# INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION AND MANAGEMENT

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- Bowersox, Donald J., Closs, David J., (1996), "Logistical Management." Tata McGraw, Hill, New Delhi.
- Hunker, H.L. and A.J. Wright (1963), "Factors of Industrial Location in Ohio," Ohio State University.

**CONTRIBUTIONS TO BOOKS**
- Sharma T., Kwatra, G. (2008) Effectiveness of Social Advertising: A Study of Selected Campaigns, Corporate Social Responsibility, Edited by David Crowther & Nicholas Capaldi, Ashgate Research Companion to Corporate Social Responsibility, Chapter 15, pp 287-303.

**JOURNAL AND OTHER ARTICLES**
- Schemenner, R.W., Huber, J.C. and Cook, R.L. (1987), "Geographic Differences and the Location of New Manufacturing Facilities," Journal of Urban Economics, Vol. 21, No. 1, pp. 83-104.

**CONFERENCE PAPERS**
- Garg Sambhav (2011): "Business Ethics" Paper presented at the Annual International Conference for the All India Management Association, New Delhi, India, 19–22 June.

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- Kumar S. (2011): "Customer Value: A Comparative Study of Rural and Urban Customers," Thesis, Kurukshetra University, Kurukshetra.

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**WEBSITE**
- Garg, Bhavet (2011): Towards a New Natural Gas Policy, Economic and Political Weekly, Viewed on July 05, 2011 http://epw.in/user/viewabstract.jsp

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# E-GOVERNMENT - TRENDS AND CHALLENGES FROM THE PERSPECTIVE OF DEVELOPING NATIONS WITH FOCUS ON PAKISTAN

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## ABSTRACT

*Efforts to create e-governments are going on in different countries of the world at varying pace. Some countries are the leaders while others are followers of this technology. The promises made by the proponents of this system are yet to materialize. The spread and usage of this technology is uneven mainly because of the digital divide amongst the IT haves and have not's. The cost-benefit equation is not yet clear even to the leaders of this technology. Developing countries face certain challenges which are not there at all or are very minimal in developed countries. Different hurdles on demand as well as supply side of e-government exist; as a result developing countries lag far behind developed countries in this form of governance. A careful analysis of these impediments shows that the supply side constraints are relatively easier to address as compared to the demand side constraints.*

## KEYWORDS

Benefits, Developing countries, E-government, Impediments, Pakistan.

## INTRODUCTION

E-government is not a very old phenomenon. It became a buzz word in the early 90s when the governments started placing some information on the web for public use. Major advancements in the field of e-government were made during the current decade and the key players contributing in its' development had been United States and some countries of Europe. United Nations e-Government survey 2008 rated Scandinavian countries (Sweden, Denmark and Norway) as number one in e-government readiness followed by the United States, Netherland and South Korea (UN, 2008). Other notable contributors in E-government development are Canada, Australia and France. United Kingdom, Japan and Switzerland have also made good quality progress in this field.

Different authors have defined E-government differently. Some have defined in narrow terms while others have looked at this new form of governance from a broader perspective. Bekkers & Homburg (2007) defined E-Government as the "use of modern Information Communication Technologies (ICTs), especially Internet and web technology to support or redefine the existing and/or future (information, Communication and transaction) relations with stakeholders in their internal and external environment". These stakeholders include Government organizations, companies, citizens, civil servants and social organizations (Chadwick & May, 2003).

Siau and Long (2009) have defined four major areas of e-government development:-

a. Government to Consumers (G2C) – Which include all such services provided by the government to its citizens to improve government-citizenship relation.
b. Government to Business (G2B) – Include services targeting reduction in government cost of purchasing and creating better ties with the businesses.
c. Government to Government (G2G) – The objective here is to achieve better collaboration and integration of federal, state and local government.
d. Government to Employee (G2E) - Here the emphasis is to improve the quality of work as well as the efficiency of employees in the government organizations.

Lee et. al (2005) have defined G2E little differently. They have used the term government internal efficiency and effectiveness (IEE) instead of G2E. The objective of IEE is to improve internal efficiency and effectiveness of operations. Another category of e-government defined by them is cross cutting where the target is to produce infrastructure to enable interoperability among different e-government operations. They have also drawn similarities between these categories of e-governments and the terms used in business world e.g. activities and objectives of G2C and G2B are similar to Customer Relationship Management (CRM), G2C similar to Supply Chain Management (SCM), IEE similar to Enterprise Resource Planning (ERP) and cross cutting similar to Enterprise Application Integration (EAI).

