policy, enacting legal instruments, and action plans.

Development of IT Policy and Creation of Legal Instruments

Introducing IT Policy in 2000 was one of the key functions of developing e-governance in Nepal. Its broader objective is to make information technology accessible to the general public and increase employment through this means, to build a knowledge-based society, and to establish knowledge-based industries (His Majesty's government of Nepal 2000).

Later in 2010, the government of Nepal introduced new IT policy whose aims are (GoN/MoST 2010: 8):

- To make ICT as government's priority area
- To encourage for the development of a knowledge-based society
- To make e-government inclusive and effective for disseminating information and delivery of services
- To use ICT as productive resource in economic and commercial sectors
- To access to international efforts and developments of IT
- To make effective government integrated data center to develop IT as development infrastructure

The new IT policy tries to ensure more of its use in both the public and private sectors. In addition to IT policy adoption, a number of legal instruments are created to develop IT sector for augmenting e-governance in Nepal. Some of them are Electronic Transactions Act and Digital Signature Act 2008; Cyber Law in 2007; E-Government Master Plan 2006; Telecommunications Policy 2004; National Strategy Paper on ICT (National Planning Commission), 2002; Electronic Transaction and Digital Signature Act (ETADSA), 2057 (2000); Copyright Act, 2059 (2000); Telecommunication Act, 1997 and Telecommunication Regulations 1997; and National Communication Policy, 1992. These efforts obviously create an environment to develop ICT sector in Nepal. However, the commitment from the policy makers as well as from the policy implementers is considered equally important.

Institutional Mechanism of Implementing ICT in Nepal

Some of the important institutions created to augment ICT sector are the Ministry of Science and Technology (MoST), High Level Commission for Information Technology (HLCIT), and Nepal Telecommunications Authority. In addition to these governmental entities, a number of private organizations which offer teleservices including telephone and Internet services are also created. There are 22 Internet service providers (ISPs), six VSATs (very small aperture terminal), eight radio paging service provider, and some 15 software-developing companies have been providing services. The government has also emphasized BOT (build, own, and transfer) system and permitted FDI (foreign direct investment) for the development of this sector (UNDP: ICT profile in Nepal, 2006). To enhance institutional strengthening of municipalities and air transport capacity enhancement of Tribhuvan International Airport including three remote domestic airports has been supported by Asian Development Bank which is one of the important endeavors to contribute to IT development in Nepal (ADB-Funded ICT-Related Projects in Nepal 2009).

Increasing Trend of ICT Utilization in Nepal

Effective application of ICTs in public administration and governance area in Nepal remains relatively low. Even though the trend to use personal computers (PCs) and networking has been increasing, there is conspicuous lack of systemic approach to deployment of ICT-based delivery models in the administrative setup.

The administrative structure is yet to make forays into databases, MIS intranets, and meaningful web presence – basic attributes that determine e-readiness in Nepali bureaucratic setup to plunge whole hog into e-governance. Out of total 26 ministries, 25 ministries have already introduced web and 22 ministries e-mail IDs. Only around 50% of the government departments have the web presence (see Box 13.2). IT education in different secondary level schools, colleges, and training institutes also help to augment the utilization of e-learning. The recent introduction of telemedicine in remote villages would be very useful to deliver health-related services.

Box 13.2 ICTs in Ministry and Departments

	Ministries	Departments
Total	26	51
With web page	25	27
With emails	22	32

Source: http://www.nepalgov.gov.np/?option=ngdir&page=ngdir (visited on 19.3.10)

Box 13.3 Trend in Phone Users in Nepal

	2005	2010
Total mobile users	299,000	10,500,000
Landline users	–	843,000
Mobile density rate	1.52%	36.27%
Teledensity rate	–	41.51%
Total telecommunication customers	–	11,800,000

Source: http://www.ekantipur.com/np/2066/12/4/full-news/308552/ (accessed on 15.03.2010); http://www.ekantipur.com/np/2068/1/25/full-news/242152/ (accessed on 08.05.2011)

In addition to governmental departments, academic institutions, private organizations, and the NGOs have also increased significantly and coming up with web presence. In addition, there is an overwhelming increment of using telephone and mobile phones (See Box 13.3). In 1999, the teledensity reached 1 line per 100 inhabitants which was 1.4% in 2003, and expected to be 15% by 2017. It was the private sector that first connected Nepal to the Internet in 1995. PC penetration in Nepal is continually on the rise and is at an estimated 0.96 per 100 people. The ISPs

