Public Participation and Ethical Issues on E-governance: A Study Perspective in Nepal

Gajendra Sharma, Xi Bao and Li Peng
School of Public Administration and Law, Dalian University of Technology, China
gsh106@gmail.com

Abstract: E-governance is a way for governments to use the most innovative information and communication technologies (ICTs), to provide public and businesses with convenient access to government information and services, to improve the quality of the services and to provide greater opportunities to participate in government activities. E-government offers a huge movement to move forward with higher quality, cost-effective, government services and a better relationship between people and government. This paper investigates how public participant in e-government can be enhanced in Nepal with ethical implementation of e-government. A case study from e-government context in Nepal was taken to study public participation, service delivery, challenges and ethical issues. A policy network theory was applied on e-governance policy-making processes in the perspective of Nepal. The finding of the study was focused on good governance which includes issues of efficiency of service delivery, empowerment of citizens, transparency, and accountability. If applied effectively in developing countries like Nepal, e- government strategy can advance productivity in the public sector. The e-government ethics may cover the rights and duties of bodies involved in the development of information systems for public administration.

Keywords: E-governance, public participation, e-participation, ethics, public service delivery

1   Introduction

E-government is considered as implication of information and communication technology (ICT) in order to improve public services and strengthen support to public policies. E-Government is defined as a system utilizing the Internet and the world-wide-web for delivering government information and services to citizens. This system reduces the processing costs, improves service delivery, and increases transparency and communication between a government and its citizens (Alia et al., 2012). E-government brings advantages to the public in terms of relevance and ease of use and to government in terms of improved management of public resources, promoting better planning and targeting policies to address problems of communities (Sarpoulaki et al., 2008). E-government involves using information technology (IT), and particularly the Internet, to enhance the delivery of government services to public, businesses, and other government agencies to interact and receive services from the central, state or local governments (Salhofer & Febas, 2007; Gajendra et. al, 2012). The movement to e-government is significant for government to interact and communicate with people and business transactions. E-government provides a massive potential to locate innovative way to reach the people's satisfaction. Development of new technologies allows electronic services to be applied in e-government (Riad et al., 2010).

Implementation of e-government has increased in number of nations but the rate of adoption varies from country to country. In general, developing countries have been lagging behind in e-government use as compared to developed countries (West, 2006). Different sources indicate that strong political leadership is one of the important factors for e-government success (The Asia Foundation, 2007). In a society with a culture of multi party political system, like Nepal, leaders play a crucial role in decision making. Strong leadership ensures a long-term commitment of national resources and to combine different fractions so that they cooperate with each other and support e-government initiatives. Government was urged to utilize the everyday technologies the people were already using. Changes in leadership and policy were necessary to utilize social media to the fullest (Banson et al., 2012). The information revolution and the governance revolution are important factors of e-governance and is a means to increase transparency in administration, minimize corruption, and increase public participation (Kumar & Best 2006). E-governance is separating developed and developing countries in a great extent (Heeks, 2001).

E-government can be adopted successfully if it is regulated by a legal framework and with ethical manner (Hai, 2005). Legal issues include cyber-security, digital signatures and personal data protection and confidentiality. Laws limiting the government's authority in relation to the individual in terms of the control of personal information should be forwarded. People may not be confident to participate in e-government programs and

trust the system if their privacy is not guaranteed. Majority of government websites are not fully operational and the information does not enhance service delivery to public and participatory democracy. A fully functional e-government website should include an e-participation framework which offers online information on government policies and programs, budgets, laws and regulations, e-consultation mechanisms and tools, and e-decision making (Gil & Martinez, 2007). Governments with an e-participation framework are participatory and inclusive. Technology has strengthened reforms in many areas and e-government is broadly recognized as fundamental to the change, and as a modernization and improvement of government (Foley & Alfonso, 2009; Shahjahan, 2011). A review of best state and local practices in public participation discovered that successful efforts treated citizens as customers, and they recognized, encouraged, and enabled engagement in public affairs through mechanisms for direct participation (Holzer, Hu, & Song 2004).

The purpose of this paper is to present how public participant in e-government can be enhanced in Nepal with ethical implementation of e-government. Administrative, political and ethic issues derived from e-government are as security, privacy and digital divide. E-government implementations must consider security and privacy issues to ensure protection of individual rights. A case study from e-government context in Nepal was taken to investigate public participation, service delivery, challenges and ethical issues. A case study is a best method for studying administrative, political and ethical issues in e-government and has a strong connection with focus group of people to collect qualitative information. A policy network theory was applied on e-governance policy-making processes in the context of Nepal. E-government reflects a new face of government that is transforming interactions between government and public around the globe (Morgeson & Mithas, 2009). E-Governance is able to establish a consensus among the government officials on the major issues of e-government programs. Nepal can gain sustainable development only through good governance. People still long for a transparent and accountable administration, and the government of Nepal has yet to fully provide effective services. Good governance is essential to achieving long term socio-economic development. Governments and public organizations are being pressured by internal and external forces to reform the public service (Gessi, 2006). Putting the citizen perspective and citizens' needs at the core of public services is challenging when it is so hard to define citizens' expectation and desire from government.

