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Researchers' Declaration

I hereby certify that I am the sole author of this dissertation and this material. The work that I now submit is entirely of my own and my very first one and so, I declare that I have exercised reasonable care to ensure that the work is original, and does not, to the best of my knowledge, breach any laws of copyright.

All sources of knowledge used, have been duly acknowledged. I authorize the Ministry of Chittagong Hill Tracts Affairs to lend this research paper to other institutions or individuals for the purpose of scholarly research and project initiation.

I further authorize the Ministry and concerned authority to reproduce this research paper by any means, in total or in part, at the request of other institutions for the purposes of academic research.

Sincerely,

Monami Mehnaz
Department of Public Administration
University of Dhaka

Acknowledgement

I would like to extend my heartiest gratitude and appreciation to the people who helped to complete this study.

At first, I would like to thank the Almighty for giving me the capacity to complete this task.

I would like to extent my heartfelt gratitude to The Ministry of Chitttagong Hill Tracts Affairs and the Government if Bangladesh for endorsing this survey project and supporting in every step of the way to make this study fruitful. The suggestions and cordial care have always inspired me to also complete the study with utmost care and respect.

I would like to thank the local stuff from the surveyed areas located in Rangamati, Khagrachari and Bandarban for the support in reaching the remote places in the CHT.

Finally, I would like to thank the people from the para centers who have helped thoroughly with data and information and helped in implementing the survey into a successful one.

I am also grateful to my parents who have helped and assisted me through thick and thins.

I am also thankful to all the respondents of the study, for helping during the data collection and their eagerness. Without them the study wouldn't be possible.

I would also like to pay my due respects and gratitude to my caring family for bestowing me with love, care and inspiration.

Abstract

Chapter 1

Introduction:

In the wake of digitalization it is increasingly debated whether developing countries can achieve prosperity through digitalization in the same manner as developed countries did. One of the core features of developed countries in digitalizing the entirety of the geographical spread by decentralizing and disseminating the service delivery in rural and remote places. At the same time, developing countries have high hopes for digital technologies to drive the transformation of the economy towards prosperity. Literature on structural change regarding decentralization equipped with technology in comparatively challenging geographical locations technology can work as one driver of employment shifts between economic sector as well as health and educational aspects. Similarly, evidence on digitalization highlights its impacts on enabling developing the causes and effects require further investigation. As a consequence, both strands of literature benefit from an integrated perspective on structural change and digitalization, which has largely been lacking. Hence, we pose the following research question: What are potential linkages between structural change and digitalization? Is it feasible, in the case of Chittagong hill Tracts (CHT) areas, for being digitalized in a decentralized way?

Para Center emerged as the hub of basic services for the people living in peripheries and became a 'light house' to them. A Para Center is A venue for early childhood development, early learning and pre primary education and it i works as a hub for the children and women to receive micronutrient supplements and nutrition counceling. It is a setting for basic health services delivery from Health and Family Planning Departments other NGOs to offer immunization and other preventive services offering itself as an information center and meeting place for the community. Will digitalizing them would be a feasible choice for linking the different service delivery hubs needed in these comparatively remote places? Evidence suggests that digitalization is likely to affect relative sectorial productivity, but it is questionable whether destinations of subsequent labor movements (e.g. towards traditional services) will equally benefit from technological progress. Moreover, the questions of availability of networking and budgeting remains under question in order to successfully digitalize the para centers on a whole. However, it is contested if digitalization facilitates better positioning of these districts in the greater development, or if it narrows the scope for their participation and upgrading opportunities on the contrary. Thus a survey was carried away in the already digitalized para centers among the 5000 existing para centers in order to study the feasibility of digitalizing the para centers structurally from the core.

Literature Review:

As the title suggests, to explore the feasibility of digitalizing the Para Centers will be worked through in this writing. As discussed already, the projection will be addressed by some theoretical explanations as well along with the survey results. As study is furthered, I will try shed light on these and possibly understand how to resolve taking advice from the research population by discussing them.

There are several theories regarding securities and since working with development of lifestyle from implementation of the project in the CHT, it's best to use the theories mentioned here to explain the basic theoretical background of this paper.