The proponents of e-government exert that the use of ICTs (especially Internet technology) by the governments will result in improvement in quality of services provided to the citizens. The citizens will have better access to information, the data will be more transparent and tasks will be performed efficiently -the overall result will be a new and better government. Bekkers & Hamburg (2005) states this new and better government to be more efficient, more democratic and more responsive to the need of citizens and enterprises. According to Heeks (2001) there are three main domains of e-governance: e-Administration (improving government processes), e-Citizens and e-Services (connecting citizens), e-Society (Building interactions with and within civil society). Some of the governments are using the slogan YQ (why Queue) for promoting e-government indicating that the use of this technology will save citizens from standing in queues for getting services. Because of this technology citizens can have access to government information and services 24 hours a day, 7 days a week (Holden et. al, 2003).

## MODELS OF E–GOVERNMENT

Literature of e-government contains different models of e-government development and progression. Gartner Research (2001) presented a four stage model of e-government development. The four stages identified in this model are: web presence, interaction, transaction and transformation. In another model (Layne & Lee, 2001) the following four stages of e-government are discussed: catalogue, transaction, vertical integration and horizontal integration. A five stage model was presented by Moon (2002) where he defined the five stages of e-government development as simple information dissemination, two way communications, service and financial transaction, vertical and horizontal integration and political participation. Another model worth mentioning here is that of Deloitte's six stages model where the following six stages of e-government development have been mentioned (Deloitte and Touche, 2000):

a. Information publishing/dissemination.
b. Official two-way transaction.
c. Multipurpose portals.
d. Portal personalization.
e. Clustering of common services.
f. Full integration and enterprise transaction.

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All of these models discussed here have their own strengths and weaknesses (Siau & Long, 2009) and we cannot say that anyone of them is a perfect model. Models discussed here show different stages of development of E-government but one thing is common among all of them – they all show a linear and a step-wise development. The first step is the web presence by means of a website, which then leads to two way communications between the users and service providers. Next step is the vertical and horizontal integration and the final step is a seamless and fully integrated web presence. Although these models show step-wise progression, none of them define a time line for moving to the next level.

## UNITED NATIONS (UN) E-GOVERNMENT READINESS INDEX

To measure and compare the E-readiness of its 192 member states United Nations has developed a tool called "Global E-Government Readiness Index". This index is designed to measure usage of internet & World Wide Web (www) by the member states as well as infrastructure development of telecommunication and human capital. These measurements are done by means of the following three indices:

a)      Telecommunication (Connectivity) Infrastructure Index:

The usage of the five main information and communication (ICT) tools i.e., PC, Internet, telephone, mobile and broadband provides the basis of calculation of this index.

b)      Human Capital Index:

It is derived from the UNDP education index. The factors considered are adult literacy & gross enrollment ratio.

c)      Web Measure Index:

It is based on the web presence and features. The primary consideration is given to official home page of the government followed by the websites of five key Ministries (finance, education, labor, health and social welfare)

## UNS FIVE STAGE MODEL OF PROGRESSION

UN has also outlined a five stage model depicting the progression of E-government (see figure 1). These Five stages are:

1)      Emerging Presence:

In this stage information about government- its policies, laws & regulations, newsletters and reports, etc., is provided through Internet.

2)      Enhanced Presence:

Next level is to provide enhanced information & e-services through Internet e.g. downloadable forms.

3)      Interactive Presence:

Two way communications between Government and citizens is carried out in this phase e.g. e-mail Communication.

4)      Transactional Web Presence

In this stage the citizens can complete transactions online e.g. payment of public utilities, online filing of tax returns, processing of applications for birth certificates, licenses, etc.

5)      Seamless or Fully Integrated Web Presence:

This requires horizontal and vertical integration between federal, state and local governments. It also requires connections among different stakeholders (including government organizations, companies, academia, NGOS and private sector).

