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Where Are E-governments in South Asian Countries? A Comparative Approach

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Abstract

The four countries are selected and compared based on their use of e-government as a tool to work and share information more effectively while delivering better services to the public. It also provides a general understanding of e-government and uses different variables to discuss the reality of e-government development and e-participation over the last few years in these four countries. In view of this, the time series data are collected from the United Nations e-government survey to highlight developing trends in e-government along with issues and challenges, best practices, and opportunities for the development of e-government. As a result, this study finds that real e-government remains a distant hope in these countries due to the expense of supplying technology, a lack of infrastructure, limited human capital and a weak private sector.

Keywords: E-government, E-government Development, E-government Readiness

Introduction

E-government can generate development for the people. Public services delivered through e-government are designed to be responsive, socially inclusive and centered on citizens. E-government refers to the use or application of information and communication technologies (ICTs) in public administration to integrate workflows and processes, improve and enhance delivery of public services, manage data and information n more effective ways, as well as expand communication channels for engaging with and empowering the people. Governments are also able to involve citizens through delivering services via more participatory processes. Recent e-government progress in a growing number of countries where citizens both use and co-produce public services provide evidence for participatory service provision. Through e-government, nations around the world can be more efficient, providing better services and responding to demands for transparency and accountability. E-government itself has become an important and powerful tool, both nationally and locally, for addressing development issues and as a force for effective participation and governance. It can also help

governments promote effective management of natural resources while stimulating economic growth and promoting social inclusion (United Nations, 2014).

E-government is transformational. It is altering the ways business, government, and the public at large interact with each other. Through ICT use and government applications, the means of providing services and information to the public have changed dramatically. The way government interacts with multiple stakeholders, including employees, businesses, and other government agencies has also been accelerated (Rhoda, 2013). ICT is introduced primarily to improve government transparency, efficiency, and effectiveness. E-government is becoming a very important application for the use of ICT and carries the potential to remake citizen relationships with government by simplifying the ways in which they can communicate and transact with government. Specifically, it is argued that the impact of ICT has improved the performance of government and private sector organizations, particularly in developing countries (Khan, 2013). The benefits of ICT adoption are numerous and widespread.

In this regard, it can be assumed that the governments of developing countries make efforts towards adapting ICT in their governance system and increase their ability to remake relationships with citizens, businesses, and other levels of government and the public sector. This study tries to compare the government's use of ICT in India, Pakistan, and Bangladesh with Korea, as a successful example. This comparison is based on e-government efforts to deliver better services to the public by sharing information and working more efficiently. In particular, this study compares the ability of governments, their desire for e-government, and the involvement of the public in e-participation. It provides a general understanding of e-government and uses different variables to discuss the reality of e-government development and e-participation over the last couple of years in these four countries. From this comparative approach, this study tries to answer the question of which functions are important for developing e-government in these countries. In view of this, time series data are collected from the United Nations e-government survey to highlight trends, practices, issues and challenges in the use of e-government as well as opportunities for its development and expansion.

Literature Review

What is E-government?

E-government represents the infrastructure or electronic platform that makes possible and supports networking the development of public policy. E-government is the use of ICTs in the process of governance and has been one of the most widely studied mediating technologies, systems, phenomena (Jean and Juri, 2000; Layne and Lee, 2001; Silcock, 2001; Khan et al., 2011; Zheng et al., 2013). E-government has actually become a discipline dealing with the use of ICT and the development of applications for online services for citizens to access particular

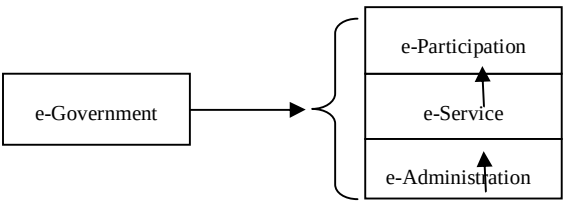
government services such as e-tax, e-health or e-transportation. E-government provides public services, while e-governance facilitates appropriate behavior.

E-government can enhance effectiveness and efficiency in the public sector and contributes to generating a knowledge-based society. It is the use of ICT to make possible more effective, efficient, and participatory government that lays the basis for more convenient government services to allow greater public access, while making government more accountable to citizens. In most developing countries, e-government can play a lively role in national socio-economic development by reducing corruption and strengthening participatory government. It may provide a good solution allowing government to facilitate a rapid, efficient and clean process for performing public administration and delivering services to citizens and other agencies (Chowdhury & Satter, 2013). As Coleman (1999) indicated, interactive discourse that is possible with networked computing is often described as inherently democratic. This has led to an often less-than-critical approach to the analysis of internet impacts, and perhaps more significantly to aflurry of pilot e-government implementations. Moreover, the contribution of ICT to administration leads to the belief that e-government possesses the potential to realize democracy through more direct forms of participation while making administration more citizen- and service-oriented, accountable and transparent (Jho, 2005). E-government is also attempting to extend e-democracy. Riley (2001) defined it as the "commitment to utilize appropriate technologies to enhance governmental relationships, both internal and external, in order to advance democratic expression, human dignity and autonomy, support economic development and encourage the fair and efficient delivery of services."