Social capital theory contends that social relationships are resources that can lead to the development and accumulation of human capital. For example, a stable family environment can support educational attainment and support the development of highly valued and rewarded skills and credentials. It is a set of shared values that allows individuals to work together in a group to effectively achieve a common purpose. The idea is generally used to describe how members are able to band together in society to live harmoniously. The idea is to incorporate the survey results to social capital theory and see whether that is justified by the digitalization of Para Centers.

Theoretical Background

Para Kendra or Para Center is the local pre-school education and healthcare centers set up under the Integrated Community Development Project (ICDP) in Chittagong Hill Tracts (CHT).Set up under the joint initiative of Chittagong Hill Tracts Development Board and the United Nations International Children's Emergency Fund (UNICEF), the Para Centers are playing significant role in improving education and healthcare services in remote hilly areas.

The majority of the people in CHT reside in small communities known as 'Para'. Many of them are in isolated locations that are difficult and time consuming to reach. There are discrepancies in the communities' access to and use of services. While the population in the valleys and other

easily accessible locations is well served, these facilities and services are not easily accessible to a vast number of individuals dispersed throughout the hills. Furthermore, a large proportion of the ethnic group is reliant on jhum agriculture (shifting cultivation), which is their primary source of income. They move their family to a jhum location far away from the para at the start of the jhum farming season and stay there until the end of harvesting. Next year, those individuals will relocate to a new location to continue their work. Because of the nature of shifting cultivation, the children of such households lack access to school, health care, and other essential services.

With this in mind, the Government of Bangladesh and UNICEF agreed to work together to eliminate such disparities, and UNICEF has been assisting the Chittagong Hill Tracts Development Board (CHTDB) in Chittagong Hill Tracts (CHT) since 1980. UNICEF's partnership with CHTDB began in 1980, when it funded an action research project concentrating on child development, education, health and nutrition, water supply, sanitation and hygiene promotion, community capacity building, and income production. UNICEF has continued to support the implementation of the Integrated Community Development Project (ICDP), which aims to improve the quality of life for CHT's most vulnerable citizens.

Through integrated service delivery mechanisms, project services have been extended to the three hill districts, which have been tailored to the unique and diverse nature of both the topography and the communities.

- Mouza was the lowest level of service delivery unit during the first phase (1985–1995).

- In the subsequent phase (1996–2012), a strategic shift in service delivery was implemented. The project's focus has switched from mouza to para, with the goal of bringing project services closer to the community.
- The UNICEF-supported ICDP (Integrated Community Development Project) – 2nd phase (1996–2012) approach was to develop a network of Para Centers to increase access to basic services in rural parts of CHT, and
- 4,000 Para Centers were established by the end of the ICDP 3rd phase (2013–2017). ICDP Para Center evolved as a very effective model for making basic services available to people living on the margins in the second and third phases, but a significant number of people were left behind.

It is vital to reach out to CHT's most disadvantaged and deprived groups in order to achieve universal coverage of basic social services. As a result, UNICEF has agreed to assist the government in expanding and scaling up effective service delivery models (such as the Para Center, adolescent nutrition, multilingual education, satellite schools, socio-lodging facilities for school-aged children, and the adolescent empowerment package) to ensure long-term outcomes for children in remote CHT areas inhabited by marginalized ethnic communities. The current project, titled "Sustainable Social Services in CHT," is based on the SDGs and incorporates lessons learned as well as best practices from previous programs. Until the CHT's communication and infrastructure are fully developed and operating, the government and its development partners, such as UNICEF, would like to ensure that project-based social services continue to cover the most vulnerable members of society—women and children. It is possible to achieve effective

coverage of services among individuals by strengthening the social services system in a methodical way.

Rationale behind the study:

The main rationale of the study is to find out whether digitalizing Para Centers will align with the goals of the existing objectives of the initial project and create a value in developing the CHT regions in mainly three aspects. They are as followed:

1. Education
2. Health
3. Digital services

1. Digitalizing Education and Pre-Schooling

Education is the most effective means of widening one's horizons in life. Para Center is providing early stimulation and pre-schooling to children in the community as part of the initiative. The program is aimed to keep children on track in many developmental areas and to assist them in developing essential skills for school readiness. Every year, more than 55,000 students attend Para Centers for early learning and pre-primary education. The early learning facilitator function is filled by the Para Worker, who helps the children socialize and prepare for formal education. Six days a week, for 2.5 hours a day, Para Worker engages the children in a variety of activities using the 'play, fun, and learn' approach. Multi Lingual Education (MLE) at the center recognizes the relevance of mother tongue for optimal learning in the early years of a child's life. The transition to primary school for pupils who have completed three years of pre-school is aided. Parenting education also ensures early stimulation for children at the home level.