### FIGURE 1: FIVE-STAGE MODEL OF E-GOVERNMENT INTEGRATION
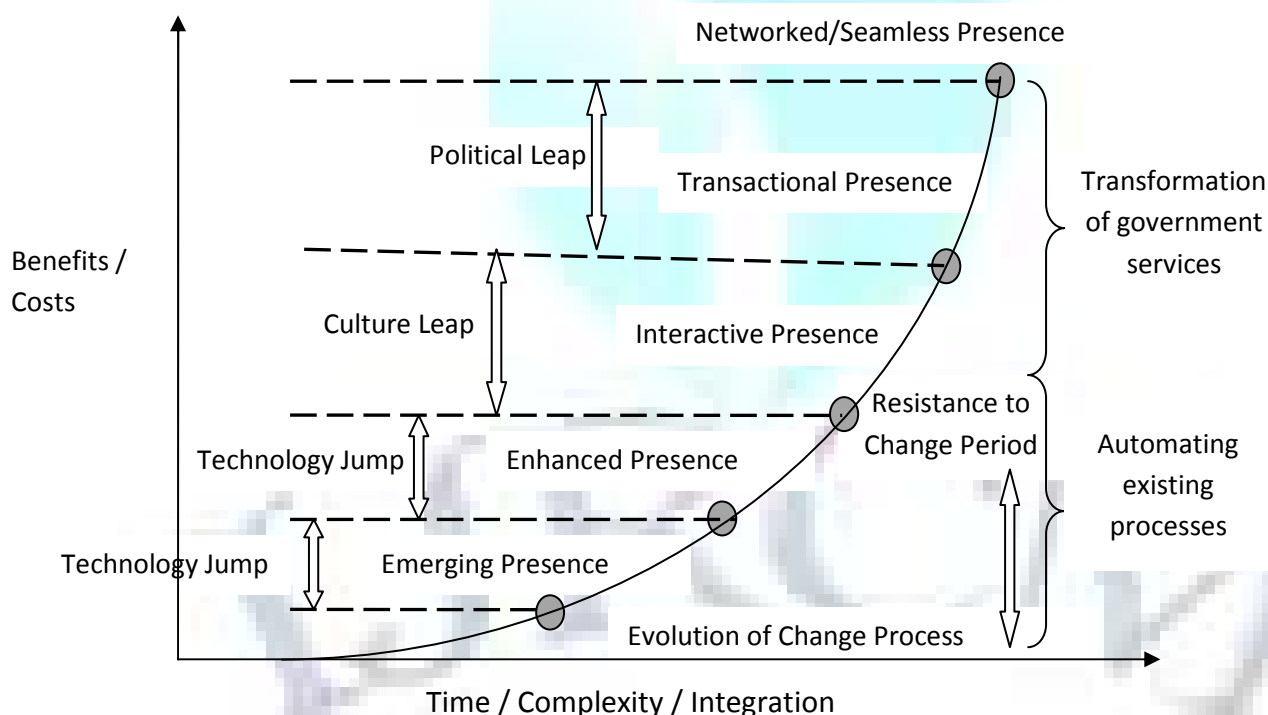


**Source:** Adapted from (Siau & Long, 2009)

Previous researches indicate that mostly the countries have achieved the third level of e-government development i.e. interactive presence (UN, 2003; Vintar et.al, 2003). This level is comparatively easy to achieve as providing information online, providing downloadable material and forms and communicating via email is not very challenging. But things get complicated beyond this stage and the development gets slow down significantly (Accenture, 2004; Cap Gemini Ernst and Young, 2004). According to a survey conducted among EU countries, only 10% of the government department's websites had at least one transactional service (West, 2003).

## E-GOVERNMENT BARRIERS IN DEVELOPING COUNTRIES: PAKISTAN IN FOCUS

Almost 80% of the world population is living in developing countries which show enormous potential of e-government development. But there exist a plethora of barriers that hinder the way of e-government in developing countries. Developing countries face certain challenges which are not there at all or are very

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minimal in developed countries e.g., institutional weakness, shortage of qualified staff, lack of funds, unsupportive local environment leading to implementation problems, inability to keep pace with changing technology and lack of legal framework (UN, 2002).

Pakistan is a country located in South Asia having a total area of 796,095 square kilometers. It is the sixth largest populated country in the world having an estimated population of 174 million (CIA, 2010). Pakistan is a country that has a tremendous potential for development in the field of information technology (IT). Realizing this potential, the Government of Pakistan (GOP) made first serious effort in developing IT sector in the start of current millennium when it announced National IT Policy and Action Plan in August, 2000. Some of the key areas for the development of IT sector and IT usage in the country were identified which included: Human Resource Development, Infrastructure Development, Software Industry Development, Hardware Industry Development, Internet and IT usage and legal and regulatory framework (National IT Policy and Action Plan, 2000).

In October 2002 Government of Pakistan established E-Government Directorate (EGD) with the purpose of facilitating and promoting provision of e-services by various government agencies and departments. 14 projects have been completed by EGD so far and there are 19 projects in various stages of completion. Those projects completed by EGD include:

1. Online processing and status tracking of hajj (pilgrimage) applications.
2. Online submission of documents at Securities and Exchange Commission of Pakistan (S.E.C.P.).
3. Salary disbursement of government employees through ATM's.
4. Development and installation of Internal E-mail system at seven Federal Government Divisions.
5. Automation of Patent Office at Karachi.
6. Online access to Statutory Case Laws at District Bar Associations.

Some of the important ongoing projects of EGD include:

1. Providing online recruitment services for Federal Public Services Commission (FPSC).
2. Arranging E-services for Capital Development Authority (CDA) and Islamabad Police.
3. Enabling the Ministry of Interior, Ministry of Health and Ministry of Population Welfare to offer e-services.
4. Automation of District Courts, Federal Investigating Agency (FIA), Prime Minister Secretariat and Establishment Division (EGD, 2010).

