

# Actions towards implementing e-government in Bangladesh: Are the change agents ready?

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## Abstract:

E-government has been considered as an agenda for implementation by the government of many countries. The current research has attempted to assess current level of awareness about e-government initiatives among government employees in different departments of the Bangladesh government. This research is the result of a survey regarding the perception of a recent e-government initiative of the Bangladesh government named e-Citizens Service Application among government officials. This paper also tries to identify the agency which will be responsible for promoting e-government in Bangladesh. It outlines possible drivers who will take e-government implementation into a successful shape and also identifies possible barriers towards e-government implementation.

## Key words:

e-Government, developing country, digital divide, Bangladesh, e-citizens, public sector

## 1. Introduction

Both the public and private sectors have started to experience major changes in economies because of information and communication technologies since 1990 (Johnson, 2001). Use of electronic services like online-information procurement or

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inquiry possibilities which are made available by administrative authorities and political institutions for citizens and businesses are some examples of changes. Those changes like development of e-Government can affect positively the relationship between an administration, citizens and business (Barns et al: 2002). The key players responsible for conceptualization of successful implementation of various e-government applications are government officials who are also termed as change agents (Metaxiotis & Psarras, 2004). This paper is based on a study conducted among government employees to find out the overall picture of their state of readiness towards e-government initiatives. The first step for any changes to take place is to understand how and to what extent the key players are all aware of e-government application trends in Bangladesh. This paper will look at government employees at the advocacy level who will continue to work with the electronic government implementing process. Technical aspects of the e-government project can easily be transferred from other countries and also with the help of local sources (Schedler and Scharf, 2001). However, government employees are the ones who will ultimately take e-government applications to the citizens and continue to work with them (Metaxiotis & Psarras, 2004; Schedler and Scharf, 2001).

In Bangladesh, the costs of accessing government services and even collecting information are very high. Corruption and inefficiency in bureaucratic system are common problems in Bangladesh (Jamil, 2002). This cost of accessing information includes cost of transportation and unofficial service costs. While most government forms are free, access to those forms is somewhat difficult since this require paying identified brokers waiting in front of the relevant offices issuing the forms. To address this issue, the government recently has taken several steps to introduce e-government services to facilitate easy access to government information and services (MOSICT, 2002). However, despite being technically sound, many eGovernment projects in developing countries have not been successful (Heeks, 2003). The indicators used for measuring success used in this research are awareness of the initiative and use of the initiative. The project used as an example in this study is the Bangladesh government e-Citizens Service Application ([www.forms.gov.bd](http://www.forms.gov.bd)) portal. Many important government forms are downloadable from this portal. The current study has been conducted to assess readiness in terms of awareness about e-government among government officials of Bangladesh.

## 2. Origin and Background of the Study

Rigorous studies have been made in assessing the technological capacity of the government for implementing e-governance. Many government and non-government agencies have also conducted several project-based studies for

technical factor assessment (Taifur, 2003). Such studies are focused on educating staff of those agencies to new technologies related to e-government. However, the success of e-government largely depends on the government along with "e-tools". This overwhelming focus on e-government has provided the motivation to do research on the non-technical environment of Bangladesh in respect to e-government implementation. In fact, there is a real shortage of evaluation of non-technical factors that contribute in technology transfer. One case that has been presented by Heeks (2003) has to do with the national databank project in Bangladesh. The Planning Commission of Bangladesh has taken an initiative to make official statistics available to government ministries, NGOs, and general stakeholders for government and public use. The annual investment cost varies but for network infrastructure alone it spent US\$440,000 during 1999/2000. However, this project was a total failure as it was unable to contribute to any development in communication between inter-ministries. LAN was utilized only within the Planning Commission and no statistical data was visible on its use (Heeks, 2003). Heeks identified lack of human resource practice, lack of leadership and poor government-supplier relations as major reasons of this failure. Improving the awareness of eGovernment among government employees will result in a greater investment of financial and human resources and may reduce the likelihood of eGovernment failure (MOSICT, 2002; Hossan & Sikder, 2006; Heeks, Mundy & Salazar, 1999). The experience of the Bangladesh Garments Manufacturers and Exporters Association (BGMEA) in implementing a National Portal for the Garments Industry ([www.bangladeshgarments.info](http://www.bangladeshgarments.info)) is an example where despite having all the technical and financial capabilities the portals failed to achieve the desired success due to non-technical barriers among member companies. In fact, it is impractical to believe that unlike technology, management strategies of a country can be copied and directly transferred to another country. However, the technological requirement for implementing e-government is quite simple. Moreover, the investment requirement for e-government implementation is also affordable either through internal resources or from the support of international community or both. Despite enjoying those advantages, e-Government implementation in Bangladesh is yet to gain momentum (As\_Saber, Srivastava, & Hossain, 2006). Issues like perception of both government officials and citizens towards e-government services have been ignored in any kind of study undertaken on the subject.