The structure of the paper is organized as follows: Section 2 provides literature review on related studies. Section 3 outlines theoretical backgrounds of the study. Section 4 presents the e-governance status in Nepal. The case findings and discussion part is mentioned in Section 5. Section 6 includes theoretical and practical contributions of the research. The study is concluded in Section 7.

2 Literature Review

2.1 E-government and e-governance

E-Government is defined as digital interactions between a government and people. E-government generally refers to the utilization of ICTs, and other web-based communication technologies to improve and develop efficiency and effectiveness of service delivery in the public sector (Harris, 2000). The basic models of e-government are government to citizen, government to employees, government to government and government to business (Rossel and Finger, 2007). E-government should enable people to visit state websites to communicate and interact with employees through the internet, instant messaging, email and audio or video presentations (Kaylor et al., 2001). E-participation or public participation refers to the ICT-supported participation and processes involved in government and governance. Processes include administration, service delivery, decision making and policy making. E-participation is thus closely related to e-government and e-governance   participation.

E-government is the incessant optimization of service delivery, constituency participation and governance by transforming internal and external relationships through technology, the Internet and online media. This includes government to public, government to employee, government to business, and government to government. E-government provides the potential to bring people closer to their governments, and regardless of the type of political system in the nation, the public benefits from interactive features enabling communication and interaction between public and governments (West, 2006). Heeks (2008) does not agree that e-government should only have the involvement of Internet related applications, which some argue as prerequisites   of   e-governance.

According to Kumar & Best (2006), e-government can be defined widely as the use of ICTs in the public sector to improve its functions and delivery of services. Despite benefits and initial success, e-government has

yet to prove successful in, or even affect the wide majority of governments in developing countries. E-government success and failure therefore depend on the size of the gap that exists between current realities and design of the e-government project (Heeks, 2003). Some studies have been carried out on success and failure of information systems in developing countries and few works have been carried out on sustainability (Walsham & Sahay, 2006). The availability of an e-government framework for assessing the ICT readiness in public sectors is pivotal in developing effective e-government policies and strategies (ACM, 2008). The majority of the e-government strategies of developing countries are lacking a strategic framework. Some countries had included some relevant diagrams but they do not qualify as strategic e-government frameworks (Rabaiah & Vandijck,   2009).

E-governance is the use of ICT by the government, civil society, and political organizations to engage people through feedback and dialogue to promote their participation in the process of governance of these institutions (Bhatnagar, 2004). IT has become the major force that drives the modern organization. E-Governance permits new ways for the public participation and communities for debating (Rogers & Shukla, 2001; Gupta et al., 2004; Heeks & Nicholson, 2004). The governance of ICTs requires a substantial growth in regulation and policy making capacities, with all the capability and opinion making processes among the different social stakeholders of these matters. Hence, the perspective of the e-governance is "the use of the technologies that both help governing and have to be governed" (Rossel and Finger, 2007, p. 402). The concept of e-governance will consist of government, public participation, political parties and organizations, parliament and judiciary functions.

2.2   E-governance in developing countries

Developing countries are lagging behind in e-government adoption compared to developed countries (Furuholt & Wahid, 2008). IT offers the opportunity for the government to better deliver information and services and to interact with citizens, businesses, and other government stakeholders in an effective manner. The discrepancy in e-government implementation between regions in Nepal is huge due to a number of reasons, including management, infrastructure, and human factors that vary across this heterogeneous country. An e-government vision is driven by the unique setting of social, political, and economic factors and requirements (Park, 2008). A variety of both academic and practitioner oriented literature was found covering e-goverment projects. Grönlund et al. (2005) provides a broad overview of literature sources covering e-government projects and study in developing countries. The main opportunities for e-government, such as cost reductions, improved efficiency, and quality of services, will also apply to projects in developing countries, but some motivation seems a stronger and more important factor for transitional democracies and developing economies. The transitional democracies with newer governments may perceive a need to improve openness and public opportunities to solidify their legitimacy, and may thus emphasize reforms such as transparency, increased public participation and attracting economic development (Seifert & Bonham, 2003).

