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The Viability of Union Digital Center under Public-Private Partnership towards E-governance in Rural Bangladesh

Reza, Mahmud Ali Masud

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**The Viability of Union Digital Center
under Public-Private Partnership towards
E-governance in Rural Bangladesh**

PhD Dissertation

Mahmud Ali Masud Reza



**Institute of Bangladesh Studies
University of Rajshahi, Rajshahi
June 2016**

The Viability of Union Digital Center under Public-Private Partnership towards E-governance in Rural Bangladesh

A dissertation submitted to Institute of Bangladesh Studies, University of
Rajshahi in partial fulfillment of the requirements for the award of the
degree of Doctor of Philosophy in Social Science

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**Institute of Bangladesh Studies
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June 2016**

Certificate

This is certified that the thesis entitled “The Viability of Union Digital Center under Public-Private Partnership towards E-governance in Rural Bangladesh” that is being submitted by Mahmud Ali Masud Reza for the award of the degree of “DOCTOR OF PHILOSOPHY” in Social Science to the Institute of Bangladesh Studies, University of Rajshahi, Rajshahi is a record of bonafide work carried out by him under my supervision and guidance. The thesis, in my opinion, is worthy of consideration for the award of degree of PhD.

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Declaration

I, hereby affirm that the work presented in the thesis entitled, “The Viability of Union Digital Center under Public-Private Partnership towards E-governance in Rural Bangladesh” submitted for the partial fulfilment of PhD Degree, is exclusively my own and there is no collaborators. It has not been submitted anywhere else for any other degree, diploma or publication.

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PhD Fellow, Session: 2012-2013
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Acknowledgement

Primarily, I would like to thank the almighty Allah who created and gave me the opportunity to be educated through acquiring knowledge, provided me courage and strength for preparing this dissertation. To complete this thesis, I have taken assistance from a number of advisors, colleagues, friends, organizations and groups.

First of all I render my gratitude and appreciation to my supervisor Professor Md. Fakrul Islam, PhD for his intellectual guidance, co-operation, and all out support to launch such a research from initial phases of framing ideas and designing structures of the research project to the final product as dissertation. It was his sheer graciousness to accept me as a fellow and to extend all forms of assistance in conducting the research.

I must note my unbounded appreciation to Professor Dr. Swarochish Sarker, Director of Institute of Bangladesh Studies (IBS) for his continuous inspiration and cooperation all long. I am also indebted to him for his friendly approach and scholarly support in completing my research work timely.

I also acknowledge the other faculty members of IBS Professor Dr. M. Zainul Abedin, Professor Dr. Jakir Hossain, Dr. Mohammad Najimul Hoque and Dr. Md. Kamruzzaman for their meaningful suggestion and cooperation. I am also grateful to the staff of IBS for their supports and cooperation and especially thanks to Md. Ziaul

Alam, Secretary of IBS and Md. Monirul Haque Lenin, Assistant Secretary for their sincere support and cooperation. I am indebted to the University Grant Commission (UGC) for institutional and financial support respectively that allowed me to have the opportunity of the study from the Ministry of Education (MoE) and Directorate of Secondary and Higher Education (DSHE).

I offer my cordial gratitude to my parents—Md. Jafar Ali Sarker and Mahmuda Khanam—who have shown me a good dream of bright future and brought me up in the way what just I am. I thank my wife Monira Khanam who wanted me to be a PhD degree holder and was ready to be deprived of the time and attachment that was hers. My little lovely children—Musanna Raiyan and Muaz Rayeed have been deprived of the due time, attention and affection for my research work. May Allah bless them and make them *Imamul Muttaqin*. I am also thankful to my mother in law Samsunnahar, and Father in law Md. Jalal Uddin who extended their helping hands to my family during my research work. Without their contributions it was not possible to complete this tremendous task.

A large number of IBS fellows, colleagues, teachers of RU and well-wishers and friends of mine in particular Md Khaled Hossain, Md. Abdullah Al Mamun, Toab Hossain, Md Haris Uddin Md Shamim Ahsan and Md. Abul Kalam Azad have put ample contributions to my work. I acknowledge their contribution in gratitude. Finally, I thank all the respondents who took part in the questionnaire survey and interview. All of the respondents shared me with their knowledge, attitude and experience that helped me to write down such a dissertation.

Abstract

With its proven ability to connect the vast illiterate and poor rural population with the Government, telecenter based E-governance is gaining popularity in developing countries to provide information and services more efficiently and effectively by reducing time, distance and cost. Stirred by the idea, on 11 November 2010 the Government of Bangladesh, established 4501 Union Digital Centers (4547 in December, 2016) under Access to Information (A2i) program with the vision of “Citizens need not go to services but services will come to them”. Equipped with necessary ICT inputs and operated by two private entrepreneurs (*Uddokta*) under the Public Private Partnership (PPP) program, these UDCs are delivering various information or services to the rural people from government and different provider agencies. It charges prescribed fees to meet the day to day operation costs and to generate revenue for entrepreneurs.

But it has been more than five years since the establishment; these UDCs are facing significant barriers for very low rate of users’ participation and high rate of drop-outs of entrepreneurs for a variety of factors which challenges the viability (existence with the meaningful and sustainable participation) of UDC. Hence, understanding the viability factors attains significance to ensure the E-governance in rural Bangladesh through UDCs. Side by side it is also necessary to measure the level of presence of these factors to find the gap between prospect and reality. So the study tries to identify the crucial viability factors of UDC, analyze their real scenario and find the gap between them to realize the viability towards a viable UDC based E-governance in Rural Bangladesh

The study is both exploratory and evaluative in nature where both qualitative and quantitative approaches have been used. It is exploratory in the sense that it tries to identify the significant viability factors in the light of rural socio-economic background and evaluative in the sense that it tries to estimate these identified factors

under the present settings and services of UDC. These exploration and evaluation have been accomplished under four core chapters - service availability, service accessibility, service profitability and service guarantee to cover the whole viability factors in three phases.

Regarding service availability the crucial factors demanded by the rural users are mainly related to agriculture; development programs, employment opportunities, healthcare etc. On the other hand, to the entrepreneurs' the crucial factors for service availability is related to online presence of required information and services from different levels of Government. Regarding service accessibility the crucial factors for the rural users are related to proper publicity as rural citizens have limited or no idea about UDC and its services. They also have crucial demand for entrepreneurs' efficiency, regularity, responsiveness which bring users' trust on UDCs. On the other hand, the crucial factors of entrepreneurs for service accessibility is related to sustainable ICT input support; speedy internet support; strong and uninterrupted power support; and active support from UP authority. Regarding service profitability and service guarantee the crucial factors demanded by the rural users are not so important, as they are not enough conscious regarding this. On the other hand, crucial factors for entrepreneurs' perspective are vibrant which is related to their existence. These are users' regular and minimum presence (20-25); functioning computer training center with ample input support; assurance in job renewability (guarantee); demand budgeting and transparent disbursement; and returning marginal revenue for the services given to UP. But against the demands of users and entrepreneurs regarding service availability, accessibility, profitability and guarantee; they are getting only 20-30% of their expectations which is very meagre to make UDCs viable. This limited fulfilment causes limited presence for users and limited profit and drop outs for entrepreneurs which challenges the viability of UDCs. This means the UDC is functioning in a vulnerable situation. This is high time, the related authority takes the necessary steps.

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Abbreviations

A2i	Access to Information
ADC	Additional Deputy Commissioner
BDT	Bangladeshi Taka
BBS	Bangladesh Bureau of Statistics
BMET	Manpower, Employment and Training
CeC	Community E-center
DC	Deputy Commissioner
DGTTE	Democratic Government Thematic Trust Fund
DDLG	Deputy Director, Local Government
DLRS	Directorate of Land Records and Survey
FGD	Focus Group Discussion
GDAS	Government Directory Access Service
GIS	Global Impact Studies
GoB	Government of Bangladesh
G2B	Government to Business
G2C	Government to Citizens
G2G	Government to Government
ICT	Information and Communication Technology
ICT4D	Information and Communication Technologies for Development
IS	Information System
ITU	International Telecommunication Union
KII	Key Informant Interview
LG	Local Government

LGD	Local Government Division
LGSP	Local Government Support Project
NCTB	National Curriculum and Textbook Board
NESS	National E-service System
NeGP	National E-government Plan
NGO	Non-Government Organization
NILG	National Institute of Local Government
NPF	National Portal Framework
NSO	National Statistical Organization
PBS	Pally Biddut Samity
PMO	Prime Minister's Office
PPP(P)	Public Private Partnership (Program)
REB	Rural Electrification Board
RMP	Rural Maintenance Program
RWP	Rural Works Program
TCV	Time, Cost and Visit Facility
UIC	Union Information Center
UISC	Union Information and Service Center
UDC	Union Digital Center
UNDP	United Nations Development Program
UNO	Upazila Nirbahi Officer
UP	Union Parishad
UZP	Upazila Parishad
VGD	Vulnerable Group Development
VGF	Vulnerable Group Feeding

Chapter One

Introduction

1.1 Prelude

ICT (Information and Communication Technology) has a great potential. It has impacted a lot in the urban life; these impacts have been manifested in the sectors of mutual communication, communication with government, communication with different organizations, and also in the arena of entertainment. There are available mobile phones, tele-centers, cyber-cafes in receiving or mailing different kinds of information services (video, audio, text and data).¹ But the same cannot be said for the vast rural people of Bangladesh as most of them have no ability or limited ability to access to ICT due to poverty, illiteracy, unconsciousness and limited opportunity.² Traditionally they have to go to Upazila offices (average distance 15 km), and district administration (average distance 35 km); as a result, they have to spend a lot of time with sufferings.

To simplify these miseries and to connect them with the Government, honorable Prime Minister of the People's Republic of Bangladesh, Sheikh Hasina and UNDP's executive Miss Helen Clark jointly inaugurated 4501 UDCs (4547 in December 2015) on

1. Nidhi Tandon, *Information and Communication Technologies in Bangladesh Trends, Opportunities and Options for Women Workers*, (Dhaka: BD Press, 2006), 08, accessed June 12, 2016, <http://unpan1.un.org/intradoc/groups/public/documents/apcity/unpan038251.pdf>

2. Farzana Akther, "ICT Appropriation: A Knowledge Creation Perspective," (PhD thesis, Aalborg University, Denmark, 2015) 43, accessed June 12, 2016, http://vbn.aau.dk/ws/files/219478376/Farzana_Akther_E_pdf.pdf

11 November 2010 in every Union Parishad throughout the country. These UDCs can play a significant role to the rural people to bring them into the mainstream of development. Hence the project's slogan is "Citizens need not go to services but services will come to them"³ It is creating new aspirations and expectations among the rural people for rapid, easy and transparent information and service delivery.⁴ Through establishing these UDCs, Bangladesh is moving towards 'Digital Bangladesh'⁵. This has been marked in the "world networked readiness index from 2009 to 2015 where the score changes from 2.70 to 3.30 (rank changes from 130 to 109) among 142-144 countries of the world.

Table 1: The Rank of Bangladesh in the Global Information Technology

Year	Rank	Score/Value
2009	130	2.70
2010	118	3.01
2011	115	3.19
2012	113	3.20
2013	114	3.20
2014	119	3.20
2015	109	3.30

Source: Global Information Technology Report: 2015" accessed September 06, 2015, www3.weforum.org/docs/WEF_Global_IT_Report_2015.pdf

3. Access to Information (A2i) Program, *Innovation in Service Delivery*, 04, (Prime Minister's Office, Dhaka: 2009), accessed June 23, 2015, [http://A2i.pmo.gov.bd/sites/default/files/Access%20to%20Information%20\(A2i\)_09_Janu_14.pdf](http://A2i.pmo.gov.bd/sites/default/files/Access%20to%20Information%20(A2i)_09_Janu_14.pdf)

4. Oliur Rahman. "An Institutional Assessment of UISC (Union Information and Services Center): A Case Study of Two Selected Union Parishads of Bangladesh," (PhD diss., BRAC University, Bangladesh, 2014):62.

5. Digital Bangladesh is an integral part of the government's *Vision 2021*—which promises a prosperous and equitable middle income Bangladesh by its golden jubilee of independence. It was emerged as part of "Charter for Change"-the election manifesto of Bangladesh Awami League for the 9th Parliamentary Election.

1.2 Theoretical Framework of the Study

Before a clear understanding of the challenges faced in the participatory and sustainable UDC implementation, it is imperative to develop a working concept on E-governance, tele-center based E-governance, its viability, Public-Private Partnership (PPP), rural Bangladesh and related issues.

1.2.1 E-governance

E-governance or 'electronic governance' is basically the application of ICT to the processes of Government functioning in order to make it 'Simple, Moral, Accountable, Responsive and Transparent' (SMART).⁶ It may be understood as the quick performance of the governance via the electronic means in order to facilitate an efficient, a speedy and a transparent process of information dissemination among its organs and with the citizens and businesses. So E-governance is not about automation of existing government systems but it is a tool that has the capability to transform the way government and citizens interact. The US E-government Act of 2002 (Section 3601)⁷ defines this by the Government of web-based Internet applications and other information technologies, combined with processes that implement these technologies, to enhance the access to and delivery of Government information and services to the public, other agencies, and other Government

6. Padmapriya, "E-Governance: A move towards paperless Administration in India." *International Journal of Computer Trends and Technology* 4, no. 3 (2013):13, accessed June 12, 2016, <http://ijctjournal.org/Volume4/issue-3/IJCTT-V4I3P141.pdf>

7. The US E-government Act: 2002 (Section 3601) accessed 6/8/2016, <http://thomas.loc.gov/cgi-bin/query/F?c107:1:./temp/~c107hnyhnX:e9144>

entities; and to bring about improvements in Government operations that may include effectiveness, efficiency, service quality, or transformation. Bhattacharya⁸ identifies E-governance with four internal and external factors- (a) establishing a secure intranet and a central database to enhance interactions among governmental agencies; (b) developing web-based service delivery; (c) implementing e-commerce applications for efficient transaction activities; and (d) adopting digital democracy for more transparent and accountable government. Thus E-governance involves the use of ICTs by government agencies for any or all of the following ways:

- 1) Exchange of information with citizens, businesses or within /among government organs, directorates, departments, branches;
- 2) Speedier and more efficient delivery of public services;
- 3) Reducing costs / increasing revenue;
- 4) Re-structuring of administrative processes and
- 5) Improving quality of services.

1.2.2 E-governance vs. E-government

The terms ‘Government’ and ‘Governance’ are often used interchangeably. Government is an institutional superstructure through which policies are executed and maintained through legislative, executive and judicial organs; and governance is the outcome of the

8. Debjani Bhattacharya et al., "E-service quality model for Indian government portals: citizens' perspective." *Journal of Enterprise Information Management* 25, no. 3 (2012): 01, accessed June 12, 2016, https://www.researchgate.net/profile/MP_Gupta/publication/263422397_E-service_quality_model_for_Indian_government_portals_Citizens'_perspective/links/5421a2bc0cf26120b79e7d1d.pdf

interaction of government with citizens throughout the political process, policy development, and service delivery.⁹ Therefore, it can be said that E-governance is beyond the scope of E-government. While E-government is defined as a mere delivery of government services and information to the public using electronic means, E-governance involves direct participation of constituents in government activities. In case of E-government, the services and information are delivered to the citizens or clients through electronic medium while in case of E-governance, the interaction between the citizen and the government takes place through electronic medium and decisions are processed electronically. E-governance allows citizens to communicate with government and participate in its decision-making process. Thus, E-government focuses on government services that are electronically provided to citizens. On the contrary, E-governance assumes interactions between government authorities and the common citizens.

1.2.3 E-governance Interactions

E-governance interaction implies different types of information flow in Government information service delivery system. There are mainly four types of information flow in E-governance.

- a) Government to Government,
- b) Government to Citizens,

9. Zhiyuan Fang, "E-government in digital era: concept, practice, and development." *International journal of the Computer, the Internet and management* 10, no. 2 (2002): 03, accessed June 12, 2016, <http://www.sahra.org.za/sahris/sites/default/files/additionaldocs/10.1.1.133.9080.pdf>

- c) Citizens to Government and
- d) Government to Business/NGOs.

All these interactions can be depicted with their main participants in the following Chart.

Chart 1: E-governance Interactions among Stakeholders in the State



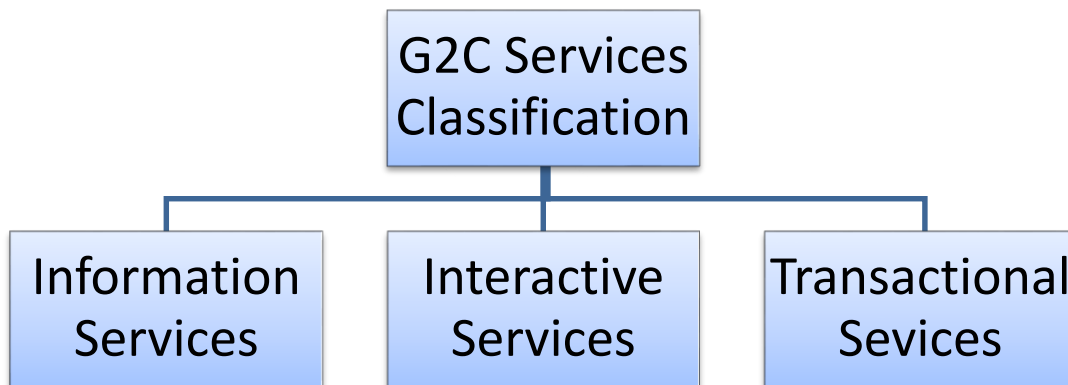
Source: The Researcher

1.2.3.1 Government to Citizen

Government-to-citizen (G2C) services refer to online communication between Government and consumers/individuals. It is an online interaction between local, central Government and private individuals which helps in making public services and information accessible to all. The spirit behind G2C services encompasses all the services

that the government delivers to its citizens. It can increase the transparency in transactions at grassroots level with easy access and little cost such as online form filling, application, admission, payments, registration, certificates etc., or complex applications like distance education, e-learning, and tele-medicine. G2C Services are classified broadly into three types based on their operation processes as following –

Chart 2: Classification of G2C services



Source: Developed by Researcher

To ensure these services, integrated ICT service centers have to be established to take over the various customer services. In short, it is an effort to make the public sector responsive to the citizens ‘views and needs. Besides, it is expected to improve the speed, quality, reliability, convenience and cost of delivery of services to the citizen.¹⁰

10. Darrell M West, "E-government and the transformation of service delivery and citizen attitudes." *Public Administration Review* 64, no. 1 (2004): 17, accessed June 12, 2016, <http://www.insidepolitics.org/WestEgovtPAR.pdf>

1.2.3.2 Citizens to Government

C2G mainly constitutes the areas where the citizens interact with the government. It includes areas like election when the citizens vote for the Government; census where they can provide information about themselves to the Government; taxation where they can pay tax to the Government.¹¹ Election is an effort to change the role of the citizens from passive information giving to active citizens' involvement. Through election, democratic government forms which represents the citizens and informs them, encourages them, counsels them and engages them in governance. Taking the citizens' input about the various government policies by organizing e-debate can further strengthen the e-democracy. This initiative can further strengthen the process by enhancing the representative role, improving accessibility of citizens to their elected members and developing the capacity of elected representatives to engage in E-government. The essential prerequisite for the achievement of this service is spreading awareness among the citizens of the State.

1.2.3.3 Government to Government

Government to Government (G2G) interaction involves all those activities that take place between different Government organizations. This can also be referred as "e-administration". The interaction between the Government can be both horizontal (between/among different directorates/sections/branches among different organs) and

11. Rajendra Kumar and Michael Best, "Impact and sustainability of e-government services in developing countries: Lessons learned from Tamil Nadu, India." *The Information Society* 22, no. 1 (2006): 10, accessed June 12, 2016, <http://mikeb.inta.gatech.edu/papers/infosoc.kumar.best.pdf>

vertical (from up to bottom / bottom to up within an organ). It involves networking all Government offices so as to produce interaction among them. It involves improving government processes by cutting costs, managing performance, making strategic connections within government and creating empowerment.¹² It helps to streamline the Government processes involved in the working of Government organizations. It enhances the flow of information and services amongst the Government organizations/departments. These interactions aim at improving the efficiency and effectiveness of Government operations. In this way, the G2G interaction incorporates a well-structured process that leads to better efficiency in Government procedures.

1.2.3.4 Government to NGOs / Business

The government to NGO model comprises interactions to build government partnerships with the different working NGOs from home and abroad. It involves building various private associations or interest groups that can ensure the betterment of the society. The essentials for the achievement of G2N services are: open access to government information by citizens, delivering data to citizens, receiving data from citizens, taking feedback from citizens and interacting with the interested groups. On the other hand Government to Business (G2B) interaction deals with businesses selling products and services to Government. Here, the Government provides opportunities and instructions to

12. Richard Heeks. "Information systems and developing countries: Failure, success, and local improvisations." *The information society* 18, no. 2 (2002): 101, accessed in June 12, 2016, <http://www.paul-adrien.info/backup/LSE/IS%20470/litterature%20review/IS%20failures%20developing%20countries.pdf>

different businesses concerned with selling or trading of goods and services to citizens and Government bodies. The G2B initiative includes licensing permits, revenue collections and investments. This helps providing a congenial environment to enable businesses to perform in a better way.

1.2.4 E-Government Stage Models and Their Characteristics

The e-government cannot be thought of as a single process or single performance. It is evolutionary in nature, involving multiple stages or phases of development. The stages/phases of e-government development by the United Nations, the World Bank, the Gartner Group, e-ASEAN Task force are discussed in the following subsections.

a) **World bank-3 stage model**¹³:

- 1) **Publish:** It starts with the process of publishing government information in online, beginning with rules and regulations, policies and different documents and forms.
- 2) **Interact:** It starts when citizens engage them in interaction with the online efforts of the Government at all levels. Strengthening civic engagement contributes to building public trust in government.

13. S. Iyashree and G. Marthandan, "Government to E—government to E—society." *Journal of Applied Sciences* 10, no. 19 (2010): 2208, accessed June 20, 2016, https://www.researchgate.net/profile/Govindan_Marthandan/publication/49591267_Government_to_E-government_to_E-society/links/02e7e52096555a44c5000000.pdf

- 3) **Transact:** In this stage, both government and citizens go further, by creating and using websites that allow them to conduct quick transactions, with potential cost savings, accountability and productivity

b) **UN's five-stage model**¹⁴:

The United Nations and American Society for Public Administration suggested an e-government model with five stages which are as follows:

- 1) **Emerging presence:** A single or a few independent government web sites provide formal but limited and static information.
- 2) **Enhanced presence:** Government web sites provide dynamic, specialized and regularly updated information
- 3) **Interactive presence:** Government web sites act as a portal to connect users and service providers and the interaction takes place at a more sophisticated level.
- 4) **Transactional presence:** Users have the capability to conduct complete and secure transactions, such as renewing visas, obtaining passports and updating birth and death records through a single government web site.

14. S. Iyashree and G. Marthandan, Government to E-government to E-society, 2206.

- 5) **Seamless or fully integrated presence:** Governments utilize a single and universal web site to provide a one-stop portal in which users can immediately and conveniently access all kinds of available services.
- c) **Moon's five-stage model:** M. Jae Moon identified a five-stage model¹⁵--information, two-way communication, transaction, integration and participation.
- 1) **Simple information dissemination (one-way communication):** This is the most basic form of e-government, which disseminates information by simply posting it on the web sites
 - 2) **Two-way communication (request and response):** Interaction occurs between governments and users. This also known as synchronous and asynchronous communication theme
 - 3) **Service and financial transaction:** Transactions occur both between governments and individuals (e.g., obtaining visa) and between governments and businesses (i.e., ordering office facilities)

15. M. Jae Moon, "The evolution of e-government among municipalities: rhetoric or reality?" *Public administration review* 62, no. 4 (2002): 428, accessed June 20, 2016, https://www.researchgate.net/profile/M_Moon/publication/227629301_The_Evolution_of_E-Government_Rhetoric_or_Reality/links/5421f8030cf2a39f4af767f1.pdf

- 4) **Vertical and horizontal integration:** This stage refers to integrating separate systems at different levels (vertical) and from different departments (horizontal)
- 5) **Political participation:** Promotion of political participation through services such as online voting and surveys. In this research, we aim to combine these models into a synthesized model. A synthesized model provides a common framework for future research in this area and a common point of reference

c) Gartner's four-stage model¹⁶:

Gartner and others had proposed a four-stage model, which has been accepted widely in the digital world. They are- 1) Websites Presence, 2) Interaction, 3) Transaction and 4) Transformation.

Phase I – Information / Online Web Presence:

This is the initial stage where government provides website with basic information (static information like providing government particulars, its structure, policies, rules, programs, forms, and application process etc.) that the citizens can access. Here links to ministries/departments may or may not exist. The communication is government to citizens only (G2C).

16. Baum, C., A. Di Maio, and F. Caldwell. "What is e-Government?" *Gartner's definitions. Res Note (TU-11-6474)*: 2000, cited from Government to E-government to E-society, 2208.

Phase II – Interaction:

Government provides updated online information on public policy and governance (updated policies, documents, programs, budget, participation process, review reports etc.) through different ministries/ departments; easily accessible to citizens. Citizens can review it and can provide their comment, opinion there. At this level the on-line website has more capabilities and functionalities including sorting and searching of information.

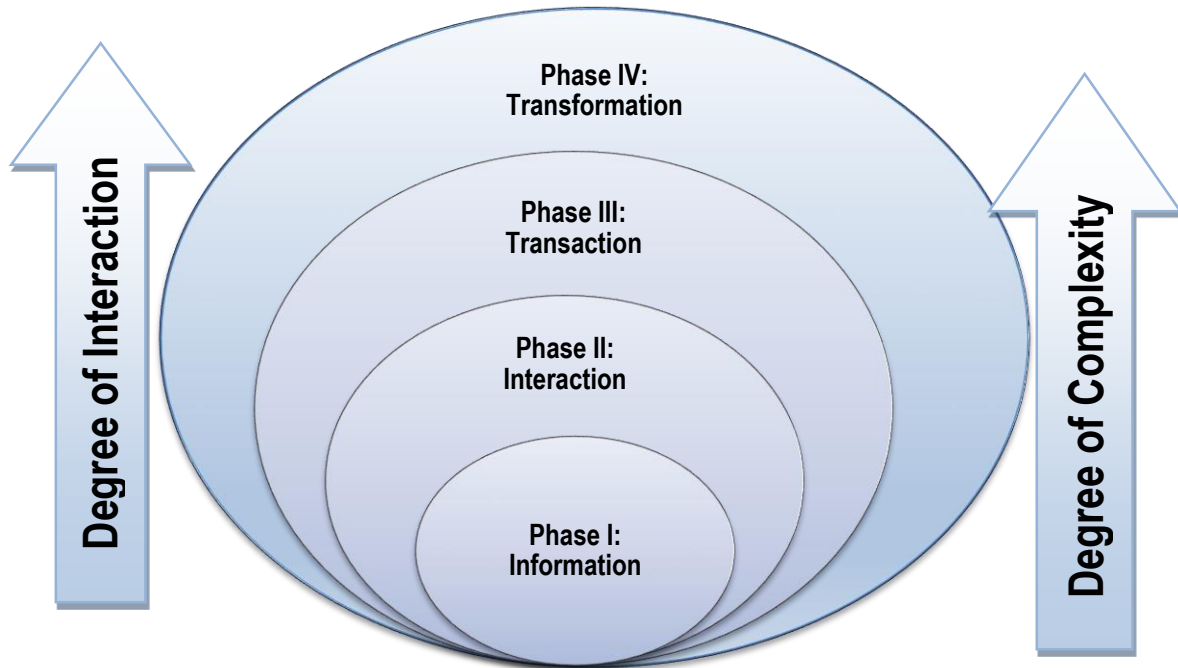
Phase III - Transaction:

Delivery of online Services such as tax payments and applications for license renewals; beginning of an interactive portal or website for citizen centric services. The bottom-line is that now the complete process is online, including payments, digital signature etc. This saves time, paper and money.

Phase IV - Transformation:

The fourth level in the maturity model is labeled transformed government. This is the phase in which all information systems are integrated and the public can get G2C and G2B services at one virtual counter. One single point of contact for all services is the ultimate goal. People interact with government in an integrated fashion, “online, not in line,” 24 hours a day, seven days a week from the convenience of their homes.¹⁷

17. Layne Karen and Jungwoo Lee, "Developing fully functional E-government: A four stage model, 125.

Chart 3: Evolution of E-governance: Four Critical Stages

Source: Quality Assessment Framework, NeGP, India, accessed June 12, 2016 from [https://www.researchgate.net/profile/Ganesh_Deka/publication/235556701_Cloud_Computing_Model_for_National_E-governance_Plan_\(NeGP\)/links/00b4953c93e60e071a000000.pdf](https://www.researchgate.net/profile/Ganesh_Deka/publication/235556701_Cloud_Computing_Model_for_National_E-governance_Plan_(NeGP)/links/00b4953c93e60e071a000000.pdf)

Siau and Long¹⁸ included e-democracy as the fifth stage on Gartner's four stage model namely e-democracy. It includes the social, economic, legal, political, demographic, and technological factors that are seen in an e-society to capture the vision and ideas of e-government.

18. Keng Siau and Yuan Long. "Synthesizing e-government stage models-a meta-synthesis based on meta-ethnography approach." *Industrial Management & Data Systems* 105, no. 4 (2005): 443-458, Accessed June 20, 2016, <http://emeraldinsight.com/doi/abs/10.1108/02635570510592352>

1.2.5 ICT and E-governance in Bangladesh

There is a broad consensus among research and policy communities that ICT can play a very enabling role in fostering positive social change and attaining sustainable development in low income developing countries of the South Asia. The Information and Communication Technology for Development perspective regards ICTs as the powerful instrument for bringing socio-economic development having huge potential in the context of helping world's poorest populations.¹⁹ A great majority of people in Bangladesh are illiterate, resource poor, live in rural areas and employed in small and medium size enterprises and in informal sectors; but people engaged in these sectors are lagging behind in terms of utilizing computer, internet and other ICT facilities.

Bing recognized the potential of ICTs for development, the government of Bangladesh formed the National ICT Task force in 2000 which led to Bangladesh's first National ICT Policy in 2002. It was housed in the Planning Commission and played a key role in infrastructure building and process automation. The formation of the Support to ICT (SICT) Task Force Project in 2002-3 (a publicly funded implementation arm) provided a push to the process. The SICT functioned like an internal facilitator and was involved in conceptualizing, planning and prioritizing projects, and providing funding and technical assistance to line ministries to implement them. Another public entity, the Bangladesh Computer Council (BCC) provided support with respect to infrastructure

¹⁹ Syed Mohammad Aminur Rahman, "Prospects of PPP in Expanding ICT Services in Rural Bangladesh: A Case of Union Digital Center," *International Journal of Economics and Finance* 8, no. 2 (2016): 163. Accessed June 15, 2016, <http://www.ccsenet.org/journal/index.php/ijef/article/viewFile/56680/30306>

development, technical assistance and capacity building for various E-government initiatives. However, many of the projects initiated by the SICT or the line ministries on their own during this period did not sustain in the long run (Bangladesh Enterprise Institute, 2010). Then in 2006, UNDP launched the Access to Information Programme (A2i). Two years later (in 2008), a national vision for Digital Bangladesh was developed as a long-term development platform for the country with the following objectives:²⁰

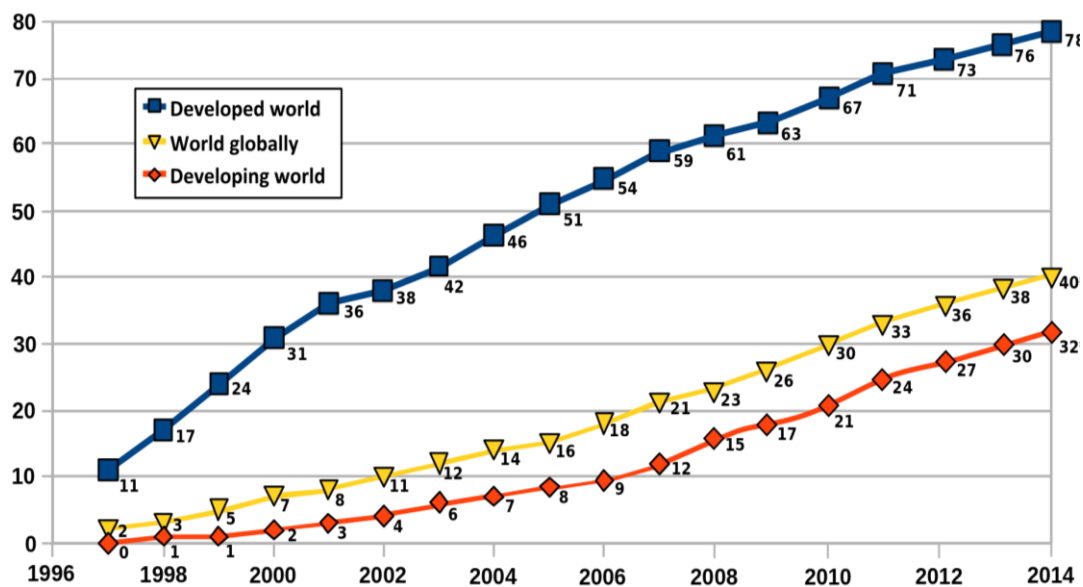
- Ensure that new initiatives and programs on E-governance operate within the context of national development priorities and mainstream ICT for Development (ICTD) into national development plans.
- Support the development of innovative ICTD programs and provide technical assistance for monitoring and evaluation.
- Develop a national E-governance vision and strategy to harness digital opportunities for development in close consultation with stakeholders.

Since 2006, with the caretaker government in place, the approach to e-Government has shifted gradually from a top-down approach to a more participatory approach. It was realized that without internal ownership the extensive change management, that is needed, will not be achieved. In early 2009, the innovative Digital Bangladesh agenda of the newly elected government provided a new momentum. The vision for Digital Bangladesh focused on both increasing Bangladesh's ability to compete more effectively in the global economy, and on building a responsive and effective

20. United Nations Development Program. (n.d.) *Bangladesh: Services for all* accessed September 23 2015, <https://www.undpegov.org/featured/Bangladesh>.

government capable of delivering services to the poor and marginalized. A structured policy and regulatory environment, was put in place with the passage of ICT Policy 2009 and the ICT Act 2009. The assessment on national and international experience on E-governance service delivery has become clear through the following graph.

Chart 4: Internet Users in the World (per 100 people)



Source: Internatal Tele-communication Union (ITU)²¹

From this graph, it is clear that the developed countries are far advanced in the use of ICT has become their a strong tool behind their development. So there is clear relation between ICT and development. But the developing countries like Bangladesh are very

21. "Measuring the Information Society Report 2015", Internatal Tele-communication Union, accessed: June 12, 2016, <http://www.itu.int/en/ITU-D/Statistics/Documents/publications/misr2015/MISR2015-w5.pdf>

backward in ICT penetration. This has been clear from the following table. The following table shows the state of internet penetration in Bangladesh comparing the world²².

Table 2. Internet Users in Bangladesh Comparing with the World

Rank	Country	Penetration of Pop. with internet
1	China	46.03%
2	United States	86.75%
3	India	19.19%
4	Japan	86.03%
5	Brazil	53.37%
6	Russia	59.27%
7	Germany	86.78%
42	Bangladesh	06.86%

Source: International Tele-communication Union (ITU) 2015

From the above table, it is clear that Bangladesh is far behind in the use of ICT. Only 6.68% population has penetration of ICT and the rest 93.32% is out of it. More over this penetration is mostly in the urban area. And the village area is mostly out of these ICT facilities.

22. Ibid

1.2.5 Access to Information (A2i) Program²³

The Access to Information (a2i) is UNDP and USAID supported Program under the Prime Minister's Office. It was started in 2007 with the objectives of increasing transparency, improving governance and public services and reducing inefficiencies in their delivery in terms of 'TCV' – the time (T), cost (C) and number of visits (V) associated with obtaining government services for underserved communities in Bangladesh. The project entered its second phase in 2012. It is facilitated from the Prime Minister's Office of the Bangladesh government's innovation agenda, Digital Bangladesh. It works as an innovation intermediary through a whole-of-government approach – that is, rather than limiting itself to certain ministries and government organizations, it brings together all relevant stakeholders and supports, suggests and curates their work to catalyze truly unprecedented transformations in service delivery. A2i focuses primarily on bringing information and services to citizens' doorsteps and increasingly within the palms of their hands. It does so by harnessing modern ICTs, local knowledge and global best practices to establish both physical and virtual one-stop access points.

1.2.6.1 Some success of A2i:

Some success of A2i have been depicted bellow:

23. *Access to Information (II)*, UNDP in Bangladesh, accessed June 12, 2016, http://www.bd.undp.org/content/bangladesh/en/home/operations/projects/democratic_governance/access-to-information--II-.html

- 1) 6 million e-services are delivered on average per month to citizens from rural and remote regions through 407 City Corporation Digital Centers, 321 Pourashavas Digital Centers and 4,547 Union Digital Centers (UDCs). The centers provide 102 types of services (38 government and 64 commercial). Since their inception, the Digital Centers have delivered 216 million services. The Centers serve 4.5 million beneficiaries on average per month.
- 2) More than 25,000 websites of various unions, Upazila's (sub-division), districts, divisions, directorates, departments and ministries connected through the National Web Portal. The portal contains information of 43,000+ government offices, 2,100,000+ content and generates 90 million+ hits per month.²⁴
- 3) 400 services of 36 public directorate/organizations made available in *Sebakunjo* (Service Portal). It is a web platform where citizens can find all required important information about services provided by public offices. In addition to the information on services, necessary information of public offices and other relevant government web-sites have been linked here. www.serviceportal.gov.bd.
- 4) Service Profile Books with introduction, organogram, scope of work, list of all the services, methods of service delivery, process map etc. of 36 departments of the government have been published.
- 5) A Forms Portal (www.forms.gov.bd) has been developed where more than 1400 forms of 158 offices are available.

24. Access to Information Program, The Government of Bangladesh, Dhaka: 2016, accessed June 13, 2016, www.bangladesh.gov.bd

- 6) E-filing system has been introduced to provide prompt, transparent and efficient services to the government and to create paperless environment-friendly public offices. At present, this system is in use at the Prime Minister's Office (PMO), 20 ministries, 4 departments, 64 Deputy Commissioner's offices, and 7 Divisional Commissioner's offices.
- 7) Digital Mobile Court System has been initiated with the aim to modernize the activities of the courts. Executive Magistrates can perform all of their activities such as submission of complaints, preparation of seizure list, framing charges, recording statements and order etc. easily and faster through online and if necessary through offline with this system. 1059 cases have been settled/ disposed and pilot program is running in 4 districts.

1.2.7 Public Private Partnership (PPP) in Promoting E-governance

The term 'Public-Private Partnership' (PPP) refers to a functional ongoing relationship where both public and private resources are employed to attain some specific objectives which are beneficial for both.²⁵ It involves contractual arrangements of sharing costs, responsibility, management where two parties (both public/government and private) come together to improve the delivery of services. The government generally provides primary capital investment (fixed Cost), backward linkage (electricity, internet connection, and

25. Satyam ShivamSundaram, "Public Private Partnership in India: Prevailing Challenges and Way Forward," *Emerging Economy Studies* 1, no. 1 (2015): 93, accessed June 12, 2016, <http://emi.sagepub.com/content/1/1/90.full.pdf>,

set-up) and upward linkage (awareness creation, environmental support, and political support). The private sector's responsibility in the partnership is to make use of its knowledge and proficiency in commerce, management, operations, and innovation in order to run the business professionally and efficiently.

The Government Agencies throughout the world specially the developing world are considering and conducting E-governance initiatives with the help of private initiatives. At the global level, experiences shows that IT is one of the areas that is perfectly suited for PPP especially in connecting the rural, providing service, providing livelihood information, collecting utility bills, managing land records etc.²⁶ India's experience in E-governance has demonstrated significant success through PPP in improving accessibility, cutting down costs, reducing corruption, extending help and increased access to unserved groups.²⁷ Several State Governments of India are providing government services to the citizens partnering with local ICT entrepreneurs under PPP through tele-centers.²⁸

26. Mahesh Uppal, *Making E-Governance Work for India A Report of the Fourth Annual Joint Roundtable on Communications Policy*, Gurgaon, (Haryana: Aspen Institute, 2009), accessed June 12, 2016, https://www.aspeninstitute.org/sites/default/files/content/docs/pubs/CandS_2009_India.pdf

27. Neeta Verma and Alka Mishra, "India's Approach in Constructing One-Stop Solution towards e-Government." *Journal of E-Governance* 33, no. 3 (2010): 144-156, accessed: June 12, 2016, https://www.researchgate.net/profile/Alka_Mishra3/publication/221547539_india.gov.in_-_India's_approach_in_constructing_one-stop-solution_towards_e-government/links/0046351e6beec6110a000000.pdf

28. Jonas Keller and A. Heiko. "The influence of information and communication technology (ICT) on future foresight processes—Results from a Delphi survey." *Technological Forecasting and Social Change* 85 (2014): 81-92, June 12, 2016, [https://www.researchgate.net/profile/Heiko_Von_der_Gracht2/publication/257354929_The_influence_of_information_and_communication_technology_\(ICT\)_on_future_foresight_processes__Results_from_a_Delphi_survey/links/0deec524fe9a11a096000000.pdf](https://www.researchgate.net/profile/Heiko_Von_der_Gracht2/publication/257354929_The_influence_of_information_and_communication_technology_(ICT)_on_future_foresight_processes__Results_from_a_Delphi_survey/links/0deec524fe9a11a096000000.pdf)

1.2.8 Rural Bangladesh

The Population of Bangladesh can be divided in to two fragments based on the availability of ICT (especially internet) facility- 1) Urban Bangladesh covered under City Corporation and *Pourashava* and 2) Rural Bangladesh covered under *Union Parishad*. There is availability of internet facility in urban Bangladesh; but there is no or limited internet facility in rural Bangladesh.

