Challenges of E-government Implementation in India

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ABSTRACT

E-Government is the use of information and communication technologies (ICTs) to improve the activities of government agencies. The e-readiness index of India is found to be low as compared to other countries. There are various challenges for the implementation of e-government in India. These challenges are like low literacy, low per capita income and limited financial resource. In this paper a conceptual framework is suggested for the effective implementation of e-government in India. The conceptual framework can be further validated in the real life situation.

Keywords: e- government, per capita income, literacy level, Gross Domestic Product.

1. Introduction

Electronic government or E-government refers to the delivery of national or local government information and services via the Internet or other digital means to citizens or businesses or other governmental agencies *(*Palvia and Sharma, 2007*)*. E-government is the use of information technology to provide citizen and organizations with more convenient access to government information and services and to provide delivery of public services to citizen, business partners, and those working in the public sector. In other words E-Government is the use of information and communication technologies (ICTs) to improve the activities of public sector organizations. E-government has very significant role in the development of a nation. It has brought revolution in the governance of the government. However according to Economist Intelligence Unit the e-readiness index of India is low. Therefore, the implementation of e-government is very challenging. It is because of the low level of literacy, low per capita income and insufficient infrastructure for the implementation of e-government.
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2. Components E-government Program in India

Over the past decade there have been e-government initiative in the country at national state and district level. Some of them are highly successful and are implemented across the country and some of them are not successful. Hence there is a need of taking a holistic view towards the entire e-government initiative across the country.

The national e-government programme is conducted to effectively implement the e-government in India. The component of this programme is as follows:

- *Awareness and communication:* The success of e-government plan highly depends on the awareness about the programme. Therefore the Government of India disseminates the information

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about the e-government plans.

- *Assessment:* The Government of India is invest significant part of its scare resource in e-government projects. Therefore it is necessary that a robust assessment strategy is devised for the existing e-government projects.
- *Capacity Building:* The capacity building guidelines take into account of the fact that different states are at different levels of readiness for e-governance and have different levels of aspiration. The role of the capacity building team is at the programme level to provide leadership and vision including policy formulation, preparing roadmaps, prioritization, preparing frameworks and guidelines, monitoring progress & capacity management.
- *Common Services Centre:* Common Services Centre (CSC) scheme is the most prominent face of National e-Government Programme. Specific support is being provided for this scheme. The scope of support includes Identification of core components of CSC Scheme; Frame problem agendas related with application software, legal instruments, essential backend for CSC etc.
- *Infrastructural and Technical:* This cell provides support to the Department of Information Technology in implementing those projects and components of e-Government.
- *Monetoring and Evaluation:* The Program Management, Monitoring and Evaluation Unit of the Programme Management Unit for National e-government programme develop a comprehensive MIS at programme level and track the physical and financial progress of various projects.
- *Project and Financial Appraisal:* The cell identify resources to provide assistance in project conceptualisation, development and implementation to various implementing agencies.
- *Research and Development:* The e-Governance R&D team provides consultancy and research inputs in the areas of e Governance Technical Standards including interoperability standards e-Government Enterprise architecture frameworks, Information Security etc.

3. India's Position on E-readiness

E-Readiness is the ability to use Information and Communicat ion Technologies (ICT) to develop one's economy and to foster one's welfare.Each year, the Economist Intelligence Unit produces a ranking of e-readiness across countries, based on six pillars of e-readiness: connectivity & technology infrastructure, business environment, social & cultural environment, legal environment, government policy & vision and consumer & business adoption. United states is at 1st position with e-readiness score 8.95 out of 10 followed by Australia and United Kingdom (Table 1). India is at 54th position with e-readiness score of 4.96.

Table 1: Economist Intelligence Unit e-readiness rankings in 2008 of select countries

Sl. No.	Country	e-readiness score (out of 10) 2008	Rank 2008
1	United States	8.95	1
2	Australia	8.83	4
3	United Kingdom	8.68	8
4	Switzerland	8.67	9
5	Japan	8.08	18
6	Republic of China	8.05	19
7	India	4.96	54
8	China	4.85	56
9	Russia	4.42	59
10	Sri Lanka	4.35	60
11	Pakistan	4.10	64
12	Iran	3.18	70

(Source: http://en.wikipedia.org/wiki/E-readiness)

4. Challenges for implementation of e-government in India

Implementation of e- government has changed the way of living of the people in many countries. However, in India the implementation of e-government is little difficult because of its developing status. The government agencies find lot of difficulties in the smooth implementation of e- government in India because of low literacy, low per capita income, insufficient infrastructure and limited financial resource.

4.1 Low literacy

Literacy is defined as the ability to read and write with understanding in any language. A person who can merely read but cannot write is not classified as literate. Any formal education or minimum educational standard is not necessary to be considered literate. Georgia is the country having 100% literacy rate and at 1st rank in the list of literacy (Table: 2). Literacy level of India is 61% and ranked 147 in the list of and Mali is having literacy level 24% , is the lowest level in literacy level (176).

Table 2: Literacy rate of select countries.

Sl. No.	Country	Literacy rate	Rank
1	Georgia	100.0	1
2	Cuba	99.8	2
3	Russia	99.4	12
4	Australia	99.0	18
5	Canada	99.0	18
6	Germany	99.0	18
7	Japan	99.0	18
8	Switzerland	99.0	18
9	United Kingdom	99.0	18
10	United States	99.0	18
11	China	90.9	86
12	Sri Lanka	90.7	87
13	Swaziland	79.6	124
14	India	61.0	147
15	Pakistan	49.9	160
16	Nepal	48.6	162
17	Mali	24.0	176

(Source: http://en.wikipedia.org/wiki/List_of_countries_by_literacy_rate)

4.2 Low per capita income

Per capita income means how much each individual receives, in monetary terms, of the yearly income generated in the country. This is what each citizen is to receive if the yearly national income is divided equally among everyone. Per capita income is usually reported in units of currency per year. Globally Bermuda have the highest per capita income followed by Luxembourg. India is at 160th rank in with 530 US$ average per capita income (Table 3).