The Asia Foundation (2007) states that, in Asia, there is growing recognition that e-government have the ability to improve government transparency by increasing accountability and reducing opportunities for corruption. E-government projects must focus on the social contexts into which IT is introduced. A common argument in most literature dealing with e-government in developing countries is the focus on transparency and fighting with corruption. Major barriers can be met in the adoption and diffusion of e-government services depending on the readiness of a country in terms of ICT infrastructure and deployment (Ibrahim et al., 2011). If applied effectively in developing countries, strategy can advance e-government productivity in the public sector. In this connection, the primary step in implementing e-governance in Nepal is identifying how the program's objectives and challenges relate with the vision and strategies developed by the government.

2.3   Public participation

E-governance allows people to communicate with government, participate in the governments' policy-making and public to communicate each other and to participate in the political process (Fang, 2002). In this sense, e-governance has more implications than e-government. E-Government can serve a variety of different ends such as better delivery of government services to people, improved interactions with business and industry, citizen empowerment through access to information, or more efficient government management. Public participation or e-participation is the use of ICTs to broaden and deepen political participation by enabling people to connect with one another and with their elected representatives (Macintosh 2004). This definition includes all stakeholders in democratic decision-making processes and not only citizen related government

initiatives. The complexity of e-participation processes results from the large number of different participation areas, involved stakeholders, levels of engagement, and stages in policy making (Fraser 2006). In putting citizens first, governments are required to be more responsive to citizens' needs and inputs.

E-participation is crucial for any e-governance initiative. In a government-to-consumer context, various studies have found individual characteristics that affect attributes of e-government, such as quality of government website (Barnes & Vidgen 2006), access to e-government (Choudrie et al. 2005; Gilbert et al. 2004; Pilling & Boeltzig 2007), measurement and assessment of benefits (Gupta & Jana 2003), infrastructure (Dossani et al. 2005), intention to use e-government (Carter & Belanger 2005; Horst et al. 2007; Schaupp & Carter 2005; Warkentin et al. 2002). The outcomes from these studies are vast and confusing that conceptual clarity is required to locate positive view of e-government adoption. The study conducted by Pilling & Boeltzig (2007), makes suggestion that proponents of diffusion of innovation theory focus more on the "individual characteristics of the adopters, holding the individual responsible for his/her problems" (p.36).

2.4 Public service delivery

Public service delivery indicates providing people with services of public interest. Examples are healthcare, education, security, energy, water and public transport. The demands that are placed on public services are different from services and products that are provided by the market. Public service delivery quality is a multifaceted concept (Steenhuisen, 2009). Thus, it is hard to evaluate quality (Bruijn, 2007). The quality of public service delivery in some cases suffers from cost and efficiency (Blok & Pool, 2010). Besides efficiency and effectiveness that are the measures for good public service delivery; legitimacy, legality, and transparency are also crucial (WRR, 2004; Gestel et al., 2008). Majority of public services are not used willingly: for example, not all recipients of social security advantages are eager about the reintegration programs offered to them. Public service delivery offers for public service providers that are mostly committed (Goossensen, 2011). According to the Agency Theory, organizations behave in an opportunistic, calculating, and self-centered way (Heuvelhof et al., 2009). They need intrinsic motivation instead of prioritizing the quality of the public service delivery. When public employees are treated as 'agents', they no longer have the freedom to adjust their service to their individual client's precise requirements. This will discourage and isolate them from the reason, and make them pessimistic (Tummers et al., 2011).

2.5 E-government challenges

A number of challenging issues of e-government implementation have been outlined in the literature. They include infrastructure development, law and public policy, digital divide and e-literacy. Other challenges include accessibility, trust, privacy, security, transparency and permanent accessibility (Info Dev, 2002). E-governance has to be implemented across different government departments and organizations with a wide range of activities and with varying levels of readiness. It would require providing institutional and physical infrastructure for taking e-governance initiatives across Nepal's cultural and regional diversities. Apart from the technical requirement, success of e-governance initiatives would depend on capacity building and creating awareness (Bhatnagar, 2008). Nepal's government is facing numerous challenges in introducing and implementing e-governance. These include political issues, inadequate human resources, the lack of a legal framework, little public awareness about ICT and poor ICT infrastructure across the nation. The major hurdle is to provide a citizen-centric solution by offering hassle free, easy-to-use and easily accessible services to the consumers.

Social and cultural factors such as gender, poverty, education level, class, caste, age, and social exclusion can all directly hinder the use of computers in developing countries like Nepal. The inadequate supply of qualified manpower and lack of good training infrastructure as one of the key components to the development of e-governance in developing countries. The quality of e-governance highly depends on the performance of human resources (UN/ASPA (2002). Digital divide is one of the challenging issues in e-governance. The digital divide implies a widening of the gap between the rich and poor with respect to ICT across the world (Ashraf et al., 2009). In developing countries, the digital divide occurs where there is a lack of infrastructure (for example, power supply) or access to modern technology such as internet, computers and mobile phones (James, 2007). E-Government should have very clear legal structure to work on. Governments must ensure that a proper legal framework exists before e-government initiatives and processes can take up. Funding arrangements should account for the agencies working together on e-government projects e-government projects is like long-term funding and collaboration across agencies, so it may not work on the principle of traditional one. The rapid

development of new technology added the economic demand day by day. Adoption of whole-of-government standards, software integration and middleware technologies can help to handle this barrier someway.