1.2.9 PPP in E-governance: Case of UDCs in Rural Bangladesh

Keeping pace with the global trends, Bangladesh also achieved notable progress in several ICT factors in the last decade. In order to translate the dream of ‘Digital Bangladesh’ into reality the Government of Bangladesh has established 4,547 UDCs at all *Union Parishads* throughout the country with its strong commitment providing e-services to the doorsteps of the huge rural people. In recent years, these ICT based UDCs have been playing an important role in accessing to the relevant information and transformation of local government services. The Government expects that UDC can bring the opportunity for rural underprivileged communities in order to improve the efficiency of government information, reduces cost, increases transparency, and ensures quality of service.²⁹

29. Rakibul Hoque and Golam Sorwar. "ICT based e-government services for rural development: a study of union information and service center (UISC) in Bangladesh." *The Electronic Journal of Information Systems in Developing Countries* 71 (2015), accessed June 12, 2016, <https://144.214.55.140/Ojs2/index.php/ejisd/article/viewFile/1579/612>

1.2.10 A Brief Account of UDC

Operated by two private entrepreneurs (*Uddokta*), one male and a female, under the PPP, the UDC is an ICT enabled one-stop center where rural people can avail various information or services of different provider agencies including government, local government and private enterprises. It is equipped with computer, laptop, internet modem, webcam, photocopier, scanner, printers, multimedia projector, digital camera and solar panel etc. initially supplied by the government and the UP. It charges prescribed fees for delivery of services to meet the day to day operation costs and income for entrepreneurs. It is likely to generate revenue sufficiency since it performs both government and commercial services. A range of government services of UDC are delivering government information, advertisement, circulars, notices, forms; public examination results; employment and application information; supporting in admission and online education; birth and death registration; passport processing; visa support; agriculture and health consultancy; and conveying the services of DC office like Porcha distribution, stamp transaction, relief distribution etc. and commercial services are browsing, printing, word processing, scanning, mailing, video conferencing, computer training etc. According to the UDC Census 2013, out of a total 4,547 UDCs, 4,492 were reported to be functional while 41 were found inactive. According to this report, there were 9,032 entrepreneurs with the earning 5,410.26 taka each on monthly basis.³⁰

30. Bangladesh Bureau of Statistics (BBS), Ministry of Planning, Government of the People's Republic of Bangladesh, *Census Report on Union Information and Service Centers (UISCs)*, (Dhaka: Statistics and Informatics Division, 2014), 8

1.2.10.1 Development of UDC (UISC) in Bangladesh

The effort of tele-center based service delivery in Bangladesh has been started in late decades of 90s. In 1987, *Dhaka Ahsania Mission* (DAM) launched *Gonokendra* (people's centers), which is considered the first generation tele-center in this country.³¹

Table 3: Community Information Centers in Bangladesh

Organization	Name of the Center	Legal Status
Bangladesh NGO Network for Rural communications	Rural Knowledge Center	Non Profit
Bangladesh Friendship & Education Society	Amader Gram Learning Centre	Non Profit
Bangladesh local govt. entrepreneurs & UNDP	Union Information Service Center (UISC)	Public-Private Partnership
Dhaka Ahsania Mission	Gonokendra: Centre for Community Development	Non Profit
D Net	Pallitathya kendra	Non Profit
Digital Equality Center	Ghat: Rural ICT Centre	Non Profit
Grameen Solutions	Grameen Digital Center	For – Profit
Grameen Telecom	Community E- Center (CeC)	Non Profit
Grameen Phone	Community Information Centre	For – Profit
Participatory Action Network	e-Village	Non Profit
UNDP Bangladesh	Community Based CeC	Partnership
World Net	Global Information Center	For Profit
Young People in Social Action	Youth Community center	Non Profit

Source: K. M. Mahiuddin and Shah Md Hoque. "Enabling E-Services for Rural Community through Union Information and Service Centers (UISCs)." *Asian Studies, (Journal of the Department of Government and Politics), JU 32* (2013): 53.

31. Paul Tallon, Ronald Ramirez and James Short. "The information artifact in IT governance: toward a theory of information governance." *Journal of Management Information Systems* 30, no. 3 (2013): 141-178, accessed: June 12, 2016, https://www.researchgate.net/profile/Paul_Tallon/publication/269500452_The_Information_Artifact_in_IT_Governance_Toward_a_Theory_of_Information_Governance/links/5547ce510cf2e2031b3849d7.pdf

The service facilities of *Gonokendra* were like reading newspapers, exchanging experiences, learning from success stories, getting information about innovations to improve livelihoods etc. using mainly hard copy materials as only 5% of them had computers, none of which had internet connectivity. Then there took several years to start another tele-center. After several years, in 2001, organizations like *Amader Gram* and Relief International started their telecenter projects³². After 2005 several organizations including corporate organizations like Grameen Phone started telecenters for their

Realizing the importance of telecenter, the government of Bangladesh has started public telecenter in the name of CeC the last of first decade of twenty first century. UDCs began operations in 2009 as CeC (Community e-Centre) in 30 Union Parishads (UP) under under Quick Win Project³³ through partnership between Local Government Division and A2i program.³⁴ Before that, in 2007, two Community e-Centre (CeC) was established as pilot under Democratic Government Thematic Trust Fund (DGTTF) of UNDP. With the assistance of UNDP, the Government of Bangladesh took over the idea under Access to

32. A. E. A Akanda & M. Roknuzzaman, 23

33. A Quick-Win is a service delivery improvement prototype led by government officer with technical and financial support from Access to Information (A2i). In 2008, A2i introduced this concept which became highly popular and successful to execute E-governance project quickly and effectively.

34. Access to Information (A2i) Program is an UNDP and USAID supported project (program) having its office at the Prime Ministers' Office. The overall objective of the project is to provide support in building a digital nation through delivering services at the citizen's doorsteps. The program aims to improve quality, widen access, and decentralize delivery of public services to ensure responsiveness and transparency.

Information (A2i) Program.³⁵ Conceived and implemented under the United Nations Development Program (UNDP) –funded Access to Information (A2i) program – Digital Bangladesh represents the cornerstone of E-governance in Bangladesh. The Digital Bangladesh agenda involves a digitized government, ICT enabled services, nationwide internet connectivity, high-tech parks for businesses and IT trained professionals. It consists of four pillars: (i) developing human resources suitable for 21st century demands; (ii) connecting citizens in a meaningful ways; (iii) taking services to the doorsteps of the people; and (iv) making private sector more productive and competitive through the use of ICT.³⁶ The Digital Bangladesh campaign has led to a more comprehensive, sustained and robust approach to E-government with the aim taking services to the doorsteps of the people by establishing Union Information and service Centre (at present Union Digital Centre-UDC) at every *Union Parishad* (the lowest tier of local Government) in rural Bangladesh. As a result, on November 2010, the Prime Minister of Bangladesh inaugurated Union Information and Service Centers (UISC) in each Union Parishad all over the rural Bangladesh.

35. Access to Information (A2i) Program, Prime Minister’s Office, Peoples republic of Bangladesh *An Evaluation of Access to Information (A2i)Program – A Report prepared for the United Nations Development Program (UNDP)*, (Dhaka: A2i, 2011)

36. Access to Information (A2i) Program Prime Minister’s Office, *Digital Bangladesh: E-Sheba Sobar Jonno*. (Dhaka, 2014).

1.2.10.2 Objective of UDC³⁷

General objective of UDC is to develop the UPs as reliable, dependable resourceful centers having connectivity among global, national and local network. Specific Objectives are:

- To ensure easy access of common people to government and commercial and social information and services
- To create ICT infrastructure at all Union Parishads and to increase efficiency of UPs through prompt delivery of information and other day to day services.
- To provide a supportive environment for creation of local entrepreneurs.
- To ensure free flow of information for empowering rural community.
- To create a vibrant, knowledge-based UP.

1.2.10.3 The Location of UDC

UDC has been established in every Union Parishad which is the lowest political chamber of rural local government structure and the fundamental unit of local government. Generally, a union headed by a Chairman and 12 members, encompasses 10–15 villages and comprises about 10–12 square mile with a population of about 15000 to 20000 people which is covered through an UDC. Generally it is located in a room hosted by the Union Parishad. In few cases the office of the UDC is shifted to nearby shops at growth centers or commercial points considering the convenience of people's access or marketability.

37. Rejaul Karim Bakshi and Tariqur Rahman, *Expansion of Selected Services through Union Digital Centers*, (Copenhagen: Copenhagen Consensus Centre: 2016), 04 accessed: June 12, 2016, http://www.copenhagenconsensus.com/sites/default/files/bakshi_udcs.pdf,

1.2.10.4 Management of UDC under PPP:

The UDC model is unique in the sense that it builds on the concept of PPP instead of donation dependent models. In order to make it successful and sustainable for the long run, public-private partnership is built. The overall management of UDC is also under a committee (comprising 7-9 members) headed by the Chairman of UP. The duration of this committee is about 2(two) years. One-third of the members of this committee would be the women. The UP authority has to provide all types of institutional and other assistance to the committee. The managing committee is assigned to render the following activities³⁸:

1. Selecting of local entrepreneurs
2. Buying of different tools and equipment of UDC
3. Render all necessary assistance to the UDC entrepreneurs
4. Strengthen the motivational activities among the rural community people for taking the services provided by the UDC
5. To help the entrepreneurs for maintaining different reports and accounts of income and expenditure.
6. To hold at least a meeting in each month for reviewing the UDC activities

38. Saroar Ahmed Saleheen, "Public service delivery-role of Union Digital Center (UDC) and impact on improving governance and development: a case study of Narayanganj District, Bangladesh." (PhD diss., BRAC University, Dhaka, Bangladesh, 2015), 00 accessed at June 2016, <http://dspace.bracu.ac.bd/jspui/bitstream/10361/5052/1/Saroar%20Ahmed%20Saleheen.pdf>

Though there is a committee in almost all cases, chairman of the UP employs the entrepreneurs, manage the sitting arrangement, space in the office, infrastructure equipment, office furniture, and other facilities; and supervise its functions. The ICT equipment is initially provided by the government assisted by donors and yearly by the demand of UP from the budget of Local Government Support Project (LGSP) funded by the central government. They are operational by the Investment of government (From LGD through LGSP fund) and 1% of ADP. In addition DC offices spend from their allocated funds for entrepreneur training, workshop and mobilization. Subsequently, entrepreneurs also have added some equipment along with the expense for day to day operating costs. As per the contract, entrepreneurs have to invest to run the UDC well. The minimum required amount of investment in the UDC is 50, 000 Taka. This condition has been relaxed due to lack of entrepreneurs has been raised for appointment contract. In case of any failure/corruption of its entrepreneurs, the committee can dismiss the contract of their recruitment with cogent evidence, proper way (meeting with resolution), and with the permission of UNO.

1.2.10.5 The Equipment of UDC

The equipment is initially provided by the government assisted by donors and the UP from its Local Government Support Project (LGSP) funded by the central government. Subsequently, entrepreneurs also have to add some equipment along with carrying out expenses for day to day operating costs. The equipment can be categorized into two types based on their availability and the nature of job they perform: ICT equipment and Non

ICT equipment. The ICT equipment are computers, laptops and internet modem/connection which are required to provide e-services. The Non-ICT equipment can be of two types: (1) ‘picture equipment’ such as digital camera, color printer and scanner are commonly in maximum UDCs. But the (2) ‘advanced equipment’ such as photocopier, generator, multimedia projector, solar panel etc. are not available in all UDCs except for the multimedia projector. These equipment can be more or less based on local demand and investment. So the common equipment of UDC are as follows:

Table 4: Common Equipment of UDC

1) Laptop or Desktop Computer	6) One Laminating Machine
2) One Multimedia Projector	7) One Photocopier
3) One Laser Printer	8) One Digital Camera
4) One Color Printer	9) One Webcam and
5) One Scanner Machine	10) One solar Panel.

1.2.10.6 Information and Services delivered from UDC

At present, UDC is providing different kind of services. The popular services of UDC are described as follows:

Table 5: Popular Services of UDC

1) Public examination results	10) Computer Training
2) Online university admission	11) VGD/VGF card database
3) Government forms download	12) Agriculture and health consultancy
4) Birth and death registration	13) Employment information
5) Citizenship certificate	14) Video conferencing (Skype)
6) Government circulars and notices	15) Photocopying / Scanning / Photo / Mobile phone services
7) Passport processing	16) Services of DC office like Porcha distribution, stamp transaction, relief distribution etc.
8) Data Entry	
9) e-mail and Internet browsing	

1.3 The Viability of UDC

By the viability of UDC, it has been meant the ability of UDC to continue in existence with the meaningful participation of two main field level stakeholders - citizens and entrepreneurs. Citizens' meaningful participation refers to ensuring the factors which can support their smooth and continuous participation. Entrepreneurs' meaningful participation refers to securing the facilities in UDC to meet the day to day operation costs and to generate their revenue sufficiency in the long run. Their smooth and sustainable participation is indispensable as this UDC is run by them. So the viability of UDC means 'smooth and sustainable participation of both users and entrepreneurs at UDCs'.

1.4 The Viability of UDC in Rural Bangladesh

In the abode background, this study reviews the viability of UDC under PPPs towards E-governance in rural Bangladesh. Bangladesh is a small country of 147570 square km and has about 156 million population, where 76% of its population live in rural areas.³⁹ It has been struggling to meet the basic needs such as food, clothing, shelter, health, and education to its population and to raise the standard of living. Alike other basic needs, information is another vital requirement for the development of rural people. However, the people, living especially in grass-roots areas of Bangladesh, are far away from the reach of their basic informational needs. Under the grand Digital Bangladesh vision, ICT Policy 2009 and 6th Five Year Plan, the Government of Bangladesh has prioritized

39. Bangladesh Bureau of Statistics (BBS). *Population Census 2011*, Statistics and Informatics Division (SID), Ministry of Planning, Government of the People's Republic of Bangladesh. Accessed June 12, 2016, www.bbs.gov.bd

expanding the access to ICT facilities and provision of digital services to cover the greater segments of the populations of the country.⁴⁰ Following that Bangladesh has seen several successes very recently in expanding information and services through UDCs to the poor and marginalized population, though there are creating several challenges regarding the viability of these UDCs. In this regard viability of UDC in Rural Bangladesh – has appeared to be very essential to understand the phenomenon.

1.5 Necessity of the Study

But only establishing UDCs does not mean it is viable. It has been more than five years since the establishment of UDCs, but still the country is facing some significant barriers in sustainable access of citizens' and entrepreneurs'.⁴¹ For the viability of UDC, citizens' participation is a must, who are the user of UDC. Their smooth and continuous participation can ensure the objectives of UDC which is the part of 'Digital Bangladesh Vision'. Side by side entrepreneurs' active participation is indispensable as they are the managers of UDC to provide necessary information and services. Since they are recruited under PPP to run UDC commercially (self-earner), primary support (investment and establishment) and sustainable income are crucial for their smooth participation and continuity to support themselves and their families; and further growth of service delivery from UDC.

40. M. Minges, et al. *Bangladesh: Access to Information (A2I) Evaluation*, (Dhaka: United Nations Development Program Bangladesh, 2011): 07.

41. Gofran Faroqi. "Financial sustainability of union digital center in Bangladesh." *The Journal of Developing Areas* 49, no. 6 (2015): 61-73, accessed: June 12, 2016, <https://www.aabss.org.au/system/files/published/000811-published-acbss-2015-sydney.pdf>,

The initial field observation indicates that - users' poor participation⁴² and entrepreneurs' drop-outs due to meager income⁴³ are the two major challenges towards

42 An initial survey was conducted in June, 2014. The respondents were the 16 UDCs of 8 Upazilas in Rangpur district. The researcher found though the circulated presence was 15 (shown in the Govt. website: <http://uams.E-service.gov.bd/modules/reports/report.php#> Accessed at 16/6/2014), the real presence was only 08, (institutional survey). The tabulation of the survey has been shown below:

Name of Union and Upazila	Average (per day) Circulated Presence	Average Real Presence
Kallani, Pirgacha	20	10
Parul, Pirgacha	12	5
Alambiditar, Ganggachara	12	6
Betgari, Gangachara	25	12
Chetracal, Pirgang	10	4
Boradarga, pirganja	15	7
Durgapur, Mithapukur	12	8
Milanpur, Mithapukur	13	7
Ikarchali, Taragonj	19	4
Alampur, Taragonj	36	5
Kursha, Kaunia	11	4
Balapara, Kaunia	12	6
Lohanipara, Badargonj	8	4
Kalupara Badargonj	16	5
Soddapushkaroni, Sadar	15	10
Kholea, Sadar	10	7
Average Presence (per day)	15	6

43. An initial survey was conducted on the income of UDC entrepreneurs during (1-15) June, 2014, in 16 UDCs of 8 Upazilas in Rangpur district. The researcher found though the circulated average income (shown in ibid), was 635; while the real income was only 276, (institutional survey). The tabulation of the survey has been shown below:

Name of Union	Per day Income (Circulated)	Per day Income (Real)
Kallani, Pirgacha	503	503
Parul, Pirgacha	507	200
Alambiditar, Ganggachara	690	200
Betgari, Gangachara	748	748
Chetracal, Pirgang	545	100
Boradarga, pirganja	352	150
Durgapur, Mithapukur	726	300
Milanpur, Mithapukur	862	150
Ikarchali, Taragonj	506	200
Alampur, Taragonj	856	200
Kursha, Kaunia	805	100
Balapara, Kaunia	744	150
Lohanipara, Badargonj	425	100
Kalupara Badargonj	429	100
Soddapushkaroni, Sadar	817	817
Kholea, Sadar	655	400
Average Income (per day)	635.62	276.12

the viability of UDC in Bangladesh. Bangladesh country manager of the Global Impact Studies, has observed also, “on an average only 5 (five) people visits at UDC each day which is too low to sustain UDC.”⁴⁴ Side by side initial observation and interview with entrepreneurs (16 UDCs) depict that, there are causing drop-outs from a variety of reasons (factors), which challenges the viability of UDC. So the major issue is not the matter of introducing E-governance through UDC in rural area, but to find out the crucial factors responsible for a viability of UDC that can bring trust of citizens and entrepreneurs in the socio-economic aspects of Bangladesh.

1.6 Research Questions

To ensure viability of UDC from rural users and entrepreneurs their views, feelings, demands, petitions, grieves must be taken into consideration. So there arise the following questions -

- 1) Could the UDC meet the demand of the rural masses and entrepreneurs?
- 2) Do they have the necessary facilities to access to the provision of UDC easily?
- 3) Can UDC ensure their participation with profitably?
- 4) Can it ensure their continuous desire and prospect?

To answer these questions it is necessary to identify the factors responsible for the viability of UDC in details from both users’ and entrepreneurs’ perspective as they are the

44. Araba Sey, Chris Coward, Francois Bar, George Sciadas, Chris Rothschild, and Lucas Koepke. "Connecting people for development: Why public access ICTs matter," (2013). Accessed June 13, 2016, https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/22754/ES_Global_Impact_Study_2013.pdf?sequence=2

main stakeholders in rural Bangladesh. Side by side the real condition of these factors has to be evaluated in order to identify the gap towards viability. So the major challenges for the viability of UDC can be divided into four sections service availability, service accessibility, service profitability and service guarantee (according to the research Questions) to explore and evaluate these challenges. Therefore, the objectives of the study have been evolved with these challenges also.

1.7 Objectives of the Study

- 1) To explore the required information services with their availability at UDC from both user' and entrepreneurs' perspective
- 2) To examine the service accessibility provisions of them in the light of their requirement and reality.
- 3) To assess the essential amenities of UDC to ensure their participation with commercial benefits;
- 4) To evaluate their service prospect and security for their sustainable participation at UDCs.

So the present study tries “to identify the crucial viability factors of UDC, analyze their real scenario and find the gap between them to realize the viability and to make some policy recommendation for a viable UDC based E-governance in Rural Bangladesh”.

1.8 Research Design in the light of Objectives

The above specific objectives have been mapped to the research core chapters in order to ensure the data collection, analysis, findings are according to the objectives. The following graph shows the objectives mapping with the chapter:

Chart 5: Mapping the chapter with objectives



Source: The Researcher

1.9 Scheme of the Study

The study progresses with the following chapter scheme:

Chapter-1: Introduction – This chapter outlines the contents of this research work. It includes an introduction, background of the research area, problem discussion and purpose of the problem. Further, specific research objectives, scope of the study and its limitations have also been given.

Chapter-2: Review of Literature – This chapter focuses light on the previous research work and studies conducted by different researchers on tele-center based E-governance, its process, and effectiveness in the rural area of developing countries especially in south Asia. In this way, it presents a holistic view of different researches done earlier.

Chapter-3: Research Methodology - This chapter describes the research methods, framework, tools and devices used for data collection, sample and its characteristics; and the methods used for analyzing and interpreting the collected data. Demographic profile of the respondents as to their sex, age, qualification, occupation, experience, income, residence and hierarchical status have also been presented.

Chapter-4: Service Availability – The chapter has been carried out to examine the availability of information and services at UDC in the light of users’ and entrepreneurs’ demands. For this purpose, a detailed survey has been undertaken to find out the critical factors crucial for the viability of UDC. Side by side these factors have been examined whether they are present or not in order to realize the viability of UDC

Chapter -5: Service Accessibility – This chapter presents required service accessibility factors and their reality according to the users and entrepreneurs view. For this required parameters of the factors and their availability have been analyzed. For this, several factors have been identified as crucial for the viability of UDC. Then the availability of these factors have been measured whether they are present or not.

Chapter-6: Service Profitability –This chapter provides the service crucial profitability factors, their present circumstances and gaps between them from both users’ and entrepreneurs’ perspective. But it is predominantly analyses the entrepreneurs’ issues, as their income is a significant concern for the viability of UDC under PPP.

Chapter-7: Service Guarantee –This chapter provides the analysis of required service guarantee factors, their real situation and gaps between requirement and reality in the light of both users and entrepreneurs view under PPP arrangement.

Chapter -8: Conclusions and Policy Recommendations – This chapter summarizes all the core chapters with identified crucial factors needed for the viability of UDC at first, then the viability has been evaluated on the basis of their presence circumstance. Finally, some policy recommendations have been made to ensure the viability of UDC towards the E-governance in rural Bangladesh

1.10 Relevance of the Study

There have been many studies undertaken at various times on E-governance implementation in Bangladesh. Some of these studies have evaluated the successes and failures of E-government projects, and sieved the lessons to propose recommendations for the future. Others have attempted to provide some sense of direction, and address the lack of coordination, by prioritizing rural E-government projects. A few further studies – undertaken by both government and non-government entities, have attempted to take examine the government's capacity to implement rural E-government, highlighting

bottlenecks that need to be addressed. A study by the World Bank has also assessed the potential of Public Private Partnerships (PPP) to establish UISC based E-governance in rural Bangladesh, and promoted it as one of the most effective approaches to address most of the technical, financial and managerial challenges and to ensure sustainability of such projects. All of these outputs from previous studies, and other exercises conducted by the UN and the government to identify visions for going forward. However, there have not been developed a comprehensive and coordinated study in the light of rural needs, accesses, facilities and prospects.

Though the citizen centric E-government service delivery projects UDCs have been started from the last five years (2011-2015), they have yet to be stabilized. The researcher thinks, the assessment of UDCs' viability is an important parameter towards a sustainable E-governance in rural Bangladesh. So, there should have clear portrait of field expectations, challenges and remedies towards a better framework for smooth and sustainable E-governance. The suggestions obtained from this research will provide useful guidance for E-government agencies in Bangladesh.

1.11 Limitations of the Study

Every research has its own limitations, and this work is also no exception in this regard. Despite the best efforts, the present study suffers from certain limitations like availability of time, meagre resources and vulnerable political situation during the study.

- 1) It is really a cumbersome task to bring all UDCs from all over the country within the scope of a single research. Therefore, it is necessary to limit the area to be studied under the present research. For this reason that the study has been restricted to the Rangpur District only. As the response data have been collected from the people and entrepreneurs of Rangpur District only, the findings may vary from those of the rest of Country.
- 2) This study has been made limited mainly on measuring the viability of UDC under viability model (prepared by the researcher on the base of KII, pilot survey and observation) from citizens and entrepreneurs (the two main part of UDC) point of view.
- 3) Some problems have been raised due to shortage of relevant books and research works in various libraries and educational institutions regarding the issue.
- 4) Further, as the findings are based on the respondents understanding; the objectivity of study was limited to their frankness and fairness in furnishing policy recommendation.
- 5) A total of 352 users and 32 entrepreneurs submitted their responses. Factors have been extracted exclusively from the attitudinal statements mentioned in the questionnaire.

- 6) Seeking response was a complex task. During analysis it was realized that some of the respondents did not disclose all the factors which have been mentioned in the questionnaire. On account of the above mentioned reasons some of the values may be missing in the analytical tables.

- 7) Finally, identification of the respondents who are users of UDC (minimum one time) was a tedious job. Though they have used UDC, they know little on UDCs. So it cannot be ensured that all the questions would be answered correctly, completely or truly.

1.12 Conclusion

UDCs have huge prospect in our country if they are successfully implemented. They can act as information and community centers to improve living conditions and the quality of life. They can also assist in reducing digital divide and to bring the opportunity for the rural underprivileged communities to better access to information.

Chapter 2

Review of Literature

2.1 Introduction

Though there are remarkable literatures in both developed and developing world on tele-center based E-governance initiatives, there are only a few studies are seen related to Bangladesh. A review of recent progress made in Bangladesh in particular and in other developing countries in general has been presented in this chapters in terms of expanding ICTs and internet services throughout the country especially providing access to the poor and marginalized segments of population in rural and remote places of Bangladesh. Based on a rich survey of secondary literature and online source of information, this chapter attempts to find out the primary viability factors in the tele-center (UDC) based E-governance especially in the context of rural Bangladesh. These are project based some primary documents, some articles with few books and unpublished thesis published in home and abroad. The project based primary document on public tele-center (UDC) based E-governance are found in the website of Access to Information Project (A2i) under the Prime Minister's office of Bangladesh. Others are found in the libraries of different universities and in the website of various online sources like Google scholar, IEEE explorer etc. In order to have a justified review of literature, the relevant studies have been classified and described as follows according to research objectives.

2.2 Studies Undertaken on the concept of E-governance

2.2.1 Ibrahim Osman et, al. (2014)⁴⁸ in their research have identified several models to assess the success of e-government services through measuring users' satisfaction levels that fails to provide a comprehensive evaluation model. Their study has provided an insight and critical analysis of the extant literature to identify the most critical factors and their manifested variables for user satisfaction in the provision of e-government services. Then the various manifested variables have been grouped into a new quantitative analysis framework consisting of four main constructs: cost; benefit; risk and opportunity (COBRA) by analogy to the well-known SWOT qualitative analysis framework. The COBRA measurement scale has been developed, tested, refined and validated on a sample group of e-government service users in Turkey. A structured equation model has been used to establish relationships among the identified constructs, associated variables and users' satisfaction. The results confirm that COBRA framework can be a useful approach for evaluating the success of e-government services from citizens' perspective and it can be generalized to other perspectives and measurement contexts.

2.2.2 Rajon, S. A., & Rahman, M. M. (2012) through their paper "Issues in Implementing Electronic Governance: Bangladesh Perspective" has investigated on various approaches of implementing electronic governance in developing countries and

48. Ibrahim Osman, et al., "COBRA framework to evaluate e-government services: A citizen-centric perspective." *Government Information Quarterly* 31, no. 2 (2014): 243-256, accessed June 12, 2016 <http://dspace.brunel.ac.uk/bitstream/2438/11795/3/Fulltext.pdf>

explore the specific factors related to the challenges and opportunities in implementing electronic governance. According to them, implementation of electronic governance greatly varies because of different technical and socio-economic aspects. So it is essential to analyse the features of related settings to implement electronic governance on a specific basis. As a developing country with lots of limitations like extreme shortage of resources, limitations in financing, absence of proper development planning, lack of skilled human resources, unavailability of stable and fair democracy and more importantly, a number of unavoidable circumstances including natural disasters; it is a must to analyse the concerns. In this paper, they especially present the adaptability of E-governance in the prime sectors of government for developing countries. In addition, they provide specific recommendations for implementing E-governance in the most feasible, cost-effective, and efficient manner.

2.2.3 Verma and Mishra (2009)⁴⁹, in their research paper, "India's Approach in Constructing One-Stop Solution towards E-government" has explained the significance of E-governance for the society. The authors have believed that E-governance has more than 40 potential to provide speedy and convenient access to government services. Also, it can play a significant role in improving interaction between citizens and the administration. They have also focuses on single window services which ensures availability and

49. Neeta Verma and Alka Mishra. "India's Approach in Constructing One-Stop Solution Towards e-Government." *Journal of E-Governance* 33, no. 3 (2010): 144-156, accessed June 12, 2016, https://www.researchgate.net/profile/Alka_Mishra3/publication/221547539_india.gov.in_-_India's_approach_in_constructing_one-stop-solution_towards_e-government/links/0046351e6beec6110a000000.pdf

accessibility of public services at a single point. It can save the citizens from their limitations and inconveniences of getting both public and private services and connect them to the mainstream of development.

2.2.4 Singh (2010)⁵⁰ advocated promoting E-governance in India through Right to Information. The author, in his book *Promoting E-governance through right to information: A case-study of India* has referred E-governance as the usage of internet and mobile computing by the Government agencies for better delivery to citizens. It can improve the interaction between citizens and the Government. The implementation of E-governance means the eliminating of middlemen, reducing corruption. Besides, it has essential features to support online filling of income tax, complaints and grievances. This paper also underlines the different types of interactions between Government and citizens (G2C), Government and business (G2B), Government and Government (G2G) which play a vital role in the implementation of E-governance.

2.2.5 Kumbhar Monisha (2012) in his research titled “A Critical Study of Implication of E-governance Services for Effective Communication with Special Reference to

50. Shalini Singh, "Promoting e-governance through right to information: A case-study of india." *International Journal of Scientific & Engineering Research* 1, no. 2 (2010): 1-9, accessed June 14, 2016, http://www.ijser.org/researchpaper%255CPromoting_e-Governance_through_Right_to_Information.pdf&hl=en&sa=T&oi=gsb-gga&ct=res&cd=0&ei=iN1cV9ajAYLu2AaP87WYAw&scisig=AAGBfm1mOi4VMsNdQPkjeKAojM44T7i6Sg

Citizens in Pune City” has studied the awareness of citizens about E-governance services implemented by Pune and the impact of E-governance services availed by citizens. The researcher has used survey based research methodology to carry out this research. He has found that 83.74 percent young citizens are highly aware about E-governance services and out of them 60 percent citizens prefer to avail E-governance services through the internet at home instead of cyber café or at office. 93.54 percent citizens agreed that implementation of E-governance services makes their life very easy because at the click of a mouse they could avail government services with a high predictability of outcome without standing in queues. Most of the citizens that are 94.12 percent have strongly agreed that due to the implementation of civic services through the E-governance system they got freedom from manual (traditional) cumbersome process and it is a better mode to avail civic services. 92.83 percent citizens agreed that without traveling anywhere they could avail civic services through the E-governance system at their doorstep.

2.2.6 PRABHUC.S.R. (2012)⁵¹ in his book *E-governance: Concepts and Case Studies* has tried to provide the entire spectrum of E-governance—from definition of E-governance to its history, evaluation, E-governance models, infrastructure and manpower facilities, in implementation of E-government projects, and strategies of success of such projects. The text covers 22 case studies—18 Indian case studies and 04 International case

51. C. S. R. Prabhu, "Towards an E-Governance Grid for India (E-GGI): An Architectural Framework for Citizen Services Delivery," in International Conference of E-governance (ICEG), (Hyderabad: 2007), pp. 29-30, accessed June 14, 2016, http://www.csi-sigegov.orgwww.csi-sigegov.org/1/7_266.pdf

studies. This book would be of great interest to students of computer science, IT courses, management and public administration. In addition, government departments—both at the centre and in various states—and administrators should find the book highly useful. New to this edition Provides two Appendices—one on Eucalyptus cloud to remotely provision E-governance application and another on Revisiting National E-governance Plan of India (NeGP): e-Bharath 2020: the proposed future NeGP.

2.2.7 Sushil Kumar (2013)⁵²in his research titled “Design of framework to improve effectiveness of E-governance in the state of Punjab” has defined E-governance as an attempt to bring about Simple, Moral, Accountable, Responsive and Transparent (SMART) Governance with the use of Information and Communication Technology (ICT) for the functioning of Government processes. It involves decisional processes and uses ICT for wider participation of citizens in Governmental decision-making regarding public affairs. The main objective of E-governance is to provide a friendly, efficient and affordable interface between Government and its people resulting in cost-effective and high-quality public service delivery. But it has been observed that highlights that still, the citizens are not much satisfied; and the Government is not getting the desired results. Hence, considerable empirical research efforts are required to find out the gaps and factors

52. Sushil Kumar, "Design of framework to improve effectiveness of e governance in the state of Punjab," (2013). PhD Diss. Punjabi University, Punjab, 2013, accessed June 14, 2013 <http://ir.inflibnet.ac.in:8080/jspui/handle/10603/13544>

responsible for the same. In view of the above observations, there is a need to study the ways for improving E-governance in future, especially in the State of Punjab.

2.3 Studies on the Use of Tele-Center towards E-governance

2.3.1 Singla & Aggarwal, (2014)⁵³ in their research “Status of e-governance in the state of Punjab (India): an analytical study” have investigated E-governance center as single user-friendly window disposal helpline for applicants (SUWIDHA) in Panjab India. They have attempted to examine the effectiveness of SUWIDHA project. The study identifies the factors that affect the working of SUWIDHA centers and also examines the satisfaction level of the respondents in this regard. They have selected three hundred and forty-five citizens randomly belonging to diverse regions of the Punjab state as sample from the sample to collect their opinions. The collective opinions of the respondents have been analysed using appropriate statistical tools for meaningful interpretation to reach at the conclusions. On the basis of results drawn from the study, certain suggestions have been made to improve the working of these centres, which can facilitate better E-governance and its effective implementation.

53. Singla, Sushil Kumar, and Himanshu Aggarwal. "Status of e-governance in the state of Punjab (India): an analytical study." *Electronic Government, An International Journal* 11, no. 1/2 (2014): 1-15, accessed: June, 2016 <http://www.inderscienceonline.com/doi/pdf/10.1504/EG.2014.063307>

2.3.2 Chand, Gian (2014)⁵⁴in his article “E-governance in Haryana: Measures and Effectiveness”, has analyzed the e-Disha project to examine the transparency, efficiency and cost effectiveness for citizens in delivering services. The study has been conducted in Haryana state. The researcher has found that e-Disha centres have become popular for delivering services from users’ point of view. It has been observed that, there is a significant rise in the awareness level of the people about e-Disha centre in last 2-3 years. These centres have been utilized by government department to deliver the various kinds of welfare services and citizens are approaching these centres for old age pensions widow pension and other welfare services. Therefore, it is safely concluded that people adjust themselves with the change and the government should not hesitate in using ICT for bringing delivery of more public services under e-Disha.

2.3.3 Buhigiro S. (2012)⁵⁵in his research report“*The Role of Telecenters in Promoting Socio-Economic development in Rwanda*” has explored the strengths and weaknesses of tele-center in promoting specific socio-economic objectives set in Rwanda’s National Information and Communication Infrastructure (NICI II) plan 2006-2010. He has found

54. Gian Chand, "E governance in haryana measures and effectiveness." (2015). (A unpublished thesis submitted to the Kurukshetra University, Kurukshetra, Haryana, India) accessed June 16, 2016, <http://hdl.handle.net/10603/38105>

55. S. Buhigiro, *The role of telecentres in promoting socio-economic development in Rwanda* (Doctoral dissertation, University of Kigali, Rwanda 2013), accessed June 12, 2016, <http://mobile.wiredspace.wits.ac.za/bitstream/handle/10539/12464/BUHIGIRO%20Seth%20Research%20Report-Final%20300412.pdf?sequence=1>

that tele-centers are being effective in contributing to community development through access to information, skills development, job creation, study opportunities in low cost which is increasing income. The three main challenges that hinder rural communities from advanced e-access are found to be lack of e-literacy, language barriers, and lack of skills and awareness. Future policy requires guiding the deployment of rich local content in tele-centers to promote socio-economic development through different E-government projects.

2.4 Studies on the UDC (UISC) Based E-governance in Rural Bangladesh

2.4.1 A.K.M. Eamin Ali Akanda & Md. Roknuzzaman, (2013)⁵⁶ in their study “Rural Information Provision in Bangladesh: A Study on Development Research Network Information and Knowledge Management” have aimed to explore the rural information provision in Bangladesh and examine users’ opinion regarding such information provision with a case study of Development Research Network (D.Net). Besides the review of secondary sources, data have been collected using an unstructured interview of eight officials of selected Pallitathya Kendra (rural information centre) of D.Net. The case study also conducted a survey of 120 rural dwellers from the selected centres of D.Net to receive their opinions using a structured questionnaire. The analysis shows that D.Net provides rural dwellers of Bangladesh access to information through a number of innovative

56. Eamin Ali Akanda & Roknuzzaman, M. (2013). “Rural Information Provision in Bangladesh: A Study on Development Research Network”, *Information and Knowledge Management* (Vol. 3, No. 10, pp. 64-73),

programs and services with special reference to *Pallitathya* program and Info-Lady Services. The result also shows that ninety percent of the respondents are more or less satisfied with the existing programs and services. They have finished with certain recommendations for more effective and efficient rural information provision in Bangladesh made by D.Net.

2.4.2 Mohammad Abdul Salam (2013)⁵⁷ in his thesis “E-governance for Good Governance through Public Service Delivery: An Assessment of District E-service Centres in Bangladesh” has assessed efficiency and implication of district e-service center of Bangladesh and validate the necessity of E-governance for good governance. The study has revealed that the DESC provides public services efficiently, the e-service delivery has positive impacts on citizen satisfaction and the E-governance initiative leads to good governance promises. An understanding of the current status of E-governance service in Bangladesh can help to policy makers and policy implementers in persuasion of the public service delivery properly. This is believed the comprehensive analysis on e-service centres would be imperative for assessment the effectiveness for delivery of E-government services. This study and their results have some limitations and also indicate directions for further research towards better governance.

57. Salam, Mohammad Abdul. "E-governance for good governance through public service delivery: an assessment of district e-service centres in Bangladesh." (PhD diss., BRAC University, Dhaka, Bangladesh, 2013).

2.4.3 MdGofranFaroqi⁵⁸ (2015) in his article “An Assessment of E-government: Case Study on Union Digital Centres (UDC) in Bangladesh” has assessed impacts of Union Digital Centres (UDC) in Bangladesh from citizen’s perspective in providing benefits of E-government and bridging the digital divide. Based on the ‘stage model’ framework the study finds informational, interactive and transactional services offered from the UDC. Using related sample t-tests and others it finds that the UDC bears potentiality to reduce time, distance and cost in service delivery compared to that of alternative providers. It has also impacts in improving the governance of delivery. The author argues that while the UDC has a contribution to bridge the digital divide in lines of gender, education and income it is still to win geographical parity to reach all. In conclusion, the author draws that the government’s efforts to make E-government services available in the UDC are fewer than that of commercial types or certificates which limit its potential to provide benefits widely.

2.5 Studied on Service Availability in the Light of Rural Needs

2.5.1 Sudip Aryal (2000) through his study on “Rural Transformation by the Establishment of Community Information Centers in the Rural Areas of Nepal: A Pilot Project” has aimed to aware local community people how Information and Communication technology can make their better life. The project has shown how the

58. MdGofranFaroqi, "An assessment of e-government case study on Union Digital Centers (UDC) in Bangladesh." *Australian Journal of Sustainable Business and Society* 1, no. 1 (2015), accessed June 16, 2016 from www.aabss.org.au/system/files/published/000998-published-ajsbs.pdf

benefits of information and communication technology can be reached even to the marginal farmers. The use of E-governance for agriculture can improve the productivity and quality of agricultural products. It can reduce poverty and accelerate globalization for exchange of knowledge and information. According to the author, E-governance in agriculture also improves the planning and decision-making leading to better results.

2.5.2 Ghosh (2011)⁵⁹ studied the significant role of Information and Communication Technology (ICT) in rural development. The author has stressed upon the advantage of 42 “Gyandoot”, an E-governance project implemented in Dhar district of Madhya Pradesh. A kiosk has Window based Personal Computer with internet connection, operated by computer literate owner. A kiosk provides basic services like birth certificate, death certificate, marriage certificate, medical certificate and agriculture consultation. But some technical and non-technical issues like availability of power, internet signal are the obstacles while implementing the Kiosk Net system in rural areas. The researchers have established that for effective implementation of E-governance, rural citizens must be familiar with the internet. Hence, according to the author, E-governance has played a significant role in uplifting the rural citizen. It has the scope of very low cost internet access for providing cost effective E-governance services to the poorest sections of the society.

59. Arijit Ghosh,. "Initiatives in ICT for rural development: an Indian perspective." *Global Media Journal* 2, no. 2 (2011): 1-8, accessed June 16, 2016 <https://caluniv.ac.in/global-mdia-journal/Winter%20Issue%20December%202011%20Commentaries/C7%20-%20Ghosh.pdf>

2.6 Studies on the Service Accessibility at UDC

2.6.1 Meena, and Gopi (2003)⁶⁰ have conducted a study on local governments and right to information titled “Information technology for participatory development”. According to the authors the transparency and accessibility of people to information is a vital component of democracy. Right to information or transparency measures would certainly create confidence in the minds of the public and make them true participants in a democracy. Transparency is one of the effective ways to ensure fair and equitable delivery of goods and service to the people. The author suggests that transparency is the most potent weapon against corruption and ensures a responsive administration reflecting the true will and aspirations of rural people.

2.6.2 Mathur and Ambani (2005)⁶¹ in their paper “ICT and rural societies: Opportunities for growth” have said that the application of ICT solutions for the development of rural India and other developing countries and it opens up a vast range of possibilities. They show how the ICT is giving an opportunity to the vast majority of the population living in rural areas to bring them to the way of development. Although this is a development issue, it is just not for the government; non-government organizations or the rural masses that have a role to play. Private profit-making institutions can develop solutions to capture the

60. Nair. Rahman. *Information Technology for Participatory Development*. (New Delhi: Concept Publishing Company, 2003, accessed June 16, 2016, <https://books.google.com/books?isbn=8180690253>

61. AkshayMathur and DhirubhaiAmbani. "ICT and rural societies: Opportunities for growth." *The International Information & Library Review* 37, no. 4 (2005): 345-351, accessed June 16, 2016, <http://www.tandfonline.com/doi/abs/10.1080/10572317.2005.10762692#.V2Hua7t97IU>

unrecognized markets, make profits and at the same time aid the rural societies. The paper presents some cases where ICT has been effectively used for the benefit of the rural societies and analyses the opportunities that lie in this sphere. The cases range from successful use of ICT in governance, to ICT solutions for improved profits to ICT in microfinance.