E-government is a most attractive, interesting and growing phenomenon and has become a central part of administrative reform and good governance (Moon, 2002). Backus (2001) stated that e-government must be more than just a government presence on the internet such as a web site. It is a form of governance that involves e-business. It is the process and structures needed to deliver services to the public electronically, collaborate with business partners and conduct e-transactions within an organization. It is also covers contacts and connections between citizens and their government, between business and government, on top of internal government operations that simplify and improve democratic interactions, and state and business aspects of governance (Hossain, 2005).

However, in order to make those external government operations possible, e-administration is an essential part of e-government that handles internal administration within the government instead of external users such as citizens and businesses. The European Commission (2007) defines e-administration as an application using ICT to support back office administrative tasks. Sanchez (2006) stated that e-administration is the use of communication technology to support information flow either in or outside the public authority. Heeks (1999) put forward and described e-Administration as covering government to government relations to improve administrative processes in hierarchical organizations.

Figure 1. Components of E-government



Baum and DiMaio (2000) mentioned that e-government would be ongoing optimization of services, participation and e-governance through the transformation of internal and external relationships through the use of ICT. E-government denotes the strategic coordinated use of ICT in policy, public administration and making political decisions. It is expected to deliver benefits that include greater institutional efficiency, improvements in public service delivery, transparency and political involvement (Haldenwang, 2004). In addition, Malina (1999) stated that a democratic public depends upon the quality of public discourse and the quantity of participation. Hague and Loader (1999) also took up this direct democracy perspective in their introduction to digital democracy, depicting the ICT revolution as an opportunity to implement direct democracy. They discussed technology as particularly being able to foster free speech, interactivity, and transparency in government. The United Nations also mentioned that ICTs allow governments to increase outreach efforts directed at citizens and communities in order to identify their public policy needs and preferences. E-participation is about bringing citizens into the policy process through the use of ICTs, empowering them, providing access to public organizations and giving them a voice (United Nations, 2014).

Raynsford and Beecham (2002) have captured the hope best when they argued that, with effective e-government implementation, government can be renewed by making it more capable of leading constituents, more open, more accountable, more inclusive, and more capable of sustaining citizen engagement. Layne and Lee (2001) pointed out the fundamental product of e-government implementation as the improvement of citizen to government interaction and echoing these goals. Berman and Mulligan (2003) identify the key online features relevant to democratic processes and argue that e-government technologies are inherently decentralized and open. In addition, scholars and practitioners recognize e-government as a key strategy for improving government services along with raising the effectiveness of public policy and public programs. A significant part of any e-government initiative is the ability of various government organizations to transfer integrated information, even across traditional organizational system boundaries. Such e-government integration represents complementary, multi-dimensional and dynamic capabilities needed among networks in order to achieve successful information sharing between organizations (Pardo, Nam & Burke, 2012).

Adaptation Phases of E-government

Successful implementation of e-government initiatives delivers various opportunities. These opportunities may include things such as new services, more citizen involvement in public affairs, and an improved information infrastructure. Some observers have developed and employed a common schema for organizing and classifying e-government development phases. To what extent information technology has been used to deliver public services through ICT forms the basis of the schema (United Nations, 2014). According to the Gartner Group (Baum & DiMaio, 2000), e-government projects can be divided into the four phases of presence, interaction, transaction and transformation. The different stages each represent enhanced capability from the previous stage to provide information and services online through progressively more interactive mechanisms:

Presence (Emerging Information Service): This represents the first stage of development that establishes the foundation for delivering information and services in the future. It provides the fewest options for citizens to participate online as it includes only the easiest and least costly systems of e-government. Government websites only provide information on general government services. They have links to government agencies and public organizations where citizens can access current information and search for archived information.

Interaction (Enhanced Information Services): The second stage is interaction. Government websites provide one-way or simple two-way e-communications between government and citizens in an enhanced form that includes downloadable applications and forms for accessing government services. Efforts at this stage are still limited though they offer government functions in a streamlined manner through enhanced interactive Web-based initiatives. These relatively simple interactions generally just provide information and help constituents as customers avoid trips to offices, and save phone calls through making the most common information and forms available all the time. They may take the form of online instructions and procedures, downloadable forms, and/or an e-mail contact for answering basic queries.