2.6   Ethical issues

Governments are now facing unprecedented transparency requirements, further encouraged through electronic grassroots mobilizations using social technology (Chun et al., 2012). E-government implementations must consider security and privacy issues to ensure protection of individual rights (Fang, 2002). Application of security is specific to the situation and sensitivity of the information. Security protection as an instance, for public information, such as the minutes of council meeting on the web, is not stringent as would information specific to an individual's information. Privacy generally refers to respecting the information right attributed to an individual. Information privacy protection laws are commonly put in place to monitor this (Chung, 2007). The e-governance application needs to build the trust of public in the system (Sachdeva, 2008). The identity of citizens requesting services needs to be verified before they access or use the services. A pertinent need still survives, compelling the authorities to ensure the authenticity in their transactions thereby gaining absolute trust and confidence of the citizen (Fang, 2002). The security concerns that may be for an e-government system are user frauds, unauthorized disclosure, service attack, breach of anonymity and failure to recover business information. The result of ethical implementation of e-governance is creation of good governance. Good governance is one of the most important public concerns that the government can offer to its people. It is one of the fundamental reasons why we have governments and we agree to abide by roles and responsibilities which fall under different forms of governance (Barnes & Vidgen, 2006). There are other authentic issues which should be considered while implementing e-governance in Nepal. First, concerned authorities need to be accountable. Second, a clear consent is required for the institutions, which also need to be responsible for a comprehensive e-governance implementation (Silverstone, 2007). Third, value is required to connect with the community on these issues. Finally, leadership is required to set proper and realistic goals and policies.

3   Theoretical Background

The study of e-governance within the information systems literature has increased significantly (Andersen & Henriksen, 2005; Thompson & Jones, 2008). Some authors have discovered the impacts of ICT and management issues (Fountain, 2001; O'Neill, 2009). Some others have concentrated on ICT transfer, culture and country-specific factors in e-government enhancement, and diffusion among concerned authorities in developing countries (Abdalla, 2006; Alshihi, 2005; Rahman, 2007). A further investigation is needed on organizational issues influencing on e-government significance. The literature has a major focus on technological issues such as ICT infrastructure and architecture, for instance, security and authentication, web standards, portals (Moon, 2002); interoperability (Millard, 2007); open source software, domain policy, connectivity (Reddick, 2005); procurement practices, project design (Gil-Garcia & Pardo, 2005; Martin & Bryne, 2003); and implementation issues (Heeks, 2005a; O'Neill, 2009). The study primarily focuses on issues of e-government functionality (Layne and Lee, 2001; Millard, 2007) and the ICT issues (Chen, 2002; Safai-Amin, 2002) in an e-service delivery context. Nevertheless, there is a theoretical gap between what can be done by using ICTs and what has been achieved in practical (OECD, 2003). E-government activities are frequently unsuccessful in developing countries because of the non-implementation of technical system; removal of technology after implementation, major goals relating to cost, implementation timeframes, and capability are not achieved and undesired results (Heeks, 2005b). While some studies focus on the success and failure rates of e-government (Heeks, 2003).

3.1   Policy network theory

The foundations of network theory in public administration have been traced as far back as the 1930s to early influences from anthropology and sociology (Berry, et al. 2004). There was a similar flourishing of interest in networks within the domain of policy networks in the field of political science (Laumann and Knoke 1987; Rhodes 1990) as well as a growing literature on social network methodology (Freeman 1979; Krackhardt 1988; Wasserman and Faust 1994). The interest in networks and research approaches to their study began finding their way into the public administration literature. Berry et al. (2004) divides the field into policy networks, public management networks, and methods of social network analysis. Policy networks focus on the diffusion of policy innovation, agenda setting, and institutional support for collective action. Study on public management networks emphasizes the management of complex relations between government and private

actors, as well as instrumental concerns about performance. Isett et al. (2011) proposed a similar taxonomy that includes policy networks, but they also separate management networks into collaborative networks and governance networks.

4 Methodology

4.1 Qualitative research method

Research can be positivist, interpretive, or critical, depending upon researcher's underlying philosophical assumption (Orlikowski and Baroudi, 1991). Positivists usually believe that reality is objective and can be measurable. Interpretivists consider that reality can be only understood through social constructions, such as language, perception and meanings. A research method is a strategy of investigation including philosophical assumptions, research design, data collection and analysis (Myers, 1997).