2.6.4 Thammi Raju and Sudhakar Rao (2007)⁶² in their study have revealed that the extension services are not reaching the needy farmers at the right time in right form in the traditional extension system due to various reasons or drawbacks such as high cost, irrelevance of message to a particular client, erosion of message, inability to cover all the farmers, low extension contact intensity etc. ICT is one of the new frontier areas, whose potential is unlimited in an agricultural sector, which is transforming into hi-tech commercial agriculture. The ICT enables various issues pertaining to the planning, development in farm extension system easily, efficiently with low cost.

2.6.5 Das, Patra, & Mahapatra (2008)⁶³ in their book *e-Grama: a tool for bridging the digital divide in rural India* have experienced the implementation of e-Grama project in

62. ThammiRaju, D., and B. Sudhakar Rao. "Information Technology in Farm Extension: Issues concerned." *JOURNAL OF RURAL DEVELOPMENT-HYDERABAD*- 26, no. 3 (2007): 419, accessed June 16, 2016, from ftp://193.43.36.92/upload/Agrippa/661_en.doc

63. Rama Krushna Das, ManasRanjanPatra, and Subash Chandra Mahapatra. "e-grama: a tool for bridging the digital divide in rural India," in *Proceedings of the 2nd international conference on Theory and practice of electronic governance*, pp. 361-366. ACM, Newyork 2008, accessed June 16, 216 from <http://dl.acm.org/citation.cfm?id=1509171>

Orissa. It is E-governance initiative of National Informatics Centre (NIC) for providing Government to Citizens (G2C) services through different Gram Panchayats and village level Information Technology Kiosks. These self-financed kiosks are being opened by the villagers, Clubs and Non-Government Organizations (NGOs) with their own resources and accessing the Internet from server placed at National Informatics Centre (NIC). Also, in case of connectivity problem, CDROM version of software has also been provided by the NIC. Nehru Yuva Kendra contributes in popularizing this project by creating awareness and motivation amongst the citizens. The authors conclude that e-Grama is public-private people partnership model with active participation of the citizens.

2.6.6 Tejasvee and Sarangdevot (2011)⁶⁴, in their research paper, have discussed the E-governance projects implemented in Rajasthan for improving governance, employment opportunities and life style of citizens. The authors mentioned the E-governance projects for Government to Government (G2G), Government to Business (G2B) and Government to Citizens (G2C) services implemented in the State under study. The supporting framework for integrating the overall socio-economic activities under the information and communication technology framework is also conveyed by their research paper. The authors concluded that the end-users of E-governance projects are citizens, businessmen, employees and the government itself participates in service delivery system. The main

64. SANJAY TEJASVEE, and DRSS SARANGDEVOT. "Integration of ICT and E-Governance in Rajasthan." *Indian Journal of Computer Science and Engineering* 2, no. 2 (2011): 177-183, accessed June 16, 2016 from <http://www.ijcse.com/docs/IJCSE11-02-02-55.pdf>

benefit of E-governance is to provide the public service delivery in pre-defined time and in an efficient, transparent and reliable manner.

2.6.7 Warale and Diwakar (2011)⁶⁵ has suggested the solutions for removing shortcomings of the existing E-governance systems and discussed the present status of E-governance at the world level. USA and western countries are far more successful in E-governance implementation. These countries have contributed towards the success of E-governance projects in Bangladesh, South Africa, Namibia, etc. e-voting is an E-governance project implemented in Germany successfully. National E-governance Plan (NEGP), State wide Area Networks (SWAN), State Data Centers (SDC) and Common Services Centers (CSC) are the Indian Government's E-governance initiatives for various departments and state Governments. The author mainly stressed on SETU, an E-governance project of Maharashtra state that connects the administration with the general public. The main objective of this project is to provide efficient services to the citizens in an integrated manner.

2.6.8, Mercy KarimiMugambi⁶⁶ in his PhdDiss "Effects of E-government Strategy on Service Delivery in the Government Ministries in Kenya." highlighted the initiatives of E-

65. N. PrajaktaWarale and HemalathaDiwakar. "A Study on the Relationship between Service Quality and Citizen Satisfaction for Setu: An E-governance Initiative, in Maharashtra, India." *Asia Pacific Journal of Research Vol: I. Issue XXIX* (2015), 86-98 June 16, 2016, <http://apjor.com/downloads/0508201511.pdf>

66. Mercy Karimi Mugambi, "Effects of E-Government Strategy on Service Delivery in the Government Ministries in Kenya." Phd Diss., School Of Business, University Of Nairobi, 2013 accessed June 16, 2016, http://chss.uonbi.ac.ke/sites/default/files/chss/EFFECTS_OF_E_GOVERNMENT_STRATEGY_ON_SERVICE_DELIVE.pdf

governance and assured its impact on society across whole of the country. In his research paper, the author studied 49 E-governance projects in various states of India such as BHOOMI in Karnataka for computerization of land records, e-SEVA in Andhra Pradesh for e-payment of utility bills/taxes, FRIEND (Fast, Reliable, Instant, Efficient Network for Disbursement of Services) in Kerala for the payment of different utility bills, GYANDOOT in Madhya Pradesh for village communities, LOK MITRA in Rajasthan used as single window system, SAMPARK in Chandigarh providing electronic service. According to this study, these projects will enable easy multiple services access with reduced travel and waiting time. For this the awareness of computer and internet is has to be intensify in every nook and corner in India. Without this, it is very difficult to implement E-governance projects effectively.

2.6.9 SK. Mamun Mostofa, (2013) in his book *A Comparative Analysis of Information Access in Rural Bangladesh* has aimed to carry out a comparative analysis of the information access patterns in Khulna and Shatkhira district, to discover the sources and channels of information access in the rural peoples. A total of 185 questionnaires were distributed and only 165 completed questionnaires were returned. The study reveals that villagers of Khulna and Satkhira need more information pertaining to all aspects of life, interpersonal (IP) communication sources and channels are more effective than non-interpersonal (NIP) communication sources and channels in meeting the needs of the rural peoples. Poor communication infrastructure existing in the villages remains a major

drawback in information access in the villages. Finally this paper provides some suggestions to make information spreading to rural people competently.

2.6.10 Sharon Cheuk, AzuriatyAtang, and May-ChiunLo (2012)⁶⁷ in their book “*Attitudes towards the Telecentre in Bario, Borneo Malaysia: 14 Years*” have aimed to examine the community perceptions and attitudes towards the use of the telecentre in Bario, Sarawak, Malaysia. A qualitative research approach has been chosen as it offers an avenue to investigate perceptions, attitudes and motivations. In-depth interviews have been conducted, using a structured questionnaire, to collect qualitative data from local community persons (including tele-centre users and non-users) in Bario. The study reveals that a significant number of the respondents has not currently used the telecentre, due to the presence of alternative internet access methods, the perceived high cost of using the tele-centre and slow/problematic internet connection at the telecentre. General opinion of the telecentre is positive, in that it is a communication tool for personal and business matters. In terms of perceived ease of use, the telecentre is not considered difficult to use; however very few respondents exhibited enjoyment in its use, citing that it was only a means to an end. Respondents perceive the tele-center to be useful overall, and some of those who were not able to use ICT or the tele-center nevertheless perceived that it had a business value to them. As this study is qualitative in nature, the sample size is considered small; hence, the general usability of the research may be affected. Extension of the

67. Sharon Cheuk, AzuriatyAtang, and May-Chiun Lo. "Community attitudes towards the telecentre in Bario, Borneo Malaysia," *International Journal of Innovation, Management and Technology* 3, no. 6 (2012): 682, accessed June 16, 2016 <http://www.ijimt.org/papers/319-CM302.pdf>

research findings using quantitative methods would prove beneficial for the validation of the findings. This is a first baseline study on communities' attitudes towards the tele-center more than a decade after the said tele-centre was set up. The findings can be relevant to future studies of community-based ICT initiatives and the broader areas of information-seeking, information-seeking behaviour, and user needs.

2.7 Studies on the Service Profitability from UDC

2.7.1 Subhash Chandra Bhatnagar, in his article "Panchayats in the 21st Century: ICT Enabled Panchayati Raj"⁶⁸ has identified that ICT Enabled Panchayati Raj has reduced corruption up to some extent and generated revenue for the state Government. It has also helped in increasing citizens' confidence level and reduces the role of middlemen as well as Government officials with vested interests. The study has highlighted the scope of single window system and fixed time service. This project can be easily replicated throughout the country for effective implementation of E-governance. Hence, people can avail services conveniently without much of the hassle.

2.7.2 Vir and Bansal (2008)⁶⁹ highlighted E-governance initiatives in Haryana, - "e-DISHA EkalSeva Kendra" where Government to Citizens (G2C) and Business to Citizens

68. Subhash Chandra Bhatnagar, "Panchayats in the 21st Century: ICT Enabled Panchayati Raj." accessed June 16, 2016, http://papers.ssrn.com/sol3/Delivery.cfm/SSRN_ID1804060_code1491208.pdf?abstractid=1804060&mirid=1

69. Vir, Dharam, and Ghanshyam Bansal. "e-DISHAEkalSeva Kendra–Citizen Centric e-Governance." *E-governance in Practice* (2008): 86-94, accessed June 16, 2016 from http://www.iceg.net/2008/books/3/11_86-94.pdf

(B2C) services have been provided under one roof. This e-DISHA is an electronic interface between Government and citizens for providing the Government services to the citizens. It provides for all kinds of citizens' interaction with the Government such as complaints, suggestions, feedback and all other E-governance related activities. The main objective of this project is to make governance transparent, effective and maximize citizens' participation. It also helps in reducing the costs of service delivery and improving the quality of services. The unique feature of this project is the setting-up of information Kiosks that are owned and run by local entrepreneurs who will eliminate corruption and middlemen from the process. This Online Treasuries Information System can provide transparent, efficient mode of clearance payment system. It facilitates faster payment processing, saving human time while conducting transactions with bank and state departments. It also provides timely information to the state finance department for further planning and action.

2.8 Studies on the Service Guarantee under PPP Agreement

2.8.1 Mahmood (2005)⁷⁰ There is another study entitled "*Multipurpose Community Telecenter's for Rural Development in Pakistan*" Here the author has shown about the challenges and opportunities of establishing '*Multipurpose Community Telecenters (MCTs)*' in rural areas of Pakistan. In his study he has also shown about the propose of

70. Khalid Mahmood, "Multipurpose community telecenters for rural development in Pakistan." *The Electronic Library* 23, no. 2 (2005): 204-220, accessed June 16, 2016 from <http://www.geocities.ws/khalidmahmood/mcts.pdf>

establishing of MCTs in Pakistan in terms of policy formulation, planning, management, funding, building, equipment, technology, services, target groups, marketing and sustainability. He has stressed upon the need of strong monitoring and evaluation system with feedback for corrective action. This study framework focuses mainly on making strategy for the use of information & communication technology in various existing processes for member countries.

2.8.2 Thadaboina (2009)⁷¹ has reviewed the ‘Warana Wired Village E-governance Project’ implemented in rural areas of Maharashtra. This project is used to provide basic public services with efficiency and effectiveness. The success of any E-governance project always depends on the satisfaction of users. In this paper, the study shows that 79% of the respondents are highly satisfied, 17% are satisfied and the remaining 4% respondents are on a moderate scale. It is pertinent to note that no citizen is dissatisfied here.

2.8.3 Yaghoubi et al. (2011)⁷² have evaluated E-government performance while delivering electronic services in Mashhad city of Iran. The authors concluded that satisfaction level of citizens from the staff is less than average and from the given services, accessibility is more than average. It shows that there is no improvement in service

71. Thadaboina, Venkatamallu. "ICT and rural development: a study of Warana Wired Village Project in India." *Transition Studies Review* 16, no. 2 (2009): 560-570, accessed June 16, 2016 from <http://link.springer.com/article/10.1007/s11300-009-0092-z>

72. Nour Mohammad Yaghoubi, AtiyehHaghi, and S. Khazae. "E-Government and citizen satisfaction in Iran: Empirical study on ICT offices." *World Applied Sciences Journal* 12, no. 7 (2011): 1084-1092, accessed June 16, 2016 from [http://idosi.org/wasj/wasj12\(7\)/26.pdf](http://idosi.org/wasj/wasj12(7)/26.pdf)

delivery system but only organizational change. So, awareness among users and effective participation can improve the satisfaction level.

2.8.4 Marthinus C Breitenbach, (2013)⁷³ in his writing ‘Tele-centers for sustainable rural development: Review and case study of a South African rural telecenter’ has evaluated a South African rural telecentre that may serve as a ‘best practice’ model. The paper first provides a brief literature review of tele-centers and the role of information and communication technology in economic development. A qualitative evaluation of a case study is presented within the context of sustainability considerations and development outcomes; that is, showing how the telecentre has improved the lives of the rural community at Thabina. Some of the observed economic development impacts are listed in the paper and an attempt is made to capture the essence of the vital links between the use of information and communication technology (technology transfer), human development, education and economic development.

2.8.5 Suri and Sushil (2008) analysed the conventional programmed planning framework and examined its suitability to handle the E-governance projects. In this study, the researchers studied various shortcomings in the existing Governmental system. They made many recommendations for the existing framework and expected benefits which

73. Marthinus C Breitenbach, "Telecentres for sustainable rural development: Review and case study of a South African rural tele centre," *Development Southern Africa* 30, no. 2 (2013): 262-278, accessed June 16, 2016 <http://www.tandfonline.com/doi/abs/10.1080/0376835X.2013.797229>

could further enhance the effectiveness of the system. The study brought out that existing framework is not suitable enough to handle the complex mixture of Governmental system which involves social, legal, organizational, political and technological aspects. They proposed recommendations which can help to make the system more effective and flexible.

2.8.6 Rizwan Hassan, Md. (2013) ⁷⁴in his book *E-governance and E-government in Bangladesh: Performance, Challenges and Remedies* has marked that the essence of good governance lies in successful implementation of E-governance in wide range of government activities. In current days of digital and ICT based environment, it is impossible to have good government without E-government. The purpose of this study is to discuss the performance of Bangladesh in E-government implementation, identify some of the challenges and suggest some of the remedial measures. As per UN E-government survey Bangladesh performed worse in 2012 than 2010. The challenges arise from change in government policy with change in government, lack of sufficient skilled well-trained human resource, supply of sufficient fund for implementing such capital intensive project, etc. But the situation can be changed by taking necessary steps like political consensus, development of human resource, ICT penetration, and taking proper long-term plan implementing E-government in Bangladesh.

74. MdRizwan Hassan, "E-Governance and E-Government in Bangladesh: Performance, Challenges and Remedies." *Asian Journal of Applied Science and Engineering* 2, no. 3 (2013): 210-216, accessed June 16, 2016 from <http://www.journals.abc.us.org/index.php/ajase/article/download/644/472>

2.8.7 Rahman, S. M. A. (2016)⁷⁵in his book *Prospects of PPP in Expanding ICT Services in Rural Bangladesh: A Case of Union Digital Center* attempted to review the prospects of public private partnership in expanding ICTs and digital services in rural Bangladesh. He mentioned that, due to infrastructural bottlenecks and huge initial investment requirements, a vast majority of population in Bangladesh especially in the rural areas still do not have functional access to internet facilities and digital services. On the above backdrop, based on the survey of secondary sources of information, took into account the case of Union Digital Centers (UDC) in Union Parishad level in Bangladesh. His paper made evident that neither public nor private bodies can render the poor and rural people the access to digital services in a segregated manner except without a joint endeavor or partnership for the viability of UDC. He emphasized that PPP can be a viable option in expanding digital internet services to the poor and marginalized population in rural Bangladesh.

2.9 Overall Review of the Literature

From the above literature, it has been discovered that the tele-center based E-governance in South Asian Countries has often been focused with the following factors-

75. Rahman, Syed Mohammad Aminur. "Prospects of PPP in Expanding ICT Services in Rural Bangladesh: A Case of Union Digital Center." *International Journal of Economics and Finance* 8, no. 2 (2016): 163, accessed June 16, 2016 from <http://www.ccsenet.org/journal/index.php/ijef/article/viewFile/56680/30306>

- a) Most of the rural people are out of ICT (especially public information and technology) due to poverty, unawareness and illiteracy;⁷⁶
- b) They have strong implications for socio-economic development; specially in agriculture, livestock & fisheries;⁷⁷
- c) Tele-centers can support in Digitalization and employment opportunities;⁷⁸
- d) These centers can run viably under PPP due to infrastructural bottlenecks and wants of huge initial investment⁷⁹,
- e) A suitable framework / model under PPP can ensure for participatory and sustainable telecenters;⁸⁰
- f) Technical and management issues for viable telecenters⁸¹,
- g) Financial sustainability of public telecenters⁸²,
- h) Organizational sustainability of rural telecenters⁸³,

⁷⁶. Warale&Diwakar, 97

⁷⁷. Mathur and Ambani, 351

⁷⁸. Tejasvee and Sarangdevot,183

⁷⁹. GofranFaroqi, 72

⁸⁰. Rajon, 353

⁸¹. Md. Rizwan Hassan, 216

⁸². Mahmood, 219

⁸³. Prabhu, 30

- i) There are challenges in public telecenters, but possible remedies are there,⁸⁴
- j) There is gap between supply (delivered services) and users demand in public telecenters⁸⁵,
- k) Users' awareness and satisfaction in rural telecenters⁸⁶ are also important,
- l) Impact / Evaluation of Public Telecenters under PPP⁸⁷

But in the context of rural UDCs of Bangladesh, all of these issues are not crucial, some may be incompatible also. The government of Bangladesh has a strong political commitment towards digital Bangladesh through these UDCs. Now the challenge of viability remains which includes smooth people's participation and financial sustainability that can meet the demand of both government and the citizens. (Evaluation Report, Access to information 2011). So, it needs a root level exploration and evaluation of present UDCs to ensure the viability of UDCs.

2.12 Conclusion

So the studies on telecentre based E-governance regarding the country Bangladesh have been focused on diverse perspective to make it strong and sustainable. But in the context

⁸⁴. Eamin Ali and Ruknizzaman, 73

⁸⁵. MonishaKumbhar, 163

⁸⁶. Vir and Bansal, 94

⁸⁷. Chand, 176

of socio-economic characteristics of rural people, there is no comprehensive study which can bring the root level viability of UDC. Now it requires a holistic view to identify the crucial factor responsible based on the result of previous studies and root level expectations.

Chapter Three

Methodology of Research

3.1 Introduction

Generally, research methodology is a process to collect data and different information for achieving the research objectives. It primarily focuses on the methods, tools and techniques of data collection. It may include interviews, surveys, research publication and research technique. The instruments for gathering data also fall within the definition of methodology of a research. The purpose of this study is to identify the critical viability factors of UDC, analyze their real scenario and find the gap between them to realize the viability towards UDC based E-governance in Rural Bangladesh.

3.2 Research Design

Susan K. Grove et al. defines defines a research design as “a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings”. It is a master plan of specifying the methods and procedures for collecting and analyzing the needed information. The study has been planned to be both exploratory and evaluative in nature. It is exploratory in the sense that it tries to identify the significant viability factors in the light of rural socio-economic background, anxieties, expectation and vision from both users’ and entrepreneurs’ perspective. It is evaluative in the sense that it tries to estimate these identified factors under the present settings, management and programs (information and services) of UDC.

3.3 Research Instrument

A research instrument is a tool used to collect data. The study is predominantly qualitative, though, it has used both qualitative and quantitative approaches. In one side, it has focused on the root level stakeholders demands, grieves and satisfaction; in the other side it has quantified their views statistically.

The research instrument used in the present study is basically content analysis, Key informant Interview (KII), questionnaire survey and d) observation method. At first a set viability factors has been identified from the content analysis of books, journals, thesis, proceedings, related to the tele-center (UDC) based E-governance in South-East Asia especially India and Bangladesh. Specially the reports published by the Access to Information (A2i) project responsible for UDCs' service delivery has been used as primary materials. Secondly, these factors have been verified and more specified through the primary source like KII with the selected experienced officials related to UDC; unstructured questionnaire based field survey among the users and entrepreneurs of UDC. Then the most critical factors have been identified through the experienced users and entrepreneurs of UDC. So the methods used for data collection are:

- 1) Content Analysis,
- 2) Key Informant interview (KII),
- 3) Questionnaire Survey and
- 4) Institutional Observation.

3.4 Questionnaire Design

A questionnaire has been designed to gather the necessary information. Based on the literature review, primary serve and KII the questionnaires have been developed for both citizens and entrepreneurs. At first two sets of unstructured questionnaires have been developed to find out the primary factors responsible for the viability of UDC – one for the viability from the user and viability from the entrepreneurs. The experts have been requested to scrutinize the questionnaire and to give their impressions regarding the relevance and contents of the questionnaire according to the research objectives. They have been asked to examine the questionnaire critically, and give feedback and suggest with regard to comprehensiveness, redundancy level, and consistency. The questionnaires have been created in such way that the respondent can give quick response. At the second step two sets of structured questionnaire have been made to choose the crucial factors responsible for the viability of UDC from the selected factors collected from unstructured questionnaires. The feedback provided by the respondents during the first step has been duly considered in designing the next structured questionnaires. Finally, the answers of the questionnaires have been divided and evaluated through four chapters corresponding to the objectives of the study.

3.4.1 Testing of the Questionnaire

The questionnaire has been tested for, content validity sensitivity and data triangulation.

(a) Content Validity

The questionnaire has been tested for the following features:

- 1) Comprehensiveness,
- 2) Relevance with the objectives of study,
- 3) Relevance with current scenario and
- 4) Time befitting: On an average 10-15 minutes have been required per respondent, however, the interactions with the functional heads and senior people lasted for 25-30 minutes.

(b) Sensitivity

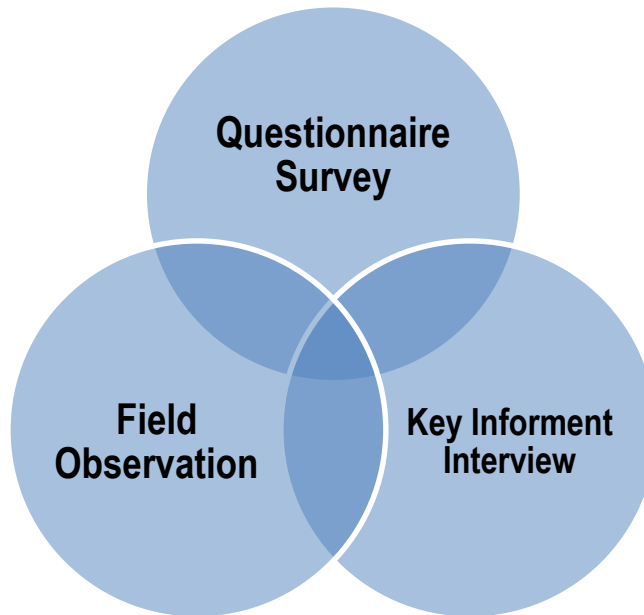
Five-point Categorical scale has been used to record the perceptions of respondents. Further, the sensitivity was assured by taking multiple questions pertaining to similar theme.

(c) Data Triangulation

Triangulation of quantitative and qualitative data allows a researcher to validate and crosscheck the findings. B. Kaplan and D. Duchon notes that:

“Collecting different kinds of data by different methods from different sources provides a wider range of coverage that may result in a fuller picture of the unit under study . . . Moreover, using multiple methods increases the robustness of results because findings can be strengthened through triangulation – the cross-validation achieved when different kinds and sources of data converge and are found congruent”.⁹²

⁹² B. Kaplan and D. Duchon, 1988. Combining qualitative and quantitative methods in information systems research: a case study, *MIS quarterly*, pp.578, accessed June 12, 2016, <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.524.6178&rep=rep1&type=pdf>

Chart 6: Data Triangulation for the Study

Source: The User

In this research the viability factors have been triangulated through questionnaire survey, KII and institutional observation respectively.

3.5 Scale Construction

For measuring the citizens' and entrepreneurs' viability factors from the settings and service delivery system of UDCs a five-point Categorical scale has been used. It is one of the most widely used approaches to scaling responses in survey research. Each item of the questionnaire has been measured on a five-point scale with end points of very essential (5) and Not essential (1). On the other side for measuring the presence of these viability factors another five point categorical scale has been used with end points of full presence (100%) and No presence (00%).

Table 6: Five Point Scale for Measuring the Viability of UDC

Degree of Significance	Categorical Scale	Evaluation of their Presence	Percentage
Very Essential	5	Available	100%
Essential	4	Moderately Available	75%
Somehow Essential	3	Partially Available	50%
Less Essential	2	Least Available	25%
Not Essential	1	Not available	00%

3.6 Analytical Framework

Analytical framework has been presented to make in line with the literature review, field survey and institutional observation. As the present study aims to explore the critical viability factors to evaluate the viability situation, the viability factors have been explored under four main segments - service availability, service accessibility, service profitability and service guarantee which can cover all the factors for the viability of UDC. This has been prepared by the researcher himself in the light of document analysis, KII and institutional observation.

Chart 7: Organization of Factors for the Viability of UDC

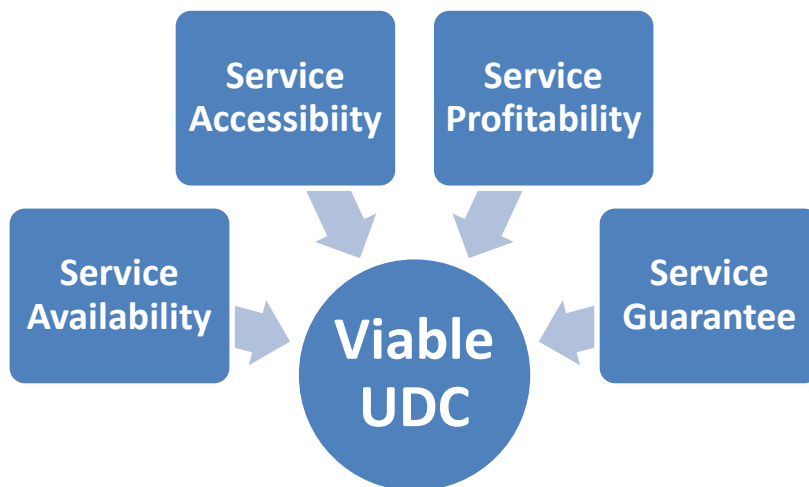
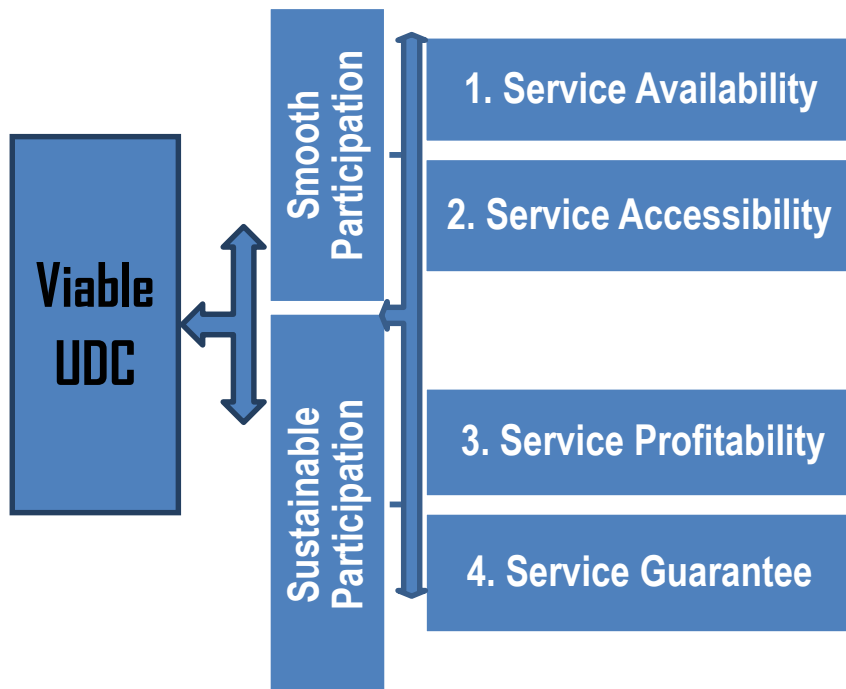


Chart 8: Process of the Factors for the Viability of UDC



Source: The researcher

The both framework shows that there are four segments of a viable UDC - service availability, service accessibility, service profitability and service guarantee under two main partitions- smooth participation and sustainable participation of both users and entrepreneurs. The four segments can ensure both users' and entrepreneurs' smooth and sustainable participation and this participation can make the UDC viable. Here, the first two segments – service availability and accessibility are predominantly related to the smooth participation of rural users and second two segments – service profitability and guarantee are predominantly related to the sustainable participation of entrepreneurs. Every segment has specific factors which have been generated by users' and entrepreneurs' claim and expectation.

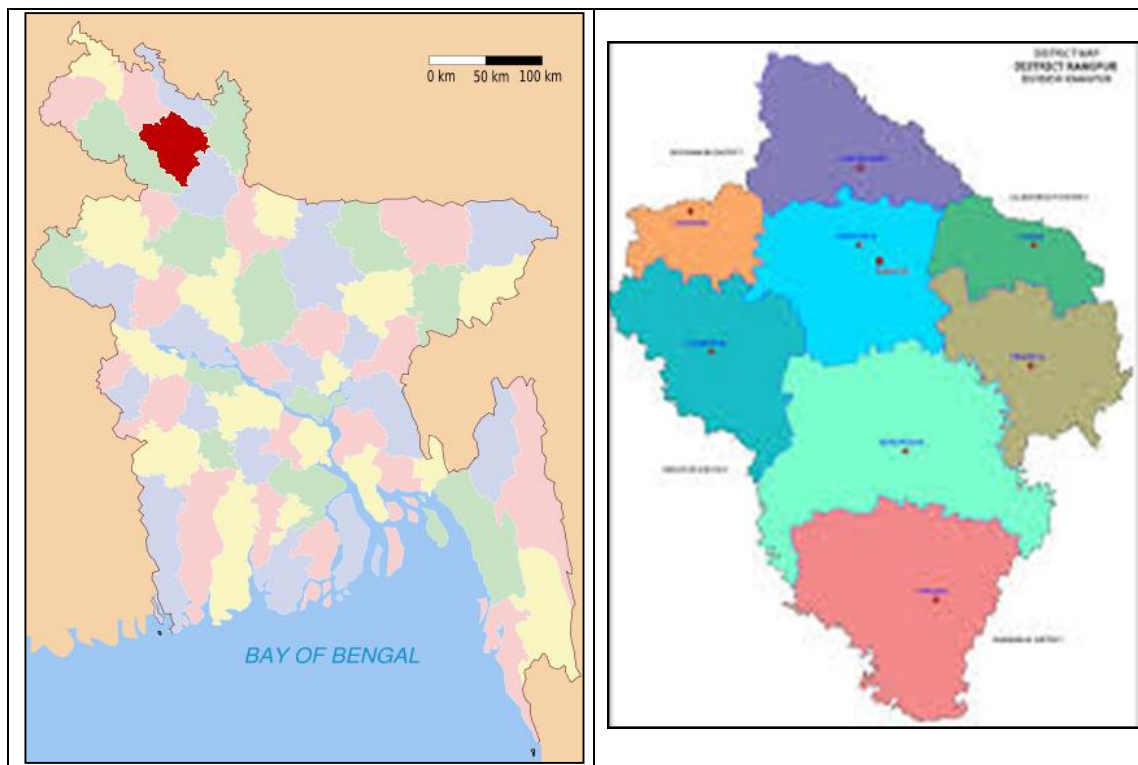
3.7 Research Area

The management and services of UDCs are almost same in all over the country- Bangladesh and there is a limited variation among one another. So out of 64 Districts, Rangpur District has been selected to study. So it has been helpful for the researcher to collect the reliable primary data, as it is home District of the researcher.

3.7.1 Identifying Rangpur District

Rangpur is a north-western and backward district of Bangladesh with eight upazila consisting 76 Union Parishads.

Chart 9: Location of the Rangpur District



Source: Bangladesh Demographics Profile 2014, accessed at June 16, 2016, http://www.indexmundi.com/bangladesh/demographics_profile.html

3.8 Population and Sampling

3.8.1 Population:

There are two kinds of population in these study. The first one is individual - users and entrepreneurs of UDC. The users are the citizens who use the UDCs to avail their required information and services. The entrepreneurs are those individuals who are engaged at UDCs through a contact under PPP to deliver information and service. The second one is institutional – UDCs working under every Union Parishad in rural Bangladesh.

3.8.2 Sampling:

After selecting Rangpur District, 16 UDCs have been selected as primary sampling unit from 08 Upazilas where 02 UDCs lies in each Upazila (stratified sampling). Then 384 individuals (both users and entrepreneurs) have been selected as secondary sampling unit where 24 individuals from each UDC (stratified sampling).

The sample size 384 has been made through the following formula ---

$$n = \frac{Z^2 \cdot p \cdot (1-p)}{e^2}$$

Where:

n = Sample Size;

Z = Z value (e.g. 1.96 for 95% confidence level);

p = percentage picking a choice, expressed as decimal;

(.5 used for sample size needed);

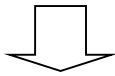
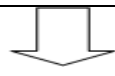
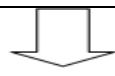
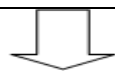
e = confidence interval, expressed as decimal (e.g. .05).

NB: This formula has been taken as the population size (respondents) is unknown.

3.8.3 Sampling Process

The sampling process will be clear through the following table:

Chart10: Sampling Process

Population	The UDCs and their Users & Entrepreneurs from rural Bangladesh
	
Convenience Sampling	The UDCs and their Users & Entrepreneurs from Rangpur District (01 from 64 Districts)
	
Stratified Sampling (Primary Sampling Unit)	16 UDCs and their Users & Entrepreneurs from 08 Upazilas (02 from each Upazila)
	
Stratified Sampling (Secondary Sampling Unit)	384 individuals (Users & Entrepreneurs) from 16 UDCs
	
Purposive Sampling* (Secondary Sampling Unit)	352 Users and 32 Entrepreneurs from 16 UDCs (22 Users and 02 Entrepreneurs from each UDC)

* There was 352 users (average) in each UDC per month in Rangpur District during study.

3.9 Socio-Economic and Communication Backgrounds of Sample Users

Before using the sample respondents of Rangpur district in this study, it is necessary to study the socio-economic background of these respondents which can help to understand their belief, attitude, mindset, perception, outlook, consciousness, interest, lifestyle and communication. In this this study the variables of socio-economic background for the respondent are described through the following table:

Table 7: Variables for the Respondents’ Socioeconomic Background

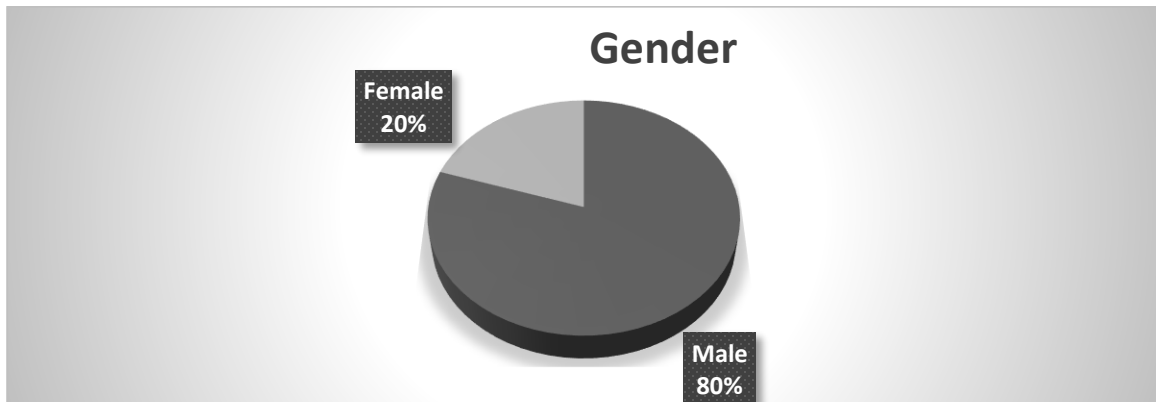
Variables for the Socio-economic Background (For UDC Users)	Variables for the Socio-economic Background (For UDC Entrepreneurs)
Gender	Gender
Age	Age
Educational Qualification	Marital Status
Wealth/ income	Educational Qualification
Occupation	Training Skill
Distance from UDC	Experience
Communication with Government	Communication with Government
Perception on UDC	perception on UDC

3.9.1 Socio-Economic and Communication Backgrounds of Sample Users

a. Background in Relation to Gender

The researcher has observed that the citizens of rural area are gender sensitive. They do not expect their mother, wife or daughter to go to any office or center. Though the situation is changing, even now this is predominant in middle income and religious families. These have been also seen in the user statistics of UDC. The ratio is nearly 4:1. So among 352 users, the researcher has distributed the sample as 282 male and 70 female.

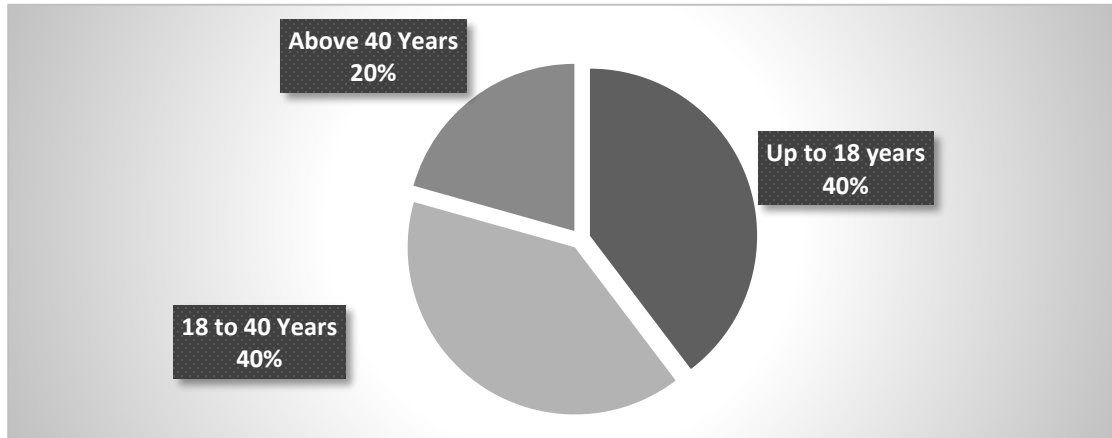
Chart 11: Citizens Sample Distribution: Gender-wise



b. Background in Relation to Age

It has been observed that most of the rural citizens are not eager to the UDCs due to illiteracy, unawareness, poverty, traditional mindset and lifestyle. But this situation is changing in the young and middle aged people. They are more participatory than the old. Among 352 users it has been observed that the young (10 -25) are nearly 140, middle aged (25 - 40) are 140 and old are (40- 55) are 72.

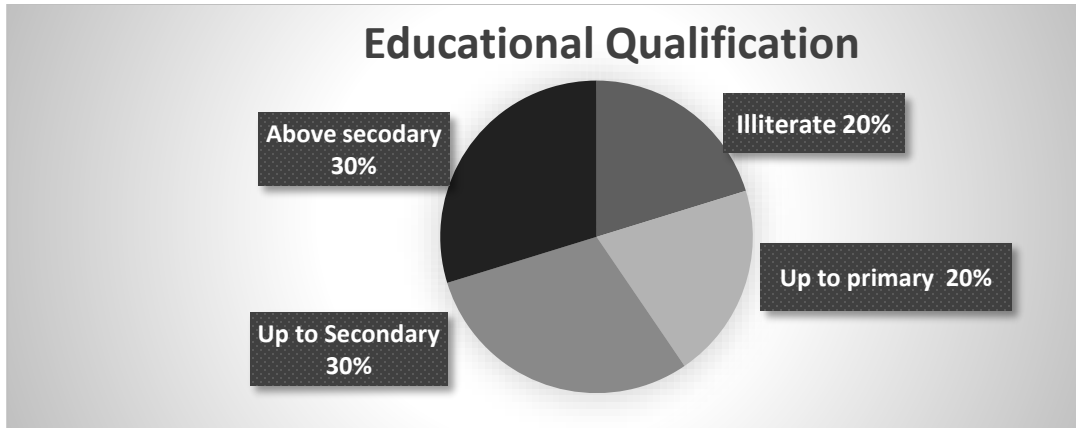
Chart 12: Citizens Sample Distribution: Age-wise



c. Background in Relation to Educational Qualification

The observation indicates that educated people especially young generations are keen in ICT and ICT based UDC irrespective of their educational qualification. They are becoming eager day to day. On the other hand, the participation of illiterate people are not satisfactory though they are huge in number. So the proportion 3:3:2:2 has been taken according to HSC pass, SSC pass, Primary pass and illiterate (no Pass) and that is 106:106:70:70 .

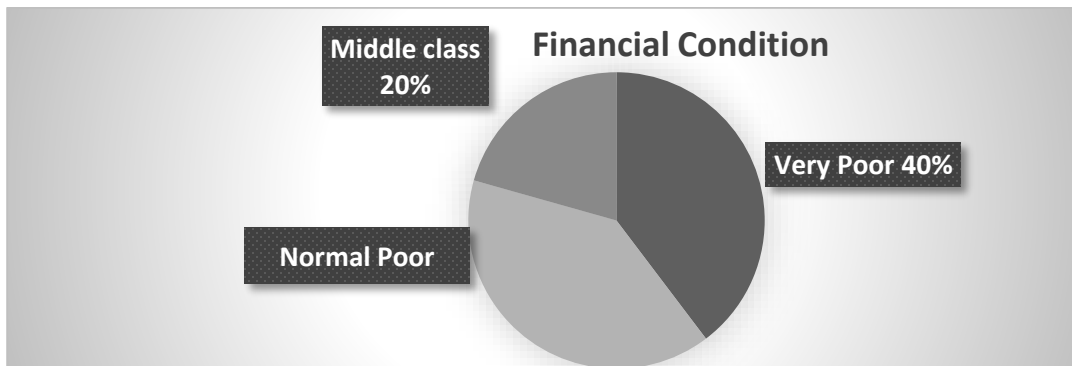
Chart 13: Citizens Sample Distribution: Qualification-wise



d. Background in relation to Wealth/ Income

It is critical to find out the solvency of a rural people. In that case, we have assumed it by the ownership of vehicle which is crucial in their daily life. If a user is very poor if he has no vehicle, normal poor if he has non-mechanized vehicle and middle class or higher if he has mechanized one. It has been observed that the normal poor and middle class people are participating more. But the huge hardcore poor are outside the touch of UDC. So the ratio has made very poor 140, normal poor 140 and middle class 72 according to their financial conditions.