Transaction (Transactional Services): The evolution of e-government advances to he transaction stage. Government websites here now allow for two-way communications, changing the ways government communicates with citizens. These initiatives are more complex than just providing simple information. They do more to embody the types of activities the public associates with e-government. Transactional initiatives help clients complete tasks electronically at their convenience day or night. They create interactions that amount to self-service operations for things like license renewals, making payments and making bids for procurement contracts. The activities continue to involve a mostly one-way stream of information though the interactivity takes place at a higher magnitude than second-stage initiatives. Government responses tend to be regularized, creating predictable outcomes that include things like renewals of licenses and printable receipts.

Transformation (Connected Services): The ultimate stage of e-government is transformation. Governments communicate with their citizens in completely new and changed ways via websites and other electronic means. Technology is employed to the full extent to rethink and transform the conception, organization and execution government functions. As technology is constantly changing, this stage is always advancing and its standards are perpetually in flux. Initiatives at this level address a comprehensive range of needs, questions and problems that arise in the relationship between citizens and government. There are currently very few examples of this type on account of administrative, technical and budgetary limitations. These initiatives enable information flow and collaboration in decision making in a seamless way between the various levels of government, the public and private partners. E-government at this final stage tries to remove any organizational barriers that stand in the way of customer-centered solutions. Such barriers typically include a departmental or agency focus that gets in the way of serving citizens as customers. The potential may even exist for e-government to reorganize, combine, and/or eliminate existing agencies through virtual forms of organization.

However, most countries remain within one of the first three stages, though the final phase appears sporadically as well. In any case, most countries advance from one stage to the next. Meanwhile, Korea is in the final transformation phase. India, Pakistan, and Bangladesh are having significantly improved their e-government development and e-participation scores and global rankings in recent years. Notwithstanding, those countries are progressing from the first phase to the next phase. This study will compare what causes different levels of government and public desire and capability for creating systems for e-participation.

Data Collection and Measurement

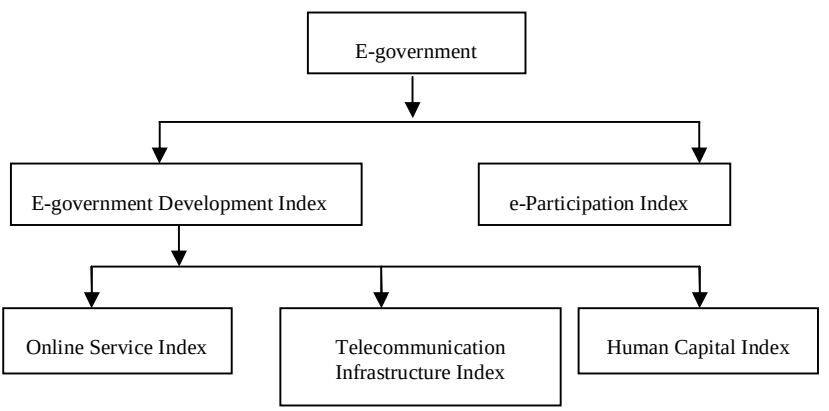
In order to compare the selected countries, data were collected from the United Nations e-government survey that measures the status of e-government in United Nations member countries. The time series data cover of the years 2003, 2004, 2005, 2012 and 2014. The United Nations e-government survey has employed a framework that is holistic in its concept since its inception in 2003. This conceptual framework for development rests on three important dimensions. These are human capacity, availability of online services and telecommunications infrastructure. This also presents how human capital, online services and telecommunications infrastructure are measured and explained.

This methodological framework remains consistent through the different survey periods. At the same time the components have been updated carefully to reflect the ongoing evolution of successful e-government strategies. These surveys assess e-government around the world and adopt the perspective that the target of e-governance is always including everyone in development. This is the only comprehensive report assessing the status of e-government in the United Nations, covering all of the 193 member states. This report serves to help decision-makers

to identify the strengths of their nation's e-government initiatives as well as their weaknesses and obstacles. It is also commonly used to inform e-government planning and strategy, implementation and execution. In the process, it underlines cutting-edge trends, issues, challenges, opportunities and innovative practices fore-government development. It also analyzes the survey data to provide strategies and policy options to aid government officials.