Although governments in developing countries including GOP are serious in developing e-government but their efforts are not so successful so far due to the existence of many barriers both on the demand side as well as the supply side. Some of the major hurdles in e-government development in developing countries are discussed below:

## DEMAND SIDE IMPEDIMENTS
### DEMOGRAPHIC FACTORS
In a research conducted by Belanger and Carter (2009) to find out the demographic characteristics of the population using e-government services, age, income and education were found to be significant predictors for e-government usage. Internet usage and experience of searching online information were also found to be important skills for predicting the intentions to use e-government services, whereas computer and prior online purchasing experience were not found to be significant indicators. Low purchasing power makes ICT less accessible and less affordable to the general public thus resulting in a low level of demand for e-services. Pakistan has a Gross Domestic Product (GDP) per capita (purchasing power parity) is $2,600 which is 171st in the world (CIA, 2010).

### DIGITAL DIVIDE
Almost all the societies are facing problem of digital divide - the separation between the information have's and have not's. This digital divide is because of two main factors i.e. accessibility and skills (Belanger & Carter, 2009). There is a certain portion of population who has access to internet technology whereas there is another portion that does not enjoy this access. Also there is a large section of population who do not have the necessary skills to get benefit from online services.

The problem of digital divide in developing countries is more serious as compared to developed countries. There is a tremendous difference in the standard of living of those living in rural and urban areas; those living in rural areas are deprived of some of the basic necessities of life e.g., electricity. In case of Pakistan, almost 36% population of the country lives in the urban areas whereas the remaining 64% belongs to the rural areas. This uneven distribution of population means any initiative taken by the government in the direction of e-government would be biased, favoring the 'IT haves' living in urban areas (Basu, 2004).

Pakistan in one of those countries where the number of internet subscribers and internet users is very low as compared to those of developed and technologically advanced countries. Although the number of internet subscribers/users is increasing but still it is very low i.e. less than 5% of total population of the country.



**Figure 2:** Internet Subscribers (million)
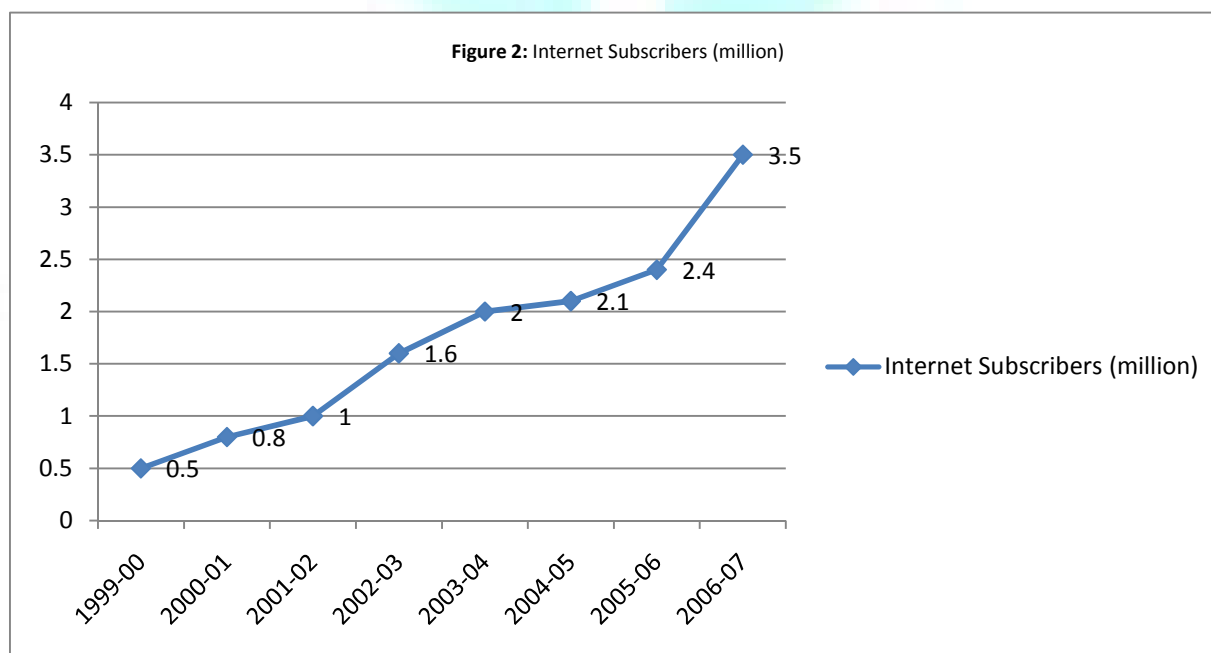
Source: Pakistan Telecommunication Authority (PTA)

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It can be seen in the above figure that the total number of internet subscribers in 1999-00 were 0.5 million which increased to 3.5 million in 2006-07. The number of internet users (those having access to internet at home, office or commercial areas) are much more than internet subscribers as can be seen in the table given below:



Figure 3: Internet in Asia – 2009 (Top 10 countries)
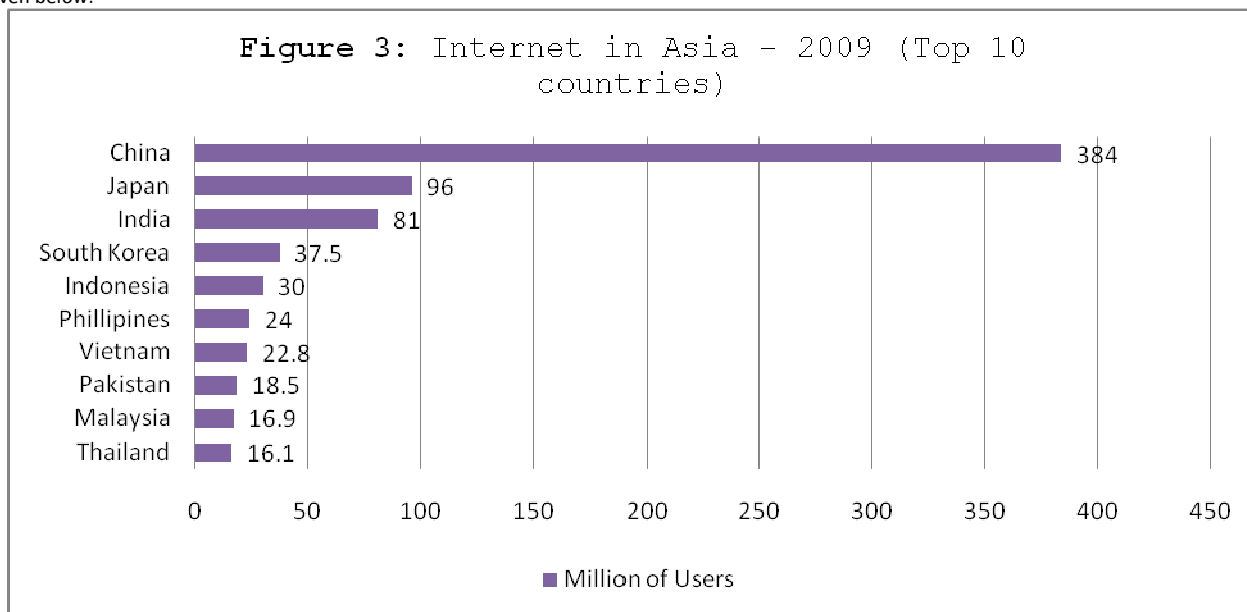
Source: (Internet World Stats, 2010)

The above figure shows that there are 18.5 million internet users in Pakistan as per the data collected in 2009. According to the UN e-Government survey 2008, Pakistan holds 131st position for e-government readiness among the total 192 member states. The following table shows e-government readiness of some of the developing countries:

TABLE 1: E-GOVERNMENT READINESS RANKINGS OF SOME DEVELOPING COUNTRIES

| Country Name | China | India | Malaysia | Russian Federation | Pakistan |
|---|---|---|---|---|---|
| 2008 Ranking | 65 | 113 | 34 | 60 | 131 |

Source: (UN, 2008)

## SOCIO-POLITICAL FACTORS

### LOW LITERACY RATE
A very serious impediment in e-government development in developing countries, as far as the demand for e-services is concerned, is the low literacy rate. Those who cannot read and write cannot get benefit from the e-services. In case of Pakistan, literacy rate (age 15 and above that can read and write) is approx 50% (CIA, 2010) which makes e-government services meaningless to almost half of the population of the country.

### LOW LEVEL OF TRUST IN E-GOVERNMENT
Collection of citizen's personal information is a prerequisite for providing e-services. Implementation of e-government cannot be separated from collection of citizen's personal information (Yu, 2005).Often a citizen is asked to provide his or her personal information to the government which could be of sensitive nature. Some studies have suggested the gathering of sensitive personal information related to income, credit card numbers, ID card numbers, hobbies, preferences, etc. and storing them at a central location (McDonagh, 2002). Not only is this information gathered but also distributed and used by different departments or agencies of the government and the private sector. Unless the citizens have confidence that their personal information will not be misused in any way, they will not be interested in using e-services. Trust in government is a decisive factor for the success of e-government web sites (Teo et. al, 2009).

### LOW QUALITY OF E-SERVICES
People living in developing countries are sometimes not interested in using the e-government services because of the poor quality of these services. In case of Pakistan, in most cases the government web sites serves only as a show case to portray information about different government departments and agencies and do not offer any transaction facility. In many cases there are complaints of missing links on government web sites and frequent web site breakdowns. Mostly these web sites do not have any information available in local languages.