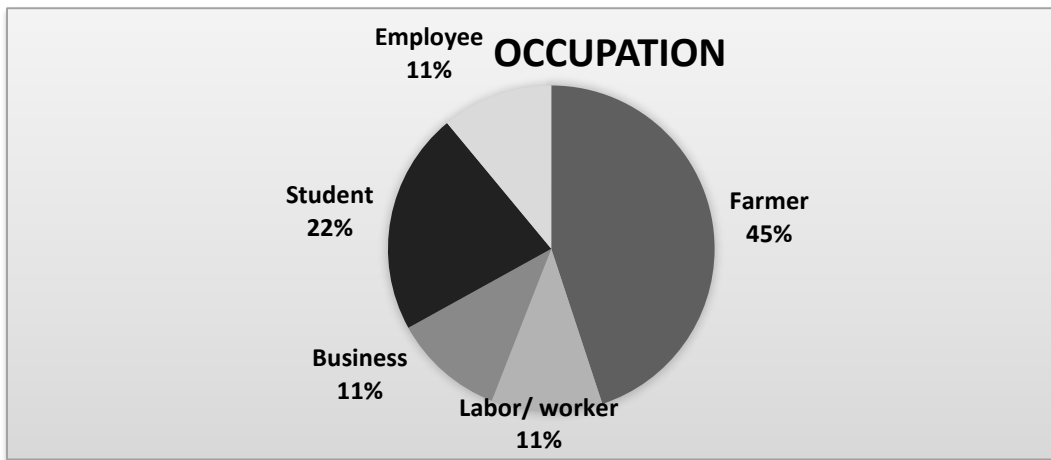
Chart 14: Citizens Sample Distribution: Income-wise



e. Background in relation to Occupation

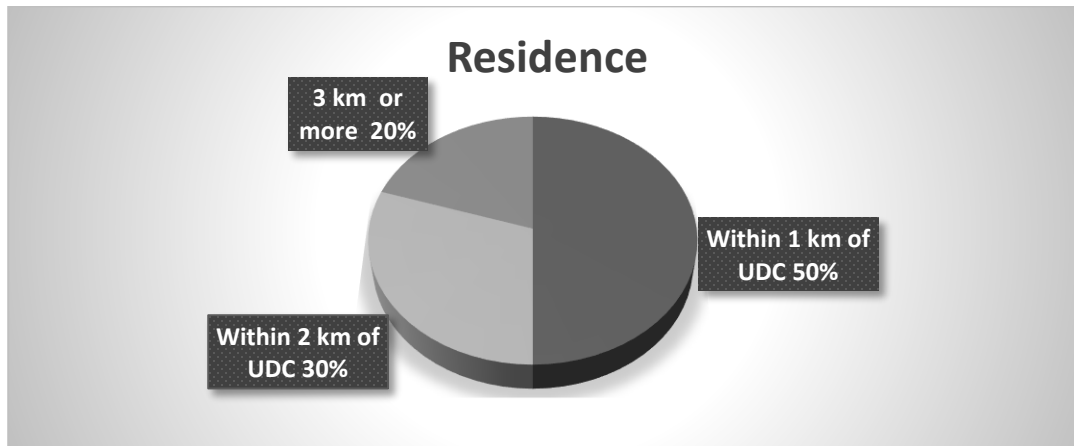
According to participation rate in UDCs, it has been observed that the employee, small business men, students have good participation though they are small portion in the rural society. The participation of farmer and labor group are lower though they are the larger portion of the society (more than 75%). So the participation rate from farmer group is 140, from the labor is 70, from the Business is 35, from the employee is 35 and the rest 35 is from the Student.

Chart 15: Citizens Sample Distribution: Occupation-wise



f. Background in Relation to Distance

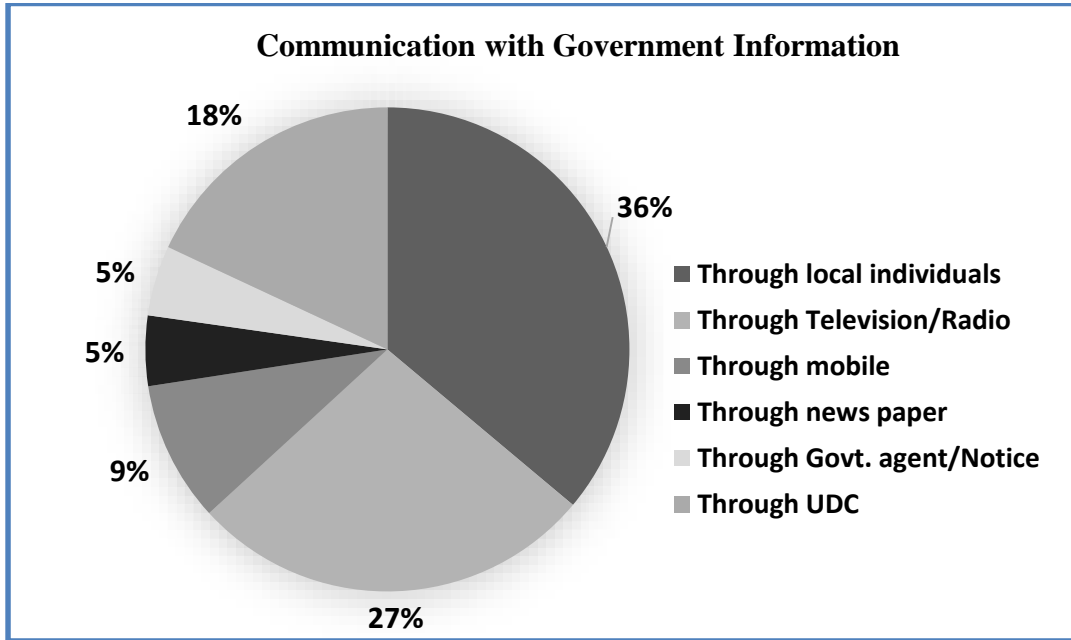
It has been observed that the people nearer to UDC are more conscious regarding the information and service delivery of UDC than the far one. Nearer people can connect with UDC closely. They have the comparative benefit also. This has been proved also in the resister book. So the ratio has been made by the proportion 5: 3: 2 (176, 106 and 70) according to distance proportion 1:2:3 km from UDC.

Chart 16: Citizens Sample Distribution: Residence-wise**g. Background in Relation to Public Communication**

It has been observed that in rural area, public communication is tried to transmit in one way – from government to people. Public information and services are being delivered through District office, Upazila office or UP office through letter, individual or mobile. Common information and services are delivered through Radio or television. Now a days ICT based UDC is taking the little responsibility like deliberation of government advertisement, notification and some awareness programs through projector. It has been observed that maximum people have informed with government information and services through local individuals (neighbors, relatives, friends, students etc.); electronic media television, radio, or print media (newspaper). Now a days, mobile has been growing as a popular medium for communication in rural area. But most of them are via media, not direct communication with government. So misinformation can be exchanged often. The

following graph shows the distribution of people according to their communication media with Government.

Chart 17: Citizens’ Sample: Communication with Government

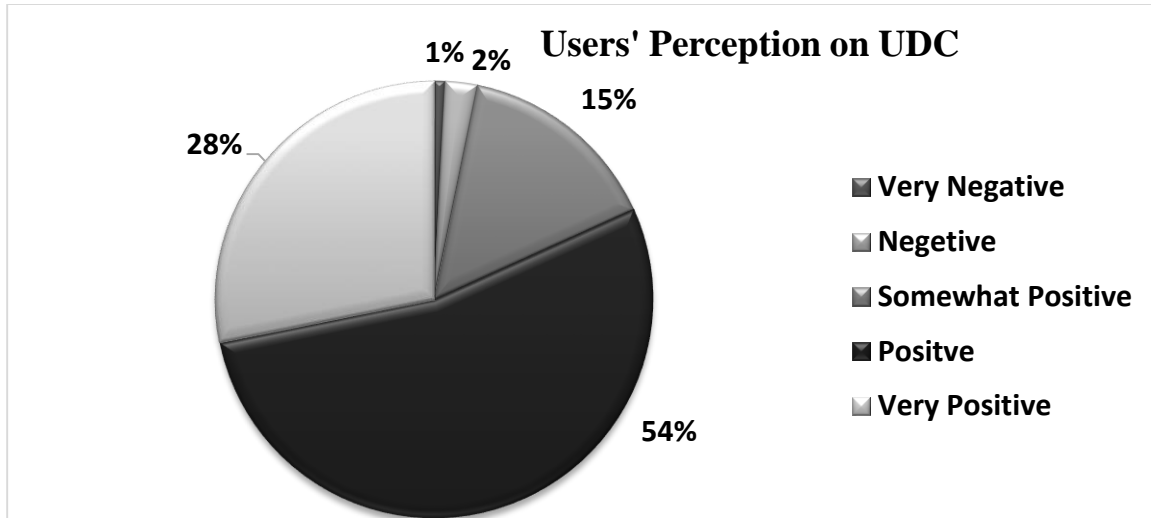


Here it has been seen that among 352 people 127 people get public information through local individuals; 95 persons through electronic media, 63 persons through mobile, 18 through print media, 18 through government agent or notice and the rest 31 get through The UDCs.

h. Background in Relation to Perception on UDC

Most of the users welcome the initiative of the government to introduce UDC in Rural Bangladesh. But it has been seen that some senior users, hardcore poor, illiterate people do not feel that much comfort in using technology.

Chart 18: Users Perception on UDC



Very positive about UDC 98; positive about UDC 190, somewhat positive about UDC 52; negative about UDC 8 Very negative about UDC 4

i. Users Sample Distribution in a Nutshell

The sample size has been distributed in a nutshell in different user groups through the following table. This distribution has been taken according to the user participation rate in UDCs.

Table 8: Users Sample Distribution in a Nutshell

Category	Group 1	Group 2	Group 3	Total
Gender	Male 280	Female 72	_____	352
Age group	10 to 25 y. 140	25 to 40 y. 140	Above 40 y. 72	352
Qualification	Illiterate 106	Primary 106	Secondary 140	352
Wealth	Very Poor 140	Normal Poor 140	Middle class 72	352
Occupation Group	Farmer 140	Labor / Worker 72	Others 140	352
Residence far from UDC	Within 1 KM of UDC 176	Within 2 KM of UDC 100	Within 3 KM of UDC 76	352
Public Communication	Through Individuals 127	Through media 194	Through Govt./UDC 31	352

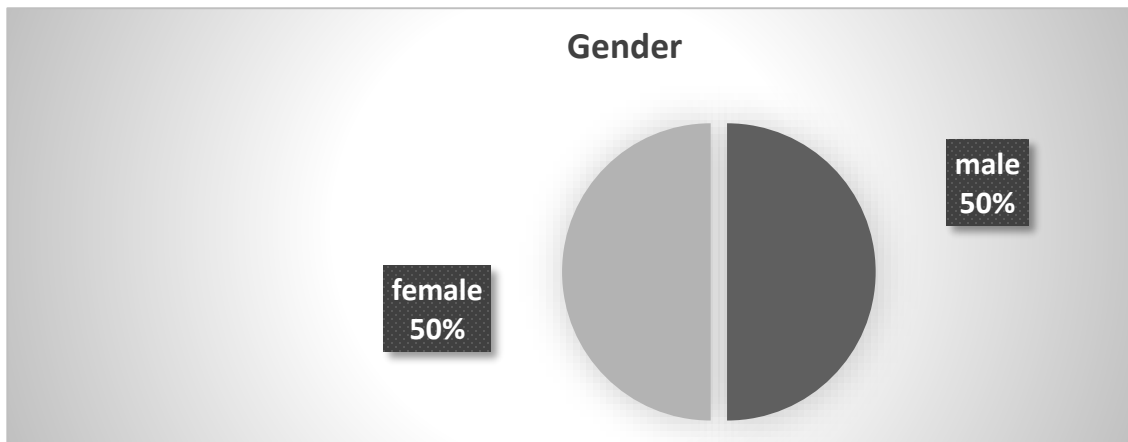
3.10 Socio-Economic and Communication Backgrounds of Entrepreneurs

It is necessary to be acquainted with entrepreneurs' socio-economic background to ensure their smooth and sustainable participation in the UDC.

a. Background of Entrepreneurs according to Gender

Though there are one male and a female entrepreneur in every UDC, it has been observed that female entrepreneurs are absent in most cases. According to the observation and record, the presence ratio in working day is female 1: male 2. (12 days and 24 days). But for the convenience of research (to know their causes of absence), the ratio has been taken equally. Among 32 sample size 16 are male and 16 are female.

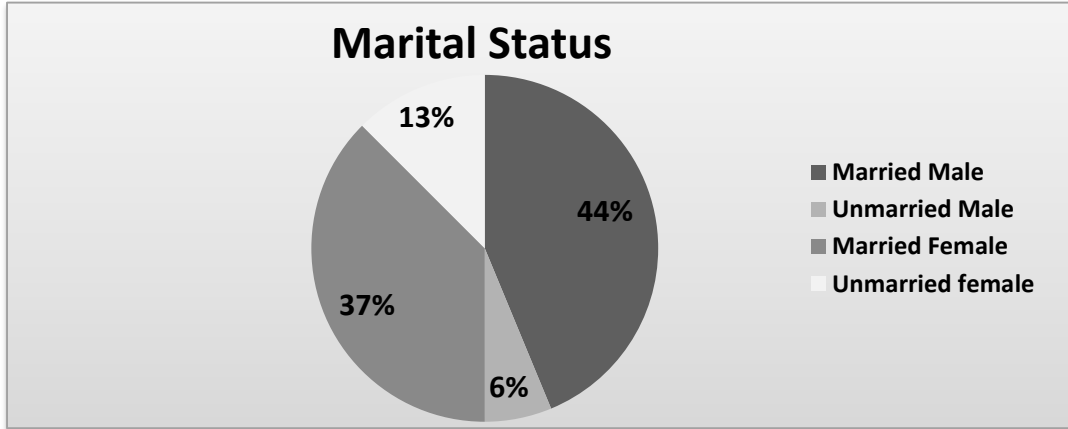
Chart 19: Entrepreneurs Sample Distribution: Gender-wise



b) Background in Relation to Marital Status

It has been observed during the pilot survey that most of the entrepreneurs' (63) working in UDC are young married. But the presence of unmarried are not meager. Among the unmarried, the female are facing different social and cultural problems and harassments.

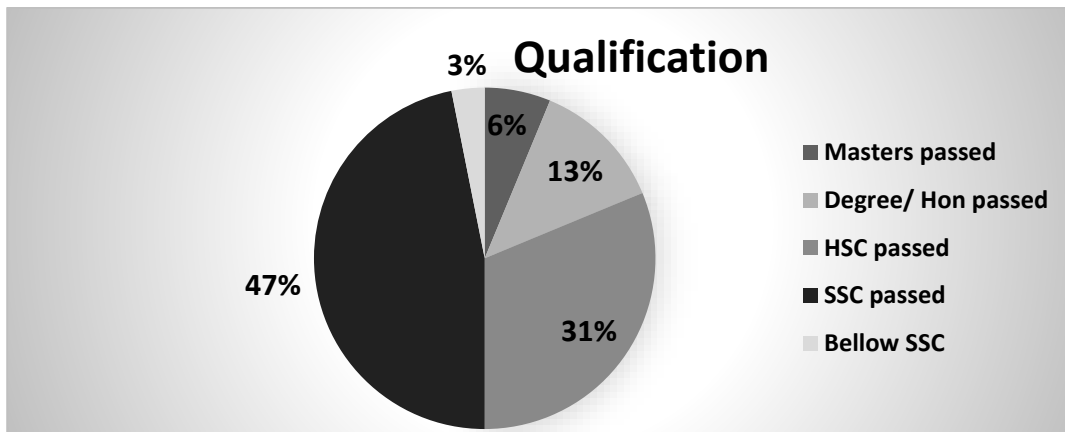
Chart 20: Entrepreneurs, Sample Distribution: Marital status



c) Background in Relation to Educational Qualification

It is surprising that most of the entrepreneurs are educated enough to run the rural UDC though there is question on their ICT education. About 50% (16) are HSC pass or above and 44% (15) are SSC passed. They can UDC smoothly if they get enough training. But the question is about the rest 6 % (2) who are below the SSC. There is enough confusion on their performance.

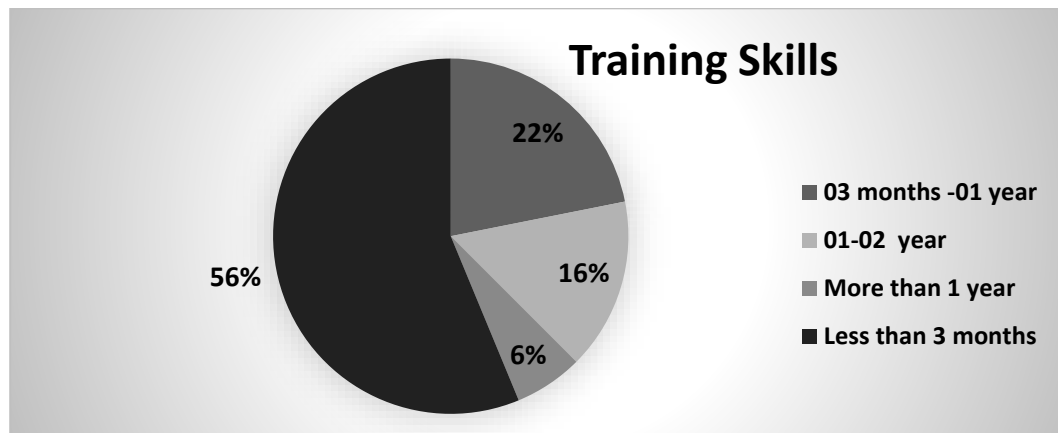
Chart 21: Qualification wise Entrepreneurs Sample representation



D) Background in Relation to Training Skills

It has been observed during the pilot survey that almost all the male entrepreneurs have training skills. But the female entrepreneurs are not trained enough to deliver services to the users. At the time of appointment, they were appointed without any training or skill. Even they have not given any comprehensive training after appointment. From the following graph we can get the idea of training experiences of male and female entrepreneurs.

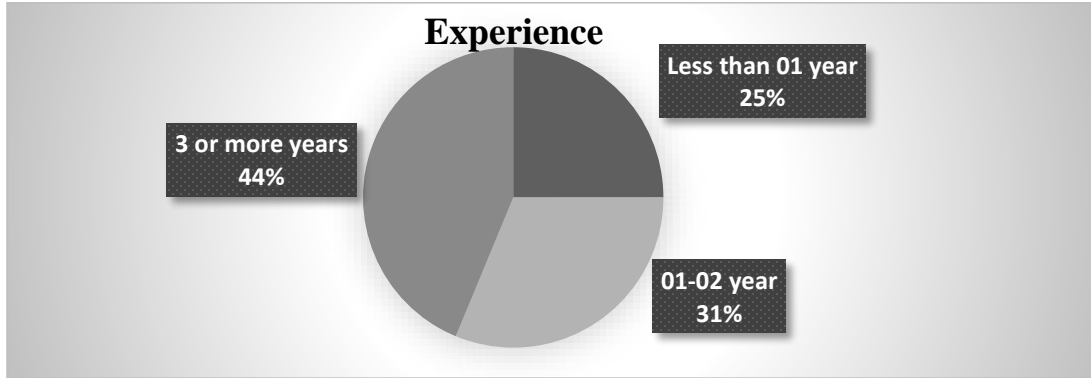
Chart 22: Entrepreneurs' Sample Distribution: Training Skill



e) Background of Respondents According to Experience

According to experience, most of the entrepreneurs (53%) have been remaining from the first establishment at UDC and they are well experienced to run UDC smoothly. But the entrepreneurs (27%) who are newly appointed (within 01 year) are not experienced and often fall in confusion to UDC. This case is mostly common for newly appointed female entrepreneurs; as most of them left their UDC due to marriage, low profit, lack of skill and other complexities.

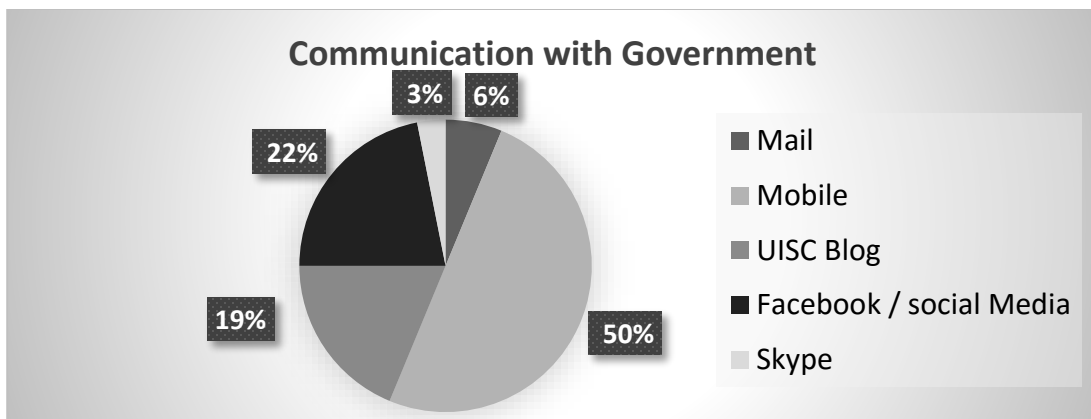
Chart 23: Entrepreneurs’ Sample Distribution: Experience-wise



f) Background in Relation to Exchanging Government Information Service

The following graph shows the distribution of entrepreneurs according to their communication media with government. It is observed that most entrepreneurs have informed with government function through UISC blog.⁹³ Based on the communication behavior of entrepreneurs, it can be said that interpersonal online and mobile forms of communication are the most popular.

Chart 24: Entrepreneurs’ communication with Government

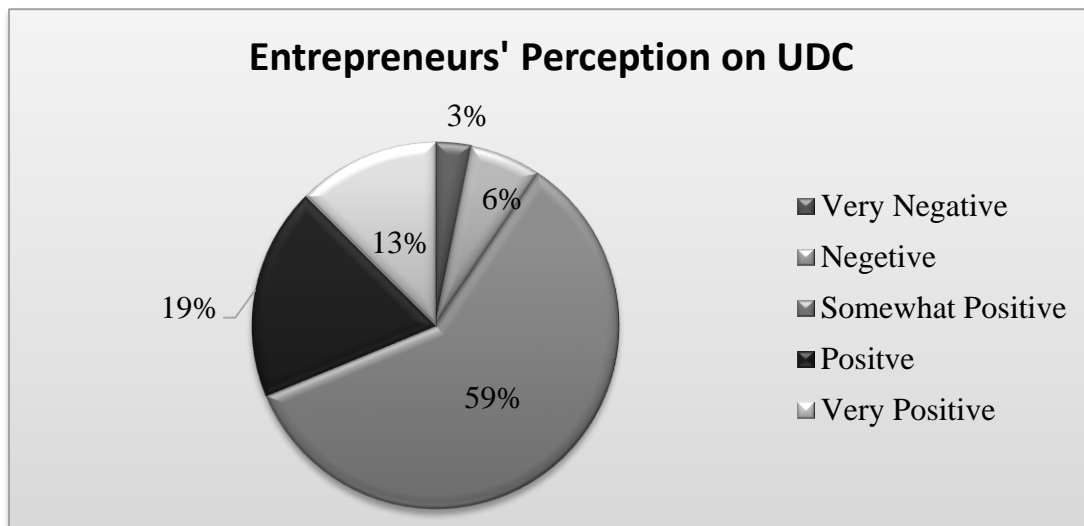


93. A blog among the related officials and entrepreneurs to communicate and exchange view in complexities.

g) Background in relation to Entrepreneurs' perception on UDC

The following graph shows the distribution of entrepreneurs according to their communication media with government. It is observed that most entrepreneurs have informed with government function through UISC blog.⁹⁴ Based on the communication behavior of entrepreneurs, it can be said that interpersonal online and mobile forms of communication are the most popular.

Chart 25: Entrepreneurs' Perception on UDC



h) Entrepreneurs' Sample Distribution in a nutshell

Through the following table the entrepreneurs' sample size has been distributed in a nutshell in different user groups through the following table. This distribution has been taken according to their different characteristics concerning UDC.

⁹⁴. A blog among the related officials and entrepreneurs to communicate and exchange view in complexities.

Table 9: Sample Distribution of UDC Entrepreneurs in a Nutshell

Category	Group 1	Group 2	Group 3	Group 4	Total
Sex	Female 16	Male 16			32
Marital Status	Unmarried male 02	Married male 14	Unmarried female 04	Married Female 12	32
Educational Qualification	Bellow SSC 01	SSC 15	HSC 10	HSC or More 06	32
Training in ICT	No training 18	3 – 6 months 7	6 months-1 year 5	1 year or more 02	32
Experience	Below 1 year 08	1 – 2 year 10	2 year or more 14		32
Public Communication	Mobile 16	Face book 7	UISC blog 6	Mail & skype 3	32

3.13 Data Collection (Period, Technique and Processing)

This study was held in three phases from 2014 to 2015. At the first phase in June 2014, primary factors (appendix 3 and 4) responsible for the viability of UDC were selected from document analysis, KII (see appendix 5) and survey through unstructured questionnaire (see appendix 1 and 2) among 176 users and 16 entrepreneurs. At the second step in June 2015 two sets of structured questionnaire (see appendix 6 and 7) were made and surveyed among other 176 users and 16 entrepreneurs to choose the crucial factors typically responsible for the viability of UDC from the primarily selected factors. During questionnaire survey, most of the users preferred to fill the questionnaire themselves. However, some of the questionnaires have been filled by the researcher himself as per the response of respondents. At the third stage (December 2015) the presence of these crucial

factors have been observed (observation method) in the current service delivery system whether they are present or not to measure the gap between the requirement and reality, so that to we can understand the viability situation. The collected factors have been processed systematically according to the objective of the research in different research approaches according to the predetermined variables like age, education, occupation, income etc.

3.14 Data Analysis:

The collected factors have been sorted, edited, summarized, formatted, tabulated calculated and analyzed systematically by using some statistical tools and techniques like frequency distribution, arithmetic mean etc. The collected data have been presented through tables, charts and graphs whatever suitable for the researcher from Microsoft Word and Excel.

3.15 Conclusion

The research methods, framework, tools and devices mentioned this chapter have been used for analyzing and interpreting the collected data. So the research methods have been used here to decorate the study systematically to identify the crucial viability factors of UDC and to evaluate their existence in order to realize the viability level of UDCs in rural Bangladesh.

Chapter 4

Service Availability

4.1 Introduction

In the present era, the information is not only to be considered as a resource but also product as well as basic need. If people are well-informed, they will be more vigilant; and therefore, their livelihood will be more vibrant. Reaching right information to right people at the right time helps naturally for the socio-economic development among rural masses. In order to understand the information needs by different communities from UDC at the village level, a field survey has been undertaken by the researcher himself by using open questionnaire. The identified factors have been scrutinized by different citizen groups and entrepreneurs through structured questionnaire and recorded with a five-point Category scale.

4.2 Service Availability Factors by Different Users' Groups

The information needs by different rural communities are defined as service availability factors. These are described as follows:

4.2.1 Farmers Groups

The main stakeholders of UDC initiative are the rural citizens and their meaningful participation to the public services is the main objective of establishing this UDC. So their

requirements, their facilities, profitability and prospects through it must be taken into consideration. Information needs of the farmers may be divided into six groups.

- i. Field procurement: Farmers are required to know the different types of schemes, subsidies purchasing of agricultural land.
- ii. Agricultural inputs: Farmers are needed to get information about improved variety of seeds, pesticides, agricultural equipment, weather conditions, harvest and post harvesting technology etc.
- iii. Agricultural technology: Farmers should be fed with innovative technology in their farming.
- iv. Agricultural credit: Farmers need information about credit facilities, source, how to utilize, loanable amount, terms of loans etc.
- v. Agricultural marketing: Day to day market trend on price of different variety of crops is necessary for the farmers.
- vi. Food preservation: Information in post-harvest, food preservation technology is needed for the farmers to get optimum benefit from crop.
- vii. Field procurement: Farmers are required to know the different types of schemes, subsidies purchasing of agricultural land.
- viii. Agricultural inputs: Farmers are needed information about improved variety of seeds, pesticides, agricultural equipment, weather conditions, harvest and post harvesting technology etc.

- ix. Agricultural technology: Farmers should be fed with innovative technology in their farming.
- x. Agricultural credit: Farmers need information about credit facilities, source, how to utilize, loanable amount, terms of loans etc.
- xi. Agricultural marketing: Day to day market trends on price of different variety of crops are necessary for the farmers.
- xii. Food preservation: Information in post-harvest, food preservation technology is needed for the farmers to get optimum benefit from crop.

4.2.2 Cultivator Groups

Similar to farming community, the cultivator's community also needs effective supervision or direction in cultivation. A person is classified as cultivator if he or she is engaged in cultivation of land owned or held from private persons for payment in money or share. They need information on how to cultivate and harvest the different variety of crops such as wheat, paddy, *jowar*, sugarcane, tobacco, jute etc.; how to preserve the cultivated crops; when effective technology is implied, availability of irrigation facilities, how and when the insecticide and pesticides are used; when the crops will be produced in the market; demands and availability in the market; transport facility etc. Cultivators community may also need information on program sponsored by agriculture department / officials engaged in agriculture allied sectors for better improvement in the field of agriculture.

4.2.3 Business and Small Trader Groups

Business men and small traders need information of multidisciplinary character concerning economic, legal, political, social and technological issues. The type of information needed by the business and trader community may vary considerably. It varies from general information to more detailed information relating to different aspects of the business and trade. The information needs of business and trader people can be grouped into the following categories.

- i. Capital procurement and mobilization;
- ii. Better farm production, revival of cottage and small industries;
- iii. Technological know-how;
- iv. Knowledge of existing policies, practices and regulations;
- v. Better marketing facilities;
- vi. Better means of securing suppliers, credit facilities, and communication;
- vii. Management information.

The business and trader community in the rural areas may comprise from small range business community to the medium range business and trader community. The businesses which are owned by the rural community have no satisfaction to their business activity due to low investments of the money capital, small market facility, lack of road and transportation facility, low availability of raw materials and trading agencies.

4.2.4 Teachers' Groups

Teacher community has played a vital role to promote literacy and lifelong education in the country. The teacher community in the rural areas mainly comprises into the following two groups according to their functions and services provided by the concerned authority.

- i. **General Teacher:** It includes schools (elementary, primary, junior, high school, higher secondary etc.); colleges etc.
- ii. **Professional teacher and Vocational Teachers:** It includes vocational institutions, colleges, technical institutions etc.

The type of information needed by the rural teacher community may vary considerably. It varies from general information to more detailed information relating to the different aspects and services of the teachers. The information needs of the teacher's community can be group into the following categories:

- i. Educational infrastructure information;
- ii. Teaching methodology and curricula;
- iii. Information on Client groups/students;
- iv. Advance teaching and learning facilities;
- v. Advanced training and orientation need;
- vi. Well equip teaching room/reading room/library/laboratory etc.;
- vii. Audio-visual needs;
- viii. Good academic atmospheres;

- ix. Proper management by the government agencies and other societies.

4.2.5 Students Groups

The students community mainly comprises those students who are studying at different level of the institutions like schools, colleges, universities etc. including professional, general (academic as well as technical), vocational and other who do not fall in the above categories.

The student's community needs information about:

- 1) List of universities, colleges, schools including private educational institutions, polytechnics etc. and their address and location;
- 2) Academic calendar (open and closing of admission, schedule of examination, result announcement etc.);
- 3) Courses offer or what the institution they offer;
- 4) Selection procedure, fee structure and mode of payment of fees; and
- 5) Facilities available both inside and outside of the campus, job opportunity, prospect in the future and scholarship/stipend facility etc.

4.2.6 Labor Groups

A person who works on another person's land/or any form of work for wages in money or kind or share will be regarded as a Laborer including agricultural laborer and non-agricultural laborer. She or he has no risk in the cultivation, but merely works on another

person' has no right of lease or contract on land on which she/he works. The laborer communities in the rural areas was needs information on,

- i. To/from whom the contract of maximum work may be available;
- ii. Maximum wages;
- iii. Distance of the working area;
- iv. Income and expenditure of the work;
- v. Type and nature of the work;
- vi. Honesty of the owner etc.

4.2.7 Service Holder Groups

Service holders' community includes Government Administrator, Planners and Policy Makers, Managers, Research and Development Personnel, Technologists, Doctors, Lawyers and others. According to the level, status, nature of the job, responsibility of the duty she/he may require from the variety of information may vary from one service holder's person to another service holder. Some of the major information needs of the service holder persons are given below:

- 1) Good administration and management system of the Government;
- 2) Smooth service regulation, terms and conditions, line of promotion;
- 3) Various loan facility like housing, personal loan, vehicle loan etc.
- 4) Health care, personal security etc.; Income tax, insurance, reimbursement facility;

- 5) Latest development, technological know - how (need for attending seminar/conference/ workshop/ orientation courses by the employees);
- 6) Retirement benefit, pension system etc.;
- 7) Better salaries/remuneration, pay commission, better allowance etc.

4.2.8 Unemployed Groups

Unemployed community mainly covers all the educated and uneducated persons specially the youth who are educated and not getting suitable post with their respective trades. In the rural areas of Bangladesh most of the educated and uneducated youth are still wondering how to search a suitable job for their future prospect. Most of the unemployed youths in the rural areas have faced lots of problems in regard to the financial constraints of the family, their standard of living, lack of communication and transportation facility etc. Some of the major information needs of the unemployed community are given below:

- i. Employment opportunities and advertisements;
- ii. Employment generation schemes by the Government agencies;
- iii. Financial assistance (banks loans, financial institutions giving financial support to run self-employment program, credit cooperatives etc.);
- iv. Various schemes/projects/program initiated by the government could be given priority to the rural unemployed community.

4.2.9 Social Workers' Groups

Social worker community in the rural area comprises members of organizations /clubs/NGOs group leaders; leaders of the village authority; and individuals workers who are confined to the social development activity. The social worker communities in the rural areas need information about:

- i. Various rural development program/integrated rural development program/employment generation program;
- ii. Social infrastructure development program (like health, sanitation, employment, education, agriculture, road and communication etc.);
- iii. Responsibility and duties of the elected members of the local bodies;
- iv. Social transformation, legal and social protection;
- v. Credit schemes/subsidies schemes for the rural community to enhance their socio-economic development of the community.

4.2.10 Women (Housewives) Groups

Women are the important group for spreading the message of the family planning and environment protection. For the rapid economic development of the nation, enlightenment and empowerment of women is crucial. Women responded admirably to the family planning and general awareness programs. Women or housewife needed information on:

- i. Birth control methods, child care, nutrition;
- ii. Immunization for children and pregnant women, infertility;

- iii. Women development schemes, training courses;
- iv. Interior decoration, embroidery;
- v. Women empowerment, legal and human rights;
- vi. Self-protection from the social evils.

4.2.11: Common Concerns

Beside these groups, there are some common interests required by every group like getting information and service from social and rural development programs, application and participation process; healthcare information and services; Information on clean water supply and sanitation; Administrative information and services (forms, advertisement, Notice, Circular, participation process, giving feedback); Information on administrative rules and regulations with their explanation; Legislative information (Laws with enactment, amendment); Information Judicial services (Litigation, Trial / Hearing date, Notice); Information on Transport & communication services, (Railways, Postal, Courier, ICT); and Democratic information and services (Ruling party, Opposition party, Election, Election Commission, Anti–corruption commission, Public opinion, criticism, political movement; Human Rights (Economic, Social, political, Information rights).

4.3: A Brief View of Service Availability Factors

Based on the above discussion, we can summarize the required factors with the following table.

Table 10: Required Information and Service Factors According to Rural Needs

No	Required Services from Government, Local Govt. & Autonomous Bodies
1	Agriculture, livestock & fisheries (subsidies, inputs, technology, credit, marketing and storage)
2	Cultivation Process (Irrigation, technology implementation, pesticide use and Production)
3	Land Disputes resolution Documents (<i>Dalil, Khazna and Porcha</i>)
4	Business-trade (capital formation, cottage/small industry, technology, marketing & management)
5	Teaching information (Educational Institutions, equipment, technology, academic facilities)
6	Study Information (University/college selection, Admission, courses, result, academic calendar)
7	Working Opportunities and wages in home and abroad (trainings, arrangement, facilities etc.)
8	Service Information and facilities (administration, regulations, responsibility, promotion, salary)
9	(Self) Employment opportunities (Job availability, schemes, advertisement, training, credit)
10	Social and rural development programs by Local government, PRSP, NGOs & co-operatives
11	Healthcare & sanitation community health, family planning, hazard awareness, disaster precaution
12	Law & Administrative information services (forms, advertisement, Notice, Circular, participation)
13	Judicial information services (Litigation, Trial / Hearing date, Notice)
14	Transport & communication services, Railways, Postal, Courier, ICT
15	Governance and Democracy, Citizenship rights (Economic, Social, political, Information rights)

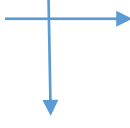
4.4 Analysis of Users' Service Availability Factors

To identify the degree of necessity from these required primary factors, a detailed survey has been taken from the different groups of rural citizens through structured questionnaire with five point Category Scale 1 to 5. Here, each point of scale (from very essential to not essential) has been measured with the score 5 to 1. These scale and average score of each group respondents have been presented below.

Table 11: Scale and Score of the Factors to Measure the Level of Necessity

Scale	Very Essential	Essential	Somehow Essential	Less Essential	Not Essential
Score	5	4	3	2	1

Detailed Mean Scores of Different Required Information from UDC

Groups 	Gender		Residence			Qualification				Income			Occupation				Age		
	Male	Female	Within 1 KM	Within 2 KM	Within 3 KM	Up to PSC	JSC/JDC	SSC/ Dakhil	HSC or Above	Very Poor	Poor	Middle class	Unemployed	Employed	Self-Business	Student	Up to 25 years	Up to 50 years	Above 50years
Agriculture, livestock, fisheries	5.00	4.92	4.98	4.96	4.94	5.00	4.98	4.94	4.92	4.90	4.98	5.00	5.00	4.94	4.92	4.98	4.88	5.00	5.00
Cultivation Process	4.98	4.70	5.00	4.94	4.58	5.00	4.96	4.75	4.65	5.00	4.96	4.56	5.00	4.54	4.98	4.84	4.52	5.00	5.00
Land Disputes Documents	4.36	3.88	4.26	4.22	3.88	4.20	4.15	4.05	4.08	4.04	4.21	4.11	4.30	4.32	4.06	4.20	3.90	4.43	4.03
Business-trade	4.36	3.82	4.21	4.12	3.94	4.39	4.15	4.08	3.74	3.07	4.58	4.62	3.87	4.12	4.46	3.91	3.80	4.72	3.75
Teaching information	4.64	3.06	4.32	3.90	3.33	3.80	3.86	3.86	3.88	3.80	3.96	3.79	3.80	3.86	3.92	3.82	3.77	3.86	3.92
Study Information	4.95	4.61	4.89	4.75	4.70	4.97	4.94	4.78	4.43	4.98	4.91	4.47	4.26	4.98	4.97	4.91	4.94	4.92	4.80
Working wages and Opportunities	4.71	3.49	4.58	4.13	3.59	3.97	4.32	4.26	3.85	3.80	4.37	4.13	3.65	3.97	4.78	4.00	3.40	4.80	4.10
Service facilities	4.37	3.71	4.30	4.05	3.77	3.17	4.00	4.29	4.70	4.04	4.17	3.91	4.47	3.43	4.12	4.14	4.90	4.20	3.02
Employment opportunities	4.85	4.55	4.96	4.85	4.29	4.98	4.84	4.06	4.92	4.86	4.81	4.43	4.46	4.62	4.95	4.77	4.56	4.90	4.64
development programs	4.97	4.85	5.00	4.93	4.80	5.00	4.89	4.75	5.00	5.00	5.00	4.73	5.00	4.67	4.98	4.99	4.74	4.99	5.00
Healthcare & sanitation	4.92	4.80	4.98	4.86	4.74	4.92	4.86	4.86	4.80	4.99	4.93	4.66	4.94	4.92	4.71	4.87	4.96	4.97	4.65
Law & Administrative	4.42	3.66	4.16	4.08	3.88	4.18	4.04	3.94	4.00	3.98	4.20	3.94	4.18	4.09	4.32	3.57	3.70	4.32	4.10
Judicial (Litigation and trail date)	4.61	4.37	4.94	4.37	4.16	4.77	4.63	3.85	4.71	4.63	4.60	4.24	4.25	4.42	4.92	4.37	4.37	4.90	4.20
Transport & communication	4.53	3.31	4.40	3.95	3.41	3.79	4.14	4.08	3.67	3.62	4.19	3.95	3.47	3.79	4.69	3.73	3.32	4.62	3.82
Governance and Democracy	4.11	3.97	4.25	4.10	3.77	4.32	4.20	4.14	3.50	4.34	4.27	3.51	3.57	4.23	4.52	3.84	4.90	3.62	

This analysis shows a detailed scenario of different opinions of different groups. To have a brief idea, the average means of different factors have been summarized through the following table.

Table 12: Means and Ranks of Service Availability Factors

No	Required services from Govt., Local Govt. & Autonomous Bodies	Rank	Mean
1	Agriculture, livestock & fisheries Information and services	1	4.96
2	Cultivation (Irrigation, technology, pesticide use and Production) Process	4	4.84
3	Land Disputes resolution Documents (<i>Dalil, Khazna and Porcha</i>)	9	4.12
4	Business-trade (capital, cottage/small industry, technology, marketing process)	10	4.12
5	Teaching information (Institutions, equipment, technology, academic facilities)	15	3.85
6	Study Information (University/college selection, Admission, result,)	5	4.78
7	Working Opportunities and wages in home and abroad (trainings, facilities etc.)	11	4.10
8	Service Information and facilities (regulations, responsibility, promotion, salary)	13	3.99
9	(Self) Employment opportunities (Job availability, advertisement, training, credit)	6	4.70
10	Social and rural development programs	2	4.91
11	Healthcare & sanitation, family planning, hazard awareness, disaster precaution	3	4.86
12	Law & Administrative information services (forms, advertisement, Circular,)	12	4.04
13	Judicial information services (Litigation, Trial / Hearing date, Notice)	7	4.49
14	Transport & communication services, Railways, Postal, Courier, ICT	14	3.94
15	Governance and Democracy, Citizenship rights (Economic, Social, political)	8	4.14

From the above analyses we can have the following findings.