This study is a case study based on qualitative research method. The source of qualitative data collection was from interview with experienced IT professionals who are full time IT faculty members and employees of Kathmandu University, Nepal as well as representatives of High Level Commission of Information Technology, Nepal. Moreover, literature review and e-government websites were used for related information collection. The interview was conducted from June 24 to July 15, 2012. The population of respondents was 18. The participants having more than two years of experience in IT was chosen for interview. Out of them best and convincing opinions of 10 interviewees in the Nepal e-government context was included in this study. The questionnaires were focused on adoption of e-governance in Nepal, public participation and awareness of government policies, goals, programs and delivery of government services with ethical implementation. The responses were recorded manually and analyzed for study. The interview questions were designed as follows:

- How effective do you find the development of e-government in Nepal?
- Have you participated in e-government activities?
- What are the major e-government services in Nepal?
- How successful is Nepal in e-government compared to other developing countries?
- How online government services are effective for its people?
- How active are the people for e-government participation?
- How e-government services can be conducted into an ethical manner?
- What are the problems and challenges for e-governance in Nepal?

The strength of case study is its ability to integrate a full variety of evidence, including documents, and observations which are used as alternative methods for data collection (Yin, 2003).

4.2 The concept of e-government in Nepal

Nepal is a landlocked and underdeveloped country with population of 29.3 million. It lies in between India and China. Nepal is characterized by varied and difficult topography including highest mountain "Mount Everest". The country is still having poor literacy rate (57% approx.) and technological culture. There is not an adequate access of government services to the people of remote and rural area of Nepal. The data processing of the country's data has started with the establishment of The National Computer Center (NCC) in1974. The involvement of private sector in the area of software development started during 1980's. The concept of outsourcing has already implemented during 1982. In the early 90's, large numbers of IT companies were emerged in capital city, Kathmandu. The government of Nepal observes e-governance in terms of its capability for bringing about a major standard shift in the way public administration functions and also as a possible means of good governance.

ICT infrastructure and Networks are the backbone to implement e-governance. Nepal Telecom Company (NTC), the state-owned telecom operator, has been the major builder and operator of the national telecom network. NTC along with other private companies provide telecommunication services in the country. They provide the services of land line phone, GSM mobile, C-phone, sky phone, sky data, internet, V-SAT and ADSL. As compared to other sectors, the telecommunication facilities have been enhanced considerably in recent

years. Table 1 provides the telecom service penetration as per the report of Nepal Telecom Authority (MIS Report, 2011).

Table 1: Telecom service penetration (Source: MIS Report, 2011)

Services	Penetration
Fixed	2.97
Mobile	22.86
Others (Limited Mobility, GMPCS etc)	0.87
Internet subscribers	2.55

Note: Projected total population for 2011 is 2.9 million

he growth of telecom facilities in Nepal is satisfactory but still the rate of use of internet is low. In the meantime, more than 35 internet service providers are providing services and total international internet bandwidth used is in the ratio of 1: 2.25 with 58 Mbps and 122 Mbps for uplink and downlink. More than 8% rural village development committees have lack of telephone facility. Majority of telecom facilities are centered in urban areas of the country. The Nepal government has introduced a number of policies relating to Telecommunications. The following policies have been formulated by the government that is relevant for the telecommunications sector.

▪ Communications Policy (1992)

▪ Telecommunications Policy (1999)

▪ Long Term Vision of Communications Sector (2002)

▪ Telecommunications Policy (2004)

The communications Policy of 1992 have liberalized telecommunications sector. It opened the door for private sectors in the telecommunications sector. Telecommunications Act was formulated in 1997 in line with the liberalization policy of 1992 establishing an independent telecom regulator (Kathayat, 2011). Some of the important organizations created towards ICT sector are among Ministry of Science and Technology, High Level Commission for Information Technology, and Nepal Telecom Authority. Besides these governmental institutions, a number of private organizations provide telecom services including telephone and internet services.

Government institutions are developing ICT applications separately and some of them have operated the applications for administration and public services. The following are some examples of government agencies with applications:

▪ Online registration of permanent account number by Inland Revenue Department.

▪ Personal record system by Election Commission of Nepal

▪ Datacenter by Supreme Court of Nepal

▪ Online Gate pass System by National Information Technology Center

▪ Online tender system by Department of Road

▪ Computerize citizenship in some district like Kavre, Nepal.

▪ Website, e-mail and internal memo management system in Ministry of Local Development

The major e-governance projects and implementing organizations in Nepal is presented in Table 2.

The public, private and the nonprofit organizations have been in the process of introducing ICTs for their performance in Nepal. The e-policy focuses on using e-government usually for the delivery of programs and services and the usage of information infrastructures for improved internal administrative procedures. In order to enhance the e-governance initiatives many legal instruments have been introduced and necessary institutional mechanism has been created. However occurrence of digital divide both at individual and institutional level is common in Nepal. Digital divide is one of the most focused issues in Nepal. Technological discrimination in society tends to lack the objective of e-government itself. But still e-government can indirectly improve services to citizens with no Internet access through back-office improvements.