### PREFERENCE TO GET WORK DONE BY PERSONAL CONTACTS
Another important hurdle reducing the demand for e-government in developing countries is the culture to get work done through personal contacts rather than following the laid down procedures. Corruption in bureaucratic setups of developing countries is a well known fact and citizens sometime find it convenient to meet their needs using short cut methods. E-Government can be an effective tool to reduce corruption as experienced by several countries such as Argentina, Chile, India, Russia and South Korea (Bhatnagar, 2001; Im, 2001).

## SUPPLY SIDE IMPEDIMENTS

### TECHNOLOGY AND LACK OF MANPOWER
A study was conducted to investigate the impact of information and computer technology (ICT) and the level of human development index (HDI) on the development of e-governments (Siau & Long, 2009). The research concluded that both technology and social factors (ICT and HDI) are important for the development of e-government and the higher level of IT and human development will result in advanced development of e-government.

### FINANCIAL CONSTRAINTS
There is a general consensus among the researchers that the governments are gearing up to enter the transactional stage of e-government development (Reddick, 2004; West, 2004). Financing online transactions has been identified as one of the most significant hurdle in the way of development of e-governments (Norris & Moon, 2005; Robbins & Miller, 2004).

### LACK OF LEGAL AND REGULATORY FRAMEWORK
E-government initiatives of any government would not be successful unless they are not properly backed by the legal and regulatory steps to ensure the security of information and protection of intellectual property. In order to achieve these objectives government of Pakistan took the following steps:
2002: Electronic Transactions Ordinance (ETO): This ordinance deals with the protection of official and commercial documents in accordance with the United Nations Commission of International Trade Law (UNCITRAL). It also deals with the electronic signatures as detailed in Model Law on e-signatures (2001).
2004: Electronic Crimes Act (ECA): This Act is designed to deal with e-fraud, cyber crimes, e-forgery, pornography and spamming.

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2005: Data Protection Act (DPA): It deals with disclosure and dissemination of data as well as resolution of disputes.
2005: Payment Systems and Electronic Funds Transfer Act (PSEFTA): It is a comprehensive act dealing with transfer of funds and e-payments promulgated by the central bank i.e., State Bank of Pakistan.

**LACK OF BACK-OFFICE INTEGRATION**
Another obstacle cited in literature on e-government is the co-operation between front office and back office operations (Bekkers, 2007). E-services cannot be effectively and efficiently delivered without consolidating the back end systems (UN, 2008). Back office integration should take place side by side front office development (Kunstelj & Vintar, 2004). Integrating back office operations is much more difficult than developing front office as a result most e-government sites offer only information or one way communication but very few offer two way communication and transaction facilities.

**RESISTANCE FROM PRESSURE GROUPS**
There are some pressure groups in government setup that resist change. These groups have their own vested interests in maintain a status quo and they fear a decrease of number of jobs due to use of technology. Lack of support from politicians and high level bureaucrats is also an important barrier on supply side of e-government (Schwester, 2009).