- a) As most of the rural people are related to agriculture directly or indirectly, their first and foremost demand (scored 4.96) from the UDC is the availability of agricultural information and service which can improve their cultivation process,

inputs, technology, process, storage etc. Side by side, as most of them lives in poverty, they must need the information and services of social and rural development programs (scored 4.91) like cooperative initiatives, credits, subsidies, PRSP, VGD, and VGF etc. They have limited facilities in healthcare, family planning and sanitation activities, while UDC can provide them these services easily.

- b) Males are more interested than female to avail the information services from UDC which has been proved in almost every factors. Female citizens have a good interest in agriculture, fisheries, livestock which are supposed to be at males' hand.
- c) The citizens staying near from UDC are more interested to gain different services from UDC. This is seen in the requirement of every factors. They are more concern about their required services.
- d) According to educational qualification, there is also difference. The literate citizens are more concern about legal, administrative, judicial information and services. But the illiterate are mostly concerned about agriculture and labor oriented information services.
- e) According to income, determined by different vehicles ownership, middle class citizens are more interested in availing different services from UDC.

- f) According to occupation, concerning citizens of different occupations are more interested to get information services of concerning occupations.
- g) According to Age, young citizens are more interested in educational information and services. Middle age people are concerned about agriculture, business and other development activities. On the other hand the old are indifferent about UDC and its any kind of services providing from UDC.

4.5 Users' Service Availability Factors in Publicity

According to the website of A2i, (the program under which UDC project is running) at present UDC is providing three categories of information and services i.e. informational, interactive and transactional services mainly.

4.5.1 National Level

National Portal Framework (NPF) and the National E-service System (NESS) have constituted the E-Service Delivery Network. The NPF is the gateway to all government offices through online. It is the single platform allowing citizens' easy access to any of the 27,000 public offices at different tiers, trouble free updating of data by non-technical personnel and sharing of data vertically and horizontally across various organizations. Under the NPF, district web portals for district administration are also commissioned to ensure smooth access of information and services. NPF changes the nature of information in government websites from supply-driven to demand driven focusing on citizens' needs. NPF marks the crucial step towards streamlining free flow of information from the lowest

administrative tier, i.e. Union Parishad to highest decision-making bodies, i.e. ministry and emerges as the gateway to all e-services, i.e. National E-service System. The National E-Service System has three components—Citizen, Policy, and Service Provider—to deliver service at citizens' doorsteps. It is an initiative to consolidate all government services within one framework. Major components of NESS are E-service Delivery, E-Forms, E-Filing, E-Communication, Government Directory Access Service (GDAS), Citizens' Profile and Dashboard. So according to the publicity of the Government every types of required primary factor has been presented through UDCs to the doorsteps of rural people of Bangladesh.

4.5.2 District Level

The development of NESS in Bangladesh can be categorized into two segments: e-Service 1.0 and e-Service 2.0 and these segments have been implemented in two phases. Under e-Service 1.0, government has set-up Public Information Center (PIC) at the Deputy Commissioner's (DC) office as District E-service Center (DESC) to improve the accessibility and transparency of public service delivery system at the district level. The services of DESC can also be delivered through UDCs like *porcha*.

4.5.3 Upazila Level

Upazila Information and Service Center has not been available at present. Citizens themselves have to communicate to avail different information and services. Sometimes some Government agents also communicate to the rural people to execute the government

plans and programs. Recently some Upazila Information and Service Centers have been initiated in tentative way.

4.5.4 Union Level

At present (2016) 4547 Union Digital Centers operational in all Union Parishads of Bangladesh. Besides transporting information and service from central and district level, it provides different services of Union Parishad like birth and death registration, issuing different certificates, licenses etc.

4.6 Different Information Sources and Their Publicity

4.6.1 Informational

For informational services the UDC depends on both online and offline CDs supplied from the project management A2i. One of the major sources of online information for UDC is *Jatiya e-Tothyakosh*⁹⁶ which encompasses various public and private institutions on agriculture, education, health, literature, culture, law, human rights, citizen services, tourism, non-agriculture enterprise, employment, commerce, environment, disaster management, science & ICT etc. The *Jatiya e-tothyokosh* also enables entrepreneurs to links with other government portals for forms download, online applications, e-book download etc. For example, using the hub of digitized forms ‘Bangladesh Government Digitized Forms Services Application’ web portal available at www.forms.gov.bd. 440 different kinds of forms for various public services including birth and death registration,

96. Accessed at 23/4/2015 <http://www.infokosh.gov.bd/>

driving license, vehicle registration, citizenship certificate, family pension, passport and immigration, income tax return, etc. can be downloaded by entrepreneurs. Without providing any identification entrepreneurs can download these forms easily. The same can be done for downloading e-books developed by the Ministry of Education and the National Curriculum and Textbook Board⁹⁷.

4.6.2 Interactive Services

There is a host of both-way interactive services, like application for passport and overseas jobs (Malaysia registration), education services such as admission/registration/result check, and consultation with doctors through mobile phone or video call known as telemedicine, among others. Recently, the Bureau of Manpower, Employment and Training (BMET) has empowered UDCs to register overseas job seekers specifically for employment in Malaysia and Hong Kong. The Ministry of Health offers mobile phone health service by making the mobile numbers of doctors working in the local sub-district/district available in its website. The Department of Immigration and Passports allows online application for machine readable passport (MRP) in which entrepreneurs can register their clients and submit the initial application with photo uploads.

4.6.3 Transactional Services

UDCs are providing quite a number of transactional services like land copy electricity bill pay, mobile banking, admission and job application fees, mobile recharge, etc. (A2i,

⁹⁷. NCTB, accessed at 23/4/2015 <http://www.nctb.gov.bd/>

2015). In many districts the *Pally Biddut Samity* (PBS) under have made contracts with entrepreneurs enabling them to facilitate easier bill pay. BRAC Bank's mobile banking unit b-Cash signed an MOU with the LGD and A2i to allow entrepreneurs to act as their agents and others are also following the same.

4.7 Service Availability Factors and Their Reality

This is no denying the fact that about all livelihood information and services are absent in UDC. Though there are some information on Agricultural insecticide and Production, but there is no information on marketing and storage. There is also no information on other agricultural sectors like livestock fisheries, Tree Plantation. There starts issuing land disputes resolution documents (Porcha) on small scale. Business/commerce information (Profit, Interest and Tax, VAT) with Price Index of Basic and Daily Necessities are totally absent in service delivery. Science and technological Innovation; Environment, Weather forecast and Disaster Precaution Information is important for them which is absent. Employment and immigration information and services are crucial to them which are little from UDC. For the villagers Rural Development, Poverty reduction and Social Safety net Programs are one important agenda, which are not present in the UDC. Human citizens' rights related activities are also absent in the UDC.

4.8 Gap among Requirement, Publicity and Reality

The marginal level citizens are not availing their required services as the entrepreneurs are not getting the supply from the above 05 sources as they expect. Here is a survey through

observation has been highlight to show the gap among service requirement, publicity and reality from the users' perspective. This has been determined through the following scale:

Table 13: Scale to Measure the Service Availability

Scale	Available	Moderately Available	Partially Available	Least Available	Not available
Score	100%	75%	50%%	25%	00%

Table 14: Gap between Publicity and Reality

No	Required services	Circulated	Reality
1	Agriculture (Production, Marketing and Storage) Information	Available	Least Available
2	Livestock Information (Rearing, Marketing and Storage)	Available	Not available
3	Fisheries Information (Rearing, Marketing and Storage)	Available	Not available
4	Land Disputes resolution Documents (<i>Dalil</i> , and <i>Porcha</i>)	Available	Partially Available
5	Tree Plantation (Process, Usage and Price Index)	Not available	Not available
6	Price Index of Basic and Daily Necessities (Firm Products)	Not available	Not available
7	Finance, Trade, business information (Interest and Tax, VAT)	Not available	Not available
8	Science and technological Innovation and Usage Information	Not available	Not available
9	Environment, Weather forecast and Disaster Precaution	Not available	Not available
10	Foreign Registration, Passport, Visa, Recruitment	Available	Not available
11	Education (Admission, Exam, Result) Application,	Available	Moderately Available
12	Law Administrative information services (forms, Circulars)	Available	Moderately Available
13	Healthcare, Sanitation and Family Planning	Not available	Not available
14	Transport & communication services, Railways, Postal, ICT	Not available	Not available
15	Judicial information services (Litigation, Trial / Hearing date,)	Not available	Not available
16	Public awareness, Poverty reduction, Safety net Programs	Not available	Not available
17	Rural Development and Co-operative Initiatives	Not available	Not available
18	UP works (Reports, birth registration, certificate, relief	Available	Available
19	ICT and Self Employment Training opportunities	Available	Moderately Available
20	Citizenship rights (Economic, Social, Democratic,	Available	Not available
	Average Availability	50%	20%

From the above observation it is clear that, though the publicity focuses average 50% information and services are available from UDCs, only 20% service are available truly.

More over the information and services which are available are in the UDCs are not related to basic livelihood like agriculture, livestock, fisheries, rural development programs, health care etc.

4.9 Entrepreneurs' Required Service Availability Factors

For delivering G2C services, access to department portal or availability of online information (either on National portal / district portal/ Upazila Portal) is needed. For this, initiatives like District e-Service Center will form a platform for UDCs to deliver G2C from Government portal of a district. To supply users required information and services, entrepreneurs have been asked how they can acquire these services to fulfill citizen's demands. They have responded to provide information and services from the main five sources-Websites of Different ministries and Directorates; District level directorates, boards and administration; Upazila level Branches and administration, Union Parishad administration and Different Autonomous bodies (Universities/ Banks/ Companies). They would be able to deliver the users' demand when these sources can provide their service fully. These sources are described according to the view of different entrepreneurs as follows:

4.9.1 Central Government (National Level)

Sometimes rural citizens have to go to the different ministries at the capital city Dhaka, to avail public services concerning different projects, jobs, development programs, assignments etc., which creates a lot of sufferings, costs to them. If these concerning services can be accomplished through UDCs, this will be a great relief for the rural

citizens. For these the websites of different ministries with their information and service should be in online and connected to the UDCs with regular update.

4.9.2 District level (Like District e-service Centers and webs)

District level information and services are the important source for the rural citizens to get information and services through UDCs. For this the government of Bangladesh has already established total 64 District e-service Center service centers (DESC). With the launching of the DESC, it is desired to end the era of over 200-year-old traditional ways of providing government services, which often cause sufferings to millions. Moreover, with the aim to ease of getting services and information from the web pages, government of Bangladesh has launched national web portals containing 64 district web portals which are the crucial for providing e-services to the rural people. The web portals have the opportunity to getting information about the day to day works, circulars and notices from the government organization by the citizens of all.

4.9.3 Upazila Level Administration

According to the decentralization policy of Bangladesh Government, most of the public services have been delegated to the Upazila level. So Upazila information center is crucial to provide information services delegated by the government. At present there is no upazila information and service center to provide information and services in the light of rural needs. As a result, rural people have to suffer much to come and avail the public

information and services. There are also middlemen who harass the rural people taking advantages of their ignorance and this cost more with confusion.

4.9.4 Union Parishad Information and Service

Union is the lowest unit of local Government which has mainly 12 (twelve) types of functions⁹⁸ to be performed under the leadership of UP Chairman. If the functions are digitalized and recorded, rural people can achieve and participate easily. Beside these, citizens' information like birth/death registration, citizenship certificate have to be digitized for quick access, delivery and record. Beside this UDCs can be related to various welfare works e.g. VGD, VGF, TR, GR and others. They can supply information, issue card in every program. They can also be related to LGSPs (Local Government Support Program) development works. They can register stamp vendors.

4.9.5 Autonomous Bodies (Universities/ Banks/ Companies)

There are some autonomous bodies like Universities, Education boards, Public banks, Life insurances and different companies of Bangladesh Government. Especially the delivery of public banking services at an affordable cost to the vast sections of the rural disadvantaged and low income groups is critical. These autonomous bodies have their own websites and regulation system. To have their services available, UDCs entrepreneurs need to access to their updated Websites. So connection/access with their websites is crucial to provide service to the marginal level through UDC. UDCs have the potentials

98. accessed at November 10, 2015, http://www.lgd.gov.bd/index.php?option=com_content&view=article&id=9&Itemid=42&lang=en

to make financial services, such as mobile payment, online banking, life insurance, etc. easy and hassle free. Delivery of these services will be smooth when they are fully connected to the UDCs.

4.10 Analysis of Entrepreneurs' Service Availability Factors

It is clear from the data of entrepreneurs that each of the five sources are most important to provide service to the rural people. Any absence of the sources will make deprivation of rural people from their factors. The average score of the entrepreneurs' demand factors have been presented in the following table.

Table 15: Means of Required Primary Sources in the Light of Required Service

Groups → Service sources ↓	Gender		Marital Status		Education			ICT education / Training			Experience				
	Male	Female	Married	Unmarried	HSC or below	Graduate	Post Graduate	No Training	less than 1year	1year – 2 year	2 year Or more	less than 1year	1year – 2 year	2 year Or more	
Government (Ministries/organs)	5.00	5.00	4.30	4.65	4.65	4.55	4.65	4.75	4.60	4.65	4.65	4.70	4.55	4.65	4.75
Service from District	5.00	4.00	4.75	4.25	4.65	4.50	4.35	4.75	4.55	4.50	4.20	4.65	4.55	4.30	4.30
Service from Upazila Administration	4.40	4.20	4.40	4.20	4.40	4.30	4.20	4.20	4.30	4.40	4.30	4.10	4.30	4.40	4.40
Service From UP Offices	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Services from Autonomous Bodies	4.45	4.35	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40	4.40

If we summarize and make rank the above table with average score of every indicator that can be viewed by the following table.

Table 16: Scales and Scores to Measure the Service Availability at UDC

Factors in details		Rank	Mean
16	Government e-services (Ministries/Departments/Organizations/branches)	1	4.65
17	Service from District (District e-service Center)	2	4.50
18	Service from Upazila (Upazila Information Center)	4	4.3
19	Service from Union services (From Districts Upazilas' and UP Offices)	5	4.00
20	e-services from Autonomous Bodies (Universities/commissions)	3	4.40

4.11 Service Availability Factors: Entrepreneurs Requirement and Reality

From the observation of the above table, it is clear that at present the UDC is mainly used for birth registration, getting certificate, educational helpline and overall commercial purposes. Pure public services which are from national Government level, District level and Upazila level are nearly absent. Most of the required information services are absent or nearly absent. If we compare the required services and sources with real services and sources real services it will be clear from the following scale and table.

Table 17: Scale to Measure the Entrepreneurs' Service Availability Factors

Scale	Available	Moderately Available	Partially Available	Least Available	Not available
Score	100%	75%	50%	25%	00%

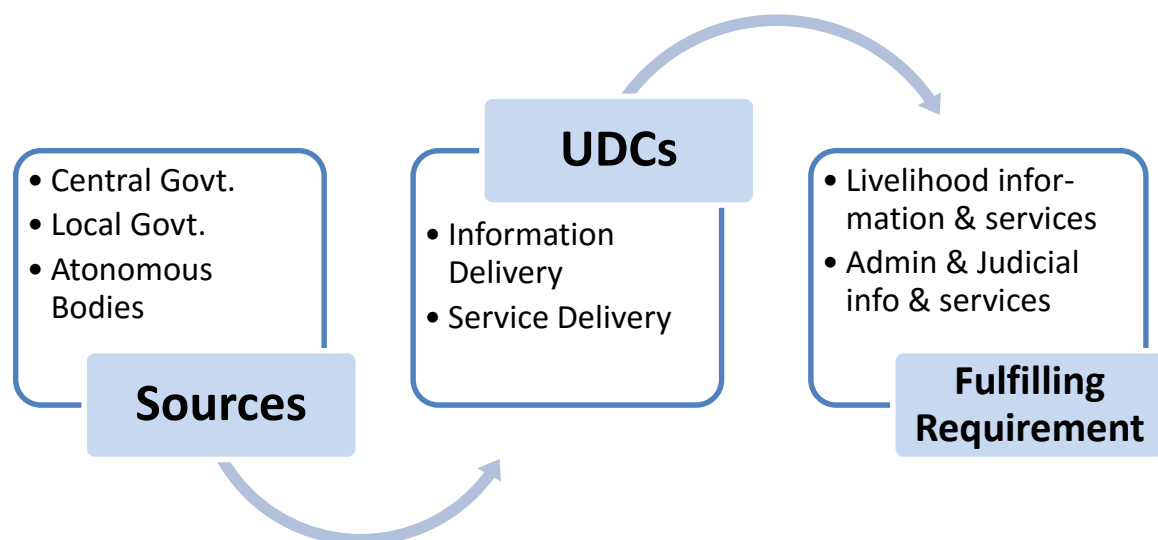
Table 18: Entrepreneurs' Service Availability Factors and their Reality

No	Required sources services	Circulated	Real
16	Govt. e-services (Ministries/Departments/Organizations/branches)	Available	Least Available
17	Service from District (District e-service Center)	Available	Least Available
18	Service from Upazila (Upazila Information Center)	Not available	Not available
19	Service from UDC (From District and Upazila Offices)	Available	Partially Available
20	e-services from Autonomous Bodies	Partially Available	Least Available
	Average Availability	70%	25%

From the above observation it is clear that on an Average only 25% required services are available from required five sources (100%). It is also clear that, there is no service from the Upazila level.

4.12 The Smooth Process of Service Delegation

According to the factors of required information services and websites identified by the users and entrepreneurs an availability route can be graphed bellow.

Chart 27: The Smooth Process of Service Availability at UDCs

According to these graph, when three major types of sources can deliver information and services through their websites, the entrepreneurs of UDC can fulfill the required information and services by users smoothly.

4.13 Viability of UDC Regarding Service Availability

It is clear from the above analysis that only 25% of required services is present in UDC. There is great gap between requirement and circulation and even in circulation and reality. Now it is existing mainly on birth registration, certificate issuing and some commercial services. Livelihood information and services are the least from UDCs. In this condition, it may exist but will be meaningless towards expected E-governance in rural Bangladesh.

4.13 Conclusion

UDC is one of those having the potential to make available the required information services to the rural people who do not otherwise have access to ICT. The main demands from UDCs are agro-based information service, government services, socio-economic development programs, online information services etc.. Though it was promised to bring the required information and services near the doorsteps of every citizen in rural Bangladesh through UDCs, the present situation of service availability has made it nearly impossible.

Chapter Five

Service Accessibility

5.1 Introduction

Most of the rural people of Bangladesh are poor, illiterate or nearly illiterate and conservative. They have their own conventional mindset and life cycle. They only concentrate on their livelihood and its improvement through traditional application. Delivering public service through UDC is a new concept to them. So, most of them are indifferent to ICT, ICT based public tele-center (UDC) which already has been proved a powerful force to the development. To understand their requirements for the accessibility towards UDC, we have had a literature survey, KII and field survey and found some important factors responsible behind their accessibility.

5.2 Service Accessibility Factors: Citizens' Perspective

To ensure access to UDC, different opinions have been collected from literature survey, field survey and KII. We have got three sub-factors mainly to access to information service delivery from UDCs. These are as follows:

- 1) Effective advertisement
- 2) Ensuring TCV facilities and
- 3) Entrepreneurs' regularity, efficiency and responsiveness.

5.2.1 Effective Advertisement of UDC and Its Benefits

It has been five years since the establishment, still now most of the rural people are not aware of the information service delivery of UDC. It has been observed that this is due to lack of awareness and publicity among the citizens. It can be ensured through advertising of its services and benefits. The rural users and entrepreneurs have chosen several methods of advertising like 1) electronic media, 2) print media, 3) Billboard, 4) *Uthan Boithok* (yard meeting), 5) Banner, 6) Signboard, 7) Miking (Public announcement), 8) Gathering (meeting), 9) Leaflet and 10) Ward Meetings.

5.2.2 Reaching TCV and other Facilities to the Citizens Doorsteps

To have a smooth access to the public service of UDC there must be some facilities which attract them to connect with UDC and avail its services. It must be time saving (rapid), cost saving (cheap) and visit (sufferings) saving. Side by side there should be other related facilities in UDC like sitting arrangement, water and sanitation facilities that fascinate them to connect with UDC and avail its services.

5.2.3 Entrepreneurs' Regularity, Efficiency and Responsiveness

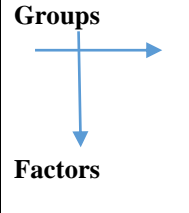
The effectiveness of UDC in terms of e-service delivery essentially depends upon the skill of entrepreneurs as the delivery is fulfilled by them. If they are not skilled enough to provide the e-services; citizens suffer and it affects their accessibility. Secondly, their regularity, punctuality brings peoples' trust towards them. If they are irregular and late in the UDC, these affect the users negatively in their accessibility. Finally their co-operation

i.e. pleasant behavior, honesty, responsiveness makes the citizens to have a positive feelings about UDC. As the citizens are main participants of e-services, their satisfaction about the entrepreneurs is very much necessary in their smooth access.

5.3 Analysis the Significance of Citizens’ Accessibility Factors

From the above exploration, the following factors have been identified required by the different group of citizens for their smooth access. Here, the value of these factors (groups scores) have been calculated by the previous 5 point category scale and score.

Table 19: Citizens’ Accessibility Factors and their Scores

 Factors	Gender		Residence			Qualification			Income			Occupation			Age				
	Male	Female	Within 1 KM	Within 2 KM	Within 3 KM	Up to PSC	JSC/JDC	SSC/ Dakhil	HSC or Above	No Vehicle	Non-mechanized	Mechanized	Unemployed	Employed	Self-Business	Student	Up to 25 years	Up to 50 years	Above 50years
Direct / Field Advertisement	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Printed advertisement	4.48	4.00	4.44	4.30	3.98	4.36	4.30	4.05	4.25	4.30	4.26	4.16	4.20	3.74	4.78	4.24	4.24	4.68	3.80
Electronic Advertisement	4.96	4.96	5.00	4.94	4.98	4.98	5.00	4.96	3.90	4.98	4.94	4.96	4.98	3.94	4.96	4.96	4.92	4.96	5.00
Facility in Time/ Distance	3.36	2.82	3.21	3.12	2.94	3.39	3.15	3.08	2.98	2.07	3.58	3.62	2.87	3.12	3.46	2.88	2.98	3.72	2.93
Facility in Cost	3.74	2.16	3.42	3.00	2.43	2.90	2.96	2.96	2.98	2.90	3.06	2.89	2.90	2.96	3.02	2.92	2.90	2.96	2.99
Facility in Visit/ trip	3.11	2.77	3.05	2.90	2.87	3.12	3.00	2.94	2.70	3.14	3.07	2.61	2.37	3.03	3.32	3.04	2.40	3.70	2.72
Facility in waiting	3.71	2.49	3.58	3.13	2.59	2.97	3.32	3.26	2.85	2.80	3.37	3.39	2.65	2.97	3.78	3.00	2.50	3.80	3.00
Entrepreneurs’ regularity	4.85	4.51	4.79	4.65	4.60	4.87	4.74	4.68	4.33	4.88	4.81	4.35	4.86	4.88	4.87	4.83	4.44	4.82	4.78
Entrepreneurs’ efficiency	4.95	4.61	4.89	4.75	4.70	4.97	4.84	4.78	4.43	4.98	4.91	4.45	4.96	4.98	4.97	4.93	4.54	4.92	4.88
Entrepreneurs’ reliability	4.24	3.74	4.01	4.00	3.96	3.12	3.96	4.26	4.62	4.00	4.13	3.84	4.43	3.43	4.08	4.02	4.86	4.36	2.75

Through the above analysis, the rural users have been asked to measure the primary factors with above scale through structured closed ended questionnaire, they have marked it and it has been presented here precisely. From the above different groups average scores, the average mean against each indicator with their ranking have been presented through the following table.

Table 20: Rank and Mean of Users' Accessibility Factors

Factors		Mean	Rank
21	Field advertisement of all services (Gathering, meeting rally, Miking)	4.96	2
22	Printed advertisement of all services (Banner, Signboard Leaflet, Poster)	4.24	5
23	Electronic Advertisement of all services (TV, Radio, Dish TV)	5	1
24	Facility in Time/ Distance	3.09	8
25	Facility in Cost	2.95	9
26	Facility in Visit/ trip	2.94	10
27	Facility in waiting arrangement (sitting, water, Sanitation etc.)	3.10	7
28	Entrepreneurs regularity	4.68	4
29	Entrepreneurs efficiency	4.78	3
30	Entrepreneurs responsiveness	3.99	6

From the above table, it is clear that rural citizens do not have clear idea about UDCs and their services and facilities. So the known citizens/ users have given their importance on the different publicity methods like direct communication through meeting, miking, gathering, rally, cultural activities. They have also given importance on electronic and printed advertisement. Through this advertisement every citizen can be acquainted with every service facility. Especially they will be informed about the facility of time saving, cost saving and visit saving (TCV). These three TCV are the great advantages to connect with the UDC. Beside these, Entrepreneurs' efficiency is another important factor to trust

UDC. If the entrepreneurs are efficient, they can solve peoples demand easily and efficiently which can bring people's faith. Finally their regularity and responsiveness carry people's fascination to come to UDC.

5.4 Users Service Accessibility Factors and Publicity

According to publicity almost all of the requirements are present in the UDC or at least Government is trying to deliver it. The UP authority is working with direct communication through union meeting, ward meeting, village meeting, miking, rally, cultural rally etc. UDC entrepreneurs are advertising through banner, signboard, festoon, Poster, leaflet, wall writing etc. Beside this government is trying to attach it in electronic advertisement in BTV, Radio Dish TV etc. Through all these methods of advertisement, government is trying to reach the rural people with all the news of UDC services and its TCV facilities. Side by side UP authority has managed sitting and waiting arrangement with sanitation facilities. Through monitoring of UNO, DC/ADC and A2i, entrepreneurs' regularity, efficiency and responsiveness have been ensured.

5.5 Users Service Accessibility Factors and Reality

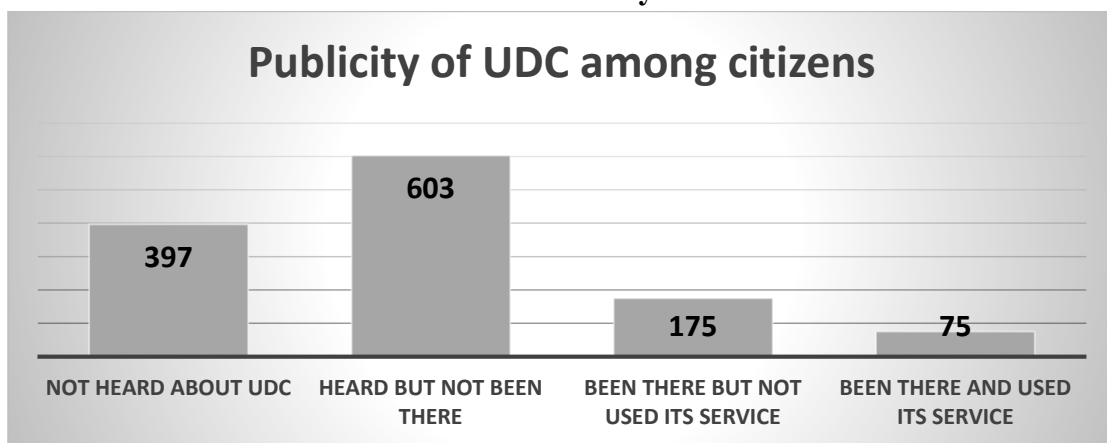
Though users service accessibility factors are available according to the publicity, it is partial or absent in the reality. The real situation has been examined below.

5.5.1 Advertisement of UDC

It has been surveyed among 352 citizens who have been UDC or availed its services at least one time. To find these sample, we have to reach 1250 rural people. It has been seen

that most of these people (70%) have limited or no idea about UDC. Those who visited/ got services from UDC (20%), they also do not have clear information about all government services as well as its benefits. They only know about some commercial services and some UP services like birth registration (from LGSP), issuing certificate etc. These will be clear from the following table and graph.

Chart 28: Publicity of UDC



In the above graph among the 1250 citizens have been interviewed about UDC. Among them 397 citizens have not heard about UDC, 603 citizens heard about it, but they have not been there, 175 of them, have been there but have not used its services and only 75 have been there and used its services.

5.5.2 TCV in Publicity and Reality

It is true that through UDC time, cost and visit has been reduced, which attract the users. But in areas, there arises complain to charge more than the revenue. In birth registration there is no charge within six months without printing cost. But in reality some

entrepreneurs charges tk. 50 or more. In some cases there needs more visits due to irregularity and lateness of entrepreneurs which is not acceptable.

5.5.3 Entrepreneurs' Regularity

At present UISCs are mainly served by male entrepreneurs. Female entrepreneurs are being absent in 35% (26 UDCs) UDCs of Rangpur district, though most of them are present in publicity. Some of them are married to other places, some of them are inefficient, some finds UDC as unprofitable etc. In some marginal areas, male entrepreneurs are also not regular and punctual in their UDCs. The researcher has observed 16 UDCs personally; has found 15 male entrepreneurs and only 4 female entrepreneurs working. It has been clear through their following presence sheet collected from themselves.

Table 21: Entrepreneurs Presence in June 2014

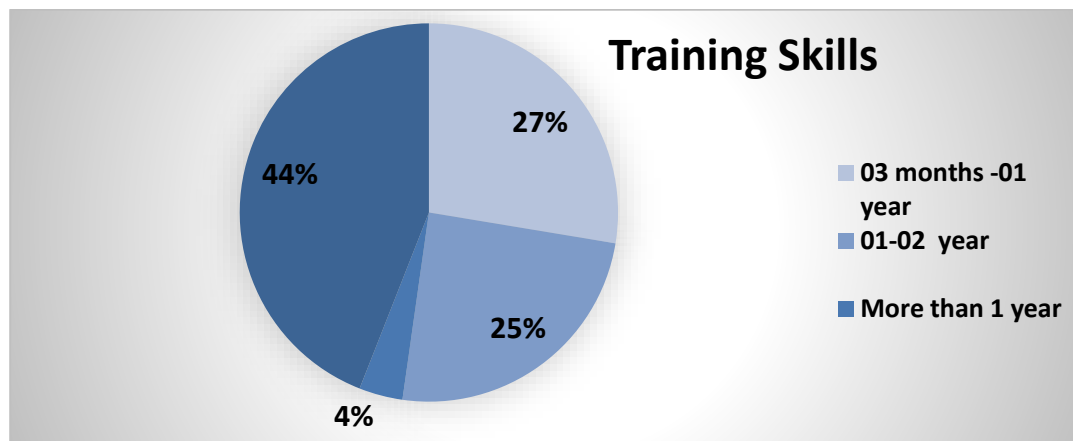
Union, Upazila	Male Entrepreneur	Female Entrepreneur
Kursha, Kaunia	23 days	Absent
Balapara, kaunia	23 days	24 days
Alombiditor, Gangachara	24 days	24 days
Betgari, Gangachara	26 days	17 days
Kursha, taragonj	24 days	07 days
Ikorchali, Taragonj	26 days	12 days
Itakumari, Pirgacha	21 days	04 days
Kallani, Pirgacha	24 days	17 days
Kalupara, Badarganj	25 days	10 days
Lohani para, Badarganj	25 days	25 days
Haridebpur, sadar	26 days	23 days
Sadypuskoroni, Sadar	26 days	19 days
Durgapur, Mithapukur	26days	Absent
Gopalpur, Mithapukur	25 day	Absent
Baradarga, Pirganj	25 days	Absent
Chaitrocal, Pirganj	22 day	Absent
Average presence	24 days	11 days

Source: Field Observation

5.5.4 Entrepreneurs Efficiency

It has been observed during the field survey that around 44% entrepreneurs have no expertise training. Almost all of the female entrepreneurs have no training skills. At the time of appointment, they were appointed without training skills. But after that they have not got /provided any comprehensive training. It can be cleared through the following graph.

Chart 29: Entrepreneurs' Sample Distribution: Training Skill



During the field survey it has been observed that, lack of individual capacity of entrepreneurs is acute problem in delivering service. Some government services are unavailable only for entrepreneur's lack of ability.

5.6 Gap between Requirement, Publicity and Reality

If the gap among the requirement, publicity and reality is examined, it can be seen that there is a minimum gap between requirement and publicity but there is maximum gap between publicity and reality. According to publicity there is enough advertising of USC

but from our observation it is not. Regarding facility mostly there is minimum gap among them but in entrepreneurs' regularity, efficiency and responsiveness there remains a maximum gap. If we compare the requirement factors of user with the publicity and reality through the following scale and table, it will be clear the present situation.

Table 22: Score to Measure the Presence of Service Accessibility Factors

Scale	Available	Moderately Available	Partially Available	Least Available	Not available
Score	100%	75%	50%	25%	00%

Table 23: The Presence of Service Accessibility Factors

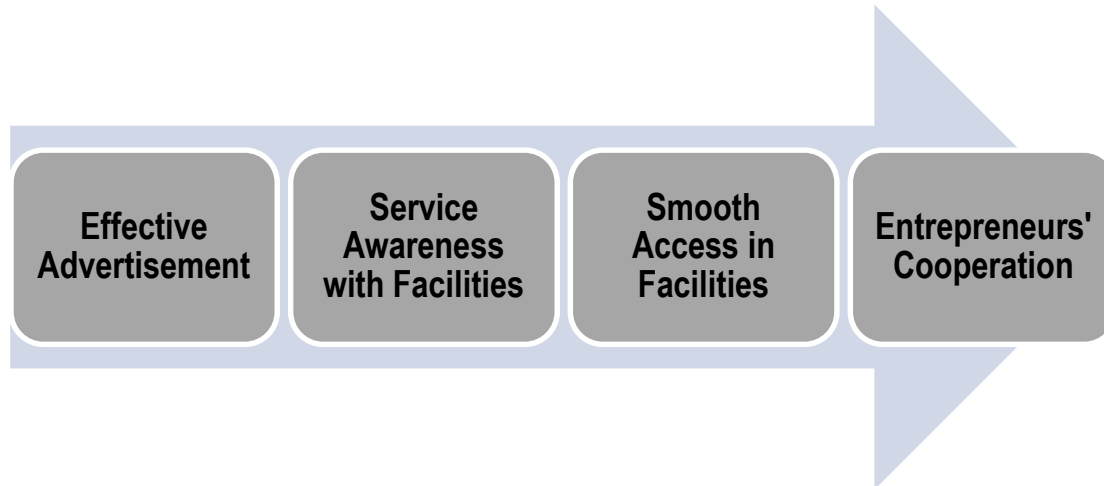
No	Accessibility processes and factors	Circulated	Reality
21	Field advertisement of all services	Available	Least Available
22	Printed advertisement of all services	Available	Not Available
23	Electronic Advertisement of all services	Available	Not available
24	Facility in Time/ Distance	Available	Available
25	Facility in Cost	Available	Partially Available
26	Facility in Visit/ trip	Available	Available
27	Facility in waiting arrangement	Available	Least Available
28	Entrepreneurs regularity	Available	Partially Available
29	Entrepreneurs efficiency	Available	Partially Available
30	Entrepreneurs responsiveness	Available	Partially Available
	Average Availability	100%	40%

From the above analyses it is clear that, among the required 10 factors for user accessibility only 50% is present (in on average score). The basic requirement that is field level advertisement is least available. Electronic advertisement is also absent which is a strong tools for modern publicity.

5.7 The Smooth Process of People's Access to UDC

From the above discussion (especially basic requirements and their presence), a graph of smooth access process of UDC can be made from both users perspective.

Chart 30: The Smooth Process of Citizens' Access at UDC



According to the above channel, when the rural people can recognize information and services of UDC with its benefit clearly, they will be attractive with it. And again when they can realize the regularity, efficiency and responsiveness of entrepreneurs, they will have trust on it. These rural people will connect UDC fully when they are supported institutionally and become bound to use it legally.

5.8 Service Accessibility from Entrepreneurs' Perspective

For the service accessibility, providing the necessity of rural people's requirement is not enough. The entrepreneurs also have to access to the services to fulfill the people's demands from UDCs.

5.8.1 Infrastructural Arrangement by UP Authority

To establish UDC infrastructure support is a must for rendering service. According to PPP between Union Parishad (UP) and entrepreneurs, this infrastructure support is supposed to be supplied by UP authority in the UP complex. They need minimum two rooms i.e. one for service center and other for training center with necessary facilities like chair, table, bench etc. So support from UP is very important to make the UISC effective.

5.8.2 Logistic (input) Support from Authority/ Government

To access to different online and offline facilities, entrepreneurs need different ICT inputs like laptop/desktop computer, modem/broad band with speedy connection, uninterrupted supply of electricity, photocopier, printer, scanner, digital camera, multimedia projector etc. In most of the cases, these electrical instruments are not in improved quality and may get damaged any time. So government/related agencies have to supply required input every year. Primarily these have been supplied from LGSP. But in course of time in each UDC, different inputs have been damaged. So the Government, especially Ministry of Local Government along with its local directorates, at districts level have to ensure supply of this with yearly budget.

5.8.3 Uninterrupted Power (Electricity/ Solar Panel /Generator)

Uninterrupted Power is a must to run the UDC. Though all the UDC has covered by the electricity, most of the time it is interrupted through load shedding. It hampers the information and service delivery mostly. To cover this crisis, solar panel has been set up in every UDC. But this panel are low capable. They are not supporting all the activities

of service delivery except running a laptop. To ensure the smooth service delivery from UDC, electricity supply is very indispensable. Otherwise uninterrupted electricity supply may create unrest for the smooth functioning of UDCs.

5.8.4 Speedy Internet Support

For smooth ICT penetration in rural and remote areas of the country speedy internet support is a must. People are being deprived of the services like online birth and death registration, porcha application, uploading customers' data, e-mail, Skype, internet browsing, on-line banking, on-line shopping etc. which largely depend upon the internet speed. If the internet speed is at satisfactory level, service delivery can be provided according to the customers need.

5.8.5 Trainings on Special Services

The UISC entrepreneurs are the key personnel for providing the e-services among the rural community people. To make the UDC effective, trained entrepreneurs are very much essential. There are some entrepreneurs who do not have satisfactory knowledge regarding the e-service delivery to meet the citizens' desire. If they are trained at a desired level, they will be able to provide more services efficiently.

5.8.6 Support from Woman Counterpart

Women entrepreneurs constitute half of the entrepreneurs. But they are appointed without any necessary skills on the job (A2i, 2011). Though training facility was provided to the first batch (during 2010), the next batch of women entrepreneurs were not provided any

formal training. They received an online tutorial, but due to fluctuating internet speed in most of the rural areas, the online tutorial was not very useful. So, maximum women entrepreneurs are not trained.

5.8.7 Cooperation/Mentoring from Chairman

There is a committee comprising of 7-9 members headed by the Chairman of concerned Union Parishad for conducting and managing the UDC. They have to select entrepreneurs and provide all types of institutional and other support to them. The authority has to meet at least once in a month for reviewing the UDC activities. So chairman has a great role to run the UDC. Without his active cooperation, it is impossible for the entrepreneurs to run the UDC.

5.8.8 Effective UISC Blog to Solve Complications

UISC blog⁹⁹ is a learning and sharing platform for the UDC entrepreneurs and associated Local Administration officials. An effective blog can share and face the problems and issues mutually pertaining to operating the UDCs which ranges from hardware to software trouble-shooting; social problems to professional hazards. Stakeholders can save considerable time and effort in troubleshooting various problems by using the blog. The blog allows local administration to disseminate instructions to all officials and follow up on actions required to resolve issues. The blog can become a platform for entrepreneurs to voice their concerns and service demands.

⁹⁹Source: (<http://uiscbd.ning.com/>) Access at 29/10/2015

5.9 Entrepreneurs Accessibility Analysis

From the analysis of the above factors the following factors required by the citizens can be categorized for their smooth access. Here, these accessibility factors have been valued by the following scale and with average score.

Table 24: Scale and Score to measure accessibility factors

Scale	Very Essential	Essential	Somehow Essential	Less Essential	Not Essential
Score	5	4	3	2	1

Mean Scores of Required Sources in the Light of Required Service

Groups → Service sources ↓	Gender		Marital Status		Education			ICT education / Training			Experience			
	Male	Female	Married	Unmarried	HSC or below	Graduate	Post Graduate	No Training	less than 1 year	1 year – 2 year	2 year Or more	less than 1 year	1 year – 2 year	2 year Or more
Room arrangement (UP)	4.08	4.00	4.54	3.54	3.60	4.04	4.48	3.24	4.00	4.34	4.58	3.42	4.04	4.66
Infrastructural arrangement(UP)	4.13	4.05	4.54	3.64	3.65	4.09	4.53	3.29	4.05	4.39	4.63	3.47	4.09	4.71
Logistic (input) support (LGSP)	4.71	4.79	5.00	4.50	4.46	4.75	3.54	4.50	4.75	5.00	3.84	4.50	4.75	3.50
Speedy Internet support	4.56	4.64	5.00	4.20	4.16	4.60	5.04	4.04	4.56	4.92	4.88	4.21	4.59	5.00
Uninterrupted Power supply	4.09	4.01	4.50	3.60	3.61	4.05	4.49	3.25	4.01	4.35	4.59	3.43	4.05	4.67
Trainings for specific services	4.14	4.06	4.55	3.65	3.66	4.10	4.54	3.30	4.06	4.40	4.64	3.48	4.10	4.72
Effective UISC blog to solve complications	3.35	3.65	3.00	4.00	4.00	3.50	3.00	3.75	3.50	3.50	3.25	3.70	3.50	3.30
Support from Woman/man counterpart	4.14	4.22	4.63	3.73	3.74	4.18	4.62	3.38	4.14	4.48	4.72	3.56	4.18	4.80
Mentoring from UP Chairman	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Monitoring from UNO	4.54	4.62	5.00	4.16	4.14	4.58	4.75	4.00	4.54	4.88	4.90	4.19	4.55	5.00

From the above average scores of different groups, it has been calculated the following mean with serial ranking.

Table 25: Entrepreneurs Accessibility Factors and their Measurements

Factors	Rank	Mean
31 Room arrangement (UP)	5	4.04
32 Infrastructural arrangement(UP)	6	4.09
33 Logistic (input) support (LGSP)	2	4.75
34 Speedy Internet support	3	4.60
35 Uninterrupted Power (Electricity/ Solar Panel /Generator)	8	4.05
36 Trainings for specific services	7	4.10
37 Effective UISC blog to solve complications	10	3.50
38 Support from Woman/man counterpart	5	4.18
39 Mentoring from UP Chairman	1	5.00
40 Monitoring from UNO	4	4.58

From the above table it is clear that, the first and foremost demand for the entrepreneurs is the cooperation from the chairman. The second crucial requirement is speedy internet support. Interrupted power supply/ load shading is another crucial crisis for UDC. Beside this, Regular (monthly) meeting among UP Chairman, Members, Secretary and entrepreneurs on UDCs service delivery can make the UDC effective. Beside this, UNO has responsibility to run UDC. Without their co-operation, entrepreneurs cannot move their responsibility smoothly.