The UN E-government Survey rates each country on a comparative basis relative to all other state members. Surveys of e-government have been carried out to show both the basis for e-government and actual e-participation. The e-government development indicator is a composite measure that expresses the willingness and ability of public administration in different nations to use ICTs to deliver better services to the public and to have telecommunication infrastructure and human capital that can make it possible to work and share information more efficiently. In addition, e-participation is another indicator measuring citizen use of ICTs to engage in policy and decision making processes to remake public administration. The goal is to be more deliberative, collaborative, participatory and inclusive, both for its own sake as well as an instrument for achieving other goals. This study examines e-governments in South Asian countries through both the E-government Development Index (EGDI) and the e-Participation Index (EPI). It represents a survey of the government presence online for all UN member nations. It assesses technical features such as government websites in addition to policy and strategic factors such as how e-government is applied for delivery of necessary services, both in general as well as in specific sectors.

Figure 2. E-government Index



The EGDI represents a weighted average made up of three normalized scores coming from the three most important e-government dimensions. These include the quality and the extent of online services (Online Service Index, OSI), which discusses progress in online service delivery; the status and level of development of telecommunications infrastructure (Telecommunication Infrastructure Index, TII); and the level of human capital development (Human Capital Index, HCI). All of these indices are also composite measures that can be taken apart and analyzed

on their own.

In addition, e-participation refers to the process of getting citizens involved in policy and decision making with the use of ICTs so as to improve government administration through popular input in a collaborative and deliberative manner. It expands the means for governments to communicate and engaging with their people. The EPI model developed by the United Nations assumes that moving from passive participation to active public engagement is the true source of popular empowerment, which is understood to be necessary for sustainable development. The e-Participation measure includes government programs encouraging citizen participation as well as the willingness of citizens to get involved. It includes both supply and demand. The EPI includes e-information sharing, e-consultation and e-decision (United Nations, 2014).

Comparison of E-government Development and e-Participation

General Discussion of E-government Development and e-Participation

The EGDI moves ICT into a more central place in discussions of development. It accomplishes this through a better understanding of national performance and developmental arrangements as they emerge. It incorporates the characteristics of access such as infrastructure and education as well as an assessment of a nation's extent and quality of website development in order to reflect how the nation uses such technologies for empowerment of its people in economic, social and cultural realms. It is an indicator used to measure the ability and desire of government to use ICT to provide public services. The e-government development index measures a country's ICT infrastructure, its quality and the ability of public and private stakeholders to use ICT for their convenience and advantage. The EGDI takes a holistic view of e-government development. As noted above, it is a composite measure of user capacity, telecommunications connectivity and availability (and provision) of online services, three important dimensions of e-government.

The EGDI value of Korea was 0.744, 0.857 and 0.872 in 2003, 2004 and 2005 respectively. In 2008, the EGDI value of Korea was 0.831, which means it was a little lower than before but Korea still stands the first ranked position in the world. The table below presents the EGDI, which signals broad trends among the countries across the region.

Table 1. General Comparison of E-government Development and e-Participation

Country	EGDI (Rank)		EPI (Rank)	
	2014	2012	2014	2012
Republic of Korea	0.9462 (1)	0.9283 (1)	1.0000 (1)	1.0000
Singapore	0.9075 (3)	0.8474 (10)	0.9020 (10)	0.9474
Japan	0.8874 (6)	0.8019 (18)	0.9608 (4)	0.7368
Average of Asian Region	0.4951	0.4992	0.4506	0.2738
India	0.3834 (118)	0.3829 (125)	0.6275 (40)	0.1842
Pakistan	0.2580 (158)	0.2823 (156)	0.3333 (97)	0.1316
Bangladesh	0.2757 (148)	0.2991 (150)	0.3922 (84)	0.0789

However, as shown in Table 1, the EGDI value of Korea was 0.928 and 0.946 in 2012 and 2014, respectively. These values are a little higher than before and Korea received the first position in the world in both years. The EGDI value of India was 0.247, 0.304 and 0.401 in 2003, 2004 and 2005, respectively. The EGDI value of India grew steadily from 2008 to 2014. However, the EGDI value of Pakistan was 0.373, 0.387 and 0.401 in 2003, 2004 and 2005, respectively. From 2008 to 2014, the EGDI value of Pakistan dropped steadily. Meanwhile, the EGDI value of Bangladesh grew from 2003 to 2012 and the EGDI value of 0.275 in 2014 was a little lower than before. Bangladesh performed better in 2012 because of a policy change in the government and the supply of sufficient fund for implementing such an intensive project. However, the situation can change more by taking necessary steps like political consensus, development of human resources, ICT penetration, and making proper long-term plans for implementing e-government in Bangladesh (Hassan, 2013). India leads among the South Asian countries, followed by Pakistan and Bangladesh.

The EPI value of Korea was 1.00 in 2012 and 2014, which means the highest score. From 2012 to 2014 the EPI values of India, Bangladesh, and Pakistan show that e-participation were rapidly growing and developing. There have been good signals in these countries for their governments to encourage citizen participation as well as their willingness to do so.