Table 13.2 E-government readiness in Southern Asia

Country	2008 index	2005 index	2008 ranking	2005 ranking
Maldives	0.4491	0.4321	95	77
Sri Lanka	0.4244	0.3950	101	94
Iran	0.4067	0.3813	108	98
India	0.3814	0.4001	113	87
Pakistan	0.3160	0.2836	131	136
Bhutan	0.3074	0.2941	134	130
Bangladesh	0.2936	0.1762	142	162
Nepal	0.2725	0.3021	150	126
Afghanistan	0.2048	0.1490		
Region	0.3395	0.3126		
World	0.4514	0.4267		

Source: UN (2008: 33)

(Internet service provider) source reveals that the number of subscribers to their services has an annual increment of 50%. There were only 35,000 users in 2000 which has increased by ten times in 2009. These trend shows that there is a growing trend for the application of ICTs in Nepal. It is estimated that business organizations use 30% of Internet services followed by international organizations based in Nepal and private home users by 20% each. The NGOs occupy 15% share, educational institutions 10%, and government entities just limited to only 5%. There have been an increasing number of computer users across the rural areas through schools, colleges, and computer training institutes.

Compared to urban areas, rural areas where 85% of the total population (27.5 million – projected in 2009) lives are characterized by acute shortage of telephone accessibility. Nepal Telecom source shows that only 1,963 village development committees (VDCs) out of 3,915 VDCs have been served with at least one PCO (Nepal Telecommunications Authority, Management Information System (MIS), Vol. 8). The general phenomenon is that telephone penetration has been heavily skewed in favor of urban areas as a significant number of VDCs remain underserved.

E-Government Readiness in Nepal

Despite widespread use of ICT in households and in the private sector in Nepal, its use in the public sector is still poor and modest. The UN conducted a survey in 2008 to map the application of ICT by governments in different countries. The focus of the survey was on e-government readiness (Table 13.2).

According to the survey, Nepal is a poor performer in terms of e-government readiness and, in fact, lowest in the Southern Asian region. Its ranking in terms of e-government readiness has deteriorated from a rank of 126 in 2005 to 150 in 2008 among 189 countries. Moreover, its readiness index of 0.2725 is lower than region's index of 0.3395 in 2008. The Southern Asian region remains far below the world

Table 13.3 ITU IDI for Southern Asia

Country	Rank 2008	ICT Development Index 2007	Rank 2002	ICT Development Index 2002
Maldives	68	3.16	88	1.96
Iran	84	2.94	92	1.93
Sri Lanka	105	2.38	97	1.75
Bhutan	123	1.63	118	1.17
India	117	1.59	117	1.19
Pakistan	128	1.46	146	0.89
Bangladesh	137	1.26	132	1.02
Nepal	142	1.23	133	1.01

Source: Bhuiyan (2010: 5), ITU (2010: 10)

average and is the lowest ranking region in Asia. The Maldives (0.4491) continues to lead this region, followed by Sri Lanka (0.4244) and Iran (0.4067).

In another study by the International Telecommunication Union (ITU) on ICT Development Index (IDI),[3] Nepal was ranked the lowest (142 of 159 countries) in the Southern Asian region in 2008 (ITU 2010: 10). Its ranking has deteriorated since 2002 (Table 13.3).

Despite such poor ranking of Nepal in ITU ICT Development Index in the Southern Asian region, Nepal's progress in terms of the number of mobile phone and landline users has increased significantly in the last few years (see Box 13.3).

Data Analysis: Status, Importance, and Consequences

We focus on two aspects of e-government in Nepal as mentioned earlier. These are (a) enhancing internal efficiency of public organizations and improvement of service delivery and (b) maintaining accountability of public officials and hence empowerment and more inclusion of citizens in the decision-making process.

Improvement in Internal Efficiency

In order to map the extent to which Internal Revenue Offices have adopted e-governance using ICT technology to enhance internal efficiency for the delivery of services to their clients as well as for better internal coordination among different responsibilities,

[3] Based on (a) *ICT access*: (1) fixed telephone lines per 100 inhabitants, (2) mobile cellular telephone subscriptions per 100 inhabitants, (3) International Internet bandwidth (bit/s) per Internet user, (4) proportion of households with a computer, (5) proportion of households with Internet access at home; (b) *ICT use*: (6) Internet users per 100 inhabitants, (7) fixed broadband Internet subscribers per 100 inhabitants, (8) mobile broadband subscriptions per 100 inhabitants; and (c) *ICT skills*: (9) adult literacy rate, (10) secondary gross enrolment ratio, (11) tertiary gross enrolment ratio.