Table 3: National Average Per Capita Income of select countries

Sl. No.	Country	Per Capita Income in US$	Ranking
1	Bermuda	N/A	1
2	Luxembourg	43,940	2
3	Switzerland	39,880	4
4	United States	37,610	5

5	Japan	34,510	7
6	United Kingdom	28,350	12
7	Germany	25,250	22
8	Canada	23,930	24
9	Australia	21,650	27
10	Swaziland	1,350	127
11	China	1,100	133
12	Sri Lanka	930	140
13	India	530	160
14	Pakistan	470	166
15	Bangladesh	400	174
16	Nepal	240	192
17	Ethiopia	90	208

(Source: http://www.success-and-culture.net/articles/percapitaincome.shtml)

4.3 Limited financial Resource

The Gross Domestic Product (GDP) is one of the measures of national income and output for a given country's economy. GDP is defined as the total market value of all final goods and services produced within the country in a given period of time (usually a calendar year). GDP of a country is the measure of its financial strength. United states is having the highest GDP in the world followed by Japan, Germany, China and United Kingdom (Table 4). India with GDP 1,098,945 million US $ is at rank 12th (Table 4).

Table 4: GDP of select countries in 2007 given by International Monetary Fund.

Sl. No.	Country	GDP (Million US $)	Rank
1	United States	13,843,825	1
2	Japan	4,383,762	2
3	Germany	3,322,147	3
4	China (PRC)	3,250,827	4
5	United Kingdom	2,772,570	5
6	France	2,560,255	6
7	Canada	1,432,140	9
8	Brazil	1,313,590	10
9	Russia	1,289,582	11
10	India	1,098,945	12
11	Australia	908,826	14
12	Switzerland	423,938	21
13	Pakistan	143,766	47
14	Sri Lanka	30,012	78
15	Kiribati	67	179

(Source: http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(nominal))

5. A Strategic framework for implementation of e-government may be helpful

On the basis of the study of e-readiness in India and the challenges for implementation of e-government in India a conceptual framework for the effective implementation of e-government in India is suggested. This conceptual framework is divided into five stages:

Vision for e-government implementation
In the first stage the vision for the effective implementation of e-government has to be determined. In this level it is planned that to what extend the e-government can be implemented.

Assessment of e-readiness
To fulfill the vision the e- readiness of India should be assessed. It is compared with respect to other countries. The e- readiness reveals the position of India with respect to the other countries.

Overcoming challenges of e-government
In the assessment process the challenges for effective implementation of e-government will be exposed. These challenges are low literacy levels, low per capita income and limited financial resource in India. The challenges should be overcome for the effective implementation of e-government.

Developing the environment for e-government:
The positive environment needs to be developed to meet the vision of e- government implementation. This environment is internal environment and external environment.

Implementation of e-government:
Then finally the e-government should be implemented. This is the final step of the conceptual framework.

These steps are summarized in a conceptual framework, which is shown in figure 1. This is a conceptual framework and can be validated in the real life situation.
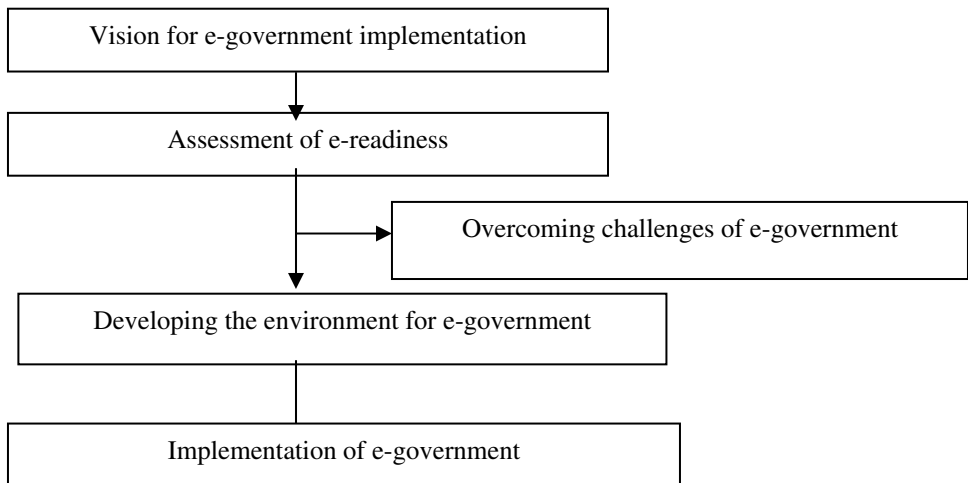

Figure 1: A conceptual framework for e-government implementation in India.

6. Concluding Remarks
According to Economist Intelligence Unit the e-readiness index of India is low. There are various challenges for the implementation of e-government in India. These challenges are like low literacy, low per capita income, and limited financial resource. A vision is required to implement the e-government in India. To meet the vision the challenges in the implementation of e-government should be overcome. Then the environment needs to be developed for the effective implementation of e-government in India. A

conceptual framework is developed for the effective implementation of e-government in India. This conceptual framework and can be further validated in the real life situation.

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