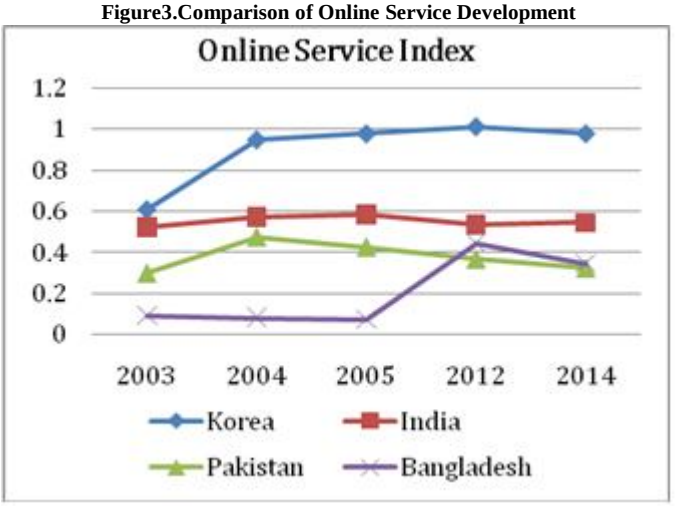
Online Service Development

The online services component of the EGDI measures how governments use ICT to deliver public services at the national level. The Online Service Index (OSI) is a numerical index, which measures the general ability of government to use e-government for informing, transacting, connecting and interacting. The OSI measures web presence, in theory, that progresses on top of the foundation of a government's existing online presence. It assesses the websites of national ministries of health, education, welfare, labor and finance and is a measure of the ability and capacity of a nation to provide services online.

The figure presents the Online Service Index (OSI) where the value of Korea was 0.607, 0.946 and 0.976 in 2003, 2004 and 2005, respectively. In 2008, the OSI value of Korea was 0.822, which was a little lower than before but Korea stood in the first position in the world. However, the OSI value of Korea was 1.011 in 2012

and this was the highest value in the world. Moreover, Korea also attained the first position in the world in 2014 and the value was 0.976.

Figure3.Comparison of Online Service Development



The OSI value of India was 0.522, 0.568 and 0.582 in 2003, 2004 and 2005, respectively. The value of India is 478 in 2008, 0.535 in 2012 and 0.543 in 2014. However, the OSI value of Pakistan was 0.297, 0.475 and 0.426 in 2003, 2004 and 2005, respectively. The OSI value of Pakistan declined steadily from 2008 to 2014. Meanwhile, the OSI value of Bangladesh was 0.092, 0.081 and 0.073 in 2003, 2004 and 2005, respectively, whereas the value grew sharply from 2008 to 2012, which was 0.351 and 0.444, respectively. It is a matter of pleasure that government is realizing the need for widespread use of ICT in governance (Hassan, 2013).

The United Nations (2014) found that many nations have created and established e-government initiatives as well as ICT applications to support sustainable development by further enhancing public sector efficiencies and streamlining governance systems by placing technology in the hands of the people. E-government leaders recognize innovative technology solutions as special means for revitalizing economic and social sectors lagging behind. ICT can be used to extend existing governance frameworks that provide the foundation for government effectiveness, as based on empirical evidence. E-government, as tool for building sustainable development, is at the core of the strategic framework.

Telecommunications Infrastructure Development

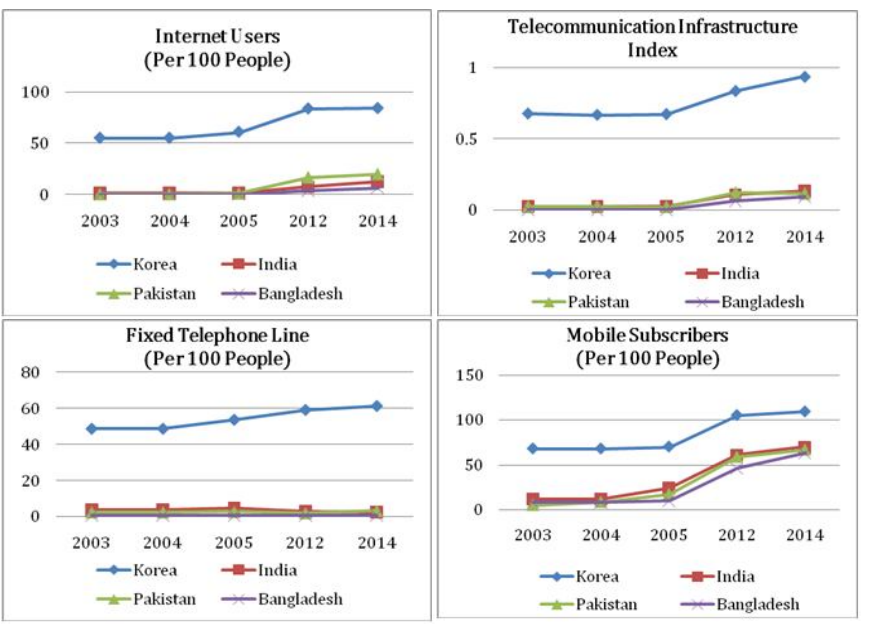
The Telecommunication Infrastructure Index (TII) relates to the provision of services via e-government through the already-existing national infrastructure capacity. The TII is a composite mean of some important indicators: number of people online per 100 residents (estimated); telephone lines per 100 residents; mobile telephone subscriptions per 100 residents.