### **3. Objective of the study**

The main objective of this study is to understand the extent of the basic level of awareness that exists among employees of the Bangladesh government. However,

on attempt has also taken to find out government employes's perception on how to progress in the way towards implementing e-government in Bangladesh.

#### 4. Methodology

*Definition:* Okot-Uma (2001) has defined e-government as "the processes and structures pertinent to the electronic delivery of government services to the public". Drucker (2001) has defined e-government as "the use of emerging information and communication technologies to facilitate the processes of government and public administration. In reality, though, e-government is really about choice. It is about providing citizens with the ability to choose the manner in which they wish to interact with governments. And it is about the choices governments make about how information communication technologies will be deployed to support citizen's choices." (Drucker, 2001). In this study, e-Government refers to the electronic delivery of government information and services to citizens.

*Selection of sample:* Non-probabilistic judgmental sampling (Malhotra, 2004) was used to select population elements among government employees of Bangladesh. A total of 200 units of questionnaires were used targeting government officials. 105 questionnaires have been qualified and 100 have been selected for this study.

*Questionnaire Structure:* There were 10 questions in the questionnaire. The first question asked was whether respondents had heard about e-government and the second question required them to mention name of any project if the answer of the first questions had been positive; otherwise, they were moved to the third question. The third question was about the procured benefits of e-government initiatives. The fourth and fifth questions were to find out the role of e-government in reducing corruption and increasing efficiency in government services. The sixth question was very specific: to identify the level of awareness that exists regarding e-citizens service application. This was followed by a question on the perceived benefits of that initiative. The eighth question was to identify the authority responsible to promote e-government initiatives in the view of government officials. The ninth question involved giving a list of factors considered significant for successful implementation of e-government. The tenth question involved working with a list of factors constraining implementation of e-government. Respondents were allowed to select multiple answers for the ninth and tenth questions.

*Collection of data:* The primary data were collected using the survey method. Personal interviews were conducted to pretest the questionnaire. Formal face-to-face interviews were conducted through a semi-structured questionnaire. A five point Likert scale was used to measure perceptions. Respondents were from 45 different government agencies including Bangladesh Parliament, Bangladesh Railway, Bangladesh Small and Cottage Industries Corporation, Central Bank of Bangladesh, Dhaka Electric Supply Authority, Dhaka Shishu Hospital, Dhaka University, Dhaka Wasa, Government Bank, Local Government Engineering Department, Local Government Rural Department, Ministry of Establishment, Ministry of Agriculture, Ministry of Communication, Ministry of Education, Ministry of Foreign Affairs, Ministry of Forest, Ministry of Gas, Mineral and Energy, Ministry of Home Affairs, Ministry of Health and Family Welfare, Ministry of Information, Ministry of Jute and Textile, Ministry of Land, Ministry of Planning, Ministry of Science and Technology, Ministry of Social Welfare, National Board of Revenue, etc (Appendix Table 2). The maximum number of respondents from a single department was 10 and most departments had 1 to 3 respondents each.

