E-GOVERNANCE: BRIDGING THE DIGITAL DIVIDE

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ABSTRACT

With the development of information and communication technologies, e-governance has become prime focus in many countries around the world. More and more governments implemented e-governance in order to improve government services, to reduce cost and to increase effectiveness and efficiency in public sector. Unfortunately, these benefits may not be realized by the entire population. A digital divide exists in society, both from an access point of view and from a skills point of view.

In this paper, the problem of digital divide is explored deeply. Also, its effect on e-governance initiatives is discussed. A valuable recommendations and suggestions are stated for bridging or overcoming the digital divide.

Keywords: *e-governance, effectiveness, efficiency, digital divide.*

INTRODUCTION

The "e" in e-governance stands for 'electronic'. E-governance is the application of information and communication technology (ICT) for delivering government services to citizens. The purpose of e-governance is not only the digital transformation of the traditional data and making it reachable via the internet or giving government officials computers or automating old practices to an electronic platform. But it also calls for rethinking ways the government functions are carried out today in order to improve processes and integration.

The importance of e-government is rising as more citizens turn to the Internet as a medium for communication and commerce. Government agencies are responding to this increase in demand by offering more information and services online. Despite substantial growth in e-government spending, there is a segment of society that lags behind this socio-technical revolution. Certain demographic groups are less likely to have computers and Internet access than others. The distinction between the information haves and computer literate versus the information have-nots and computer illiterate is referred to as the digital divide [1]. Unlike organizations in the private sector, government agencies have a charge to make their information and services available to everyone. However, the uneven distribution of computer access and skills biases the governments' ability to make their online services equally accessible and beneficial.

DIGITAL DIVIDE

The digital divide refers to the separation that exists between individuals, communities, and businesses that have access to information technology and those that do not have such access. Social, economic, infrastructural and ethno-linguistic indicators provide explanations for the presence of the digital divide. Economic poverty is closely related to limited information technology resources. An individual living

below poverty line does not afford a computer for him to harness the benefits of e-governance and other online services. As the digital divide narrows, broader adoption of e-governance in the public domain becomes possible.

Economic poverty is not the only cause of digital divide. It can also be caused by the lack of awareness among the people. Even some of the economic stable people don‘t know about the scope of e-governance. Awareness can only help to bring users to that service delivery channel once.

The idea that some information and communication technologies are vital to quality civic life is not new. Some suggest that the Internet and other ICTs are somehow transforming society, improving our mutual understanding, eliminating power differentials, realizing a truly free and democratic world society, and other benefits.

In many countries, access to the telephone system is considered such a vital element that governments implement various policies to offer affordable telephone service. Unfortunately some countries lack sufficient telephone lines.

Literacy is arguably another such element, although it is not related to any new technologies or latest technological devices. It is a very widely shared view in many societies that being literate is essential to one's career, to self-guided learning, to political participation, and to Internet usage. Unfortunately, in the world there are still 757 million adults including 115 million youths who cannot read or write a simple sentence (Table 1).

Indicator	Adults (15 years and older)	Youth (15-24 years)
Literacy rate, total	85%	91%
Literacy rate, male	89%	93%
Literacy rate, female	81%	89%
Illiterate population, total	757 million	115 million
Illiterate population, female share	63%	59%

Source: UNESCO Institute for Statistics, September 2015
Table 1: Global literacy rates and illiterate population for adults and youth

ACCESS DIVIDE

A lack of access to the Internet is a major element of the digital divide. Research consistently identifies ethnicity, income, age and education as significant predictors of access to technology.

Numerous people in developing countries do not have access to information and communication technology, even if the infrastructure is available. The digital divide is ever present and there is a large gap between the educated elite who can afford technology and the uneducated poor who cannot. The divide is not just within countries, but between the developed and developing regions of the world, as is illustrated by the table below:

World Regions	Population (2016 Est.)	Population % of World	Internet Users 30 June 2016	Penetration (% Population)	Growth 2000-2016	Users % of Table
Africa	1,185,529,578	16.2 %	333,521,659	28.1 %	7,288.0%	9.4 %
Asia	4,052,652,889	55.2 %	1,766,289,264	43.6 %	1,445.3%	49.5 %
Europe	832,073,224	11.3 %	614,974,023	73.9 %	485.2%	17.2 %
Latin America/ Caribbean	626,054,392	8.5 %	374,461,854	59.8 %	1,972.4%	10.5 %
Middle East	246,700,900	3.4 %	129,498,735	52.5 %	3,842.4%	3.6 %
North America	359,492,293	4.9 %	320,067,193	89.0 %	196.1%	9.0 %
Oceania/ Australia	37,590,704	0.5 %	27,508,287	73.2 %	261.0%	0.8 %
World Total	7,340,093,980	100.0 %	3,566,321,015	48.6 %	887.9%	%

Table 2: World Internet Usage and Population Statistics June 30,2016 - Update

SKILL DIVIDE

There are two components of the skill divide: technical competence and information literacy. Technical competencies are "the skills needed to operate hardware and software, such as typing, using a mouse, and giving instructions to the computer to sort records a certain way.

Information literacy is the ability to recognize when information can solve a problem or fill a need and to effectively employ information resources." Since our focus in this study is the use of e-government services to complete transactions, we focus on technical competencies. Research found that the old, less educated, poor and minority individuals were more likely to need computer assistance (such as help using the mouse and keyboard, using e-mail, or using word processing and spreadsheet programs). The Pew Internet and American Life project reports have explored the percentage of citizens who use the Internet to send email, make purchases, and search for product and health information as an indirect measure of computer skills.