The TII value of Korea was 0.675, 0.666 and 0.671 in 2003, 2004 and 2005, respectively. In 2008, the TII value of Korea was 0.688, which was a little higher than before. Korea then increased to the highest telecommunications infrastructure index and jumped in 2012 and in 2014, where the value was 0.835 and 0.935. However, India and Pakistan have improved their TII value and rank from 2003 to 2014. On the other hand, Bangladesh was the same as India and Pakistan though the TII value and the position remained little low compare to the other countries.

Here we can see that the internet user of Korea is growing up significantly from 2003 to 2014. Korea stood in the first position in the world from 2008 to 2014. However, the internet users of India, Pakistan and Bangladesh were also growing like in Korea. Both the global position and internet users were higher in Pakistan than the other countries.

The main telephone line index was a place where Korea's value grew strongly from 2003 to 2014. On the other hand, the value of India is dropped noticeably from 2003 to 2014. The value grew for both Pakistan and Bangladesh from 2003 to 2008. In 2012, it was a little low but a little higher in 2014for both Pakistan and Bangladesh.

Figure4. Comparison of Telecommunications Infrastructure



In addition, Korea grew meaningfully in the mobile subscriber index value from 2003 to 2014. The value of India increased significantly from 2003 to 2014 like for Korea. The value also grew fast in both Pakistan and Bangladesh from 2003 to 2012. Mobile phones are available to almost everyone even in developing nations and they have thus become the most popular telecommunications technology in the last decade. Extremely versatile, mobile phones can be used for

communicating but also as a diary with a calendar and telephone directory, as a calculator, a recording device with a digital camera and tape recorder, and even as an entertainment machine with video games. In terms of conveying information, mobiles can send pictures, text and messages, while still serving as a traditional phone.

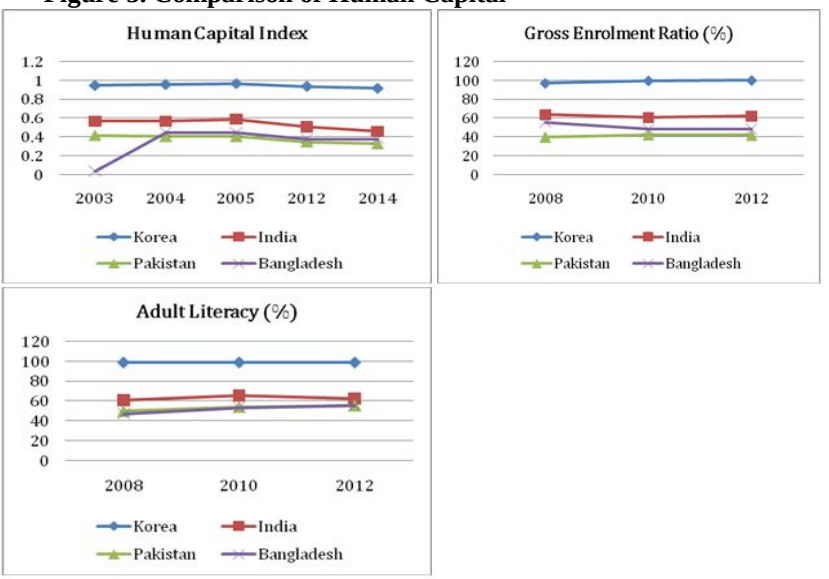
From the above discussion it can be said that mobile phone subscriptions have grown exponentially in developing regions and this is also being used in a more dynamic system. Mobile phones extend the capacity of the internet in providing e-government services. Moreover, the South Korea has managed to stay at the top with its focus on e-government innovation and continued leadership in this area.