*Processing and analysis of data:* Data collected through the survey was coded by the researcher and analyzed using SPSS. Interpretation of SPSS results were carried out by the researcher.

## 5. Limitations of the study

The factors used in this study were identified and developed based on the factor model which has been developed in the broader global context. There is scope of further identification of factors specific to Bangladesh. Due to limited time and lack of availability, Focus Group Discussion (FGD) could not be conducted. There is a scope of FGD with government employees to cross-check the findings of this study. Other major constraint faced by this study was lack of resources. The nature of this study perhaps demanded more extensive investment in time and resources. Moreover, this study assumed all the respondents of the same cluster possessed the same level of technological background.

## 6. Analysis and discussion of survey findings

The analysis of the survey result begins by discussing the current state of awareness that exists among the government employees of Bangladesh about e-government. The second section focuses on how government employees perceive e-government initiatives. The contributions of e-government has been measured in four dimensions, including overall benefit of the ESA, contribution towards

increasing efficiency, and reducing corruption in delivering government services to the citizens. The third section of the analysis focuses on developing a model for promoting e-government in Bangladesh. The last two sections focus on the factors that are either important for successful e-government implementation or are working as barriers to e-government implementation. The sample e-government project used in this study is Bangladesh Government's recent e-government initiative, e-Citizen's Service Application Portal (ESA) ([www.forms.gov.bd](http://www.forms.gov.bd)). Many important government forms are downloadable from this portal. This project is managed by the Prime Ministers office. At the beginning of the interview, respondents were asked about the project. If they were unaware about its workings, the investigator would show them the printout of the web portal and brief them about the project and general e-government concepts.

Professor Richard Heeks of Manchester University in his factor model has identified several factors for e-Government project successes and failures in developing countries (Heeks, 2003). In the questionnaire, factors for success and failure options were replicated from the Factor Model developed by Professor Richard Heeks. The definition of the factors as defined by Heeks is listed below (Heeks, 2003);

### *Success Factors*

*Internal political desire* has been defined as the drive from key government officials, including relevant ministers, for reform and achievement of e-government goals.

*Overall vision and strategy* stand for the overall vision and master plan for good governance and for e-government, identifying the target, and viewing IT as a means and not the end, and integrating IT with broader reform objectives

*Dominance of politics/self-interest*: the change agents who will take the project forward may have self-interest and/or there may be politically dominant situations favorable to the project initiative.

*Strong change management* which includes but is not limited to leadership with a project champion, use of incentives to create commitments and ownership of e-government project, and stakeholder involvement to build support and to minimize resistance.

*Effective project management* includes defining clear responsibilities, having good planning and consideration of risk, putting in place good monitoring and control systems, ensuring good organization of resources, and managing

partnerships between public agencies, and undertaking public-private joint initiatives.

*Competencies among the officials involved with this project* raise the issue of the capacity and knowledge level among government officials about e-government concepts and practices.

*Adequate technological infrastructure* includes computerization system, telecom policies, ICT policies etc.

*Other factor*, being the last item, was given to list any factor that respondents believe important but had not been presented as an option.

### *Failure factors*

Absences of success factors are presented as the reasons for failure of e-government projects in Bangladesh. For example, lack of internal political desire was the first option as the failure factor. Moreover, number and pattern of options specified as the failure factors were same as the success factor, including others as the last option.

### *6.1 State of Awareness about e-government and ESA*

The first issue was to identify the level of awareness among government officials about any e-government initiative of Bangladesh government and also about the e-Citizens Service Application portal (ESA).

		General Frequency	General Percent	ESA Frequency	ESA Percent
Valid	Yes	21	21.0	20.0	20.0
	A little bit	27	27.0	26.0	26.0
	No	51	51.0	51.0	51.0
	Total	99	99.0	97.0	97.0
Missing	System	1	1.0	3.0	3.0
Total	100.0	100.0	100.0	100.0	

*Table 1: State of Awareness about e-government*

Table 1 reveals that majority of the respondents were unaware about any e-government initiatives including the e-Citizens Service Application portal and only around 20 percent respondents were aware of them. Of them a significant portion of the respondents had heard about this particular initiative but had

never visited this portal. In figure 1, the level of awareness about the general concept of e-government has been plotted with level of awareness about ESA for the sake of comparison. However, there was no significant difference among the awareness level of general e-government and ESA.