Table 2. Project components and execution responsibilities

Project components	Responsible organization
1. Rural e-connectivity • Wireless broadband network • Village network • Telecenters	- Ministry of Information and Communication
2. Government network • Government information and data center • Government groupware	- Ministry of Science and Technology
3. E-government application • Enterprise Architecture • NID/Citizen • e-Gov. in Public Service Commission • Land Records Management • Vehicle Registration Driving License • Online registration, online tender • Personal record system and data centre • Digital citizenship • Website and e-mail management	- High Level Commission for IT - Ministry of Home Affairs - Public Service Commission - Ministry of Land Reform Management - Ministry of Land Reform Management
4. Human resource development	- Ministry of General Administration

5 Case Findings and Discussion

5.1 Implementation of e-governance in Nepal

E-governance has become a popular focal point of government efforts in many developed countries. Table 3 shows different challenging factors found in implementation of e-governance in Nepal. Nepal is one such least developed country that has engaged on an e-governance initiative with a number of challenges. It is arguable that e-governance has the capacity to reduce administrative and development issues but additional effort is necessary when implementing e-governance in developing or underdeveloped countries like Nepal (Dhami & Futo, 2010). In this connection, e-governance helps to increase efficiency and transparency in government transactions, and facilitates democratic interaction between the government and its people.

Table 3. Factors identified influencing implementation of e-governance in Nepal

Factors	Challenges of e-governance implementation
1. Technical factor	Energy supply, digital divide, e-readiness, privacy and security
2. Education and public participation	Internet bandwidth and infrastructure, low ICT literacy and education
3. Political factor	Regulation and legislation, political instability, government priority, frequent change of ministers and high level officials
4. Cultural factor	Employee resistance to change, corruption
5. Human resource factor	Inadequate human resource, lack of government awareness
6. Training on human resources	Public sector awareness, lack of training, limited information sharing and transparency
7. Financial factors	Investment issues, sustainability

 The initial step in implementing e-governance in Nepal is recognizing how the e- governance program's objectives and challenges relate with the vision and strategies developed by the government. This includes business process re-engineering (BPR), which involves legislation, training, coordination, policy, as well as finance and strategy. The Nepalese BPR strategy should involve e-governance, under which high-level political leadership will be characterized by support rather than administration. The grassroots leadership will remain, serving as local representatives. The point of influence, however, will be focused on recognition and incentives rather than a gain or loss equation. Human resource development (HRD) is another major factor in the implementation of e-governance. It is as important as the technology to be used. Without a sufficient amount of human resources and technological preparation, no amount of development and expenditure will carry Nepal forward into the information age.

There are some important issues related to HRD. The first issue is connected to planning of HRD. A way to develop a practical and strategic implementation plan for ICT HRD should be identified. The second issue is regarding qualified training institutions developing human resources for e-governance. The training institutions' competence building should be given priority. The third issue is connected with an immediate and effective strategy for e-government training, so that trained manpower do not move to another country. The fourth is the availability of ICT skills in Nepal. A focus on a sustainable authorization framework is needed for trained professional. And finally, it needs to determine how to equalize the difference in ICT skill levels among different institutions.

Nepal is still at an initial stage of e-governance development and implementation. In the meantime, the country has achieved some progress in ICT sector but it is not sufficient to implement e-governance throughout the nation. The popularity of ICT and e-governance has been increasing. The government is dedicated and committed to promote e-government. There are a number of challenges as well as opportunities. For the effective implementations of e-governance it is mandatory to improve basic foundations such as literacy rate, ICT infrastructure, awareness, funding, and commitment. In addition, the cooperation from government officials and leadership commitment is important.

> *"In my opinion this is a serious case as Nepal's economy is growing slowly. We can introduce new ICTs into our industry to improve efficiency, quality and productivity. As for the ICT industry, it is fast growing and challenging to us. We are not taking full advantage from the government. We can build up ICT infrastructure if we have good government policies, infrastructure, qualified manpower and other requirements."* (Interviewee 1)

E-government master plan is a long term vision and strategy to implement e- governance in Nepal. E-Government master plan should evaluate and discover current status and destination. The pilot projects undertaken should be carefully evaluated. The causes of failure should be investigated and documented. As per this evaluation, new vision and strategies should be developed and implemented.

> *"Previous government system as well as monarchy had lack of response and efficiency in e-government services. E-government establishes the public structure and encounters violent conflicts of power and interest. The main challenge of e-government is to provide cooperation between its departments for an effective networking system with transparent functioning. The government should encourage people to participate in its activities and corruption should be fully eliminated"* (Interviewee 2).

