E-Government Development in Developing Countries: Emerging challenges, ICT policy and Legal Issues in Nepal

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Abstract:

Within very short span of time, developing countries are showing their pace in the development of the e-Government which has changed the peoples' day to day life style though they have been lagging behind in e-government use as compared to developed countries. E-government development in developing countries have the potential to build better relationships between government and the public by making interaction with citizens smoother, easier and more efficient. Nepal is facing numerous emerging challenges while e-government development and government activities as well as service delivery. The aim of this paper is trying to explore the e-government development in developing countries and to analyses the emerging challenges of e-government, ICT policy and legal issues in Nepal. The content analysis method is used during research. This paper concludes that Nepal is facing numerous challenges whole implementing e-government like poor ICT infrastructure development, law and public policy, insufficient human resources development and management, digital divide and e-literacy. Some other challenges are political issues, inadequate human resources, lack of a legal framework, low per capita income, little public awareness about ICT and new technology. For authentication and regularization of the recognition, validity, integrity, and reliability; it is essential to make legal provisions. Nepal requires a bold set of institutional reforms aimed at achieving better governance while enforcing the rule of law. The reason of success and failure of e-government is the lack of comprehensive regulatory framework and good coordination between regulation implementing agencies of government. Citizens play a major role to make government success or failure. There are not sufficient act and policy in ICT sector so different sector wise law, policy and plan should formulate in time for regulating the e-government activities in the nation.

INTRODUCTION

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 [1]. 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 and receive services from the central, province or local

governments [49],[50] The e-Government provides electronic services to all sectors of government agencies with the help of development of new technologies [47] and it is considered as an implication of ICT in order to improve public services and strengthen support to public policies. In general, developing countries have been lagging behind in e-government use as compared to developed countries even though they have been facing various challenges [59]. It can be adopted successfully if it is regulated by a legal framework and with ethical manner [21] and the implementation of e-government is increased in the number of nations but the rate of adoption varies from country to country.

Electronic government or e-government provides the convenience and availability of government services and information to the public and to build better relationships between government and the civic by making interaction with citizens smoother, easier and more efficient [50]. It simplifies the execution of information, communication, and government services; and processes between governmental institutions, business houses and private organizations as well [2]. It is considered the primary tool to facilitate the access of the citizens to various services [36]. The rapid advancement in new technologies like ICTs has undoubtedly influenced positive changes in carrying out administrative functions in government institutions [3]. In order to meet the global challenges in administrative management, the use of ICTs for service delivery cannot be abandoned [4]. Which is shifting human daily life style. The continuous change in technology and its impact on commerce and societies have shown the importance of information management system. Many institutions are considered as successful in daily administration and to simplify the service delivery which learned how to use the new technologies and their functions [34].

Due to globalization, economic liberalization, neo application of IT and the emerging aspiration of the service holder challenges are created in e-government implementation [43]. For effective implementation of e-government service in developing countries, it is necessary to consider the issue of humanizing and enhancing citizen trust in the e-Government system [37]. Restructuring of Nepal into a federal state has posed more challenges to the government for implementing policies, plan and to deliver efficient services to the general public using new technology. There is a need of huge leap-frog to make it ultramodern technology-based service provider as smart as of the developed countries, which is the major aspiration of the Nepalese people [17].

According to Giri and Shrestha [18] vision of 'digital Nepal' and 'paperless government' should be our roadmap for the improvement of the public sector and e-governance should be our national priority sectors. They further stated that the e-government master plan should be revised to make it more holistic and implemented honestly in time. For its full implementation not only government sector, but also the private sector and society as a whole should be prepared. In spite of some progress in infrastructural development in ICT, development of e-government in Nepal has been in an initial stage. Lack of optimal leadership flourished with an unstable government, motivation, and commitment of staff, technological and geographical digital divide, ICT infrastructure, and financial insufficiency are some of the issues under discussion that are hindering (fostering) e-governance implementation in Nepal [19].

E-government development in developing countries like Nepal is still facing difficulties and challenges during service delivery [11]. This paper is focuses on development of e-government in developing countries, e-government development in Nepal, emerging challenges of e-government, success and failure stories of e-government system and IT Policy and Legal issues

in Nepal. The content analysis method is used for complete the study. Books, journals, Ph.D. thesis, government survey reports, news-letters are used as the reference materials.