Table 13.4 Employees response regarding the improvement in internal efficiency of Internal Revenue Office. Absolute numbers

Type of services	Very much + to some extent	Not at all	*N*
Easier to deliver services	10	–	10
Increased clients' accessibility to services	10	–	10
Helpful in decreasing queue	10	–	10
Helpful in quick decision making	8	2	10
Increase of employees' skills	9	1	10

The question was: Do you think the service quality has been improved in IRD after introducing ICT in terms of accessibility of services, helpful in decreasing crowd, helpful for quick decision making, easier to deliver services, and increasing employees' skills? The answer alternatives varied from (1) very much, (2) to some extent, to (3) very little

we asked the employees to give their opinions on a set of issues as specified in the following table.

Since the number of employees interviewed is only ten, we present absolute frequencies for the following statements (Table 13.4).

Almost all employees are positive about the introduction of ICT in their organization in enhancing internal efficiency. They experience now that it is "easier to deliver services" to citizens, "clients' accessibility" to services has increased from before, ICT has reduced "queue" and it is "helpful for making quick decision", and it has enhanced "employees' skills."

The findings indicate extensive use of ICT in the Internal Revenue Offices that has helped to streamline service provision processes. ICT is considered an important and helpful tool in the decision-making process. This helps to ensure quality, uniformity, and standard of services.

However, there is room for improving service provisions. In this regard, imparting computer skills is essential as well as improving the user friendly attitude of employees. In the following, we present citizens' views about the improvement of services after ICT has been introduced.

Improvement of Service Delivery

One of the major objectives of introducing ICT in public offices is to deliver service effectively and efficiently, that is, to transform the process of traditional mode of service delivery. To map service receivers' opinions about the status of service delivery, we asked the respondents to give their opinions on the following statements (Table 13.5).

As the above table reveals, service seekers as a whole are quite positive to the changes brought about by ICT in Inland Revenue Department. They perceive that it is easier to get information from IRO, easier to lodge complain to them, getting services in time, easier to report, and less persuasion of employees to get a business

Table 13.5 Citizens' response in terms of various issues regarding ICT utilization at Inland Revenue Department. Percentage distribution

	Very much	To some extent	Very little	Total	
	(%)	(%)	(%)	(%)	*N*
Service delivery in time	52	42	6	100	36
Decrease in the persuasion of employees	40	40	20	100	35
Easier to lodge complain	59	38	3	100	32
Easier to report	43	50	7	100	30
Easier to get information in time	70	23	7	100	30

The question was: What were the changes in IRO after introducing ICT in terms of service delivery in time, decreasing pleasing employees, easier to lodge complain, easier to report, and easier to get information in time? The answer alternatives varied from (1) very much, (2) to some extent, to (3) very little

done. However, some still (20%) feel that IRD officials still need to be persuaded which indicates that some form of lobbying still persists.

In order to submit "income and expenditure" and "value added tax" (VAT) reports, the concerned service seekers have to contact the Inland Revenue Department for obtaining "personal account number" (PAN). This number can only be obtained by applying through the Internet. This means that users do not need to queue up before the revenue office for registration. This is based on first come first serve principle and subsequently has reduced queue and preferential treatment. However, in spite of the introduction of online registration facility, only 27% among our respondents themselves used online facility to register in order to get the number. The rest sought help of others to register. This has also led to some businesses that would help people to register online against some fee. This shows lack of skill on the part of many users to use Internet and online facility. This of course is a serious drawback for e-governance to be functional and interactive.

Inclusion in Decision Making

E-governance entails close interactions between public organizations and society. In this regard, it is more important that citizen feel that they are given due attention, space, and voice in public decision making. Partnership fosters better coordination and trust between citizens and public organizations and it is easier to implement policies. Similarly, The use of ICT in public organizations is likely to reduce queue, include citizens in the decision making process, give accounts of one's (official's) acts, and empower citizens through information dissemination. In our survey, we intended to map user's perceptions of the use of ICT in Internal Revenue Office and to what extent it has empowered citizens (Table 13.6).