**FIGURE 4: E-GOVERNMENT BARRIERS IN DEVELOPING COUNTRIES**
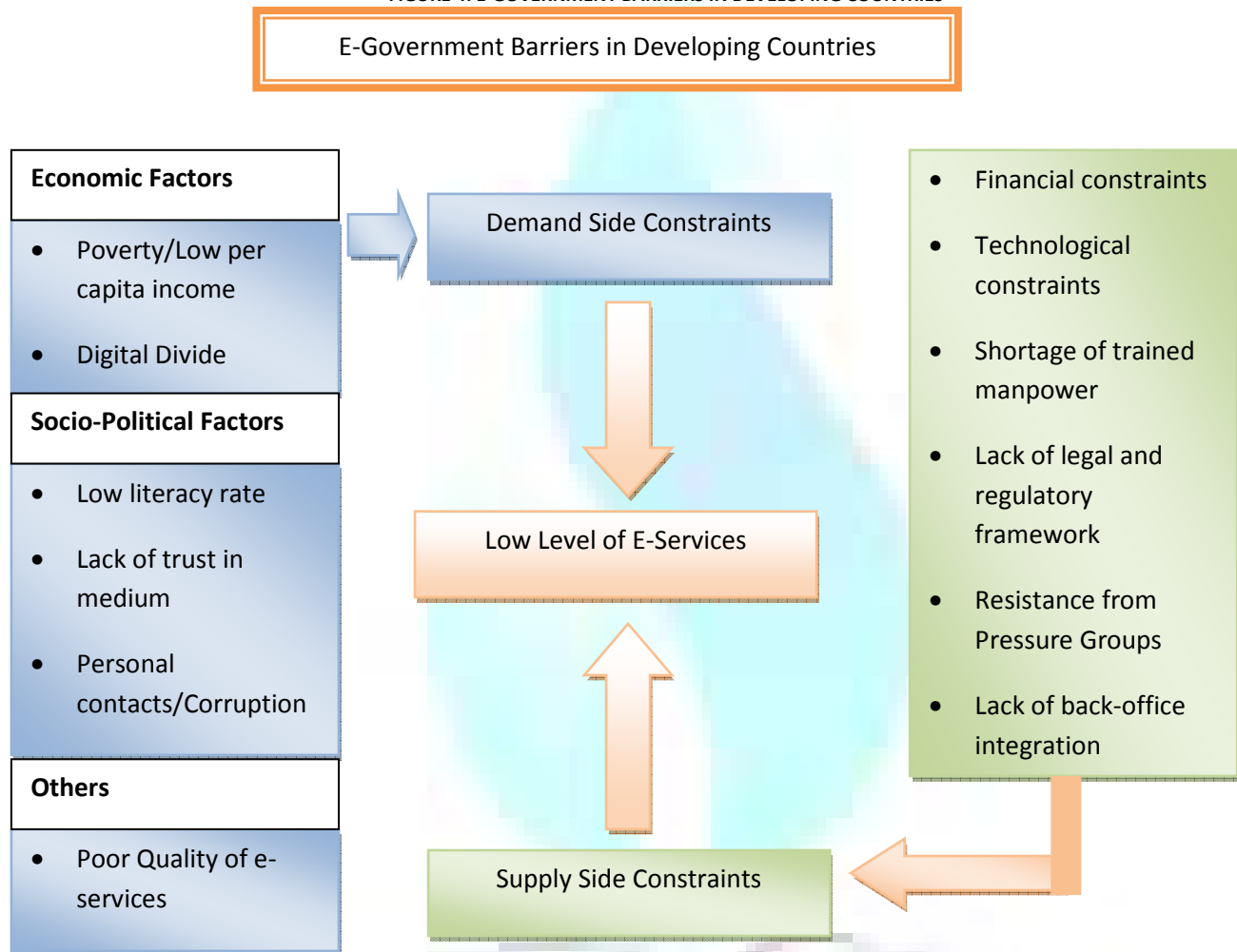


**IMPLEMENTATION ISSUES AND GUIDELINES FOR LATE ADOPTERS: CONCLUDING REMARKS FROM THE RESEARCHERS**
Although we have discussed several models of e-government development in this paper, all of which predict a linear and stepwise progression of e-government. But it does not suggest that any country which is late adopter of this modern tool of governance need to take start from step one. Late adopter can learn the lessons from early adopters and instead of leaping forward can jump towards the next step of e-development.
One common observation about e-government is that many e-services are offered on the hope that the citizens will use it. There exists a "field of dreams" that if we build it they will use it. But generally government officials admit that there is lack of demand for e-government from the public side. It is a technology which is driven from top-down i.e., by the government themselves (Kunstelj & Vintar, 2004).
We have discussed several barriers in the development and progression of e-government. Keeping these factors aside, organizational and political factors are and will remain the main barriers towards this new and better government at least in the developing nations. The governments who are able to handle the red tape and political pressure will be guaranteed leaders in this form of governance. In future researches, the model proposed in this paper can be operationalized to narrow down demand and supply side barriers to develop a suitable strategy to further promote this form of governance. Moreover, more country specific studies can be conducted to further improve upon the proposed model.

**REFERENCES**
Accenture (2004). *e-Government Leadership: High Performance, Maximum Value*, E-Government executive series, viewed on July 12, 2011 http://www.govexec.com/pdfs/AccentureEGovStudy.pdf.
Basu, S. (2004), "E-Government and Developing Countries: An overview" , *International Review of Law Computers and Technology, 18(1), pp.109-132*
Belanger, F. & Carter, L. (2009), "The Impact of the Digital Divide on E-government Use", *Communications of the ACM, 52(4), pp.132-135.*
Bekkers, V. (2007), "The governance of back-office integration", *Public Management Review, 9(3), pp.377-400.*

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Bekkers, V. & Homburg, V. (2007), "The Myths of E-Government: Looking Beyond the Assumptions of a New and Better Government", *The Information Society, 23(5), pp. 373-382.*

Bekkers, V.J.J.M., & Homburg, V.M.F. (2005), "The information ecology of e-government: Background & concepts", In *The information ecology of e-government: E-government as institutional and technological innovation in the public sector*, ed. Bekkers, V. J. J. M. and Homburg, V. M. F., 1–20. Amsterdam: IOS Press.

Bhatnagar, S. (2001). E-government and access to information, Viewed on March 05, 2011 http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN008435.pdf

Chadwick, A., & May, C. (2003), "Interaction between states and citizens in the age of the internet: 'E-government' in the United States, Britain and the European Union", *Governance 16(2), pp.271–300.*

CIA (2010). Central Intelligence Agency, USA, The world fact book, Viewed on May 08, 2011 https://www.cia.gov/library/publications/the-world-factbook/geos/pk.html.