II. LITERATURE REVIEW

2. E-Government:

The United States (US) was the first country in the globe which implemented the concept of e-government by making the first tentative steps in the early 1990s to change the entire system of public administration throughout the use of new technologies. It's noted that US has taken first initiatives to develop the national strategy in applying information technologies in public administration and academia to start discussion in the early 1970s. In this context the concept to regulate the use of information technologies in various spheres of public administration was offered only twenty years later when in February 1993 in San Jose (California). The regards goes to President Bill Clinton and Vice President Albert Gore for encouraging the use of new information technologies at all levels of the federal government and national [30].

For the developing countries in Asia and the Pacific, e-governance is increasingly being emphasized as a way for governments to strengthen good governance. If implemented strategically e-governance can not only improve efficiency of government processes, but it can also be a tool to empower citizens by enabling them to participate in the decision making processes at policy level of government's bodies [5]. The government as a service provider and manager of e-Government system must be ensured trust so that service recipients will be motivated to use e-Government service confidently [15]. He again said that public trust is foundation of relationship between service provider and service recipients. So, public trust is one of the critical factors of successes through the system adoption. The need for building trust between the government and other stake-holders of e-government is considered a fundamental principle in designing and developing effective e-government system [37].

According to Kumar & Best [33], e-government may improve its services; the success and failure, therefore, depend on the size of the gap that exists between current realities and design of the e-government project [23],; and [15] it facilitates interconnection between the government and its agencies (G2G), government and citizen (G2C) and government and business (G2B). E-government is imperative to maintain a trustful relationship between the government and its constituencies [14]. The development of the internet and continuous improvement of the management information systems, has introduced a new perspective to the public relationship [41]. The e-Government concept is now commonly acknowledged for adoption of public service enhancement [55] and current banking sector and e-commerce areas are depending on the electronic environment for their operation of many years [7]; the internet usage has been increasing electronic environment hence, these factors caused the creation of electronic operations and services in the public institutions [12].

2.1. Development of e-government in developing countries

ICT has become part of day-to-day life in developed countries. It has the potential to become a backbone of development in countries like Nepal. ICT is one of the fundamental building blocks of modern societies and digital economies. While ICT might be luxury for a rich country, for a country like Nepal, ICT is a crucial weapon to fight against poverty and thus it ensures our survival. Instead of making only verbal commitments at workshops and seminars, politicians

should make commitments on ICT implementation truly in practice to enhance the socio-economic condition of citizens across the nation [46]. In compared to developed countries, developing countries are lagging behind in e-government adoption and development [13]. 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 [19].

Developing countries are also showing their pace in the development of the ICT sector and are showing promising results in terms of overall development [26]. The overall development of any country is a result of ICT. It would remain far behind in any sort of development because now all form of development is related to ICT if a country fails to pace up its ICT development along with the world [44]. Most of the developing countries have lacking e-government capacity since they have differences with respect to geographical adversity, infrastructure availability throughout their territory, socio-economic standard and technology application managerial capacity [16]. The success and failure factors of the e-government project in developing countries are uniquely different from those in developed countries [53].

The Asia Foundation [56] states that, in Asia, there is growing recognition that e-governments have the ability to improve government transparency by increasing accountability and reducing opportunities for 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 [24]. An implementing e-governance in Nepal is identifying how the program's objectives and challenges relate to the vision and a strategy developed by the government [51]. A common argument in most literature dealing with e-government in developing countries is the focus on transparency and fighting with corruption. If applied effectively in developing countries strategy can advance e-government productivity in the public sector. It's possible to implement e-government only from the government side but needs public support and trust in government service delivery [17].

2.2. E-Government Development in Nepal

E-governance, as an effective means of governance in Nepal, was already conceptualized with the implementation of the first IT Policy in the year 2000 [54]. In order to understand e-governance, there needs to understand it conceptually [48]. The use of ICT and its application by the government for the provision of information and public services to the people need to be the precise and globally accepted definition of e-government, which highlights both the means and objectives of the e-government concept [20]. The processing of the country's data started with the establishment of the National Computer Center (NCC) in1974. The involvement of the private sector in the area of software development started during the 1980's. The concept of outsourcing was already implemented during 1982's. In the early 90's, a large number of IT companies emerged in the capital city, Kathmandu. E-governance in terms of its capability for bringing about a major standard shift in the way public administration functions. A possible means of good governance observes by the Government of Nepal [51],[63].