Human Capital Development

The Human Capital Index (HCI) consists of adult literacy and the gross enrolment ratio. As shown in Figure 5, the value of Korea was 0.95, 0.96 and 0.97 in 2003, 2004 and 2005, respectively. In 2008, the HCI value of Korea was 0.98, which was the highest year for Korea. However, the HCI value was0.94 in 2012 and 0.92 in 2014, which were a little lower than before. Korea was also in the first position among the four countries in all years. The HCI value of India, Pakistan and Bangladesh grew like Korea from 2003 to 2005. The highest HCI value was in 2008 and the value dropped a little lower from 2012 to 2014. In spite of technological progress, a serious limitation in low- to middle-income countries remains a continuing lack of ICT professionals (human capital).

Here we can see that the percentage of Korean adult literacy was the same from 2008 to 2012and it was almost 99.01. In India, the percentage of adult literacy was also same in all years. However, the adult literacy percentage of Pakistan and Bangladesh grew noticeably from 2008 to 2012.

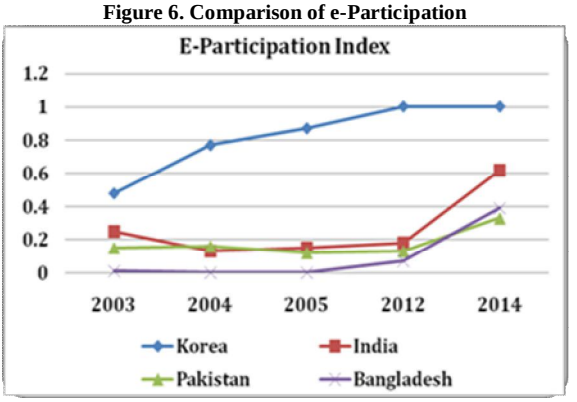
Figure 5. Comparison of Human Capital



Gross enrolment ratio includes the number of students enrolled in primary, secondary and tertiary schools, regardless of age, divided by the school-age population for the respective educational levels. In Korea, the percentage of the gross enrolment ratio was 97.23 and 99.88 in 2008 and in 2010. In 2012, its percentage was 100.28. Korea had the highest position in the world. However, the gross enrollment ratio of India, Pakistan and Bangladesh was also increasing from 2008 to 2012.

In addition to access to ICT infrastructure, it can be argued that education, including ICT literacy, concerns e-government development. The absence of government-wide investments and initiatives is an obstacle to carrying out e-government programs.

Figure 6. Comparison of e-Participation



e-Participation

The United Nations calls the systems and processes for engaging citizens online and through ICTs indecision and policy making processes e-participation, especially when they are established in order to move government administration the direction of greater participation, collaboration and deliberation, whether for their own sake or for other goals and ends (United Nations, 2014). The e-Participation Index (EPI) was developed to assess services and information provision for the purpose of engaging citizens in public policy through e-governance and specific e-government initiatives. The EPI assesses the ability of government websites to provide the public information, services and participatory tools online while evaluating their quality, usefulness and relevance.

The EPI value of Korea was 0.48, 0.77 and 0.87 in 2003, 2004 and 2005, respectively. Then Korea jumped in 2012 and 2014 when the EPI value was 1.0. The EPI value of India was 0.25, 0.13 and 0.15 in 2003, 2004 and 2005, respectively. The EPI value of India grew rapidly from 2012 to 2014 and it was 0.18 and 0.62. However, the EPI value of Pakistan was 0.15, 0.16 and 0.12 in 2003, 2004 and 2005, respectively. The EPI value of Pakistan also grew rapidly from 2012 to 2014 and was 0.13 and 0.33. Meanwhile, the EPI value of Bangladesh grew from 2012 to 2014 and the EPI value was 0.07 and 0.39 which was higher than before. Bangladesh performed better in 2014 because of a policy change in government and the supply of sufficient funds for implementing such an intensive project (Bangladesh National Report, 2012).

Korea topped the list of e-participation performers in the world. Korea tied at the top, with an average total score of 90% provision of all the services assessed. Korea offered the greatest number services for making electronic decisions. It employs features that allow for citizens to participate the most actively to influence decision-making with regard to public policies and services. However, an environment that supports e-participation requires careful strategies. Such strategies may include legal and institutional government frameworks, the development of citizen digital media literacy capacity and integration of parallel systems working online and offline for enabling seamless citizen involvement (United Nations, 2014). Governments can find and establish ways to use citizen-generated content to improve policy processes and provision of services. E-participation efforts should strive to improve the abilities of citizens to acquire public information and receive public services as well as at promoting public participation in making decisions that affect both social and individual welfare.