The most crucial component when encountering the challenges of e-governance implementation is to develop a realistic strategy in terms of the scope and size of the programs. Leadership is very important factor that provides the vision and drives the nation. Thus it is essential to increase the awareness among the leaders about the importance of e-governance. Leaders should be committed and furnish high priority to e-governance system. Appropriate persons should be appointed at the right place which will develop the commitment to the implementation of e-governance.

> *"High security is needed in e-government service delivery. Some government departments do not cooperate on this. They have lack of qualified IT experts and people have lack of awareness on e-government services. We know that our country has deficit of energy so high rate of load shedding"* (Interviewee 3).

> *"Government should implement IT policy and e-government ethics strictly. Now the second phase of constituent assembly election is approaching, government should encourage people to actively participate in its activities. The e-voting system should be expanded and improved"* (Interviewee 4).

Nepal has lack of good electricity supply, telecommunication and internet access throughout the country. Hence long term investment should be made on building ICT infrastructure. Though, Nepal is a country of difficult landscape, the more focus has to be given to develop wireless networks in the country. The government integrated data center has to be implemented immediately to its optimum level. Internet penetration should be improved. The quality and capacity of ICT connectivity needs to be improved. Government should take immediate steps to the direction of developing local area networks in all government offices and then inter-connected with other offices through wide area networks.

> *"When we publicize government policy, the second level departments won't respond as quickly as before, or sometimes there is no response; and we lack means to handle this situation because it's hard to control them. Coordination is required between the government agencies. Government has to expand its e-services to rural areas also. Nepal has difficult terrain, lack of infrastructure and electricity. These issues should be cleared focused"* (Interviewee 5).

> *"…the people living far from the cities have lack of IT awareness. Majority of them are illiterate. Top leadership enjoys consolidating their power and enlarging their direct control. Some political leaders visit rural areas during election campaign. Some of them do not have well knowledge on e-government concepts"* (Interviewee 6).

People must be aware about the e-governance system, its benefits and mechanism of its operation. People of different fields are involved to participate in e-governance system, thus frequent public awareness programs has to be organized. Nepal has low literacy rate and technological culture; frequent training programs will be much effective in a short period of time. Likewise regular awareness programs will assist to convince people and ensure the privacy and reliability of the system. Each Ministry should develop IT department to monitor and track the progress of the e-governance projects. In Nepal, large numbers of tele-centers are operated in rural areas. Therefore, effective monitoring of tele-center is highly needed to reach the targeted objectives. It is an effective way of providing ICT and e-governance facilities in rural areas to the people of under-privileged society.

> *"…it is a great reform, e-government enhances the capability of government departments. With more autonomous policy, we can set down and carry out e-governance plan, as well as implementation of upper level policy. As you know that the newly established government department, High Level Commission of Information Technology is more responsible for adopting e- governance services"* (Interviewee 7).

Majority of the e-governance projects in least developing countries fail to continue for a long period of time. The influencing components are financial factor, technological factor, political factor and social and environmental factor. So it is crucial to develop long term e-government projects. Government funding after stopping the external funds, consistent evaluation and monitoring of e-governance projects, involvement of all stakeholders, public leadership commitment are the key processes to develop sustainable e-governance models.

> *"…it seems really challenging to adopt ICT policies, cyber law and e-government ethics. How can we think that people living in Himalayan region knows about computer and IT?The government is city focused, let's say people of Jumla and Dolpa do not know about computers. As you know that the road transportation has recently reached there, but people have high illiteracy rate."* (Interviewee 8).

> *"Although local ICTs infrastructure and e-government develop rapidly, the application is insufficient. A number of civil servants still prefer working in the real world than utilising e-government facilities. They usually use computers for word processing and exchange internal information online, but so far they continue to print paper files. Less than a half of departments have timely online interactions with customers and more than one third of government websites have no regular updates (Interviewee 9).*

Nepal e-government allowed for considerable progress in improving government capabilities, providing better public service, introducing democracy, and leading wide-ranging social development. People actively dealt

with structures with the aid of ICTs and facilitated a series of social changes to sustain the new institutional properties brought by e-government. These are the successful factors of Nepal case.

> *"Middle-level officials show different views and attitudes towards e-government. Few of them either fully support or fully resist the e-government project. They generally agree to apply ICT to improve the efficiency of daily schedule and support the view of providing better public service through innovation (Interviewee 10)"*

Nepal government perceives the potential of ICT as a driving force for economic growth, so that when e-government came into existence, such as public administrative reform and industry restructuring were conducted through this ICT application. E-government is being maintained through human actions, including top leadership's commitment, middle-level official's coordination, operational staff's learning and working, and public recognition and support. In this case, the top leadership serves as both decision-makers and designers. They launched the e-government project, introduced the advantages brought by ICT, mobilized civil servants to accept and actively involve into e-government application, in which way they built into ICT certain interpretive schemes. Moreover, they exerted their power and allocated funding and other resources to push the project ahead and created relevant policies and regulations.