E-service such as e-procurement, e-banking, e-commerce or an online trader exchange, are among the services included in G2G and G2B services. This permits transparency in bidding, banking, and purchase process and gives the prospect to other smaller businesses, this enables easy procurements and purchase of commodities online. Top priority sector of e-government implementation is mentioned as e-agriculture, e-education, e-health, e-tourism, e-roads, e-vital

registration, e-Sewa, e-administration, and others [57]. The government of Nepal proposed milestones for e-government as establishing an integrated data center, starting a Database ICT development project, making IT policy 2010, establishing an ICT center in Institute of Engineering, Pulchowk Campus, Tribhuvan University by signing a MoU between Ministry of Finance, Nepal and Republic of Korea [61]. Tele-center and others private ICT centers are the very necessary medium of e-government system to provide services and information exchange from top to down. ICT center's network around the country, carries out ICT education, awareness, and health programs in rural areas for the development [6].

ICT plays a vital role in daily life of individuals, institutes, offices, and government so as to achieve their goal with minimal inputs like money, human resources, etc. [40]. This statement intends to clarify ICT which is the unavoidable tool of e-government. One of the greatest impacts on e-governments' development is trends and challenges [38].

With the help of telecommunication and internet, the Government of Nepal is outspreading its services to communicate with poor people, rural and mountain regions [17]. Transformation within the three major authorities of government may be expected, namely: political, economic, and administrative [57]. Nepal is in the internalizing process of e-government concept with its second version of E-government Master Plan [10], with the vision of using ICT for good governance. The general goals for e-GMPII to transform street-level bureaucracy to screen level bureaucracy are to:

1. Increase the efficiency of government bodies through the use of ICT.

2. Provide an easy and appropriate mechanism of sharing information between government bodies and reduce duplication of information.

3. Promote local ICT industries.

2.3. Emerging challenges of e-government in Nepal

E-government challenges include infrastructure development, law and public policy, digital divide and e-literacy [25]. Nepal's government is facing numerous challenges in introducing and implementing e-governance. These include political issues, inadequate human resources, lack of a legal framework, little public awareness about ICT and poor ICT infrastructure across the nation, low literacy, low per capita income, lack of leadership and leadership's commitment and insufficient financial resources are the major constraints and the challenges of e-government implementation in Nepal [51],[31]. There remains a challenge [35] to achieve both qualitative and quantitative growth in motion picture and telecommunication sectors. Similarly, the task of developing infrastructure to expand optical fiber network to all local levels and extend the use of IT to schools, health sector and government offices for national development is another challenge.

Tasks of extending national transmission of Nepal Television and satellite transmission of NTV Plus amid country's diverse geographical structure and also transmit nationally while competing with the private sector operated television channels have added to the challenges. The task of digital switches over from analog system of production, editing, and transmission of television programs by 2017 through its own internal resources is a daunting challenge. Gorakhapatra, Nepal Television and Radio Nepal that stand as national communication media need to compete

with the private sector run communications media while broadcasting and publishing news and other programs in various languages with a sense of national responsibility is a daunting task [35]. Developing countries generally lag behind in a modern education system that can build robust human capital. Insufficient knowledge can lead to misuse of the electronic processes hindering the political benefits of ICT use [15].

2.4. Legal Issues

2.4.1 Review of existing policies
Policies are used to set a standard for performance. Through policy, an organization can develop clear expectations for employees and administrators. It provides a framework for consistent actions. First and foremost, proper policies protect the institution from non-compliance with the law. Clear organizational guidelines allow organizational leaders to avoid overlooking any legal imperatives which might otherwise go unnoticed. The IT policy shall be formulated to make IT accessible to the general public and increase employment through this means, build a knowledge-based society and establish knowledge-based industries [42].

2.4.2. Development of IT policy and creation of legal instruments
For authentication and regularization of the recognition, validity, integrity, and reliability; it is essential to make legal provisions [42]. Nepal requires a bold set of institutional reforms aimed at achieving better governance while enforcing the rule of law [39]. There are several legal instruments created to develop IT sector for augmenting e-governance as IT Policy 2000, IT Policy 2004, Electronic Transaction Act 2004, Telecommunication Policy 2004, E-governance Master Plan, IT commitments in different plan periods, Electoral Transaction and Digital Signature Act 2000, Copyright Act 2000, Telecommunication Act and Regulation 1997, National Communication Policy 1992 and National Strategy Paper on ICT [32]. Policies on information and communication in Nepal date to the Radio Act of 2014 (1957), which established the need for radio transmitter licenses and designated the central government as the issuing authority. The IT policy was revised in 2010. After a demand for the revised policy featuring the ICT as a whole, the Government of Nepal devised the IT Policy 2015 again [58]. The need for a well-defined and consistent policy and regulatory framework for addressing converged regime of telecommunications, broadcasting, and ICT. These policies as a whole regulate all the activities regarding the ICT in Nepal [19]

IT policy is a significant and important step in the right direction towards the developing the ICT sector and represent the society as knowledge-based. But, however, several challenges have beset Nepal's efforts aimed at building upon the initial momentum that it gained in the ICT domain [42]. IT Policy was first promulgated in 2000 with the vision to place Nepal on the global map of ICT within the next five years period. The policy had the following objectives:

   a.   To make IT accessible to the general public and increase employment through this means

   b.   To build a knowledge-based society.

   c.   To establish knowledge-based industries.