Deloitte and Touche (Dec2000/Jan2001), "The Citizen As Customer", *CMA Management, 74(10), pp.58.*

CapGemini Ernst and Young (2004). Online Availability of Public Services: How is Europe Progressing? (Web-based Survey on Electronic Public Services: Report of the Fourth Measurement, October 2003), European Commission DG Information Society, 2004.

EGD (2010). E-Government Directorate Government of Pakistan, Viewed on March 02, 2011 http://www.e-government.gov.pk/.

Gartner Research (2001). E-Government: What are Citizens Really Looking For? *Gartner Research Report COM-13-3960, London, 2001.*

Heeks, R. (2001). Understanding e-Governance for Development, *Working paper series: Paper No. 11, Institute for Development Policy and Management*, Viewed on April 25, 2011 http://www.sed.manchester.ac.uk/idpm/research/publications/wp/igovernment/documents/igov_wp11.pdf .

Holden, S. H., Donald F.N., & Patricia D.F. (2003), "Electronic Government at the Local Level: Progress to Date and Future Issues", *Public Productivity and Management Review 26(3), pp. 1–20.*

Im, B. Y. (2001), "Strengthening Government Citizen Connections: A Case Study of Korea", *Special Session, Anti-Corruption Symposium 2001: The Role of On-Line Procedures in Promoting Good Governance, Seoul, South Korea, 2001.*

Internet World Stats (2010), retrieved from http://www.internetworldstats.com/stats3.htm on March 11, 2011.

Kunstelj, M. & Vintar, M. (2004). "Evaluating the progress of e-government development: A critical analysis", *Information Polity, 9 (2004), pp.131-148.*

Layne, K. & Lee, J.(2001), " Developing Fully Functional E-Government: A Four Stage Model", *Government Information Quarterly, 18 (2), pp.122-136.*

Lee, S.M., Tan, X. & Trimi, S. (2005), "Current Practices of Leading E-Government Countries", *Communication of the ACM, 48(10), pp.99-104.*

McDonagh, M. (2002), "E-government in Australia: the challenge to privacy of personal information", *International Journal of Law and Technology, 10(3), pp.327-343.*

Moon, M.J.(2002), " The Evolution of E-Government among Municipalities: Rhetoric or reality?", *Public Administration Review, 62(4), pp.424-433.*

Norris, D.F. & Moon, M.J. (2005), "Advancing E-Government at the Grassroots: Tortoise or Hare?", *Public Administration Review 65 ( 1 ), pp.64–75.*

National IT and Action Plan (2000), Viewed on April 04, 2011 http://www.pseb.org.pk/UserFiles/documents/National_IT_Policy.pdf.

Reddick, C.G. (2004), "Public-Sector Ecommerce and State Financial Management: Capacity versus Wealth", *Social Science Computer Review, 22(3), pp.293–306.*

Robbins, D. and Miller, G. (2004) "Financing E-Government Technology Expenditure to Maintain Equity and Efficiency", *Paper presented at the Annual Conference of the Association for Budgeting and Financial Management, October 7–9, Chicago.*

Schwester, R. W. (2009), " Examining the Barriers to e-Government Adoption", *Electronic Journal of e-Government, 7 (1), pp.113 - 122*, retrieved from http://www.ejeg.com/volume-7/vol7-iss1/Schwester.pdf on May 15, 2011.

Siau, K. & Long, Y. (2009), "Factors impacting E-Government Development", *Journal of Computer Information Systems, Fall 2009, pp.98-107.*

Teo, T.S.H., Srivastava, S.C. & Jiang, L. (2008) "Trust and Electronic Government Success: An empirical Study", *Journal of Management Information Systems, Vol. 25, No.3, pp.99-131.*

UN (2002). Benchmarking e-government: a global perspective – assessing the UN Member States', *United Nations, DPEPA, ASPA, pp. 22*

UN (2003), UN Global E-government Survey, UN, 2003, Viewed on March 21,2011 http://www.unpan.org/egovernment2.asp#survey.

UN (2008), UN E-Government Survey 2008, Viewed on March 06, 2011 http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf.

Vintar, M., Kunstelj, M., Dečman, M. & Berčič, B. (2003), " *Development of e-Government in Slovenia", Information Polity (8), pp.133-149.*

West, D.M.(2003), "Global E-Government 2003", Centre for Public Policy, Brown University, Providence, 2003, Viewed on March 10,2011 http://www.InsidePolitics.org.

West, D.M. (2004), "E-Government and the Transformation of Service Delivery and Citizen Attitudes", *Public Administration Review 64 ( 1 ), pp.15 – 27* .

Yu, J.W.K. (2005), "Electronic government and its implication for data privacy in Hong Kong: Can personal data (privacy) ordinance protect the privacy of personal information in Cyberspace?", International *review of law computers and technology, vol. 19, No. 2, pp.143-163.*

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