5.10 Entrepreneurs' Accessibility Factors and Publicity

According to publicity almost all of the requirements are present in the UDC or at least Government is trying to deliver it. Government has already provided the initial input

support, and providing more through LGSP. They are providing necessary trainings and UISC blog support to make entrepreneurs efficient and responsive. Some requirements are related to UP chairman, his active cooperation, mentoring and monitoring which vary from UP to UP according to their attitude. UNO, who is the main public officer to hold responsible for it, monitors it.

5.11 Entrepreneurs' Accessibility Factors and Their Reality

According to PPP among UP and Entrepreneurs, UP authority has to provide office room, training room with sitting arrangement for both users and entrepreneurs. But in many cases these are not supported by UP. Entrepreneurs run their offices with very old and often abandoned small room and sitting facilities. Hence, office space and furniture are not adequate to provide customer amenities. This has been clear in the following table.

Table 26: Infrastructure Availability in reality in UDCs

Union, Upazila	Office Room	Training Room	Siting Arrangement for Entrepreneurs	Siting Arrangement for users
Kursha, Kaunia	1	---	Partially Available	Not Available
Balapara, kaunia	1	---	Moderately Available	Least Available
Alombiditor, Gangachara	1	---	Partially Available	Least Available
Betgari, Gangachara	1	1	Available	Least Available
Kursha, taragonj	1	---	Partially Available	Least Available
Ikorchali, Taragonj	1	---	Partially Available	Least Available
Itakumari, Pirgacha	1	---	Partially Available	Least Available
Kallani, Pirgacha	1	---	Available	Least Available
Kalupara, Badarganj	1	---	Partially Available	Least Available
Lohani para, Badarganj	1	---	Partially Available	Least Available
Haridebpur, sadar	1	1	Available	Partially Available
Sadypuskoroni, Sadar	1	1	Available	Partially Available
Durgapur, Mithapukur	1	1	Moderately Available	Least Available
Gopalpur, Mithapukur	1	---	Partially Available	Not Available
Baradarga, Pirganj	1	---	Partially Available	Least Available
Chaitrocal, Pirganj	1	---	Partially Available	Least Available
Average Availability	100%	25%	75%	25%

The researcher has observed 16 UDCs personally; and tried to find out availability of these required factors. Regarding to room, most of the UDC have only one room and there is no room for providing training programs. In some areas there is no office building for UPs. There is no room facility for UDCs from these UP. Regarding infrastructure, though entrepreneurs have sitting arrangement, in most cases users' do not have these facilities.

5.11.1 Logistic (input) Support

During establishment there was a full support of government for infrastructure supply in two phases. These were 01 computer, 01 colour printer, 01 scanner, 01 GP modem and 01 web cam in first phase and 01 laptop, 01 digital camera, 01 photocopier and 01 IPS in second phase. But within three years some of these have been out of function. But within 2-3 years most of the equipment fall into out. The following table depicts the equipment available in the UDC and their working conditions.

Table 28: Available Equipment and their Working Conditions in UDC

Type	Name	Availa- bility	Good %	Moderate %	Out of Order %	Being used not for UDC %	Not present in UDC %
ICT Equipm ent	Desktop	100%	40.2	27.1	15.8	2.8	14.1
	Laptop	80%	43.9	11.2	16.5	8.7	19.7
	Modem	100%	61.5	28.1	3.0	1.5	5.9
Picture Equipm ent	Laser Printer	70%	20.5	18.9	30.1	.4	30.1
	Color Printer	60%	18.7	29	14.7	.4	17.3
	Scanner	80%	67.5	15.9	3.2	.7	12.6
	Digital Camera	70%	38.4	22.1	22.6	1.1	15.8
Advanc ed Equipm ent	Photocopier	70%	15.9	22.1	21.7	0.0	40.3
	Multi. Projector	50%	37.2	9.1	21.3	2.7	20.6
	Solar Panel	90%	72.6	4.5	3.9	.6	18.4
		77%	41.64 %	18.8 %	15.28%	1.89%	19.48 %

The equipment presented in the table can be categorized into two types based on their availability and nature of job they perform: ICT equipment and Non ICT equipment. The ICT equipment such as computers, laptops and internet modem which are required to provide e-services are mostly available in all UDCs (around 93%) and their working conditions are also moderate or good in majority cases 61%. The Non-ICT equipment can also be of two types: (1) picture equipment such as digital camera, color printer and scanner are also existing most 70% UDCs and among these 19 % out of order and; (2) advanced equipment such as photocopier, generator, multimedia projector, solar panel, etc. are available (75%) but in most case out of dated (20%). Many entrepreneurs have no ability to repair this or buy the new ones.

5.11.2 Backwards Support (Internet, Electricity, Training)

About 75% entrepreneurs face the problem with internet speed. When the researcher visited the sample UDCs, he saw ‘a 03 minute net based work needs around 10 minutes’. 02 UDCs have broad band connection but this is also slower than that in urban area. In rural areas of Rangpur district, during most of the office time, power is not available, but this is a must to conduct UDC. The highest numbers of entrepreneurs (87.50 per cent) complain about the electricity shortage, load shading, interrupted supply and voltage up-down. This shortage, on the one hand, grows frustration among entrepreneurs and on the other, deprives the villagers of getting services. Many times users have to wait for hours. This is more acute in some UISCs. During visit of Baradargah union at Pirganj Upazila, the researcher found that, UISC service delivery has been stopped due to electricity cut

off. After finding no other means, he informed it to the UNO through an application no.

1. This has been attached at the appendix to get a clear view of situation. Here, the backward support has been depicted through the following table:

Table 28: Scale to Measure Availability of Electricity, Connectivity and Training

Scale	Available	Moderately Available	Partially Available	Least Available	Not available
Score	100%	75%	50%	25%	00%

Table 29: The Availability of Electricity, Connectivity and Training in UDCs

Union, Upazila	Electricity	Connectivity	Training
Kursha, Kaunia	Partially Available	Least Available	Partially Available
Balapara, kaunia	Partially Available	Least Available	Partially Available
Alombiditor, Gangachara	Least Available	Least Available	Partially Available
Betgari, Gangachara	Moderately Available	Partially Available	Moderately Available
Kursha, taragonj	Partially Available	Least Available	Partially Available
Ikorchali, Taragonj	Partially Available	Least Available	Partially Available
Itakumari, Pirgacha	Partially Available	Least Available	Partially Available
Kallani, Pirgacha	Partially Available	Least Available	Partially Available
Kalupara, Badarganj	Partially Available	Least Available	Partially Available
Lohani para, Badarganj	Least Available	Least Available	Partially Available
Haridebpur, sadar	Moderately Available	Moderately Available	Moderately Available
Sadypuskoroni, Sadar	Moderately Available	Partially Available	Moderately Available
Durgapur, Mithapukur	Partially Available	Least Available	Partially Available
Gopalpur, Mithapukur	Partially Available	Least Available	Partially Available
Baradarga, Pirganj	Partially Available	Least Available	Partially Available
Chaitrocal, Pirganj	Least Available	Least Available	Partially Available
Average Availability	50%	31%	54%

5.11.4 Co-operation from Chairman, Secretary

In some UDCs chairman is using the government (LGSP) budget allocated for UDC.

Table 30: Co-operation from Chairman and Secretary

Union, Upazila	Cooperation from Chairman	Cooperation from Secretary
Kursha, Kaunia	Least Available	Least Available
Balapara, kaunia	Partially Available	Least Available
Alombiditor, Gangachara	Least Available	Least Available
Betgari, Gangachara	Partially Available	Least Available
Kursha, taragonj	Least Available	Least Available
Ikorchali, Taragonj	Partially Available	Least Available
Itakumari, Pirgacha	Partially Available	Least Available
Kallani, Pirgacha	Available	Partially Available
Kalupara, Badarganj	Least Available	Least Available
Lohani para, Badarganj	Partially Available	Least Available
Haridebpur, sadar	Moderately Available	Partially Available
Sadypuskoroni, Sadar	Available	Moderately Available
Durgapur, Mithapukur	Moderately Available	Partially Available
Gopalpur, Mithapukur	Moderately Available	Least Available
Baradarga, Pirganj	Partially Available	Partially Available
Chaitrocal, Pirganj	Moderately Available	Moderately Available
Average Availability	53%	37%

5.11.4 Lack of Support from Women Counterparts

Almost half of the women entrepreneurs, who signed up for taking charge of Union Digital Centers (UDC) across the country, have dropped out after five years. According to the Access to Information (A2i) Program at the prime minister's office, less than 5% of the women entrepreneurs are attending their workplace regularly. Each of these centers' mandatorily appointed one female entrepreneur along with a male entrepreneur. However, women entrepreneurs started dropping out since the very start. According to the UDC census of Bangladesh Bureau of Statistics, only 4.71 percent women entrepreneurs were

regularly attending their respective centers, while 29.46 percent were attending only once or twice a week.

Table 32: Co-operation from Women Counterpart

Union, Upazila	Availability of Women Entrepreneurs	Availability of their Co-operation
Kursha, Kaunia	No	-----
Balapara, kaunia	Yes	Available
Alombiditor, Gangachara	Yes	Partially Available
Betgari, Gangachara	Yes	Moderately Available
Kursha, taragonj	No	-----
Ikorchali, Taragonj	Yes	Partially Available
Itakumari, Pirgacha	No	-----
Kallani, Pirgacha	Yes	Moderately Available
Kalupara, Badarganj	No	-----
Lohani para, Badarganj	Yes	Available
Haridebpur, sadar	Yes	Available
Sadypuskoroni, Sadar	Yes	Available
Durgapur, Mithapukur	Yes	Moderately Available
Gopalpur, Mithapukur	No	-----
Baradarga, Pirganj	Yes	Moderately Available
Chaitrocal, Pirganj	No	-----
Average Availability	Yes=63% No 63%	80%

5.12 Gap between Requirement, Publicity and Reality

If we compare the requirement factors of entrepreneur with the publicity and reality through the following table, it will be clear the present situation.

Table 32: Scale to availability of Service Accessibility indicators

Scale	Available	Moderately Available	Partially Available	Least Available	Not available
Score	100%	75%	50%	25%	00%

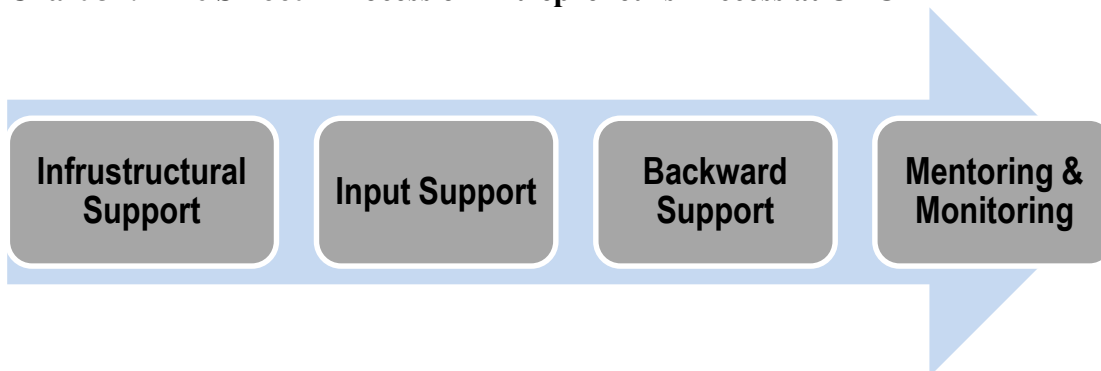
Table 33: The Availability of Service Accessibility indicators

No	Required services Accessibility Factors for Entrepreneurs	Circulated	Reality
31	Room arrangement (UP)	Available	Partially Available
32	Infrastructural arrangement(UP)	Available	Partially Available
33	Logistic (input) support (LGSP)	Available	Partially Available
34	Speedy Internet support	Available	Not available
35	Uninterrupted Power (Electricity/Solar Panel /Generator)	Available	Least Available
36	Trainings for specific services	Available	Partially Available
37	Effective UISC blog to solve complications	Available	Moderately Available
38	Support from Woman/man counterpart	Available	Partially Available
39	Mentoring from UP Chairman	Available	Least Available
40	Monitoring from UNO	Available	Least Available
		100%	40%

From the above observation it is clear that among the required 10 factors for entrepreneurs only 40% is present. Around 60% of the required service is absent.

5.13 The Smooth Process of Entrepreneurs' Access to UDC

From the above discussion we can make the following smooth access picture of UDC with the required factors and their factors from entrepreneurs' perspective.

Chart 31: The Smooth Process of Entrepreneurs' Access at UDC

5.14 The Viability regarding Service Accessibility

It is clear from the above analysis that maximum required services are absent in UDC. The gap is more than 50% in uses perspective and 60% in entrepreneurs' perspective. In this situation service accessibility will face challenge and may fall into vulnerability crisis.

5.14 Conclusion

Users' ability to access to information and services is one of the important segment towards E-governance in rural Bangladesh. Side by side entrepreneurs' ability to access is a must to make easier the users' access. But the accessibility of both of them has been challenged due to the scarcity of several factors. In this situation, the crucial factors identified by the respondents can make significance change to improve accessibility towards UDC based E-governance in rural Bangladesh.

Chapter Six

Service Profitability

6.1 Introduction

Operated under the public-private partnership model, the entrepreneurs of UDC charge prescribed fees for delivery of services through which they meet their day to day operation cost with marginal profit. The government has assisted in the initial set up of UDCs, it has been expected that entrepreneurs would eventually take the responsibility of sustaining the business with profitability in the long run.¹⁰⁰ However, initial observation says, it is more than five (five) years since the establishment the entrepreneurs who have been facing the profitability crisis. They are suffering from crisis of input sustainability, people's participation, crisis for scope of commercial services etc. Side by side, regarding users perspective, this UDC initiative has brought a lot of advantages regarding time, cost, visit. Yet they have some demands regarding their profitability. We have interviewed both users and entrepreneurs in pilot survey that 'What they need to participate at UDC with profitability'. They suggest several requirements which have been measured by structured questionnaire through five point category scale.

6.2 Service Profitability Factors: Users' Perspective

Maximum users shows their positive attitude on UDCs as their time, cost and visit have been reduced radically. Yet they want some more initiatives financially.

100. Access to Information (A2i) Program, *Sustainability and Business Plan for Union Information and Service Centre (UISC)*: 05, Dhaka: PMO, Government of the People's Republic of Bangladesh, 2014.

6.2.1 UDC should be in Common Place to Ensure Comparative TCV

In providing services the location of UDC is one of the important factors. Generally rural people are engaged with labor based work like farming, livestock rearing, horticulture, small business, day labor etc. So they have limited time to connect with public service delivery. During hat day (weekly marketing day) they meet in a common place (bazar) to meet their daily or basic necessities. If the UDC or its sub-center is near the market/common place, people can have a smooth access here. It can save their comparative time, cost and visit (TCV). So it is important to establish UDC or its sub center near the market place.

6.2.2 Free Access for the Hardcore Poor and the Disable

Most of the rural people are living in poverty. Among them some are under the hardcore poverty level. They have to live with hand to mouth. They cannot bear their basic necessities also. Some of them are disabled person like physically disabled, very old, widow etc. They cannot bear even the marginal price of UDC. They need special facility with the ICT based UDC and connect them under digital network. If they have free access to the public service of UDC, it will be great relief for them. So government should come forward to bear their cost and make their access to the UDC.

6.2.3 Closing Alternative Delivery Process

The commercial services delivered by the UDC are also available in local computer shop. The public services are also available in traditional ways like issuing porcha, citizenship

certificate, stamp etc. A class of public servants tries to keep this traditional system active for their vested interest. In issuing porcha this class has their own interest. So, in some cases public service delivery from UDC is not succeeding. If this traditional public service delivery system can be stopped fully, UDC becomes only alternative. Then delivery of UDC will be more functional, easy and smooth.

6.2.4 Monitoring in Pricing

The researcher has dealings with 352 respondents who know about UDC or have been there. Around 20% of them claim that the entrepreneurs are charging more for public service delivery like birth registration, passport processing, porcha processing etc. During observation the researcher himself has found the complaint true to some extents. This is happening in birth registration. In porcha processing there are illegal practices in the record room of DC office. So the UP and District authority have to keep an eye on this.

6.2.5 Ensuring the Common Commercial Facilities

Every UDC should have some common commercial facilities like compose, print, scanning, photocopy, photograph, video etc. If these are available and delivered with efficiency, users will be fascinated to come to avail both public and private services, which will bring profit to both users and entrepreneurs.

6.3 Users' Profitability Analysis

As UDCs are not providing information and service in the required level, there participation rate is meagre. In this situation users' profitability is not momentous.

However, their valuation has been analyzed through the following scale and table with average score of each factors against every group.

Table 34: Measurement Scale and Score of Profitability Requirements factors

Scale	Very Essential	Essential	Somehow Essential	Less Essential	Not Essential
Score	5	4	3	2	1

Measurement scale Profitability Requirements factors

Groups ↕ Factors	Gender		Residence			Qualification				Income			Occupation			Age			
	Male	Female	Within 1 KM	Within 2 KM	Within 3 KM	Up to PSC	JSC/JDC	SSC/ Dakhil	HSC or Above	No Vehicle	Non-mechanized	Mechanized	Unemployed	Employed	Self-Business	Student	Up to 25 years	Up to 50 years	Above 50years
Setting UDC in common place	4.56	3.96	4.62	4.11	4.05	4.88	4.50	4.26	3.40	4.20	4.62	3.96	4.12	3.64	4.86	4.42	3.42	4.66	4.70
Free access for disabled person	4.48	4.00	4.44	4.30	3.98	4.36	4.30	4.05	4.25	4.30	4.26	4.16	4.20	3.74	4.78	4.24	4.24	4.68	3.80
Close alternative service delivery	4.36	3.88	4.26	4.22	3.88	4.20	4.15	4.08	4.05	4.40	4.21	3.75	4.30	4.32	4.06	3.80	3.90	4.43	4.03
Monitoring in Pricing	4.94	3.96	4.92	4.70	3.73	4.50	4.56	4.56	4.18	4.50	4.66	4.19	4.50	4.56	4.62	4.12	4.50	4.56	4.29
Introducing commercial services	4.36	3.82	4.21	4.12	3.94	4.39	4.15	4.08	3.74	3.07	4.58	4.62	3.87	4.12	4.46	3.91	3.62	4.72	3.93

The above table presents the average scores of different user groups regarding every factors. If the average score against every indicator is calculated, it will indicate their significance.

Table 35: Profitability Factors and Their Factors with Means and Ranks

Required Factors	Factors' Factors		Rank	Mean
Service Profitability: people's perspective	41	Setting UDC's sub-center at common place	3	2.67
	42	Free access for disabled person	5	2.40
	43	Closing alternative service delivery	4	2.61
	44	Price Monitoring	1	4.55
	45	Introducing common commercial services	2	3.04

From the above tabulation and analysis it is found that users are not concern much about their cost and profitability. They will be benefitted financially if the price of public service is reasonable, common commercial services are available. Side by side if the government take initiative to make the public services free for the disabled, they will participate smoothly. If the UDC of its sub-center is established in a common place, it will save their time, cost and visit. Side by side they can get comparative benefits in other works concerning market place.

6.4 Gap between Profitability Factors and Reality

It has been observed that the users' profitability factors are quite absent in both publicity and reality. Setting UDCs sub-center in a common place is a public demand from the entrepreneurs which is absent. In some areas entrepreneurs have established sub-centers in their own initiative. They manage these after the office period. There is no option for free access of disabled person. In some Upazila (Pirgonj) alternative service delivery has been stopped in Porcha delivery. The authority is not monitoring the price. The presence

of commercial service is not satisfactory. Only some common commercial services are present in UDCs. This has been presented through the following scale and table.

Table38: Scale for Measuring Profitability

Scale	Available	Moderately Available	Partially Available	Least Available	Not available
Score	100%	75%	50%	25%	00%

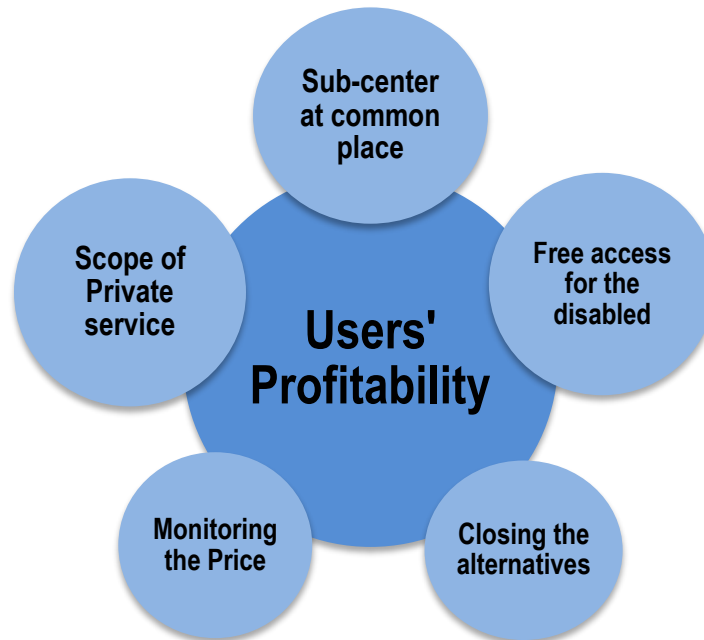
Table 39 : Required Profitability Factors in Reality

	Required services profitability for users	Circulated	Reality
41	Setting UDC/sub-center in a common place	Not available	Not available
42	Free access for disabled person	Not available	Not available
43	Closing alternative service delivery	Moderately Available	Least Available
44	Price Monitoring	Not available	Not available
45	Introducing common commercial services	Available	Moderately Available
		35%	20%

From the above description it is that around 80% of required service is absent and rest 20% is present. Three of them are totally absent. The availability of other two is also unsatisfactory.

6.5 The Process of User's Smooth Profitability at UDC

From the above analysis, the following graphs can be made which will show the smooth process of users' profitability. This will also ensure the effectiveness of TCV.

Chart 32: Smooth Profitability Factors in Graph: Users' Perspective

In the above graph it is clear that smooth accessibility can be assured through price monitoring, introducing common commercial services, setting UDC's sub-center at a common place, closing alternative service delivery process and free access for disabled person respectively.

6. 6 Entrepreneurs' Profitability Factors

In business, profitability is the main inciter for the entrepreneurs to run the UDC as viable tele-center in rural Bangladesh. Entrepreneurs are engaged at UDC through an agreement under public private Partnership program. The initial input and infrastructural facilities were provided by the local and central authority. So there is no cost for the entrepreneurs at the establishment of UDCs. But they have to incur variable costs like repairing cost, daily cost. They have no salary. The only income is the service fee from users of UDCs.

The more users mean the more income. On the other side if they get some support from Government and local Government, their profit will be more stable and smooth. Their profitability indicators are described in following.

6.6.1 Different Online Registration and Database

Different Online registration programs are required in the rural area for the security, administration and development activities. These programs can be executed by the UDC smoothly, and can be a prime source for entrepreneurs' profitability. If these programs are provided to the UDCs, this will help for their income sustainability. During the registration for Malaysian immigration UDC had done a great job and also earned handful money. At present there is only one online registration program is going on and that is online birth registration. In fact this is the main income source of most of the UDCs in Rangpur district. If this program is closed, 70% of UDC will be closed, as there is no other main income source.

6.6.2 Functioning Training Center

Functioning training center is another crucial indicator of entrepreneurs' profitability. It is observed that, the UDCs which are running on successfully are mostly depended on the income from training center. There are different types of training services from 03 months to 12 month and the rural youth are availing these opportunities. But for the lack of room and sufficient input, the entrepreneurs cannot run the trains. In our observation, in last 05 (five) years about 600 youths received training from UDCs across the country up to across Rangpur district.

6.6.3 Ensuring Marginal Revenue for UP Services

UDC has been established generally at the UP complex; inputs are controlled and supplied through UP; and entrepreneurs are appointed or dismissed under the control of UP Chairman. So they have to accomplish UP works at first without any dealing of returns. As a result most of the time, they (entrepreneurs) are not remunerated necessarily even though there is the marginal revenue/cost. Social value is also an important that makes the entrepreneurs to continue the job as entrepreneurs. If their status and income are lower than the UP secretary, they feel inferior complexity.

6.6.4 At Least tk. 400-500 Income (20-250 Users) a Day

Entrepreneurs' profitability primarily depends on the users' involvement in service delivery. The more users come to receive, the more earnings results. But from the observation we have seen that on an average 7-12 or (even less) are coming in each UDC in Rangpur district. Around 80% of them are coming for birth registration. Sometimes even there is no single user in a day. We have asked the entrepreneurs, how many users they need in on average to fulfill the minimum operating cost. They vary in their answers, which is in an average from 15 to 25.

6.6.5 Scope for Private/Commercial Services

In some UDCs the entrepreneurs are busy with different types of UP works during office period. This takes a long time. But they do not get necessary profit from this work. Beside this they do not have necessary equipment for commercial services. And their ability for

extra investment is limited. So they cannot cope up with the private telecenters. So they have limited scope to do private/ commercial services.

6.7 Entrepreneurs’ Profitability Analysis

These profitability factors described above have been analyzed by the entrepreneurs’ choice with the following scale and average score of each factors against every group.

Table 38: Scale and Score for Measuring Profitability Requirements factors

Scale	Very Essential	Essential	Somehow Essential	Less Essential	Not Essential
Score	5	4	3	2	1

Mean Scores of required sources in the light of required e-service

Groups → Service sources ↓	Gender		Marital Status		Education			ICT education / Training				Experience		
	Male	Female	Married	Unmarried	HSC or below	Graduate (Hon/degree)	Post Graduate (Masters)	No Training	less than 1 year	1 year – 2 year	2 year Or more	less than 1 year	1 year – 2 year	2 year Or more
Different Online Registration and database	4.65	4.55	4.70	4.50	4.50	4.60	4.70	4.80	4.60	4.40	4.60	4.40	4.60	4.80
Functioning training center	5.00	4.40	4.70	4.70	4.40	4.70	5.00	4.10	4.70	5.00	5.00	4.40	4.70	5.00
Ensuring marginal revenue for UP services	4.80	4.20	4.75	4.25	4.10	4.60	4.80	4.50	4.50	4.50	4.50	4.50	4.45	4.55
At least 15-20 user a day	4.60	5.00	5.00	4.60	5.00	4.80	4.60	5.00	4.80	4.80	4.60	5.00	4.80	4.60
Scope for private/commercial services	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30	3.30

If we average the scores of every entrepreneurs’ group against every indicator and make their rank we can identify their level of significance as shown in the following table.

Table 39: Rank and Mean of Profitability Factors

Required Factors	Factors	Rank	Mean	
Service Profitability: Entrepreneurs' perspective	46	Different Online Registration and database	3	4.6
	47	Functioning training center	2	4.7
	48	Ensuring marginal revenue for UP services	4	4.5
	49	At least income TK 400-500 per day (20-25 users)	1	4.8
	50	Scope for private/commercial services	5	3.3

From the above mean and rank, it is clear that, entrepreneurs are mainly facing for participation crisis regarding profitability. They want more user which ensure their profitability. Functioning training center is second largest source for their profitability. Thirdly, according to them, it depends on the functional of necessary input which can be ensure through the sufficient budget allocation. Beside this, some entrepreneurs are facing crisis from the revenue collection from UP. They spend a lot for different types activities with UP, but they do not their marginal return.

6.8 Users' Profitability: Publicity and Reality

This is no denying the fact that, users of UDC are availing important facility concerning time, cost and visit in both publicity and reality. There is only thing which can reduce their time, cost and visit more is to set sub-center of those UDC which are not in common place. We have observed that in maximum cases; UDCs of Rangpur District are not in market place or near the market place. As a result users in rural area do not will to go to UDCs.

6.9 Entrepreneurs Profitability in Publicity and Reality

As entrepreneurs' financial sustainability has the key role to run the UDC smoothly, their requirement should be considered seriously. Here we will see the real situation of entrepreneurs' profitability in terms of required factors.

6.9.1 Lack of Fixed Cost from LGSP Yearly Budget

The UDC equipment is initially provided by the government assisted by donors and the UP from its Local Government Support Project (LGSP) funded by the central government. Every year some new equipment is needed or has to be added as some of them become out of work. So, before budgeting entrepreneurs' demand for new equipment has to be included in budgetary demand. But in our observation, it has been seen that, most of the chairman though cost of different instruments have been added in yearly demand budget, allocation is not according to the demand. But the matter of great regret that this allocated budget for UDC is not disbursed for the UDC properly. Though some instruments are bought, they are not qualitative and sometimes out of work within short time.

6.9.2 Minimum Income 400-500 (Presence 20-25)

Government of Bangladesh publishes daily report regarding delivery of UDCs' services (service users name, gender, service type) with entrepreneurs' income of all the UDCs in Bangladesh. The names of ten highest income earners also published. So there becomes a competition among the entrepreneurs to be in the top ten. The low income earners are thought to be incompetent and unskilled to run the UDCs. They may be questioned in the

meeting with TNO, DC or any other responsible person. This may impact future support for their UDCs. So, to escape from this, they put a bigger Chart while sending report. Here is a table of displayed user / income and real user income collected from the 16 sample UDCs.

Table 40: Displayed Presence and Real Presence the16 Sample UDCs.

Name of Union and Upazila	Per day Presence (Circulated) in June 2015	Per day Income (Circulated)	Per day Presence (Real) in (1-15) June 2015	Per day Income (Real)
Kallani, Pirgacha	21	542	19	542
Parul, Pirgacha	20	518	7	240
Alambiditar, Gangachara	14	706	7	250
Betgari, Gangachara	29	771	29	771
Chetracal, Pirgang	11	735	5	120
Boradarga, pirganja	14	481	10	200
Durgapur, Mithapukur	17	675	14	350
Milanpur, Mithapukur	14	481	8	200
Ikarchali, Taragonj	20	600	6	220
Alampur, Taragonj	29	862	6	240
Kursha, Kaunia	11	608	5	120
Balapara, Kaunia	11	230	9	200
Lohanipara, Badargonj	10	1534	5	140
Kalupara Badargonj	21	610	6	125
Soddapushkaroni, Sadar	44	1431	44	1431
Kholea, Sadar	11	525	15	500
Per day Average Presence /Income	19	706.81	12	353.06

According to our observation average displayed income is around TK 18000 from each UDC and average daily users are 14 in Rangpur district. But the average real income

is around TK 11000 and users are 09 (approx). This becomes clearer in an official letter. In October 2013, Assistant Director of Local Government, Rangpur Division published an official message in criticizing the monthly income report which has been attached in appendix in the name of 'Letter 3 : An Official Memorandum in Criticizing the Daily Uploaded Income'. Here he has summoned the entrepreneurs to be exact in uploading the income.

6.9.3 Ensuring Marginal Revenue for UP Services

At present in fact the entrepreneurs are working under UP chairman and secretary. Chairman can appoint them or fire them any time with lame excuse. They are using entrepreneurs in their difference UP works even in works where there is no relation with UDC. Sometimes they have to work all day long for UPs purposes. But they are not getting their revenue. So there should be specification in entrepreneurs work and the amount of revenue.

6.9.4 Dysfunctional Training Center

Though there have been different initiatives to activate training center in every UDC, it is inactive in most of UDC because of room, input and infrastructure crisis. In some cases entrepreneurs are not sufficient enough to run the training program.

6.9.5 Scope and Profitability from Private/Commercial Services

At present UDCs are providing some offline commercial services like compose, photocopying, scanning and printing etc. which account a small portion of UDC's income.

The online commercial services are more important regarding this. The online services are education services (admission/registration/result check, etc.), e-mail, browsing, Skype, audio/ video downloading and data entry. So there is an ample scope for commercial services. But due to limited demand in the rural area, the scope for profitability is limited.

6.10 Gap between Profitability Factors and Reality

The rural entrepreneurs are not getting the minimum profit as they needed. Here is the survey to highlight the gap among profitability requirement factors with their publicity and reality. This has been determined through the following scale and table.

Table 41: scale to measure the service Profitability

Scale	Available	Moderately Available	Partly Available	Less Available	Not available
Score	100%	75%	50%	25%	00%

Table 42: Required services profitability Factors and their reality

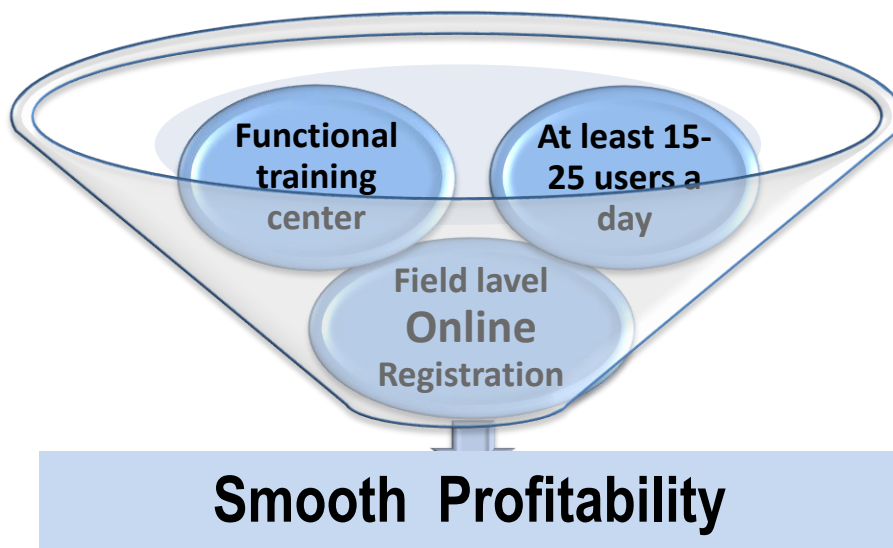
No	Required services profitability Factors for entrepreneurs	Circulated	Reality
46	Ensuring input Cost from LGSP yearly budget	Available	Partially Available
47	Functioning training center	Available	Least Available
48	Ensuring marginal revenue for UP services	Available	Least Available
49	At least 20-25 user a day	Available	Not available
50	Scope for private/commercial services	Available	Partially Available
		100%	30%

From the description given in the above table, it is clear that the minimum five requirement is not being fulfilled. On an average 20% is available and the rest 80% is absent. In this position, how can they continue their job?

6.11 The Smooth Process of Entrepreneurs' Profitability at UDC

From the above analysis we can make following graphs which will show the smooth process of entrepreneurs' profitability. According to the graph entrepreneurs' profitability can be ensured through online Registration and creating database, functioning training center and at least 15-20 user in a day.

Chart 33: The Process of profitability: Entrepreneurs' perspective



6.12 The Viability of UDC Regarding Profitability

From the above analysis it is clear that insuring entrepreneurs' profitability is an indispensable indicator for the viability of UDC. At present most of them are doing their job without marginal profitability. Around 80% of their requirement is absent. So these requirements are to be fulfilled to ensure a minimum profit. In the present situation, the viability is facing a great challenge.

6.13 Conclusion

From the above analyses and discussion we can say that, under the PPP though profitability is not a significant factor for the user accessibility, it's a burning question for the entrepreneurs as it is one of the main causes of their drop out from UDC.

Chapter Seven

Service Guarantee

7.1 Introduction

Service guarantee is related to the kind of activities or deals by which the continuity and protection of service has been ensured. Users' service guarantee means managing the activities by which they can get advantage of service protection and maintenance. Entrepreneurs' service guarantee is the assurance of service continuity and protection. In order to make UDC participatory and sustainable, entrepreneurs' service guarantee is a must; while users' service guarantee is not momentous. Yet the users have some requirements concerning their service guarantee.

7.2 Service Guarantee Factors: Users' Perspective

As the service delivery initiative of UDC is in early stage and as the users are not conscious enough to ensure their service guarantee, their requirement concerning this is not significant. Yet they have suggested their views on behalf of service simplicity, service transparency, service efficiency and service maintenance.

7.2.1 Service Simplicity

Before introducing UDC, people had to travel long distances, spend hours and incur costs which is often unaffordable for them. Beside this, the service delivery system is associated

with the involvement of intermediaries. This happens due to inadequate access of rural people to the government offices and their lack of information. These involvements of intermediaries cause higher cost and suffering to them. As a result in most cases, they have been out of public service facilities. So it has to be sure that UDCs' service delivery is easy, direct, shortcut and affordable. If we can make the present system hassle free as compared to the before, it will eradicate the sufferings and bring users' satisfaction.

7.2.2 Service Efficiency

Service efficiency means, how well institutional and technical resources are used to obtain the desired results. It is the quality of overall performance while delivering service. Users want to deliver their demands competently. They want their work professional, sophisticated and certified. When the service is according to their expected level, the customers become satisfied and hopeful.

7.2.3 Service Quality

Service quality is the beginning to the end of the transaction including information, service interactions, delivery and satisfaction with the ordered service. It is one of the important attributes for guarantee of service regarding the e-service delivery among the community level people. As the community people are the receivers of e-services, their satisfaction is very much necessary to assess the service guarantee of UDC.

7.2.4 Service Maintenance/ Sustenance (Preservation & Modification)

In ICT, every important service, both online and offline can be preserved and modified according to users demand. When any public or private service is delivered, it can be saved and can be supplied also to the same user if needed with modification. So it can be hub of rural people as storage of their required services. They can see it or avail it any time if it is needed.

7.2.5 Service Transparency

Before the establishment of UDC, there were different complains of corruption at different stage of public service delivery. Now, it is possible to ensure transparency, accountability at every stage of both public and private sectors delivery from UDC. Users can understand necessary phases of service delivery like delivery cost, delivery time, delivery authority, visit number and where to complain. If any problem arises, he can be informed timely.

7.3 Service Guarantee Analysis

All the requirements discussed before are examined from the people's perspective. Their valuation has been shown in the following tables through the following measuring scale and measurement tables

Table 43: Measuring Scale and Score for Guarantee Factors

Scale	Very Essential	Essential	Somehow Essential	Less essential	Not Essential
Score	5	4	3	2	1

Measuring Table for Estimation of Guarantee Factors

Groups ↓ Factors	Gender		Residence			Qualification				Income			Occupation			Age			
	Male	Female	Within 1 KM	Within 2 KM	Within 3 KM	Up to PSC	JSC/JDC	SSC/ Dakhil	HSC or Above	No Vehicle	Non-mechanized	Mechanized	Unemployed	Employed (Govt./Private)	Self-Business	Student	Up to 25 years	Up to 50 years	Above 50years
Service simplicity	3.56	2.96	3.62	3.11	3.05	3.88	3.50	3.26	2.40	3.20	3.62	2.96	3.12	2.64	3.86	3.42	2.42	3.66	3.70
Service quality	3.48	3.00	3.44	3.30	2.98	3.36	3.30	3.05	3.13	3.30	3.26	3.16	3.20	3.74	3.78	3.24	3.24	3.68	2.80
Service efficiency	3.36	2.82	3.21	3.12	2.94	3.39	3.15	3.08	2.98	2.07	3.58	3.62	2.87	3.12	3.46	2.88	2.80	3.72	2.75
Service maintenance	3.36	2.88	3.26	3.22	2.88	3.20	3.15	3.08	3.25	3.04	3.21	3.11	3.30	3.32	3.06	3.00	2.90	3.43	3.03
Service transparence	3.74	2.16	3.42	3.00	2.43	2.90	2.96	2.96	2.95	2.90	3.06	2.59	2.90	2.96	3.02	2.90	2.90	2.96	2.69

This analysis shows a detailed scenario of different opinions of different groups. To have a brief idea we have summarized these analyses with average mean and ranking of each indicator through the following table.

Table 44: Required Service Factors with Mean and Ranks

Required Factors	Factors	Rank	Mean	
Service Guarantee: People's perspective	51	Service simplicity	1	3.26
	52	Service quality,	2	3.24
	53	Service efficiency	4	3.09
	54	Service sustenance/maintenance and	3	3.12
	55	Service Transparency	5	2.95

According to the above analysis, users of UDC like service simplicity, service quality, service efficiency, service maintenance and service transparency to ensure their service guarantee. But none of them is considered as crucial to them.

7.4 Users' Service Guarantee in Reality

The researcher himself observes the circumstances of service guarantee. As most of the users are unconscious, they are not bothering in service quality efficiency and maintenance. They are satisfied to get their work done. Yet they complain sometimes for working time, process, and progression. They get their delivery inefficient, inferior and problematic. They also face even in malpractice.

7.5 Gap between Required Factors and Reality

If the gap between the users requirement and existing situation is analyzed, we can see that every aspect of the requirements - service simplicity, service quality, service efficiency, service sustenance/maintenance and service transparency are present in government publicity but limited in reality. Service simplicity has been trying to be ensured but the other factors service quality, service efficiency, service sustenance/maintenance and service transparency are yet to be ensured. This will be clear from the following table.

Table 45: Scale for Required ServicesGuarantee Factors

Scale	Available	Moderately Available	Partly Available	Least Available	Not available
Score	100%	75%	50%	25%	00%

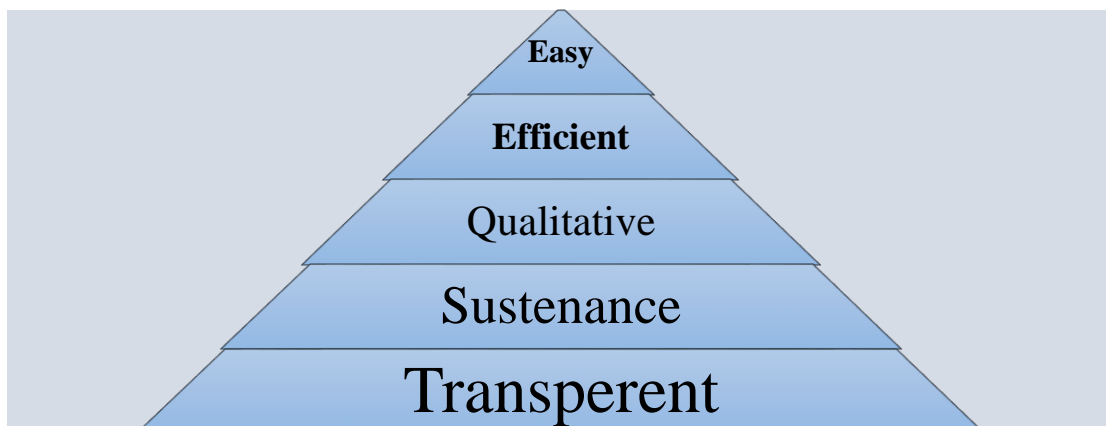
Table 46: Scale for Required services from Different Sources

No	Required factors for service guarantee for users	Circulated	Real
51	Service simplicity	Available	Partly Available
52	Service quality,	Available	Partly Available
53	Service efficiency	Available	Partly Available
54	Service sustenance/maintenance and	Available	Partly Available
55	Service Transparency	Available	Partly Available
		100%	50%

It is clear from the above presentation that every requirement are less available (50%). That means the user are not enough satisfied in the services of UDCs delivered by the entrepreneurs.