From ability to usage: A summary of Digital divides There is not just one "divide" but several. In some countries, basic access is the main concern; in others, it is making usage more productive and enhancing ICT skills. Countries also face multiple divides simultaneously. Following is a summary of divides found around the world.	
Ability	The capacity to use available access varies between groups, particularly among people with disabilities; this is a global issue as, according to the UN, about one-fifth of the world's population suffers from a disability
Access	Lack of access to ICT and/or lack of access to the Internet has decreased but continues to be a concern, particularly in developing countries
Age	The elderly are often less comfortable using ICT although they could benefit more, given today's online access to social and health services; youth too can be at a disadvantage
Broadband	Higher speeds are increasingly necessary to reap the full benefits of the digital society; the gap between basic access and broadband access is also an increasingly cited divide
Content	Local content creation and consumption is important as local usage can depend on local solutions; it is also an area linked to both geographical and linguistic divides
Culture	Culture can make a difference in access rates; for example, the former West Germany has higher access rates than the former East Germany
Education	Low education and literacy rates are perhaps the most commonly cited digital divides; it affects the poor, immigrant and disabled populations, among others
Gender	There are sometimes differences in access and usage by gender
Income	The division between rich and poor is as fundamental within countries as much as between them; affects affordability of ICT
Language	Often, there is not enough content in local languages; according to the UN, more than 80% of all websites are in English, yet it is the native language for only one-third of Internet users
Location	Rural and remote areas are often at a disadvantage compared to their urban counterparts
Measurement	There is a divide between countries in how they measure and keep track of progress in closing divides; what gets measured tends to get done

Mobile	Many countries rely on mobile devices to bridge the access gap but this can also introduce new forms of divides both in terms of technology and speed—second generation (2G) compared with 3G and 4G—as well as usage patterns
Skills	There are differences in the skills levels of people when using various ICT; overlaps with education and usage divides
Usage	Increasingly, what people do with their access, or "useful usage", is a key divide in using ICT productively

BRIDGING THE DIGITAL DIVIDE

Below are some recommendations and suggestions that propose methods for bridging the digital divide

Focus on Digital Literacy: Training on how to use the Internet is critical to closing the digital gap. The digital literary courses at local public libraries are the most effective elements in encouraging broadband adoption. Through the training, many will come to realize how integral the Internet had become to everyday tasks like paying bills, applying for jobs, searching for medical information and helping with kids' homework.

Improving ICT Infrastructure:

Telecommunications and the IT infrastructure is the key to provide universal and affordable access to information to citizens scattered geographically. The challenge that we face in ICT for development is designing and building technologies and networks that are suited for the needs of our citizens. Despite the growth of Internet, India has to provide a robust telecommunication infrastructure with suitable, sufficient and reliable bandwidth for Internet connections along with necessary hardware and software. Faster network with sustainable funding for their necessary updating is the need of the hour

Provide computers: While digital literacy was key, free or low-cost computers removes another significant barrier. The computers offer a good incentive for taking a digital literacy course, and maintaining skills.

Remove other financial barriers: Internet providers often require security deposits and a credit check before handing out equipment like routers and modems – making it harder for low-income citizens get service. Nonprofits should focus on finding a way to pay for those upfront costs.

Encourage intelligent, cross cultural-religious-economic-racial-gender, etc. computer use: With computers we see the quality of one's ideas before we see the body they are in or the lifestyle they live. The opportunity to build bridges is too great to ignore.

Local language and local content development: A related aspect is to design and deliver appropriate and localized content through the kiosks as at present the content provided is mostly standardized content. Serious efforts are needed to make the content relevant and localized to attract a larger number of users. Information network will be meaningful in a rural context only if there are local content. There is a requirement of local language accessible software that caters to the needs of the local citizens. The customization will help the government to know the citizen's need. Government has to ensure that the disadvantaged groups and communities are provided online content and services that are potentially usable.

Give recommendations to software developer to develop products with more non-textual representation in minority languages, and for teaching English as a second language. Create partnerships to identify areas for product

development and incentives for companies to design products specifically for excluded groups.

Audit disadvantaged communities to establish their needs and requirements in terms of content, and promote initiatives that involve them in directly creating materials.

The rural areas must be given priorities in the e-government and information and communications technology initiatives in order to prevent the gap between them and urban areas from being increased. Reinforce investment in infrastructure and policy support of rural areas.

CONCLUSION

The digital divide commonly understood as the gap between information and communications technology 'haves' and 'have-nots'. Digital divide becomes more popular after the diffusion of internet.

As the range of information and communications technology and its capabilities increase, what constitutes a digital divide and how to measure it become unclear. It is possible to dispute the size, characteristics and reality of its existence, and hard to clearly measure any progress made in reducing disparities. Clearer definitions and measurement criteria are needed in order assess the effectiveness of policies and initiatives. The absence of such criteria can leave policy initiatives open to criticism and difficult to defend.

It is clear that the lack of connectivity is not the only cause of digital divide. Low incomes, illiteracy, lack of training, inability to buy the latest technological innovation or insufficient income to pay for access fees, prohibit people from participating in the new economic realities and also from using online government services. Despite the fact that online access fees have come down considerably, it does not necessarily mean that the low income family can afford to be connected. This is an area where governments might want to consider tax breaks for people below a certain financial threshold who want to be connected or have a computer in the home that is connected to the Internet. Such an incentive would be similar to many initiatives now offered by governments.

It is concluded that digital divide is one of the major challenges for the e-government. Hence, the governments are committed to closing the digital divide inside their communities. They need to ensure that all their people have the opportunity to access and learn about new information and communications technology. Connecting communities is the first government strategy to support community access to information and communications technology.

Of course this will not happen overnight but rather it will take several years before the combined investment in information and communications technology, organization and skills delivers the full benefits. This is turn will allow some countries to reduce the digital divide.

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