In 2004, new IT policy was announced with the vision to transform Nepal into a knowledge-based society by 2015 to become fully capable of harnessing ICTs gives new envisage for the application of ICT to achieve the goals for good governance, poverty reduction, and social as

well as economic development [27]. This document is a legal basis to promote good governance and sustainable development through the application of ICT. The latest IT Policy of 2010 has special provisions for outsourcing and expanding the use of IT [64]. The policy has put emphasis on information security and data protection and privacy in IT. The new policy has identified the IT sector as a knowledge-based industry and it includes the involvement of youth in employment generation as one of the major objectives. The policy suggests adopting a single window policy to attract domestic and foreign direct investment in the IT sector. The other provisions included in the policy are intellectual property rights and e- certification [28].

2.5. Success and failure stories of e-government system

The implementation of e-governance has not been largely successful in the country like Nepal. The causes of failing to effective implementation of e-governance are digital divide, rude administration process and other hurdles [54]. It is obligatory to make public service delivery more effective, competitive and qualitative and service holder friendly to make government is image clean and impartial. With it, the performance of the government would be fair and result oriented [52]. He further said that success and failure of e-government depend not only on bureaucrats of the country but also depends on technocrats. If the government succeeds to take advantage of the knowledge and skill of the retired civil servants, it will be a great achievement for the country [29]. Standardization is another key point for the execution and services of e-Government [9]. Different sources indicate that strong political leadership is one of the important factors for e-government success [56]. Using only one system for institutions will reduce the costs and also enable the standardization process. The most important criteria to success in electronic state system are to enable participation of all stakeholders by a citizen focused approach. While some developing countries have taken initiation to transform the government into the digital form they often fail to meet their expectations in improving their governance system achieving expected outcomes [22]. The reason of success and failure of e-government is the lack of comprehensive regulatory framework and good coordination between regulation implementing agencies of government [19].

According to Heeks [22], e-government in the developing countries fails with 35% being classified as total failures with 50% partial failures. Different economic, social and political circumstance may have a determining effect on the realization of e-government objectives [45]. Apart from failure cases, there are several reasons for the slower adoption of ICT by public sector institution in developing countries. The government has a responsibility to provide leadership in developing a culture of privacy protection and security [15]. The indicators of the result-oriented performance evaluation system should be applied at all ministries to make civil service more result oriented, effective and responsible, through the performance contract system [8]. He further said that e-government implementation is not a joke and without making citizens satisfied through government activities and efficient and effective service delivery. It is clear that the citizens play a major role to make government success or failure. It is necessary for trust on the e-government and technology but data security is major concern in present day [62].

CONCLUSION:

Nepal is facing numerous challenges whole implementing e-government like poor ICT infrastructure development, law and public policy, insufficient human resources development and management, digital divide and e-literacy. Some other challenges are political issues, inadequate human resources, lack of a legal framework, low per capita income, little public awareness about ICT and the nation. Nepal has still many problems in case of using ICT in government and other sectors. For authentication and regularization of the recognition, validity, integrity, and reliability; it is essential to make legal provisions. Nepal requires a bold set of institutional reforms aimed at achieving better governance while enforcing the rule of law. There are several legal instruments created to develop IT sector for augmenting e-governance as IT Policy 2000, IT Policy 2004, Electronic Transaction Act 2004, Telecommunication Policy 2004, E-governance Master Plan, IT commitments in different plan periods, Electoral Transaction and Digital Signature Act 2000, Copyright Act 2000, Telecommunication Act and Regulation 1997 and National Communication Policy 1992. The reason of success and failure of e-government is the lack of comprehensive regulatory framework and good coordination between regulation implementing agencies of government. Citizens play a major role to make government success or failure. There are not sufficient act and policy in ICT sector so different sector wise law, policy and plan should formulate in time for regulating the e-government activities in the nation.

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