7.6 The Smooth Process of Service Guarantee

The process of service guarantee is graphical presentation concerning factors, their progression to have clear idea. Here is the process of service guarantee from the users' perspective.

Chart 34: The process of Service Guarantee: Users' Perspective

7.7 Entrepreneurs Service Guarantee Factors

The most important viability factors of UDC are related to service guarantee which ensures the entrepreneurs to stick to the UDC as their career and prospects. If their service guarantee becomes vulnerable and they are in fear of job security, then how can they feel safe in delivering their service? Here are factors chosen by the entrepreneurs towards their service guarantee.

7.7.1 Demand Budget and Transparent Disbursement

Support from both national and local authorities regarding yearly budget is crucial for mainstreaming the entrepreneurs as their career with UDCs. Every year some inputs are become out of work. If there is a system of demand budgeting concerning the fixed cost maintenance, there will be no UDCs out of work. Beside this the transparent disbursement has to be confirmed. In this regard there must be coordination between chairman and entrepreneurs. As most entrepreneurs are poor and unemployed and lack of adequate investment in the UDC, government is supporting them through LGSP yearly budget. But the allocation of the budget is too limited to cover entrepreneurs demand. Moreover in most case this allocation has been misused by the UP chairman and members. So the entrepreneurs demand sufficient allocation with transparent disbursement.

7.7.2 Quality Instrument (Technological sustainability)

The UDC equipment is initially provided by the government assisted by donors and the UP from its Local Government Support Project (LGSP) funded by the central government. Subsequently, entrepreneurs also have added some equipment along with the expense for day today operating costs. Beside this every year there is portion of LGSP budget to buy UDCs equipment. But in maximum time UP Chairman buy the desired equipment which is not qualitative and sustainable. So the entrepreneurs demand to be associated with the purchase committee in order to buy the qualitative instrument.

7.7.3 Personal Investment and Service Innovation

The UDC is established on public-private partnership in which initially the government has made investments on infrastructure development, equipment purchase, training of the entrepreneurs, mass mobilization etc. But the expectation is that the input and infrastructure would be owned by UP and operated by the private entrepreneurs. According to the contract, entrepreneurs are required to maintain day to day operating cost as well as make investment for expansion and innovation of the business. The UDC is established on public-private partnership in which the government has made investments on infrastructure development, equipment purchase, training of the entrepreneurs, mass mobilization etc. But the expectation is that the project would be owned and operated the local community and the private entrepreneurs in the long run. Contrary to this expectation, the amount of investment from the private sector in the UDC is very low. 13

entrepreneurs have invested more than 20,000 Taka, 21 entrepreneurs invested 10000-20000 22 entrepreneurs invested 5000-10000 and other 80 entrepreneurs have no or limited investment. Moreover government is supporting them through LGSP yearly budget. So the expectation is that they would be able run the business with new investment and innovation.

7.7.4 Job Agreement under PPP and its Renewability

Under public-private partnership entrepreneurs are appointed through a contract with UP authority, which entitled them a short term (3 years) guarantee for their job. This tenure is renewable subject to the mutual satisfaction of both parties. Only 57% entrepreneurs could enforce the contract with the UP, which is usually reluctant to do so. In most cases, Chairmen are asked to report to the authority making the decisions on entrepreneurs' appointment. Here, it is found that about 61% of entrepreneurs of UDCs of Rangpur Districts are appointed by UP chairmen. This is followed by 27% by UNO and the rest UDCs' appointment decisions made by UP Committee. Another important component of entrepreneurship under public-private partnership is the execution of the contract with the UP which is a legal document that gives the entrepreneur a short term guarantee of his/her job for 3 years. This tenure is renewable subject to the mutual satisfaction of both parties (LGD, 2010). Only 57% entrepreneurs could enforce the contract with the UP, which is usually reluctant to do so. So these entrepreneurs have to concern on their service guarantee.

7.7.5 Better Monitoring System: (ADC ICT/ADC gen/ DC/A2i)

According to administrative regulations, the continuity and success of UDC has to be monitored and ensured by the district administration. If a strong monitoring system can be ensured by the district authority, entrepreneurs' challenges regarding infrastructure, budget, job renewability will be aloof. Beside this, the central authority (A2i) has to oversee the activities and challenges of UDC. A Several monitoring cell may be formed against every division. A control room can be open to monitor this overall system.

7.8 Analysis of Service Guarantee Factors

The identified factors from the above discussion have been prioritized by the different group of entrepreneurs with the following scale.

Table 47: Measuring Scale for Guarantee Factors

Scale	Very Essential	Essential	Somehow Essential	Less Essential	Not Essential
Score	5	4	3	2	1

If we average the scores of every entrepreneurs' group against every indicator and make their rank we can identify their level of significance as shown in the following table.

Table 48: Service Guarantee Requirements (Entrepreneurs Perspective)

Groups → Service sources ↓	Gender		Marital Status		Education			ICT education / Training				Experience		
	Male	Female	Married	Unmarried	HSC or below	Graduate (Hon/degree)	Post Graduate (Masters)	No Training	less than 1year	1year – 2 year	2 year Or more	less than 1year	1year – 2 year	2 year Or more
Transparent disbursement of budget	5.00	4.80	5.00	4.80	4.80	4.90	5.00	4.70	4.90	5.00	5.00	4.70	5.00	5.00
Technological Sustainability	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.7
Personal investment and Service Innovation	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80	4.80
Job Agreement and its renewability	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Better Monitoring System: (ADC ICT/ADC gen/ DC/A2i)	4.90	2.90	4.95	2.85	2.90	3.90	4.90	2.95	2.85	4.85	4.95	2.90	3.90	4.90

If we summarize the above table with the average score against every factors, we can find the following table.

Table 49: Mean and Rank of Entrepreneurs Service Guarantee Factors

Required Factors	Factors	Rank	Mean
Service Guarantee: Entrepreneurs' perspective	56 Demand budgeting and transparent disbursement	2	4.90
	57 Technological Sustainability	3	4.80
	58 Personal investment and Service Innovation	5	3.65
	59 Terms of job Agreement and its renewability / permanency	1	5.00
	60 Better Monitoring System: (ADC ICT/ADC gen/ DC/A2i)	4	4.70

According to the above analysis, among the entrepreneurs' demands, job renewability or permanency is the urgent demand. It is the high scored and demand from all. Because in some days there will be new Chairman in all UPs. They may change the current entrepreneurs with new ones from their choices. They also have strong claim for demand budgeting with transparent disbursement. They see that most of the time their demand is not included in LGSP budget. If included it is not spend transparently. They get low quality instrument with low cost because of authority's corruption. This becomes technologically unsustainable and creates various problems regarding service delivery. So they demand to participate in budget expenditure committee regarding their part. This also needs better monitoring System through ADC (ICT), ADC (gen) DC and A2i).

7.9 Users' Service Guarantee at UDC: Publicity and Reality

In Bangladesh as this initiative is new and ongoing, the guarantee concept is not much relative here. As the users' service and presence is very small, they as well as the government are not concerning about their service guarantee.

7.10 Entrepreneurs Service Guarantee: Publicity and Reality

7.10.1 Demand Budgeting and Transparent Disbursement

It has been seen that in most UDCs the LGSPs budget regarding ICT inputs are nor executed properly. We have seen around 50% UDCs have co-ordination gap between Chairman and entrepreneurs. In some cases they have bitter relationship. This situation

impedes heavily for UISCs service delivery. An Example through letter 4 of bitter relationship has been attached at the appendices.

7.10.2 Monitoring from Local Government Authority

Around 25% UDCs have co-ordination with district authorities. In some cases there is no relationship. Here is an Example of authority's co-operation.

Table 50: Meeting with Local Government Authority

Union, Upazila	UP Secretary	UP Chairman	UNO	DDLG	ADC ICT	ADC/DC
Kursha, Kaunia	1	2	3	2	3	3
Alombiditor, Gangachara	3	2	3	2	3	3
Kursha, taragonj	3	3	4	3	3	3
Itakumari, Pirgacha	3	3	3	3	3	3
Kalupara, Badarganj	2	2	2	2	3	3
Haridebpur, sadar	4	4	4	4	4	3
Durgapur Mithapukur	3	4	3	3	3	3
Baradarga, Pirganj	2	2	2	2	2	3
Average						3

Table 46 reveals the extent of support that UDCs receive from different authority of UDCs.

Some UDCs receive good support from Deputy Director, Local Government (DDLG).

7.11 Gap between Requirement Factors, Their Publicity and Reality

Though demand budgeting and its transparent disbursement ensures technological sustainability it is absent almost in all UDCs. The second indicator personal investment and service innovation is also absent from most of the UDCs. The terms of job agreement and its renewability (permanency) is the national demand of entrepreneurs which is yet to be achieved. Better monitoring system through ADC ICT/ADC_{gen}/DC/A2i can make total

service delivery system safe and sound which is also hampered with the lack of importance of public servants. This will be through the following scale and table.

Table 51: Scale for Service Guarantee Requirements (Entrepreneurs perspective)

Scale	Available	Moderately Available	Partly Available	Least Available	Not available
Score	100%	75%	50%	25%	00%

Table 52: Service Guarantee Requirements (Entrepreneurs perspective)

No	Required services guarantee factors for entrepreneurs	Circulated	Reality
56	Demand budgeting and transparent disbursement	Available	Least Available
57	Technological Sustainability	Available	Least Available
58	Personal investment and Service Innovation	Available	Least Available
59	Terms of job Agreement and its renewability / permanency	Available	Not Available
60	Better Monitoring System: (ADC ICT/ADC gen/ DC/A2i)	Available	Least Available
		100%	20%

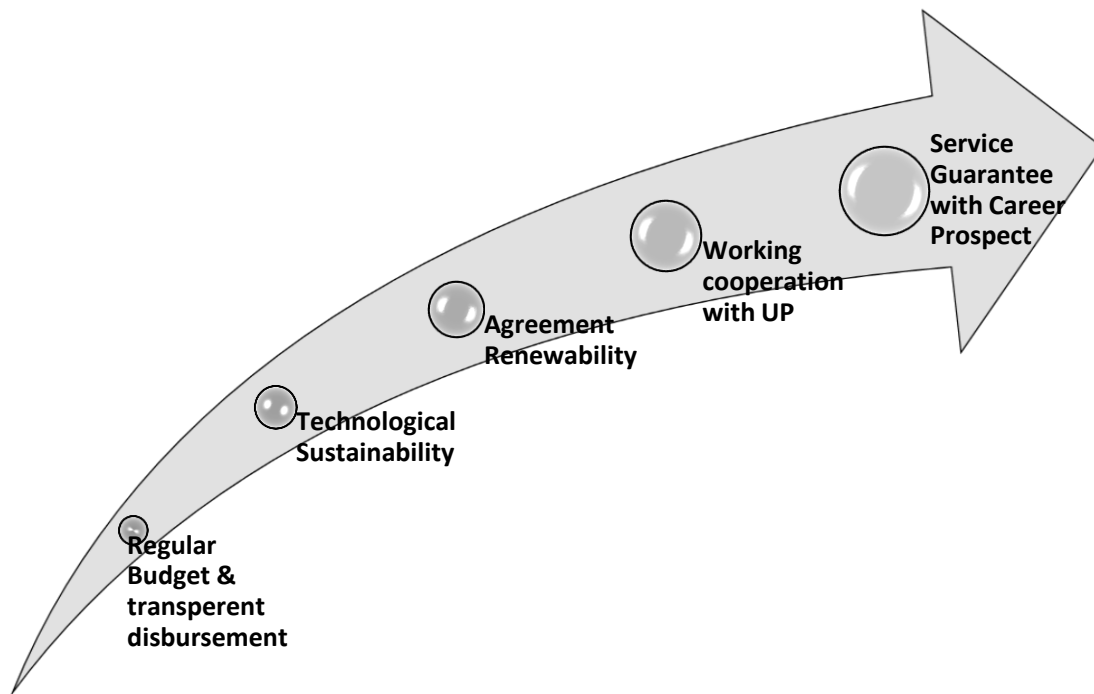
From the above discussion we can say that around 80% significant requirement of entrepreneurs is absent and rest 20% is present in UDC. In this condition, it is not possible to have smooth access at UDC for both users and entrepreneurs.

7.12 The Process of Service Guarantee

The process of service guarantee is graphical representation concerning factors to have clear idea, how do these factors communicate each other to ensure UDCs sustainability. Regular budget & its transparent disbursement ensure proper and sustainable technology. Cooperation between entrepreneurs and UP authority ensures agreement renewability,

popular participation and entrepreneurs' profitability. These help the entrepreneurs to choose their jobs as their career with future business plan.

Chart 35: The Process of Service Guarantee: Entrepreneurs Perspective



Source: The Researcher

7.12 The Viability Regarding Service Guarantee

From the above discussion we can say that though service guarantee does not affect the users much, as they are fulfilling 50% of their required satisfaction. But the requirements of entrepreneurs are crucial and must be fulfilled as they are fulfilling only 20%. So, entrepreneurs' service guarantee is an indispensable indicator for the viability of UDC. Around 80% of their requirement is absent. So these requirements are to be fulfilled to ensure a minimum profit. In the present situation, the viability is facing a great challenge.

7.13 Conclusion

From the above discussion it can be said that though service guarantee does not affect the users much, it affects to make them interested for the future iparticipation. But the fulfillment of entrepreneurs' requirement is must as it is related to their service stability, livelihood and future career. The service guarantee can adhere them to UDC with sustainability despite their present profitability crisis. It can also lead them to investment, expansion and growth of the operation. But if their requirement is absent or almost absent (75%); the expectation for a viable UDC, would be challenged mostly.

Chapter Eight

Summery and Conclusion

8.1 Introduction

The main purpose of this study is “to identify the various critical viability factors of UDC and analysis their existence to measure the current viability towards E-governance in Rural Bangladesh”. For this study the researcher at the first stage has identified 67 users’ viability factors and 45 entrepreneurs’ viability factors (total 112 factors) primarily through document analysis, field observation and KII with the tools of open ended questionnaire regarding the service availability, service accessibility, service profitability and service guarantee of UDC. At the second stage among these 112 factors have been confronted to the field level users and entrepreneurs to key out the 10 users’ and 15 crucial factors through structured questionnaire for the viability of UDC. At the third stage the presence of these crucial factors have been examined in the current service delivery system and found that the users’ viability is 25% and entrepreneurs’ viability is 28.5%. Finally, some policy suggestions have been made for the viability of UDC.

8.2 Summery on Service Availability

Regarding service availability the crucial factors demanded by the rural users are mainly related to livelihood information and service like agriculture, cultivation process, development programs, healthcare, education and training, Employment opportunities,

legislative, administrative and judicial information. At present, the UDC provides a range of public information and services from 'central level', 'District level' and 'union level' which are too limited (20%) against the rural demand. On the other hand, entrepreneurs' the crucial factors for service availability is related to online presence of updated information and services from different level of Governments. But from these sources only 25% required services are available. So regarding service availability the viability of UDCs are less than 22.5%.

8.3 Summery on Service Accessibility

Regarding service accessibility the crucial factors demanded by the rural users are mainly related to proper publicity as rural citizens have limited or no idea about UDC and its services. They also have crucial demand for entrepreneurs' efficiency, regularity, responsiveness which can ensure users' trust towards UDCs. But in reality users are getting only 40% facilities of their crucial demand. On the other hand, the crucial factors of entrepreneurs for service accessibility is related to ICT input support; speedy internet support; active support from UP Chairman and secretary; and monitoring support from UNO. But from these factors only 40% required services are available. So regarding service availability the viability of UDCs is 40%.

8.4 Summery on Service Profitability

Regarding service profitability the crucial factors demanded by the rural users are mainly related to setting UDC/sub-center in a common place. But only 20% initiatives are

available about setting UDC/sub-center in a common place. On the other hand, crucial factors of entrepreneurs for service profitability is vibrant which is related to their existence. These are users' regular and minimum presence (20-25), functioning training center, ensuring marginal revenue from the services given to UP. But only 30% crucial are available concerning their requirement. So regarding service availability the viability of UDCs is 25%.

8.5 Summery on Service Guarantee

Regarding service guarantee the crucial factors demanded by the rural users are not significant to ensure their service guarantee as the users are not enough conscious regarding this. Yet they have the demand for service simplicity, service efficiency, service quality among which they are getting only 50%. On the other hand, entrepreneurs' crucial factors for service guarantee is the fundamental enough to determine their lasting in the UDCs. These factors are related to service assurance in job agreement and its renewability / permanency; demand budgeting and transparent disbursement; technological sustainability and monitoring; and marginal revenue for UP services. But from these factors 20% required factors are available. So regarding service availability the average viability of UDCs is 35%.

8.6 Summery on Users' Crucial Factors

This viability has been measure by the availability of most critical factors selected from the 4 core chapters.

Table: 53. Crucial Factors from Users' Perspective

Areas	No	Crucial Factors (Mean Score ≥ 4)	Mean	Rank	Reality	%
Service availability	1	Agriculture, livestock & fisheries	4.9	3	Least available	25%
	10	Social and rural development programs	4.9	4	Not available	00%
	11	Healthcare, family planning & sanitation	4.8	5	Not available	00%
	6	Study Information and services	4.8	6	Less Available	50%
	9	(Self) Employment opportunities	4.7	7	Least Available	25%
Service accessibility	21	Direct advertisement by meeting, miking	4.9	2	Least available	25%
	23	Electronic Advertisement (TV, dish TV)	5	1	Not available	00%
	28	Entrepreneurs regularity	4.6	9	Less Available	50%
	29	Entrepreneurs efficiency	4,7	8	Less Available	50%
Service profitability		Establishing UDC at a common place	4.5	10	Not available	00%
Service guarantee	---	---	---	---		
			Average viability			25%

Source: The Field Survey

According to the above table the average availability of the crucial required factors is only 25%. This means the rural peoples are mostly deprived of their basic required of information and services from UDC. That's why their participation rate is lowest in UDC.

8.7 Summery on Users' Participation Progress ¹⁰⁵

The researcher has observed the participation in two steps- 1st one in June 2014 and 2nd in June 2015 to identify the progress of participation at the present structure and delivery

105. Source: Union Information and Service Management System, Prime Minister Office Gob
 Accessed at 16/6/2014 and 17/6/2015 <http://uams.e-service.gov.bd/modules/reports/report.php#>

process which also refers the viability of UDCs. The researcher has observed average presence in every day has been increased from 7 to 9 which is very meagre against the huge untouched 80% rural people of Bangladesh.

Table 54: Participation Progress of Users in UDC

Name of Union	Per day Presence (Circulated) in (1-15) June 2014	Per day Presence (Circulated) in (1-15) June 2015	Increase Rate (%)	Per day presence (Real) in (1-15) June 2014	Per day Presence (Real) in (1-15) June 2015	Increase Rate (%) In real
Kallani, Pirgacha	20	21	5%	10	13	30%
Parul, Pirgacha	12	20	40%	5	7	40%
Alambiditar, Ganggachara	12	14	17%	6	7	17%
Betgari, Gangachara	25	29	16%	12	14	17%
Chetracal, Pirgang	10	11	10%	4	5	25%
Boradarga, pirganja	15	14	-7%	7	10	45%
Durgapur, Mithapukur	12	17	42%	8	9	12%
Milanpur, Mithapukur	13	14	8%	7	8	14%
Ikarchali, Taragonj	19	20	5%	4	6	50%
Alampur, Taragonj	36	29	-19%	5	6	20%
Kursha, Kaunia	11	11	00%	4	5	25%
Balapara, Kaunia	12	11	8%	6	7	17%
Lohanipara, Badargonj	8	10	25%	4	5	25%
Kalupara Badargonj	16	21	31%	5	6	20%
Soddapushkaroni, Sadar	15	44	193%	17	24	41%
Kholea, Sadar	10	11	10%	12	14	17%
Average Rate	15	19	24%	7	9	26%

Source: Field Survey

8.8 Summery on Entrepreneurs' Crucial Factors

The most crucial factors (scored more than 4.00) and their availability from entrepreneurs' perspective have been presented through the following table.

Table 55: Crucial Factors (Mean Score ≥ 4) with Real Status from Entrepreneurs' perspective

Factors Area	No	Crucial Factors (Mean Score ≥ 4)	Mean	Rank	Reality	%
Service Availability	16	Service Availability from Center	4.5	12	Least Available	25%
	17	Service from District administration	4.5	13	Least Available	25%
	20	Service from Upazila Administration	4.5	14	Least Available	25%
Service accessibility	34	Speedy Internet support	4.7	7	Least available	25%
	33	Primary Logistic (input) support	4.6	10	Moderately Available	75%
	35	Uninterrupted Power supply	4.7	9	Partially Available	50%
	39	Monitoring from Upazila (UNO)	4.6	11	Least Available	25%
Service Profitability	46	Ensuring input Cost from LGSP budget	4.8	5	Partially Available	50%
	47	Functioning training center	4.7	6	Least Available	25%
	48	Ensuring marginal revenue from UP	4.6	9	Least Available	25%
	49	At least 20-25 user a day	4.8	4	Not available	00%
Service Guarantee	56	Demand budgeting, transparent disbursement	4.9	2	Least available	25%
	57	Technological Sustainability	4.7	8	Not available	00%
	58	Co-operation from Chairman / Secretary	4.9	3	Not available	00%
	59	Renewability of Job Agreement	5	1	Least available	25%
					Average Viability	29%

Source: Field Survey

In the above table the real situation of entrepreneurs' crucial factors has been calculated as 29% which is a meagre. So from the perspective of entrepreneurs' crucial factors, the UDC is less than least viable.

8.9 Summery on Entrepreneurs' Sustainability Progress

The researcher has also observed the entrepreneurs growth of income in in the same period to identify the progress which can prove their sustainability at UDC. The researcher has observed that entrepreneurs' average income has been increased only from 276 to 353

(30%). They cannot bear their livelihood with this meagre income. This brings their frustration and drop outs.

Table 56: Income Progress for Entrepreneurs in UDC

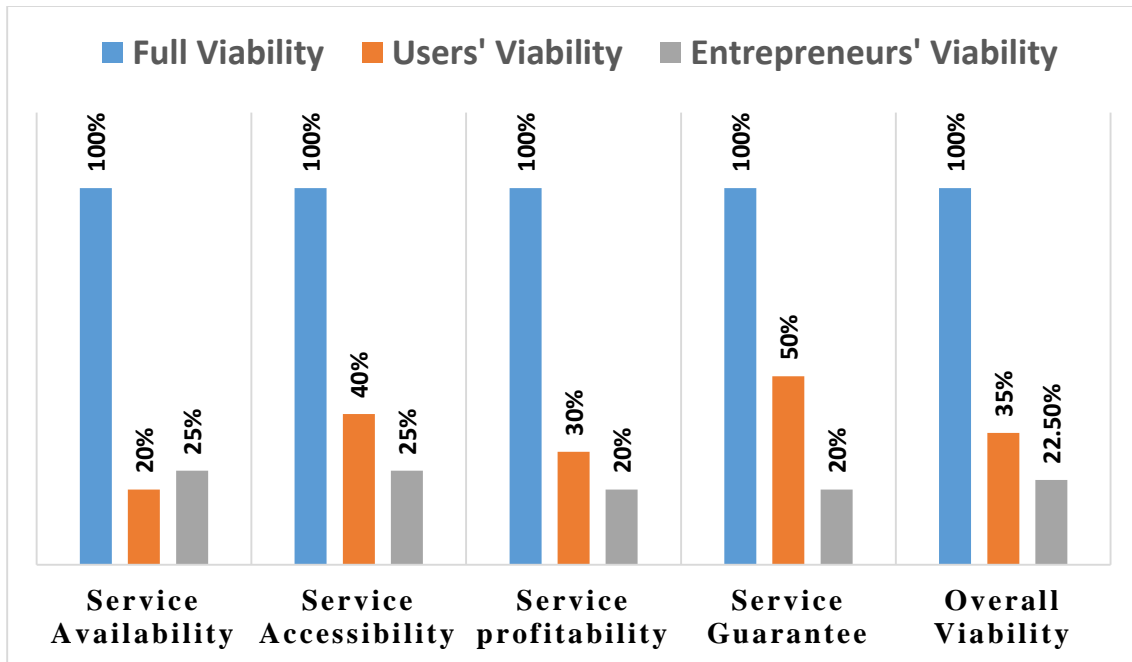
Name of Union	Per day Income (Circulated) in June 2014	Per day Income (Circulated) in June 2015	Increase Rate (%)	Per day Income (Real) in June 2015	Per day Income (Real) in June 2015	Increase Rate (%) In real
Kallani, Pirgacha	503	542	8%	503	542	8%
Parul, Pirgacha	507	518	2%	200	240	20%
Alambiditar, Ganggachara	690	706	2%	200	250	25%
Betgari, Gangachara	748	771	3%	748	771	3%
Chetracal, Pirgang	545	735	17%	100	120	20%
Boradarga, pirganja	352	481	37%	150	200	67%
Durgapur, Mithapukur	726	675	-13%	300	350	17%
Milanpur, Mithapukur	862	481	-44%	150	200	33%
Ikarchali, Taragonj	506	600	19%	200	220	10%
Alampur, Taragonj	856	862	1%	200	240	20%
Kursha, Kaunia	805	608	-24%	100	120	20%
Balapara, Kaunia	744	230	-69%	150	200	67%
Lohanipara, Badargonj	425	1534	261%	100	140	40%
Kalupara Badargonj	429	610	42%	100	125	25%
Soddapushkaroni, Sadar	817	1431	75%	817	1431	75%
Kholea, Sadar	655	525	-20%	400	500	25%
	Average Increase Rate		19%	Average Increase Rate		30%

Source: Union Information and Service Management System, Prime Minister Office, Accessed at 16/6/2014 and 17/6/2015, <http://uams.e-service.gov.bd/modules/reports/report.php#>

8.10 Summery on Overall Viability of UDC

8.10.1 Overall Viability Regarding in Primary Factors

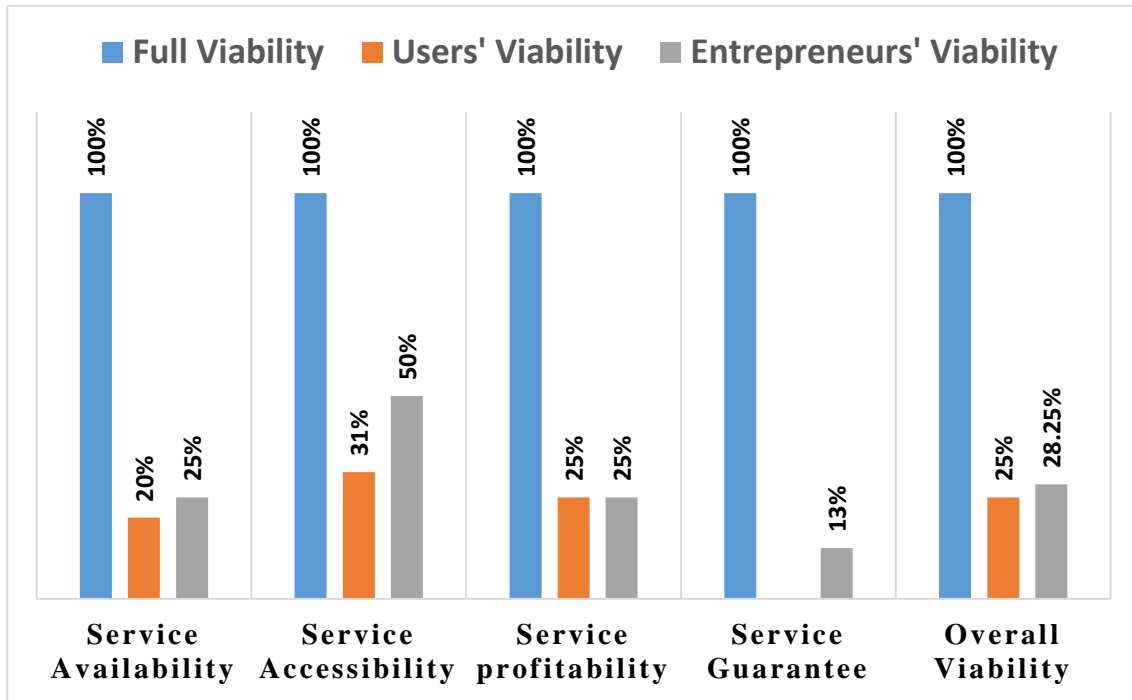
Based on the availability of primary viability factors discussed in the four core chapters, the overall viability of UDC has been calculated through the following chart:

Chart 36: Overall Viability Regarding Primary Factors

According to the above chart it has been clear that the average users' viability is 35% and average entrepreneurs' viability is 22.5%, which is very much unsatisfactory to fulfil the objectives of UDC based E-governance in rural Bangladesh. In this condition the UDC may exist with some its obligatory function but cannot ensure smooth and sustainable participation of rural people as well as entrepreneurs to fulfill the dream of Digital Bangladesh.

8.10.2 Summery on Overall Viability Regarding Crucial Factors

Based on the availability of crucial viability factors discussed in the four core chapters, the overall viability of UDC has been calculated through the following chart:

Chart 37: Overall Viability Regarding Crucial Factors

According to the above chart it has been clear that the average users' crucial is viability is 25% and average entrepreneurs' crucial viability is 22.5%, which is very meagre to make the UDC viable. In this situation it can be said the UDC is running under vulnerable situation without fulfilling its objective.

8.11 Conclusion

After analyzing the viability factors the researcher finds that in every sector of availability of crucial viability factors for users nearly at the least level (25-30%). This results limited presence of users and limited wages to the entrepreneurs. This limited wages also becomes at risk with lack of job security. As a result there is creating drop outs of entrepreneurs,

which challenges their sustainability at UDCs. This means the UDC is functioning in a vulnerable situation. It cannot meet the demands of both users and entrepreneurs which fails their smooth and sustainable participation. In this situation the vision of E-governance in rural Bangladesh may not be accomplished. So, it is high time, the Government and the related agency (A2i) should take necessary steps to ensure the viability factors (at least the crucial factors) towards UDC based E-governance in Rural Bangladesh.

8.11.1 Policy Recommendation towards the Viability of UDC

1) For Service Availability

To ensure the service availability delivery of updated livelihood information and services related to agriculture, livestock & fisheries, social and rural development programs, healthcare, family planning and sanitation should be available as these are considered as vital.

2) For Service Accessibility

To ensure service accessibility speedy internet and uninterrupted power supply should be ensured. Side by side advertising is essential which can be performed through different electronic media, print media and direct communication - *uthan boithok* (yard meeting), miking (public announcement), and gathering (meeting) etc.

3) For Service Profitability

To ensure service profitability for entrepreneurs users' regular and minimum presence (20-25); functioning training center; marginal revenue for entrepreneurs from the services given to UP; have to be ensured. Side by side sub-center of UDC can be in a common place for users' profitable participation.

4) For Service Guarantee

To ensure service guarantee assurance in job agreement and its renewability / permanency; demand budgeting and transparent disbursement and technological sustainability are crucial. Side by side positive co-operation from chairman and active monitoring from UNO should be ensured.

8.11.2 Scope for Further Research

Every research is carried out with some specific objectives. It restricts the scope of the study. Apart from it, other constraints are time and cost involved in the work. And this study is also no exception in this respect. However, the issues that can be taken up for further research in the area of rural UDC based E-governance are proposed as under:

- 1) As the scope of the present study was restricted to examine the viability of UDC in rural area, the researchers can do further research in the field of urban area - Pourashava Digital Center (PDC) and City corporation digital Center (CDC) in the state.

- 2) A comparative study on all the tele-centers either publicly or privately in rural area can also be undertaken.
- 3) The scope of future research in the area can also be broadened by taking new factors into consideration to assess the viability of UDC in Bangladesh.
- 4) A major limitation of this study is the selection of Rangpur District only. Therefore, the results may not be a true reflection for the entire population of Bangladesh. Therefore, a potential future research, could expand the study with a larger sample size and with longitudinal data to uncover a more generalized view of UISC's effectiveness to the development of rural communities.

This research was conducted within the specific domain of ICT (i.e., UDC) in a particular context (Bangladesh). However, it is believed that the study has the potential to make significant contributions to our knowledge in the areas of ICT based e-government services in the field among developing countries.

Appendix 1

Questionnaire for Citizens

(Bangla Version of the following Questionnaire were Used for Survey)

A Survey on the Viability of UDC

Institute of Bangladesh Studies, Rajshahi University, Rajshahi

[N.B: The answers of the respondent will be confidential and used for academic research only. Your sincere cooperation will extend a lot of value to the research]

Preliminary Quality for the survey

What do you know about Union Digital Centre (UDC)? (Tick Appropriate Box?)

a. I have not heard about it.		N.B. If the result is a/b; you are requested not to fill the questionnaire more.
b. I have heard but I have not been there.		
c. I have known its function but I have not got its services.		
d. I have known and I have used its services		

A. Answer sheet (Fill the Appropriate Box)

Socio-economic and communication characteristics of the respondents

1. Name	2. Female/female
3. Age	4. Education
5. Age	6. yearly Income
7. Village	8. Union
9. Upazila	10. District
11. How far the UDC from your house?	
12. How many times you have got service from there?	
13. What are these services?	
14. What the other services you have got from there?	
15. What are the new services you want to get from there?	
16. What are the benefits to get service from there?	
17. Do you get any financial benefit from there?	
18. What can be done more to more benefits?	
19. What can the entrepreneurs for mass participation?	
20. What can the Government do for sustainable UDC?	

Appendix 2
Questionnaire for Entrepreneurs
(Bangla Version of the following Questionnaire were Used for Survey)

A Survey on the Viability of UDC

Institute of Bangladesh Studies, Rajshahi University, Rajshahi

(N.B. The answers of the respondent will be confidential and used for academic research only. Your sincere cooperation will extend a lot of value to the research.)

A. Answer sheet (Tick Appropriate Box)

1. Name	2. Female/female
3. Age	4. Education
5. ICT education/training	6. Duration
7. Name of your UDC	8. Union
9. Upazila	10. District
11. Monthly income?	
12. Monthly income from your UDC?	
13. What are public/Govt. services provided from your UDC?	
14. What are the more services you want to add here?	
15. What are benefit you are getting from the existing system?	
16. What more thing can be done to make smooth the existing system?	
17. Are you benefitting financially from your UDC?	
18. What can be done more for sustainable income?	
19. What can be done for smooth popular participation?	
20. What can the Government do for sustainable UDC?	

Appendix 3
Primarily Selected Factors for the Viability of UDC (Users' Perspective)
(Identified through Document Analysis, KII & field Survey)

1. Available Agriculture Information
2. Available Fisheries information
3. Available Forestry information
4. Available Credit information
5. Available Agro-land information
6. Available Cultivation Information
7. Available Wage information
8. Available Labor (Demand) information
9. Available Employment (home) information
10. Available Employment (Overseas) information
11. Available Food information
12. Available Information on Price of basic and necessary food,
13. Available Information on Innovation and Invention
14. Available Storage information
15. Available Capital information
16. Available Savings information
17. Available Investment information
18. Available Price (Daily Neccessities) information
19. Available Development Program information
20. Available Credit schemes/subsidies information
21. Available information on science and Technologies
22. Available ICT and Multi-media information
23. Available Teaching information
24. Available Study information
25. Available Institutional information
26. Available Library information
27. Available Women empowerment, information
28. Available legal and human rights information
29. Available social and rural development programs information
30. Available healthcare and sanitation information
31. Available Administrative Information and services

32. Available Law and Judicial services
33. Available Transport & communication services
34. Available Governance and Democratic information
35. Available Information on Games and Sports
36. Available Information on Recreation Activities
37. Available Continuous and Updated Websites
38. Become attention towards Local Demand
39. Ensuring ICT education in educational Institution
40. Ensuring Field advertisement of all services
41. Ensuring Printed advertisement of all services
42. Ensuring Electronic Advertisement of all services
43. Ensuring 'Digital Mela' per year
44. Ensuring Facility in Time/ Distance
45. Ensuring Facility in Cost
46. Ensuring Facility in Visit/ trip
47. Ensuring Easiness /simplicity
48. Ensuring Facility in waiting arrangement
49. Ensuring Facility in Entrepreneurs regularity
50. Ensuring Facility in Entrepreneurs efficiency
51. Ensuring Facility in Entrepreneurs responsiveness
52. Ensuring Facility in Entrepreneurs co-operation / friendliness
53. Setting UDC's sub-center at market / common place
54. Ensuring Free access for hardcore poor, disabled person
55. Closing alternative service delivery
56. Ensuring Price Monitoring in UDC
57. Ensuring Personal Investment for common commercial services
58. Introducing Common commercial services
59. Different Online Registration and database
60. Functioning training center
61. Scope for private/commercial services
62. Service simplicity
63. Service quality,
64. Service efficiency
65. Service sustenance/maintenance and
66. Service Transparency
67. Service Security

Appendix 4

Factors for the Viability of UDC (Entrepreneurs' Perspective)

(Identified through Literature Review, KII & field Survey)

1. Available supply from Central Government (Administrative, Judiciary, Legislative information and services from Ministries/Departments/Organizations/Branches)
2. Available Supply from District (District e-service Center)
3. Available supply from Upazila (Upazila Information Center)
4. Available supply from Union Parishad
5. Available supply from Autonomous Bodies (Universities/commissions)
6. Available supply of required technology and instrument
7. Available supply of ICT Input
8. Technological Sustainability
9. Ensuring Uninterrupted Power Supply (Electricity/ Solar Panel /Generator)
10. Ensuring High Speed Net Connection
11. Ensuring ICT Training for specially for Women Entrepreneurs
12. Ensuring Trainings for Different / specific services delivery
13. Ensuring Effective UISC blog to solve complications
14. Ensuring Support (co-operation) from Woman/man counterpart
15. Ensuring Support from UP Chairman
16. Ensuring Support/Monitoring from UNO
17. Ensuring Support from DDLG
18. Ensuring Support/Monitoring from ADC (ICT)
19. Ensuring Monitoring from DC
20. Ensuring Monitoring from Divisional Commissioner
21. Ensuring Room arrangement with basic amenities (UP)
22. Infrastructural arrangement(UP)
23. Logistic (input) support (LGSP)
24. Relaxed / Interest free Loan Support for entrepreneurs
25. Innovation of new services
26. Ensuring the Relationship between UP and UDC
27. Cooperation from Members
28. Co-operation from UP secretary
29. Monitoring from UNO

30. Functioning training center
31. Ensuring marginal revenue for UP services
32. Ensuring At least 15-20 user (TK 500) a day
33. Scope for private/commercial services
34. Demand budgeting
35. Transparent Disbursement
36. Functioning training center
37. Personal investment and Service Innovation
38. Power or Dismissal should be on the hand of committee through UNO
39. Terms of job Agreement and its renewability / permanency
40. UDC should be in Common Place to Ensure Comparative TCV
41. Closing alternative delivery Process
42. Expanding the Govt. Services from UDC
43. Ensuring Required Rooms for Offices and Training
44. Ensuring updated websites from govt. organs, ministries and depts.
45. Ensuring repairment facility of ICT instrument

Appendix-5

Interview Schedule with Key Informant

(Bangla Version of the fowling Interview Schedule was Used for Survey)

(Thank you for agreeing to be interviewed for our research about the viability of UDC under PPP towards E-governance in Rural Bangladesh. We want to find out the crucial factors responsible for the viability of UDC. The interview may only take about 15 minutes. I'll write down your answers. You will not be directly quoted in any report of this study. Only group data will be recorded.)

1. Let's start with some information that will help me describe the sample:
 - a. Your name, please _____
 - b. How old are you? _____years
 - c. The respondent is male or female. M F
 - c. Your profession, please? _____
 - d. In which way you are related in UDC? _____
 - e. How long are you related/communicated/linked with UDC? _____ Years

2. Which information and services are available at your UDC?

3. What do you need for government information and services for your UDC?

4. What facilities do you need for smooth access in the service of UDC?

Are these facilities available your UDC?

5. Are you doing profit in providing different services at UDC?

7. What do you need to ensure profitability at your UDC?

8. Do you think, service contract under PPP is favorable and renewable?

9. Do you think, budget for UDCs inputs are filling fixed cost?

Thank the interviewee for his/her time.

Appendix-6
Structured Questionnaire for Citizens
(Bangla Version of the following questionnaire were Used for Survey)

A Survey on the Viability of UDC

[N.B: The answers of the respondent will be confidential and used for academic research only. Your sincere cooperation will extend a lot of value to the research]

A. Interview Questionnaire (UDC User / Non User)

1. Name of the respondent:
 2. Village 3. Union
 4. Mobile 5. Date of Interview

Preliminary Question: What do you know about Union Digital Centre (UDC) ?

(Tick Appropriate Box?)

a. I have not heard about it.		If the result is a/b; it is no needed to fill the questionnaire more.
b. I have heard but I have not been there.		
c. I have known its function but I have not got its services.		
d. I have known and I have used its services		

Socio-economic and communication characteristics of the respondents (Tick Appropriate Box)

Gender	Female	
	Male	
Residence (Distance)	Within 1 KM	
	Within 2KM	
	Within 3 or above KM	
Educational Qualification	Up to PSC or less	
	Up to JSC	
	Up to SSC	
	Up to PSC or above	
Income Level	Have no Vehicle	
	Non Mechanized Vehicle	
	Mechanized Vehicle	
Occupation	Unemployed	
	Employed (Govt./Private)	
	Self-Business	
	Student	
Age Group Up to 18 Years	Up to 18 years	
	18 to 40 Years	
	Above 40 Years	
Working Experience in UDC	Less than 1 year	
	1 years	
	2years	
	3 years or More than	

Part 01: Response Regarding the Required Information and Services from UDC

Please tick the appropriate box from these following category options.