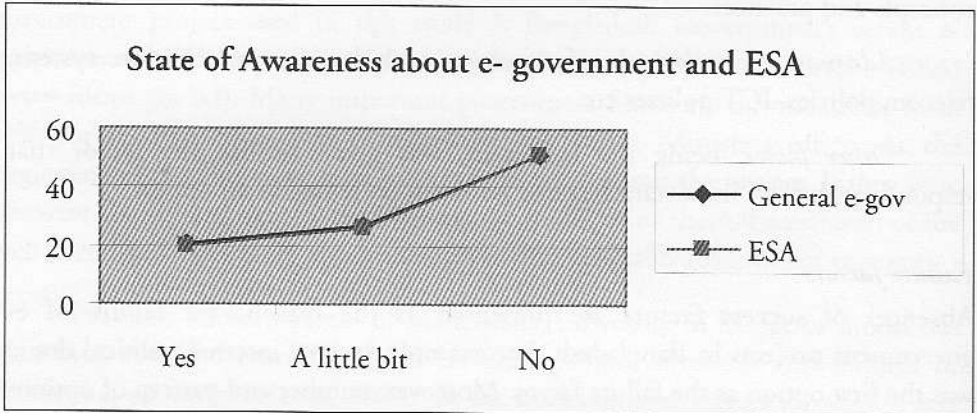


Figure 1: Awareness about e-government initiative and e-Citizens Service Application Portal

### 6.2 Perception about benefit of e-government and ESA

The second issue was to understand the perceptions existing among government officials about the benefits of e-government initiative to the citizens. Benefits were categorized into four categories. The first one was overall benefits of e-government, the next one was specific to the example used in this research on e-Citizens Service Application (ESA). The other two dimensions were about contributions of e-government to reduce corruption and increase efficiency in delivering government services to citizens.

	General Percent	ESA Percent	Reduce Corruption	Increase efficiency
Disagree	0	0	4.0	0
Neither agree nor disagree	6.0	6.0	11.0	1.0
Agree 51.0	52.0	57.0	50.0	
Strongly agree	41.0	42.0	27.0	49.0
Total	98.0	100	99.0	100.0

Table 2: benefits of e-government

According to Table 2, it is clear that about 90 percent of respondents hold very positive views regarding the benefits of e-government. About 95 percent



respondents agree that citizens will be benefited by introducing e-government programs and ESA is also beneficial to citizens. On the contrary, only 6 percent of respondents were still undecided, i.e. neither agreed nor disagreed or adopted neutral positions regarding the benefits of e-government. More interestingly, no one among the respondents expressed negative perceptions about the benefits of e-government initiatives. However, on the question of reducing corruption, there was somewhat less expectations that e-government will help to reduce corruption compared to other areas of benefits. While 85 percent respondents believed that e-government would help reduce corruption, around 15 percent either disagreed or were unsure about its possibilities. On the issue of increasing efficiency in service delivery, 99 percent respondents believed that e-government would increase efficiency in delivering government services to citizens.

### 6.3 Responsibilities to promote e-government initiatives

Development of e-government applications is only half of the work necessary for successful implementation of e-government in any country. The most important other half is the promotion of e-government applications to citizens and among government employees. Opinion was sought amongst government officials regarding the authority responsible for promoting e-government initiatives in Bangladesh. From Table 3, it is evident that 44% of the respondents thought that private-public partnership initiative was essential to promote e-government programs. About 40 percent of the respondents thought that the government should take the responsibility to promote this type of e-government initiative amongst citizens, including government employees. On the other hand, only 3 percent respondents thought that international development agencies should promote e-government initiatives in Bangladesh.