Table 13.6 Citizens' response in terms of various issues regarding ICT utilization at Inland Revenue Department. Percentage distribution

	Very much	To some extent	Very little	Total	*N*
	(%)	(%)	(%)	(%)	
Decrease discrimination	25	61	14	100	36
Maintain accountability	15	58	27	100	33
Inclusion of citizen's demands in policy making	11	44	45	100	36
Empowering citizens	6	53	41	100	32

The question was the same as in Table 13.3. Respondents were asked to give opinions on decrease in discrimination, maintain accountability, inclusion of citizen's demands in policy making, and empowering citizens

The findings reveal that the introduction of ICT in Inland Revenue Department has improved to some extent to decrease the discrimination. In Nepal, "*afno manchhe*" (informal networking) is a powerful and strong strategy to get a business done in public offices. Elites usually are treated favorably. Elites in Nepal comprise those who belong to upper caste with a renowned family background and higher education. They get easy access to public officials and offices because of "old school" ties. Sometimes preferential treatment also involves undue favor. However, our respondents perceive that ICT has decreased discrimination. This is because ICT has changed the nature of registration process. Before, a user had to appear in the revenue office to get the number which involved lobbying, delay, inaccessibility to officials, bribing, and the use of *dalal* (middleman) to get the business done. The online registration facility has reduced harassment of users and expedited the process of registration.

The findings also reveal that ICT has enhanced accountability of the Internal Revenue Office than before. This means ICT has ensured that a given service be provided within stipulated time. The procedure is now more standardized meaning criteria for registration are clearly spelled out and it is easier for people to follow the instructions. They, to a much lesser degree, depend on the personal "whims" of the officials. The ICT has made the system and the procedure more formal delineating responsibilities of both the officials and the customers. In such a system, it is easier for both service providers and users to play their respective roles.

However, when it comes to citizen's inclusion in the decision-making process and their empowerment, citizens perceive that it has improved than before but much still remains to be done.

Conclusion

Nepal considers e-governance as an important instrument for economic and social developments and intends to make full use of it by being linked to the globalized world and breaking the barrier of geographical diversity. In this regard, ICT provides

a huge opportunity and potential for bringing about a major paradigm shift in the way public administration functions and thereby facilitate good governance.

In Nepal, various sectors, such as education, health, agriculture, tourism, and trade, among others, have been using information technology. The number of telephone/Internet users has increased significantly over the years. This has necessitated adequate legal and infrastructural facilities.

In this chapter, the major concern was twofold: first, to analyze to what extent ICT has enhanced internal efficiency of public organizations and, second, to what extent accountability of public officials has been ensured. The Inland Revenue Department was chosen as a relevant unit of analysis because of its large interface with citizens. Both the service providers, that is, employees of IRO, and its users, that is, citizens, were interviewed.

In terms of use of ICT, it was found that the revenue office has computerized a number of its functions which has enabled it to interact more and with ease with users. Service provision has become uniform, standardized, and stable thereby reducing delays, queues, and influence of middleman since lobbying has decreased. Information dissemination has become easier, the same with lodging complains. The employees stated that ICT use in their workplace has made their work procedures and decision making more routine, quick, and simplified; that they are more able to provide services in time; it has enhanced their skills; and user's accessibility to services has increased.

When it concerns accessibility of citizens to services, citizens do feel that ICT has reduced discrimination of access to services. However, with regard to empowerment, accountability, and inclusion of citizens in the process of governance, the trend is positive but still much more remains to be done. As a whole, the scenario of ICT use and e-governance in the case of Internal Revenue Office is positive. The question is to what extent the same scenario may be observed in other public offices in Nepal. Is there urban-rural divide when it comes to ICT infrastructure development? Is there a divide between different sectors or among different levels of government such as central and district and village levels?

From our study, we find two major challenges confronting e-governance in Nepal. First, to make e-governance operational and functional, adequate investment in building e-governance infrastructure is essential. This requires establishing physical facilities, financial resources, and technical expertise. Second, adequate motivation and necessary attitudinal changes are required to run public affairs in a more user-friendly and digitized manner. This is a challenge to the traditional public administration system and shifting to a new mode of governance. This requires political will and societal cooperation.

In terms of e-government readiness and ICT Development Index, Nepal is ranked the lowest in the Southern Asian region which indicates that other nations in the region have made significant progress and investments. Therefore, for Nepal to be competitive, it must realize the benefits of e-government and make necessary investment in this sector.

The government of Nepal has taken ICT as a strategic tool to reduce poverty and obtain MDG goals. Our study also shows growing application and encouraging

result for delivering the tax collection services. The trustworthiness of a government depends on to what extent services are delivered and in which manner. E-governance is considered an effective tool in this regard.

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