(5=Very Essential, 4= Essential, 3=Somehow Essential, 2=Less Essential and 1=Not Essential)

Q1. What do you think about the following information and services from your UDC?

No	Factors	1	2	3	4	5
1	Agriculture, livestock & fisheries (Production process, subsidies, credit, marketing)					
2	Cultivation Process (Irrigation, technology, pesticide use and Production)					
3	Land Disputes resolution Documents (<i>Dalil, Khazna</i> and <i>Porcha</i>)					
4	Business-trade (capital formation, technology, marketing & management)					
5	Teaching information (Educational Institutions, equipment, academic facilities)					
6	Study Information (University/college admission, courses, result)					
7	Working Opportunities and wages in home and abroad (trainings and facilities)					
8	Service Information and Facilities (administration, regulations, promotion, salary)					
9	(Self) Employment opportunities (Job availability, schemes, advertisement, training)					
10	Social and rural development programs (PRSP, NGOs & co-operatives etc.)					
11	Healthcare, sanitation, family planning, hazard awareness,					
12	Law & Administrative information services (forms, advertisement, Notice, Circular)					
13	Judicial information services (Litigation, Trial/Hearing date, Notice)					
14	Transport & communication services, Railways, Postal, Courier, ICT					
15	Governance and Democracy (Economic, Social, political, Information rights)					

Part 02: Response regarding the required condition for smooth access at UDC?

Q2. Which facilities are significant at your UDC?

21	Direct advertisement (Communication, Gathering, rally, Miking)					
22	Printed advertisement (Banner, Signboard Leaflet, Poster)					
23	Electronic Advertisement (TV, Radio, Dish TV)					
24	Facility in Time/ Distance					
25	Facility in Cost					
26	Facility in Visit/ trip					
27	Facility in waiting arrangement (sitting, water, Sanitation etc.)					
28	Entrepreneurs regularity					
29	Entrepreneurs efficiency					
30	Entrepreneurs reliability (Trustworthy)					

Part 03: Response regarding the required advantages for smooth access at UDC

Q3. Which financial facilities are significant at your UDC?

41	Comparative cost advantage						
42	Comparative Time / distance advantage						
43	Comparative visit advantage						
44	Alternative advantages (Private/commercial telecenters)						
45	Entrepreneurs Social Capital						

Part 04: Response regarding the settings ensuring service guarantee?

Q4. Which facilities are significant for sustainable participation at your UDC?

51	Service simplicity						
52	Service quality,						
53	Service efficiency and transparency						
54	Service maintenance and						
55	Service satisfaction (UP Chairman, members, secretary)						

Appendix-7

Structured Questionnaire for Entrepreneurs**(Bangla Version of the following Questionnaire were Used for Survey)**

Name of the Respondent _____

(Optional to mention)

(Tick Appropriate Box)

Sex	Female	
	Male	
Residence Place (Distance)	Within 1 KM	
	Within 2KM	
	Within 3 or above KM	
Educational Qualification	Post Graduate	
	Graduate	
	SSC or Bellow	
ICT Education /Training on ICT	Less than 1 years	
	Less than 2 years	
	2 years or More	
Working Experience with this	Less than 1 year	
	1 years	
	2 years	
	3 years or More than	

Part 01: Response regarding the required e-service sources from your UDC?

Please tick the appropriate box from these following category options.

(5=Very Essential, 4= Essential, 3=Somehow Essential, 2=Less Essential and 1=Not Essential)

Q1. What is the significance of the following information sources at your UDC?

No	Factors	1	2	3	4	5
1	Government e-services (Ministries/Departments/Organizations/branches)					
2	Service from District (District e-service Center)					
3	Service from Upazila (Upazila Information Center)					
4	Service from Union services (From Districts Upazilas' and UP Offices)					
5	e-services from Autonomous Bodies (Universities/commissions)					

Part 02: Response regarding the required Accessibility Factors from your UDC?

Q2. Which facilities are significant at your UDC?

No		1	2	3	4	5
31	Room arrangement(UP)					
32	Infrastructural arrangement(UP)					
33	Logistic (input) support (LGSP)					
34	Speedy Internet support					
35	Uninterrupted Power (Electricity/ Solar Panel /Generator)					
36	Trainings for specific services					
37	Effective UISC blog to solve complications					
38	Support from Woman/man counterpart					
39	Mentoring and support from UP Chairman					
40	Monitoring and support from UNO, ADCICT/DC, A2i					

Part 03: Response regarding the required advantages to ensure profitability?

Q3. Which financial facilities are significant at your UDC?

46	Ensuring UDCs Fixed Cost from LGSP yearly budget					
47	Functioning training center					
48	Ensuring marginal revenue for UP services					
49	At least 15-20 user a day					
50	Scope for private/commercial services					

Part 04: Response regarding the settings for service guarantee

Q4. Which facilities are significant for sustainable participation at your UDC?

No	Factors	1	2	3	4	5
56	Regular budgeting and transparent disbursement					
57	Technological Sustainability					
58	Mutual co-operation with UP (Chairman, Secretary)					
59	Terms of job Agreement and its renewability					
60	Career Prospect					

Appendix- 8

Some Letters to Know the Real Situation of the UDCs

Letter 1: An application for renewed electricity connection

বরাবর

ইউএনও, পীরগঞ্জ, রংপুর

স্যার

আসসালামু আলাইকুম। আমি ০৩ নং বড়দরগাহ ইউনিয়ন তথ্য সেবা কেন্দ্র, পীরগঞ্জ এর সহকারী উদ্যোক্তা। গত ০৫ দিন ধরে আমাদের ইউনিয়ন পরিষদে বিদ্যুত সংযোগ বিচ্ছিন্ন। প্রায় ১৭০০০ টাকা বকেয়া থাকায় পল্লী বিদ্যুত কর্তৃপক্ষ সংযোগ বিচ্ছিন্ন করে। ফলে তথ্য সেবা কেন্দ্রে সব ধরনের সেবা বন্ধ হয়ে গেছে। গত ৬ মাস একই ভাবে অনেক দিন ধরে সংযোগ বন্ধ ছিল। এভাবে চলতে থাকলে এখান থেকে চলে যেতে বাধ্য হব। উল্লেখ্য পূর্বের উদ্যোক্তা ও বিভিন্ন সমস্যার কারণে চলে যেতে বাধ্য হয়েছেন।

অতএব আপনি তথ্য ও সেবা কেন্দ্রে বিদ্যুত সংযোগের ব্যবস্থা করে সেবা করার সুযোগ দানে বাধিত করিবেন।

সনজিদুল ইসলাম

১২-৬-২০১৪

সহকারী উদ্যোক্তা, ইউনিয়ন তথ্য সেবা কেন্দ্র

০৩ নং বড় দরগাহ ইউনিয়ন, পীরগঞ্জ

**Letter 2: A Letter on showing the Rough Behaviour of
Union Parishad Authority**

বরাবর

রঞ্জিত কুমার দাস

উপ-সচিব, উপ-পরিচালক স্থানীয় সরকার,

বিভাগীয় কমিশনারের কার্যালয়, রংপুর।

স্যার

আমার ছালাম নিবেন। আমি ০৯নং আলমবিদিতর ইউনিয়ন এর সহকারী মহিলা উদ্যোক্তা। জন্মনিবন্ধন এর বয়স চেঞ্জ না করার জন্য যদি এভাবে মেম্বারদের হাতে মার খাওয়া লাগে, ইউনিয়ন তথ্য সেবা কেন্দ্রে তালা লাগায় তাহলে আমাদেরকে জন্ম নিবন্ধন এর দায়িত্ব দেওয়া হল কেন। স্যার মোছাঃ শিউলী হোসাইন নামক জন্ম নিবন্ধন যাহার বহিনং-০০৩ নিবন্ধন নং-৩১৮৫, কার্ডটি একবার উত্তোলন করেছিল। পরে কার্ডটি হারিয়ে ফেলে আবার নতুন করে নিবন্ধন কার্ড নিতে আসছিল। কার্ডধারীকে বই দেখতে বললে সে পাল্টা উত্তর দেয় আমি কেন বই দেখতে যাব। বই দেখা ছাড়াই আমি কার্ডটি করে নিয়ে যাব। তখন তিনি মাহবুবুর রহমান মেম্বার যাহার ওয়ার্ডনং ০৫ তথ্য ও সেবাকেন্দ্রে আসে এবং আমাকে কার্ডটি করে দিতে বলে। তখন আমি ওনাকে একটু অপেক্ষা করতে বললে তিনি আমাকে তারাতারি করে দিতে বলে চলে যায়। পরে ঐ কার্ডধারী আবার আরেকজন লোককে ডেকে আনে। যাহার নাম সুরুজ। সে এসে অনেক কথা বলে নিজে বই দেখে নামটি খুজে বাহির করল। বাহির করে দেখি উক্ত কার্ডধারীর জন্ম তারিখ ২০-১০-১৯৮৯ এবং সেটি উত্তোলনকৃত। তিনি পূর্বের কার্ড জমা না দিয়েই উক্ত কার্ডের বয়স চেঞ্জ করে ২০-১০-১৯৮৫ করে দিতে বলে। সেটি না করলে মোঃ মাহবুবুর রহমান মেম্বার আমাকে মেরে হাত ধরে টেনে হেচড়ে তথ্য সেবা থেকে বাহির করিয়ে দেয় এবং তথ্য সেবা কেন্দ্রে তালা লাগানোর চেষ্টা করে। পরে শাহীনের ভাই মেম্বারকে থামতে বললে সে কোন কথা না শুনেই আমাকে বারবার চলে যেতে বলে। পরে আমি বাধ্য হয়ে তথ্য সেবা কেন্দ্র থেকে চলে যাই। স্যার তথ্য সেবা কেন্দ্রে কাজ করে এই যদি আমাদের হাল হয় তবে আমরা কোথায় গিয়ে দাড়াব।

স্যার আপনি সুবিচারপূর্বক আমাকে তথ্য ও সেবা কেন্দ্রে কাজ করার সুযোগ দানে বাধিত করিবেন।

সহকারী মহিলা উদ্যোক্তা
০৯নং আলমবিদিতর ইউনিয়ন

Letter 3: An Official Memorandum in Criticizing the Daily Uploaded Income

ইউনিয়ন তথ্য ও সেবা কেন্দ্রে প্রকৃত আয়ের তথ্য মাসে উপস্থাপন না করা প্রসংগে²⁰⁸

গত সেপ্টেম্বর মাস হতে রংপুর বিভাগীয় কমিশনার মহোদয়ের নির্দেশনায় রংপুর বিভাগের সর্বোচ্চ আয়কারী ২০টি এবং সর্বনিম্ন আয়কারী ২০টি **UISC** এর তথ্য সংগ্রহ করে বিভাগীয় জেলা প্রশাসক সম্মেলনে তা পর্যালোচনা করা হয়। সভায় সর্বোচ্চ আয়কারী **UISC** সমূহের ভালো আয় করার কারণ উদঘাটন করে তা অন্য **UISC** সমূহে ছড়িয়ে দেয়ার জন্য সিদ্ধান্ত নেয়া হয়। অন্যদিকে খারাপ আয়কারী **UISC** সমূহকে আয় বাড়ানোর পদক্ষেপ নেয়ার জন্য জেলা প্রশাসকদেরকে অনুরোধ করা হয়। এ প্রক্রিয়া গ্রহন করেএ বিভাগের ৮টি জেলার ৫৩৩টি **UISC** এর কার্যক্রম মূল্যায়ন অব্যাহত আছে। উক্ত কাজ করতে যেয়ে গত অক্টোবর মাসে রংপুর বিভাগে সর্বোচ্চ আয়কারী ৫টি প্রতিষ্ঠানের আয় যথাক্রমে ১,৫৮,৯৫২ টাকা, ১,৪১,৯৭২ টাকা, ১,১১,৮৫২ টাকা, ১,০২,৭২৯ টাকা এবং ৮৯,২৯৭ টাকা পাওয়া যায়। আমি মনে করি প্রতি মাসে গড়ে ৫০,০০০ টাকার বেশি আয়কারী যে কোনো **UISC** কে খুব ভালো আয়কারী প্রতিষ্ঠানের স্বীকৃতি দেয়া যায়। সে বিবেচনায় বর্নিত ৫টি প্রতিষ্ঠানের আয় অসাধারণ এবং খুবই আশাব্যঞ্জক। কিন্তু বর্নিত ৫টি **UISC** এর দৈনিক ভিত্তিক আপলোডকৃত তথ্য যাচাই ও পরীক্ষা করে দেখা যে উদ্যোক্তাগণ একতারিখের আপলোডকৃত তথ্য হুবহু অন্য তারিখে কপি - পেস্ট করে আপলোড দিয়ে তাদের আয় বৃদ্ধি করেছে। অর্থাৎ প্রকৃত আয়ের তথ্য বর্নিত মাসে উক্ত ইউনিয়ন তথ্য ও সেবাকেন্দ্রে উপস্থাপন করা হয়নি। আমার ধারণা **UISC** গুলোতে যথাযথ তদারকি না থাকার কারণে কেবলমাত্র বেশি আয়কারী **UISC** হিসেবে ড্যাশবোর্ডে নাম লেখানোর জন্যই উদ্যোক্তাগণ অতিরঞ্জিত এবং অসত্য আয়ের তথ্য আপলোড করেছে।

আমরা জানি যে **UISC** এর তথ্য সমূহকে নিয়ে ইতোমধ্যে একটি বিশাল তথ্য ভান্ডার (uams.e-service.gov.bd) গড়ে উঠেছে। **UISC** এর কার্যক্রম মূল্যায়ন করার ক্ষেত্রে আমরা এই তথ্য ভান্ডারের উপাত্তকে ব্যবহার করে থাকি। মন্ত্রিপরিষদ বিভাগ, প্রধানমন্ত্রীর কার্যালয়ের এটুআই প্রকল্প হতে এ উপাত্ত ব্যবহার করে একাজের সাথে সম্পৃক্ত নেতৃত্ব স্থানীয় জনপ্রতিনিধি ও প্রশাসনিক ব্যক্তিত্বকে পুরস্কৃত করা হয়েছে। কাজেই বিশাল ও সুগঠিত এতথ্য ভান্ডারটি **UISC** সম্পর্কিত কার্যক্রম মূল্যায়নে সবচেয়ে গুরুত্বপূর্ণ ভূমিকা পালন করছে। যে কোনো তথ্য ভান্ডারের গ্রহনযোগ্যতা নির্ভরকরে বিবেচিত তথ্য কতটা সত্য তার উপর। আমরা যদি অবাস্তব তথ্য দিয়ে **UISC** গুলোকে প্রশংসিত করে তুলি তবে তা টেকসই হবে না। এ সমস্যা সমাধানে প্রয়োজন **UISC** সমূহকে নিবিড় তদারকি, যাতে ১) **UISC** এর প্রকৃত আয় বৃদ্ধি পায় এবং ২) অসত্য তথ্যের আপলোড রোধ হয়। অন্যথায় এই সুন্দর ও বহুমাত্রিক সম্ভাবনাময় প্রতিষ্ঠানটিকে টেকসই প্রতিষ্ঠানে পরিণত করা সম্ভব হবে না। এ বিষয়টিতে নজর দেবার জন্য নীতিনির্ধারক এবং মাঠপর্যায়ের সংশ্লিষ্ট কর্মকর্তাদের দৃষ্টি আকর্ষণ করছি।

রঞ্জিতকুমারদাস,

উপসচিব, উপ-পরিচালক,

স্থানীয় সরকার বিভাগীয় কমিশনারের কার্যালয়, রংপুর।

208. RanjitKumer Das, Assistant Commissioner, Divisional Commissioner Office, Rangpur Division
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Letter 4: A Review on the Budget Allocation and Disbursement for UDC

ইউনিয়ন তথ্য সেবা কেন্দ্রে বাজেট বরাদ্দ বন্টন প্রসঙ্গে একজন চেয়ারম্যানের মতামত²⁰⁹

অবাধ তথ্য প্রবাহ জনগনের ক্ষমতায়নের অন্যতম পূর্বশর্ত। এই লক্ষ্যে স্থানীয় সরকার বিভাগ ইউনিয়ন পর্যায়ে ‘ইউনিয়ন তথ্য সেবা কেন্দ্র (ইউ আই এস সি)’ স্থাপন করেন। ইউ আই এস সি সমূহের উদ্দ্যোগ গন ভিডিও, অডিও, এনিমেশন এবং টেক্সট ফরম্যাটে কৃষি, স্বাস্থ্য, শিক্ষা, আইন ও মানবাধিকার, কর্মসংস্থান, বাজার, বিভিন্ন সরকারী ফরম প্রভৃতি বিষয়ক তথ্য ও সেবা কম খরচে কম্পিউটার প্রশিক্ষণ সহ বিভিন্ন দক্ষতা বৃদ্ধি মূলক কর্মকাণ্ড করিয়া আসিতেছে। উপরোক্ত সেবা সমূহ প্রদানের জন্য প্রথম পর্যায়ে এলজিএসপি এর বরাদ্দ থেকে ১ টি কম্পিউটার, ১ টি মডেম, ১ টিস্ক্যানারমেশিন, ১ টি ওয়েব ক্যাম সরবরাহ করা হয়। পরবর্তী সময়ে পয়্যায় ক্রমে, ১টি ডিজিটাল ক্যামেরা, ১টিফটো কপি মেশিন, ১ টি ল্যাপটপ কম্পিউটার, আই পি এস সরবরাহ করা হয়। বর্তমানে ‘ইউনিয়ন তথ্য সেবা কেন্দ্রটিতে একটি কম্পিউটার প্রশিক্ষণ কেন্দ্র খোলার জন্য চলতি এলজিএসপি-২ এর অর্থ হইতে ২,৭৫,০০০/= টাকা বরাদ্দ করার কারণে ইউপি সদস্যগন আপত্তি তোলেন, যেকোন এত টাকা ‘ইউনিয়ন তথ্য সেবা কেন্দ্রে প্রদান করা হবে। এতে আমাদের কি লাভ হবে, লাভ হবে উদ্দ্যোগর, আমরা এত টাকা দিবনা। আমি একজন চেয়ারম্যান হিসাবে তাহাদের কে বর্তমান সরকারের ডিজিটাল বাংলাদেশ গড়ার উদ্দেশ্য বর্ণনা করি তবু তারা বুঝতে চায়না। তাই আমার মনে হয় ইউনিয়ন পরিষদের সকল সদস্য বর্গকে ডিজিটাল বাংলাদেশ বিষয়ের সরকারী ভাবে প্রশিক্ষণ প্রদান করে চিটি পত্রের মাধ্যমে এমন ব্যবস্থা গ্রহণ করতে হবেযার ফলে ইউনিয়ন পরিষদের সদস্য বর্গ স্ব উদ্দোগে, স্বইচ্ছায় ইউনিয়ন তথ্য সেবা কেন্দ্রকে ইউনিয়ন কম্পিউটার প্রশিক্ষণ কেন্দ্র রূপে রূপান্তরিত করার মত প্রকল্প গ্রহণ করিতে উৎসাহিত হন। প্রতিটি ইউনিয়ন তথ্য সেবা কেন্দ্র যখন একএকটি ইউনিয়ন কম্পিউটার প্রশিক্ষণ কেন্দ্রে রূপান্তিত হবে তখন এলাকার শিক্ষিত বেকার জনগোষ্ঠী রূপান্তিত হবে জনশক্তিতে। ধন্যবাদ সবাইকে।

মোঃ আবুল কালাম আজাদ
চেয়ারম্যান ২ নং পারুল ইউনিয়ন পরিষদ,
পীরগাছা, রংপুর।

²⁰⁹ Source: www.rangpur_uisc@googlegroups.com

Appendix- 9

Proposed Viable Model for UDC

Citizens' Perspective	Service availability:	1	Available information & service on Agriculture, livestock & fisheries (Cultivation, subsidies, production, Storage, marketing)
		2	Available information & service on Social and rural development programs (Both Government & Non-Government)
		3	Available information & service on Healthcare, family planning community health & social awareness program
		4	Study Information and services (Teachers, students, subjects, educational institutions, admissions, syllabus, exams, results)
		5	Available information & service on (Self) Employment opportunities (Advertisements, application, employment, income)
	Service accessibility	6	Ensuring Direct advertisement by meeting, miking, rally,
		7	Ensuring Electronic Advertisement (TV, dish TV)
		8	Ensuring Entrepreneurs regularity
		9	Ensuring Entrepreneurs efficiency
	Service profitability	10	Establishing UDC at a common place
Service guarantee	---	---	
Entrepreneurs' Perspective	Service availability	11	Available information & service from Service Availability from national government (Legislative, administrative and Judiciary)
		12	Available information & service from District administration
		13	Available information & service from Service from Upazila
	Service accessibility	14	Ensuring speedy internet support
		15	Ensuring Primary Logistic (input) support
		16	Ensuring uninterrupted Power supply
		17	Ensuring monitoring from Upazila (UNO)
	Service profitability	18	Ensuring input cost from LGSP budget
		19	Functioning training center
		20	Ensuring marginal revenue from UP
		21	Ensuring At least 20-25 user a day
	Service guarantee	22	Ensuring demand budgeting, transparent disbursement
		23	Ensuring technological sustainability
		24	Ensuring co-operation from chairman / secretary
		25	Ensuring renewability of job agreement

Appendix-11

The Contact Paper between UP Authority and Entrepreneurs on the Establishment and Management of UDC

ইউনিয়ন ডিজিটাল সেন্টার (ইউডিসি) স্থাপন ও পরিচালনা বিষয়ক চুক্তিপত্র

প্রথম পক্ষ : ইউনিয়ন পরিষদ (চেয়ারম্যান)
 দ্বিতীয় পক্ষ : ইউনিয়ন ডিজিটাল সেন্টারের স্থানীয় উদ্যোক্তাপণ।

এই চুক্তিপত্র ইং সালের মাসের..... তারিখে নিম্নোক্ত পক্ষদ্বয়ের মধ্যে সম্পাদিত হলো।

প্রথম পক্ষ:

চেয়ারম্যান:
 ইউনিয়ন পরিষদ:
 উপজেলা :

দ্বিতীয় পক্ষ:

উদ্যোক্তা -১:
 নাম:
 মাতার নাম: পিতার নাম:
 ইউনিয়ন: ডাকঘর :
 উপজেলা : জেলা:
 জাতীয় পরিচয়পত্র নম্বর :

উদ্যোক্তা -২:
 নাম:
 মাতার নাম: পিতার নাম:
 ইউনিয়ন: ডাকঘর :
 উপজেলা: জেলা:
 জাতীয় পরিচয়পত্র নম্বর :

(চুক্তি স্বাক্ষরকারী পক্ষদ্বয়ের অবর্তমানে তাদের প্রতিনিধি ও উত্তরাধিকারীগণের/স্থলাভিষিক্ত ব্যক্তিবর্গের উপর এই চুক্তি নামার শর্তাবলী বর্তাবে)

ক. চুক্তির শর্তসমূহ:

১। 'প্রথম পক্ষ' (ইউনিয়ন পরিষদ)-এর দায়িত্ব :

১.১। স্থানীয় সরকার (ইউনিয়ন পরিষদ) আইন ২০০৯ এর ৪৭ (গ), ৫০ এবং ৭৮ ধারা অনুযায়ী জনকল্যাণমূলক কার্যসংক্রান্ত সেবা, উন্নততর তথ্য ও প্রযুক্তির ব্যবহার ও সুশাসন এবং তথ্য প্রাপ্তির অধিকার নিশ্চিত করণে ইউনিয়ন পরিষদ ইউনিয়ন ডিজিটাল সেন্টারকে সেবা প্রদানের অন্যতম ক্ষেত্র হিসেবে বিবেচিত করে এর কার্যক্রম পরিচালনা ও শক্তিশালীকরণে সচেষ্ট থাকবে।

১.২। ইউডিসি স্থাপনের জন্য বিনা ভাড়ায় ইউনিয়ন পরিষদে একটি উপযুক্ত কক্ষ বরাদ্দ করবেন;

১.৩। স্থানীয় উদ্যোক্তার বিনিয়োগকৃত অর্থ ও সেবা প্রদানে ব্যবহার্য যন্ত্রপাতি এবং অন্যান্য উপকরণ ব্যতীত ইউনিয়ন পরিষদ ইউডিসির কার্যক্রমের জন্য প্রয়োজনীয় আর্থিক এবং অন্যান্য ভৌত ও কারিগরি সহায়তা প্রদান করবেন। ইউনিয়ন পরিষদ এ জাতীয় সহায়তা নিজস্ব তহবিল, সরকারী অনুদান, দাতা সংস্থা বা দানশীল ব্যক্তিদের কাছ থেকে পাওয়া অর্থ থেকে যোগান দিবে;

১.৪। ইউনিয়ন পরিষদ স্থানীয় জনগোষ্ঠীর জন্য উন্নত তথ্য ও সেবা নিশ্চিত করার লক্ষ্যে উদ্বুদ্ধকরণ ও প্রচার প্রচারণামূলক কর্মসূচি বাস্তবায়নে উদ্যোক্তাকে সর্বাঙ্গিক সহযোগিতা প্রদান করবে;

১.৫। ইউডিসিকে টেকসই করার লক্ষ্যে উদ্যোক্তারা যাতে পর্যাপ্ত সেবা প্রদান ও আর্থিকভাবে লাভবান হতে পারেন সেজন্য প্রয়োজনীয় সহযোগিতা প্রদান করবেন;

১.৬। সকল উপকরণসহ ইউডিসির পূর্ণ নিরাপত্তা নিশ্চিত করবেন;

১.৭। অর্থের বিনিময়ে ইউনিয়ন পরিষদের বিভিন্ন কাজ করানোর ক্ষেত্রে সকল সময়ে ইউডিসির অগ্রাধিকার সংরক্ষিত থাকবে।

১.৮। স্থানীয় সরকার বিভাগ কর্তৃক প্রণীত পরিপত্র ও উদ্যোক্তার সাথে সম্পাদিত এই চুক্তি অনুসারে ইউডিসির জন্য ইউনিয়ন পরিষদ কর্তৃক পালনীয় দায়িত্ব ও কর্তব্যসমূহ যথাযথভাবে সম্পন্ন করবে; এছাড়া সরকারি নির্দেশনা মোতাবেক প্রয়োজনীয় উপকরণ, অনুদান প্রভৃতি যথাসম্ভব দ্রুততার সাথে প্রদান করবে;

- ১.৯। উদ্যোক্তা যে সকল কারিগরী সমস্যা ব্যক্তিগত প্রচেষ্টা ও স্থানীয় পর্যায়ে সমাধান করতে পারবেন না, সে সকল ক্ষেত্রে অন্যত্র থেকে কারিগরী সহায়তা গ্রহণের লক্ষ্যে ইউনিয়ন পরিষদ প্রয়োজনীয় সহায়তা প্রদান করবে;
- ১.১০। চুক্তির মেয়াদকালে একই এলাকায় প্রথম পক্ষ বা দ্বিতীয় পক্ষ একই ধরনের সেবা গ্রহণের জন্য অন্য কোন উদ্যোক্তার সাথে আগামী তিন বছরের মধ্যে চুক্তিবদ্ধ হতে পারবেন না। তবে কোন ইউনিয়নে দুই বা ততোধিক ইউনিয়ন ডিজিটাল সেন্টার থাকলে প্রতিটি ক্ষেত্রে স্বতন্ত্র উদ্যোক্তাগণ ইউনিয়ন পরিষদের সাথে চুক্তিবদ্ধ হয়ে এ সকল ডিজিটাল সেন্টারসমূহ পরিচালনা করবেন। বর্তমান উদ্যোক্তার আগ্রহ থাকলে চুক্তির নবায়নের ক্ষেত্রে তিনিই অগ্রাধিকার পাবেন;
- ১.১১। নিয়মিত উদ্যোক্তার চুক্তি বাতিল/চুক্তির মেয়াদ উত্তীর্ণ হলে/ উদ্যোক্তা চলে গেলে বিকল্প উদ্যোক্তা হিসেবে কর্মরত উদ্যোক্তা নিয়মিত উদ্যোক্তা হিসেবে কাজ করার ক্ষেত্রে অগ্রাধিকার লাভ করবেন;
- ১.১২। একই এলাকায় একের অধিক ডিজিটাল সেন্টারের সাথে প্রথম পক্ষের চুক্তি সম্পাদনের ক্ষেত্রে চুক্তিপত্রের ১.১০ ধারাটি প্রযোজ্য নয়;
- ১.১৩। উদ্যোক্তার আয়-ব্যয় হিসাব যথাযথভাবে পরিবীক্ষণে সহায়তা প্রদানে করবেন এবং উদ্যোক্তাকে যথাযথভাবে হিসাব সংরক্ষণ করতে প্রয়োজনীয় সহায়তা প্রদানের ব্যবস্থা করবেন;
- ১.১৪। ইউডিসি'র মাধ্যমে যাতে ইউনিয়ন পরিষদের স্বাভাবিক কার্যক্রম ক্ষতিগ্রস্ত না হয় বা ইউনিয়ন পরিষদের ভাবমূর্তি ক্ষুণ্ণ না হয় অথবা এমন কোন কার্যক্রম পরিচালিত না হয় যার মাধ্যমে এলাকার নিজস্ব সংস্কৃতি, কৃষ্টি বা সামাজিক ঐতিহ্যে ক্ষতিগ্রস্ত হয়, ইউনিয়ন পরিষদ এ বিষয় সমূহের দিকে কড়া নজর রাখবেন;
- ১.১৫। উদ্যোক্তার সাথে ইউনিয়ন পরিষদের চুক্তির সময়সীমা কমপক্ষে তিন বছর সময়কালের জন্য হতে হবে;
- ১.১৬। উদ্যোক্তার সাথে চুক্তি সম্পাদনের তিন বছর পর ইউনিয়ন পরিষদ ইউআইএসসির আয়-ব্যয় মূল্যায়ণ করে নতুন করে চুক্তি সম্পাদন করবেন। তবে ইউনিয়ন পরিষদকে ডিজিটাল সেন্টারের আর্থিক লাভের চেয়ে তৃণমূল মানুষকে সেবা প্রদান ও সেবা গ্রহীতাদের সন্তুষ্টির প্রতি প্রতিই সর্বাধিক গুরুত্ব দিতে হবে।
- ১.১৭। সরকারের পক্ষ থেকে সময় সময় জারিকৃত নির্দেশাবলী যথাযথভাবে পালন করতে হবে।

২. 'দ্বিতীয় পক্ষ' (উদ্যোক্তা) -এর দায়িত্ব:

- ২.১। ইউনিয়ন পরিষদ তথা ইউডিসি ব্যবস্থাপনা কমিটির সিদ্ধান্তের আলোকে ইউডিসি কার্যক্রমে প্রয়োজনীয় অর্থ লগ্নী করবেন;
- ২.২। স্থানীয় জনগোষ্ঠী যাতে অবাধে তথ্য ও সেবা পেতে পারে তার সর্বাত্মক ব্যবস্থা নিশ্চিত করবেন;
- ২.৩। ইউডিসির ব্যবস্থাপনা এবং এ সম্পর্কিত প্রয়োজনীয় অন্যান্য বিষয়ের ধরণ ও প্রক্রিয়া কেমন হবে তা ইউডিসি ব্যবস্থাপনা কমিটির সাথে আলোচনা করে নির্ধারণ করবেন;
- ২.৪। ইউডিসি ব্যবস্থাপনা কমিটির মতামতের আলোকে ইউডিসি পরিচালনার সময়-সূচি নির্ধারণ করবেন;
- ২.৫। ইউডিসির উপকরণ রক্ষণাবেক্ষণ ও মেরামতের ব্যবস্থা করবেন এবং প্রয়োজনে উপকরণ বাড়াতে উদ্যোক্তাকে বিনিয়োগ করবে;
- ২.৬। স্থানীয় পর্যায়ে বাণিজ্যিক সেবার চাহিদা নির্ধারণ, তা যুক্তকরণে উদ্যোগ এবং উদ্বুদ্ধকরণ ও সেবা সম্পর্কে প্রচার প্রচারণামূলক কর্মসূচি পরিচালনা করবেন;
- ২.৭। দৈনিক আয়-ব্যয়ের হিসাব ডিজিটাল সেন্টার ম্যানেজমেন্ট সিস্টেমে আপলোড এবং নির্ধারিত হিসাব ব্যবস্থাপনা ছকে সংরক্ষণ করবেন;
- ২.৮। ইউডিসির প্রচার ও প্রসারের উদ্দেশ্যে এমন কোন পদক্ষেপ গ্রহণ করবেন না যার দ্বারা জাতি, ধর্ম ও বর্ণ বিভেদ সৃষ্টি হতে পারে অথবা যা ইউনিয়ন পরিষদের ভাবমূর্ত্তি ক্ষুণ্ণ করতে পারে;
- ২.৯। বিদ্যুৎ, পানি ও অন্যান্য সার্ভিসের মাসিক বিল যথাযথ কর্তৃপক্ষকে নিয়মিত পরিশোধ করবেন;
- ২.১০। ইউনিয়ন পরিষদের কাছে প্রতি বছর আয়-ব্যয়ের হিসাব দাখিল করবেন;
- ২.১১। উদ্যোক্তা কোন বেতনভুক্ত কর্মচারী না হওয়ায় ইউডিসিকে সচল রাখা ও টেকসইকরণের ক্ষেত্রে প্রয়োজনীয় উদ্যোগ গ্রহণ করবেন। ইউডিসি পরিচালনার ক্ষেত্রে বিকল্প উদ্যোক্তাকে দক্ষ করার দায়িত্বও নিয়মিত উদ্যোক্তার।
- ২.১২। সরকারের পক্ষ থেকে সময় সময় জারিকৃত নির্দেশাবলী পালন করতে হবে।
- ২.১৩। উদ্যোক্তা পরিবর্তন হলে বিকল্প উদ্যোক্তা নতুন প্রাপ্ত উদ্যোক্তা নতুন করে চুক্তিপত্র স্বাক্ষর করে ইউডিসির কার্যক্রম পরিচালনা করবেন।

খ. সময়সীমা :

- ১। সপ্তাহে ন্যূনতম ৫ দিন ইউডিসি খোলা ও এর কার্যক্রম চালু রাখতে হবে। একটানা ৩০ দিনের বেশি বন্ধ রাখলে উদ্যোক্তার সাথে সম্পাদিত চুক্তি বাতিল বলে গণ্য হবে;
- ২। অত্র চুক্তিপত্রের মেয়াদ চুক্তি স্বাক্ষরের তারিখ হইতে ৩ (তিন) বছর পর্যন্ত বলবৎ থাকবে। তবে, উভয় পক্ষের সমঝোতার ভিত্তিতে চুক্তিপত্র নবায়ন করা যাবে। সেক্ষেত্রে ইউনিয়ন পরিষদ ও উদ্যোক্তা একে অপরের কার্যক্রম পরিচালনার আগ্রহের কথা লিখিত আকারে জানানোর মাধ্যমে পরবর্তী নির্দিষ্ট সময়ের জন্য নবায়ন করতে পারবে। এই প্রক্রিয়ায় চুক্তিপত্রের পুনঃ নবায়ন চলতে থাকবে।

গ. সর্বদা পালনীয় এবং নিম্নরূপ ঘোষণা দেয়া হলো যে :

- ১। উদ্যোক্তা হিসেবে কর্মরত অবস্থায় ডিজিটাল সেন্টারের আদলে অন্য কোন প্রতিষ্ঠান গড়ে তোলার ক্ষেত্রে অবশ্যই চেয়ারম্যান ও উপজেলার নির্বাহী কর্মকর্তার অনুমতি নিতে হবে।
- ২। দুই টি অবিকল সেটে চুক্তিটি স্বাক্ষরিত হয়ে জারী হলো - যার একটি করে অনুলিপি পক্ষদ্বয়ের নিকট থাকবে;
- ৩। বাংলাদেশের বিদ্যমান আইন অনুযায়ী এই চুক্তি বলবৎ হবে।
- ৪। কোন কারণে কোন বিরোধ সৃষ্টি হলে তা যদি ইউনিয়ন পরিষদের পরিচালনা কমিটি উপজেলা নির্বাহী কর্মকর্তা ও জেলা প্রশাসক মহোদয়ের হস্তক্ষেপে নিষ্পত্তি না হয় তাহলে বাংলাদেশের প্রচলিত আইন মোতাবেক নিষ্পত্তি করা হবে।

ঘ. দৈব দুর্ঘটনা:

কোন দৈব কারণে এই চুক্তি বা চুক্তির কোন অংশ যদি পালন করা না যায় তবে সে ক্ষেত্রে কোন পক্ষকে দায়ী করা যাবে না এবং সে ক্ষেত্রে বাংলাদেশের আইন অনুযায়ী এই চুক্তি পরিচালিত হবে।

ঙ. বাতিল:

নিম্নোক্ত কারণে প্রথম ও দ্বিতীয় পক্ষ সম্মত হয়ে অথবা যে কোন এক পক্ষ এই চুক্তি বাতিল করতে পারবেন:

- ১। উদ্যোক্তার কার্যক্রম যথাযথ ও সন্তোষজনক না হইলে, অর্থাৎ উদ্যোক্তা স্থানীয় জনগোষ্ঠীর জন্য তথ্য ও সেবা নিশ্চিত করতে ব্যর্থ হলে উপযুক্ত প্রমাণ সাপেক্ষে উপজেলা নির্বাহী কর্মকর্তার লিখিত অনুমোদনক্রমে ইউনিয়ন পরিষদ ৯০ দিনের নোটিশ প্রদান পূর্বক চুক্তি বাতিল করতে পারবেন;
- ২। উদ্যোক্তা যদি একক সিদ্ধান্তে কেন্দ্রটি গুটিয়ে নেয়, সে ক্ষেত্রে ইউনিয়ন পরিষদ কর্তৃক প্রদত্ত ও উদ্যোক্তার আনা উপকরণ একে অপরকে হস্তান্তর করবেন। নতুন উদ্যোক্তা যুক্ত করা বা নিয়োগ করার অপশন।
- ৩। যে কোন এক পক্ষ চুক্তির শর্ত ভংগ করলে অন্য পক্ষ তা সংশোধনের জন্য ২ মাসের নোটিশ/ঘোষণা দেয়ার পরও উক্ত চুক্তির শর্ত ভঙ্গ করে ও সংশোধিত না হয় তাহলে চুক্তির এক পক্ষ অন্য পক্ষকে চুক্তি বাতিলের জন্য ১ মাসের নোটিশ প্রদানের মাধ্যমে ও উপজেলা নির্বাহী কর্মকর্তার লিখিত অনুমতি সাপেক্ষে চুক্তিপত্র বাতিল করতে পারবে;
- ৪। দৈব দুর্বিপাকের কারণে;
- ৫। যে কোন এক পক্ষ যদি কেন্দ্র পরিচালনায় অনিচ্ছুক হয় তবে ৯০ দিনের আগাম নোটিশ প্রদান পূর্বক।
- ৬। চুক্তি বাতিল কিংবা নবায়নের প্রতিটি ক্ষেত্রে উপজেলা নির্বাহী কর্মকর্তার লিখিত সম্মতি নিতে হবে।

চ. ঘোষণা:

আমি স্বেচ্ছায়, স্বজ্ঞানে, সুস্থ মস্তিষ্কে, সুস্থ শরীরে, অন্যের বিনা প্ররোচনায় এই চুক্তিপত্র দলিল পাঠ করে -এর মর্মার্থ সম্পর্কে জেনে সম্পূর্ণ সঠিক ও শুদ্ধ বিবেচনা করে নিম্নের স্বাক্ষীগণের উপস্থিতিতে এই চুক্তিপত্র সম্পাদন করছি।

প্রথম পক্ষদ্বিতীয় পক্ষ

১। উদ্যোক্তার নাম

'ইউনিয়ন পরিষদ'-এর চেয়ারম্যানের নাম

২। উদ্যোক্তার নাম

স্বাক্ষীগণের স্বাক্ষরস্বাক্ষীগণের স্বাক্ষর

১। (ইউপি সচিব)

১। (বিকল্প উদ্যোক্তা)

(ইউপি কাউন্সিলর)

২। (বিকল্প উদ্যোক্তা)

২।

(নিয়মিত উদ্যোক্তার অভিভাবক)

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Appendix 12

<p style="text-align: center;">Fast Facts of UDCs in Bangladesh</p>
<ul style="list-style-type: none"> • Union Digital Centers were inaugurated simultaneously on November 11, 2010 • 4547 Union Digital Centers operational in all Union Parishads • 9094 entrepreneurs are self-employed. • Top services: Govt forms, Examination results, birth and death registration, livelihood information, computer training, mobile banking, email and internet browsing etc. • Investment by govt.: From LGD through LGSP fund and 1% of ADP. In addition DC offices spend from their allocated funds for entrepreneur training, workshop and mobilization.
<p style="text-align: center;">Result Achieved</p>
<ul style="list-style-type: none"> • 45 Million Services provided to citizen from Union Digital Center in last 2 years countrywide • 40 Million birth registration electronically from Union Digital Center • 1.38 Billion earnings for Union Digital Center entrepreneurs in last 2 years • 30, 000 local youths got ICT training from Union Digital Centers. • More than 9000 leaders and entrepreneurs have been trained through leadership development • 1.4 million rural workers registered for online government-to-government (G2G) migration • Closer ties established between the local administrations and the citizens through creation of service oriented UPs

Source: <http://www.a2i.pmo.gov.bd/content/union-digital-center>, accessed on April 12, 2016

Appendix 13

Factors of Dejection / Dissatisfaction from UDCs		
Users' Perspective	1	We do not get any benefit from UDCs except birth registration.
	2	Entrepreneurs are not trained and efficient.
	3	They charge more than prescribed fee.
	4	They are irregular and late.
	5	They are busy with UP functions.
	6	There are no waiting arrangement/facilities at UDCs.
	7	They are not attentive with poor marginal people.
	8	We do not get porcha from DESC through UDCs.
	9	UDCs are in backward place.
	10	There are complexities in issuing birth certificate, (price, process, time)
Entrepreneurs' Perspective	1	There is no service security / renewability / guarantee.
	2	Maximum ICT inputs are out of work. They are unsustainable.
	3	Slow internet connection annoys every online function.
	4	Interrupted power supply/ load shading
	5	Corruption in budget disbursement
	6	Non-effective UISC blog
	7	Non co-operation from chairman/secretary.
	8	Less monitoring from UNO, ADC ict, DC.
	9	Lack of room & infrastructural arrangement
	10	Users low presence (less than 10 daily)

Appendix 14

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