Although e-government in Nepal lags far behind developed countries, this should be considered more as a lack of capacity of the nation. In general, the different administrative contexts and rationalities must be considered when implementing e-government projects and strategies. Therefore, especially for Asian countries, including Nepal, a context-oriented approach seems to be a more promising method to the successful implementation of e-government.

6   Theoretical and Practical Contributions

This study has theoretical as well as practical contributions in e-government field. The government of Nepal observes e-governance in terms of its potential for bringing about a major standard shift in the way public administration functions and good governance. E-governance has been considered to break the barrier of geographical variances by implementing ICTs ensuring its effective and efficient transformation. Different sectors such as education, health, agriculture, tourism and trade have been using IT in Nepal. The number of telephone as well as internet users has been increasing considerably and legal and necessary infrastructures are introduced. Still challenges exist with regards to make full fledged e-governance due to various reasons. Besides providing service to public, it's important to empower and motivate government employees to expect better service from them. On the other hand, skills to use computer and online facilities on the employees and the service receivers are disgustingly lacking. Thus, e-governance should transform the government workers into empowered knowledge workers. Moreover, there is still remarkable lack of awareness and knowledge on e-governance related issues among policy and decision makers.

Policy network theory which was applied in this study was tested and found useful to describe and explain e-governance policy-making processes in Nepal. The theory is helpful in exposing the idea that government decision making in Nepal takes place from the top-down. The theoretical notions developed around policy networks proved fruitful when applied to the fragmentation, interdependencies, stalemates and breakthroughs in e-government decision-making processes. Based on this case study, we tend to argue that this theory is useful to describe and explain e-governance policy-making processes in the Nepalese context. However, limitations in the generic model appear in capturing the fundamentally different political and administrative systems, remarkably different cultural values in the applicability of some research methods common in developed countries (Zheng, Jong & Koppenjan, 2010). It should be addressed which political and cultural aspects turn out to be different in Nepal and how they affect methodological and practical problems Nepalese researchers will encounter when studying decision-making processes. Policy network theory is useful for understanding the e- government policy process in Nepal. It is helpful in exposing the idea that government decision making in Nepal takes place from the top-down. The theoretical notions developed around policy networks proved fruitful when applied to the fragmentation, interdependencies, stalemates and breakthroughs in e-government decision-making processes in Nepal.

Ethical standards and policies facilitate to establish direction and technical requirements. This will govern the achievement, implication and management of IT resources for the IT initiatives undertaken by the government agencies. In general, policies provide direction and guidelines to successfully implement, maintain and preside

over e-governance. The success of the initiative depends on the enforcement of these policies along with the ethical standards. Besides the theoretical and practical contributions, this paper also provides academic significance. Firstly, e-government is far more complicated than bringing ICT into the public sector. It is part of a complex social system, which includes various social elements such as political, economic, cultural, organizational change and people. Secondly, this study deals with people.

7   Conclusions

We explored whether policy network theory can be applied in Nepal. A literature review was carried out of how this approach has already been dealt with in the Nepalese policy sciences. The key concepts and research approach were presented in policy networks theory and try these on a Nepalese case to observe the fit. Based on this case study, we argue that this theory is useful to describe and explain policy-making processes in the Nepalese context. However, limitations in the generic model appear in capturing the fundamentally different political and administrative systems, crucially different cultural values in the applicability of some research methods common in developed countries.

The ethical implementation of e-government is a challenging issue in least developed countries including Nepal. Nepal lacks adequate ICT infrastructures, high speed and cost effective connectivity, literacy rate, awareness, commitment and financial system. As such, the factors influencing effective growth of e-government are government process, leadership, clear roadmap and qualified human resource. Moreover, process reengineering, information infrastructure and e-governance architecture are emerging issues for e-governance and these should be focused for Nepal's e-government development. The success of e-governance depends on attitudes, knowledge and skills especially within the public sector that are required to initiate, implement and sustain e-governance initiatives. The Nepal government has taken ICT as a strategic factor as it is an effective means to alleviate poverty. The main challenge to implement e-governance in overall is to coordinate political will, financial resources and technical competency to transform policy into action. As a result, it helps to influence the general publics' perception of the trustworthiness and effectiveness in terms of service delivery and recognition of good governance in the country. Ethics and policies should apply to all the initiatives of the government authorities. The government organizations of Nepal should refer to these standards and policies when planning or making changes to e-governance landscape. Ethical standards and policies will have to be regularly reviewed to keep them up to date with the latest technology developments. Further study is recommended to perform based on empirical data to investigate whether the e-government in developing countries offers the public with more tools to participate in the global economy.

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