Authority	Frequency	Percent
Government agencies	40	40.0
Private agencies	10	10.0
International development agencies	3	3.0
Private- public initiative	44	44.0
Others	3	3.0
Total	100	100.0

Table 3: Responsible authority for promoting e-government

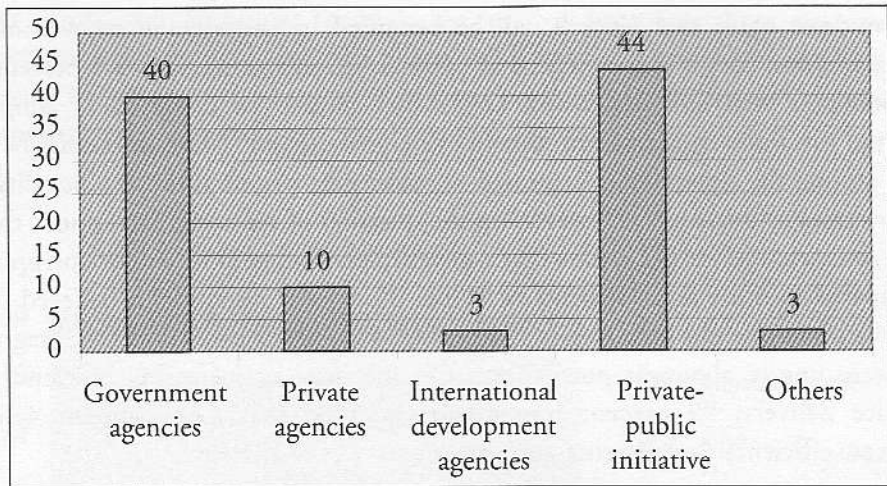


Figure 2: Responsible Agency for e-government (Hossain et al, 2006)

#### 6.4 Factors for implementing e-government in Bangladesh

The change agents were asked to rank the factors crucial for successful implementation of e-government in Bangladesh. There were 8 factors listed from Heek's factor model. Respondents could select more than one factor if they felt that they were important. According to Table 4, the most important factor for successful implementation of e-government were internal political desire; technological infrastructure secured the second place, lagging only 0.7 percent behind the top factor; and overall vision/strategy ranked third. On the other hand, less important factors, according to the opinion of respondents, are dominance of politics/self-interest, change management and competencies among officials.

Factor Name	Count	% Responses	RANK
Internal political desire	27	19.7	1
Overall vision/ Strategy	22	16.1	3
Dominance of politics	17	12.4	5
Strong change management	13	9.5	6
Efficient project management	18	13.1	4
Competencies among officials	13	9.5	6
Adequate technological infrastructure	26	19.0	2
Others	1	0.7	7
Total responses	137	100	

Table 4: Success factors for implementing e-government in Bangladesh

### 6.5 Failure factors in implementing e-government in Bangladesh

To understand the factors that create barriers in the way of successful implementation of e-government in Bangladesh, eight factors were listed from Heek's model. The respondents could have picked more than one factor. According to Table 5, the most important reasons for the failure of e-government implementation are lack of internal political desire, inadequate technological infrastructure and lack of overall vision/strategy. On the other hand, less important barriers are dominance of politics/self interest, change management and poor project management.

Factor Name	Count	% Responses	RANK
Lack of internal political desire	31	21.4	1
Lack of overall vision/ Strategy	22	15.2	3
Dominance of politics	12	8.3	6
Poor change management	12	8.3	6
Poor project management	17	11.7	5
Lack of competencies	20	13.8	4
Inadequate technological infrastructure	29	20.0	2
Others	2	1.4	7
Total responses	145	100.0	

Table 5: Failure factors in implementing e-government in Bangladesh

### 6.6 Factor weights

In this section, importance of each individual factors were assessed to identify their roles in the e-government implementation process. Figure 3 demonstrates how critical each factor was for both success and failure. On an average, 20% respondents considered internal political desire the most important factor for success and absence of strong political desire that makes a project unsuccessful. Almost similar weights were given to the importance of technological infrastructure for implementation of e-government processes. Change management ranked the lowest among all factors considered for both success and failure. Overall vision and strategy was placed as the third most important factor for e-government project implementation.