Conclusion

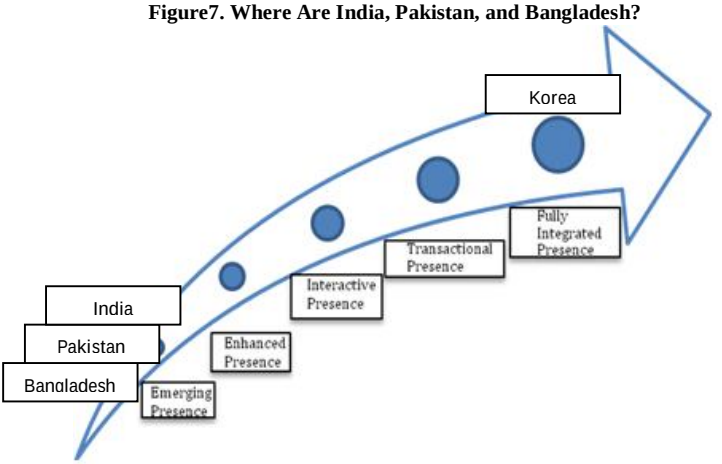
E-government is useful as a means of collaborating with citizens to increase the capacity of the government and the broader public sector to deal with development and its particular issues. Effective e-government programs are able to advance good governance practices by enhancing the range and efficiency of government

services as well as through making more information available to the public so they can meaningfully participate in making decisions as part of the public policy process. Mobile phones and the newer smart phones can help developing countries the same way if governments are able to adapt to the changing technology while pushing innovation from the perspective of meeting citizen needs. ICTs are also being used in this way to display public services in a more interactive way.

The Korean government has been leading the charge on e-government innovation. Indian e-government has come some distance through great efforts in recent years to overcome its difficulties, including connectivity to the rural population. Pakistan has also been providing more services electronically. The Government of Pakistan has advance a policy of digitizing e-services. In line with this policy, they have created a multi-biometric e-passport project that is geared towards improving transparency in the public sphere. This paper has emphasized how meaningful e-government and e-participation emerge through political will, collaborative leadership and governance frameworks. These are needed to support and manage the delivery of services for citizens. The paper has considered good practices from around the developing world, including factors like e-government and information-communications policies, as well as efforts to strengthen institutions and develop the abilities of public servants in the various nations (United Nations, 2012 & 2014; Biyagamage, 2012).

There is no doubt that political and socio-economic development underpin the overall picture, while investments in human capital and telecommunications infrastructure, along with the provision of services online are primary in contributing to e-governance. Most countries advance from one phase to the next. Korea is in the final transformation phase. India, Pakistan, and Bangladesh have significantly improved their e-government development and e-participation scores and global rankings in recent years. Notwithstanding, those countries are still progressing from the first phase to the next phase.

Figure7. Where Are India, Pakistan, and Bangladesh?



The practical approaches and modes in effect need to be weighed in forming e-government development frameworks for the future. This also includes the so-called whole government approach. The creation of effective e-government for sustainable development in the future with critical commitments being made to collaboration, openness, transparency, accountability and participation in government at all levels. This must be supported and augmented by a strong and supportive technical infrastructure. It is also important to cultivate adequate human capital while delivering online services. It can be clearly seen that national income level gives some indication of the state of the economy, which further affects the development of e-government. This provides the capacity to afford the requisite ICT infrastructure and to pay for the education and training needed to use it.

As a result, ICT planning needs to be included in all public sectors, particularly in critical services like security, public health, public education, law enforcement, economic development and regulation of trade and industry. Such integrated planning would help lay the foundations for substantial development-supporting and facilitating e-government. In addition, inclusive development and improving quality of life should be made clear and explicit e-government targets. At the same time, many developing countries need additional effort devoted to transactional services in addition to electronic systems for engaging citizens in public decision-making.

The government may need more creative public interactions and may need to solicit views more actively to inform policy and design effective public services. Successful e-government strategies for sustainable development need to include both formal and informal citizen participation. For efficiency and ease of implementation, governments should take advantage of the systems and technologies popular with citizens to increase the likelihood of success. The problem of reaching and engaging difficult-to-reach groups may require creative means of combining existing offline methods with new online ones as part of a clear integrated e-participation vision. Participation on issues should be encouraged and citizens should receive regular and systematic feedback.

Although e-government schemes have been taken as a leading development policy by many developing countries during the last decade, it seems that the results have not been pleasant and goals are not easy to achieve due to various administrative, organizational, contextual and technical problems. More specifically, the reasons are corruption, lack of coordination, lack of infrastructure and resources, limited transparency, handicapped strategic vision and illiteracy (Backus, 2001; Hossain, 2005). Moreover, e-government development and e-participation remains a distant hope for these countries. A weak private sector, lack of technology and ICT infrastructure, limited human capital, ineffective government regulations and the cost of acquiring and providing new equipment remain obstacles. Further the very low-income countries that most need these tools for development are those most likely to suffer from these traditional barriers.

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Note

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