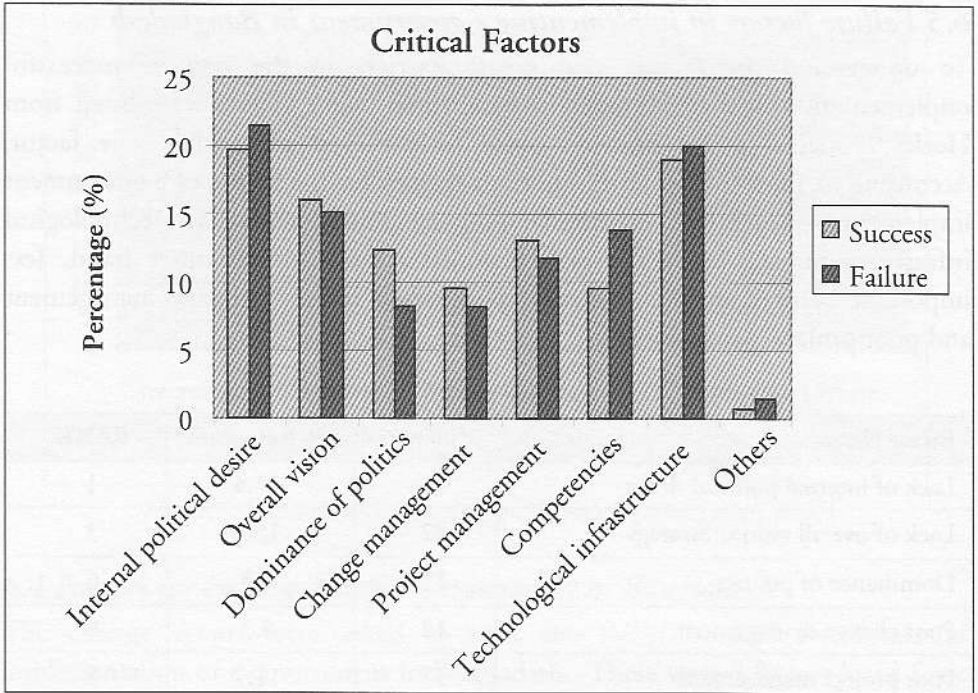


Figure 3: Critical Factors

## 7. Conclusion

The paper has tried to find significant information about the state of understanding that exists regarding e-government activities in Bangladesh among change agents. Awareness about e-government initiatives in Bangladesh is still far lower than is commendable among government employees. Half of the government officials covered under the current study is un-aware of any e-government initiative in Bangladesh while only around 20 percent of the respondents had understanding of e-government applications. Although level of awareness among government officials was very low, they held a very positive attitude about the consequence of e-government in delivering service to citizens. About 90 percent of the respondents believe e-government will bring benefits to citizens, help reduce corruption and increase efficiency in government services. From the study it is clear that the government in partnership with private organizations should play the role of a driver to promote e-government initiatives in Bangladesh. International development organizations can provide technical assistance in implementing e-government projects in Bangladesh but they have a limited role to play in the promotion of any e-government initiative within Bangladesh. The most important factors for successful implementation of e-government are internal political desire, technological infrastructure and overall

vision/strategy as perceived by the government officials of Bangladesh. According to the research, the most crucial factors causing the failure of e-government implementation are lack of internal political desire, inadequate technological infrastructure and lack of overall vision/strategy.

In conclusion, it can be said the government employees hold a very positive attitude towards e-government applications in Bangladesh. This indicates that they are ready to accept e-government. However, their level of awareness is low due to absence or improper awareness- building programs. Among the most important factors, technological infrastructure can be developed through technology transfer as this is already in place in many countries. The crucial factor that should be addressed immediately for effective implementation of e-government is creation of leadership. Building such leadership will formulate clear and sound policies and propel internal political forces towards implementing e-government in Bangladesh.

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