Now, CHT consists of areas that are remote and harder to be reached out by the government school systems, let alone private schools. 5000 Paras are surely an effective way to decentralize the divide the areas into more efficient service delivery systems. Learning digitally is a surefire way to increase their efficiency and productivity. Also, digital learning tools and technology increases critical thinking skills which are the basis for the growth of reasoning skill. Children as well as the mothers will also develop positive feelings and develop the confidence to learn new things.

2. Health Service Delivery and Digitalization

Para Center is often used as the site for health related activities. Para Worker provides initial responses to promote lifesaving behaviors at community level. She disseminates information to all the families on key health issues - ANC & PNC, safe delivery, newborn care, immunization, diarrhea management, danger signs of pneumonia and malaria, prevention of AIDS, adolescent's menstrual hygiene etc. Para workers also play a key role to establish a bridge between the community and GO/NGO health facilities. It creates a linkage with Health and Family Planning field workers and community health workers of NGOs for providing basic health services and referral as well. Currently more than thousands Para Centers are being used as the EPI outreach centers, while Para Workers facilitate national campaign on health issues within her community in collaboration with concern departments.

Digitalizing these para centers will pave the way to organize and archive the regularly held courtyard sessions and counseling to improve reproductive health including maternal and neonatal care as well as develop the adolescent health care system. It will strengthen referral

linkage helping to organize health camp and mother's assembly. And finally to mobilize children, women and adolescents for vaccination for a safer motherhood and reduce child mortality rate in the remote areas of CHT.

3. Para Center as an analogy for Union Digital Center

Bangladesh is a small country with vast unexplored resources. She has large number of population with an important portion living in the CHT. These huge numbers of population need a proper communication system and advanced knowledge about e-services to make them productive human resource which is an important component for development and growth. Recently, the government has introduced Union Digital Centre's (UDC) which provide information including health, education, agriculture, law, human rights, environment, industry and commerce at free of cost. If the goal of Union Digital Centre (UDC) is fulfilled then the e-services in rural areas as well as in national level will be improved. UDC's and its scope are very new in Bangladesh. With the Para Centers already in their existence, the levels of decentralizations of government and managerial Most of the people of rural area are not educated. Such kind of internet services at the remote areas will help to change the living status of the rural poor through making a close network with the regional and national levels for promoting overall development towards the digital Bangladesh. Building a Digital Bangladesh is an election pledge of the present government. The concept would be perceived by the generations to come as 'Sonar Bangla of the 21st century'. This idea has captured the minds of the millions and inspired them in an unprecedented way. We consider it to be a key driver of national development. The program for 'Digital Bangladesh' and its implementation will ensure a unique success to our

pursuit of transforming Bangladesh into a middle-income country by 2021. This vision, together with numerous creative enterprises, will lead the country towards higher and sustainable growth path. There is a widely held view that ICT plays a key role in reaching the public service to the doorsteps of the people and it is evidenced by the experience of many developed and developing countries. In conformity with the Vision-2021, the quality of service delivery and its access to the grass root level has been significantly enhanced because of wider application of ICT. It also supports to close the gap arising from digital divide. Establishment of e-Service Center in each government office at the upazilla, in each Pourashava and City Corporation and building ICT infrastructure is essential condition for establishing Digital Bangladesh.

Scope of the Study

The scope of this study is limited with the confines of the three hilly districts in Bangladesh. The Chittagong Hill Tracts (CHT) Region, comprised of the three hill districts of Rangamati, Bandarban and Khagrachari, is situated in the south-east of Bangladesh. It has an area of 13,294 square kilometers, most of which is highland. The population is estimated at about 1.6 million (census 2011). About half of the population belongs to eleven different ethnic groups with distinct language, culture, social customs, traditions and lifestyle focusing on the stakeholders from mostly the managerial level of the Paracenter project and a fragment of groups influenced by the applicability of the project.

This research is aimed at understanding how the risks and problems from the act manifest in real life and impact people in general. It is also focused on the debate whether the existing system can be, by any means, shifted to the common folks' favor.

Chapter-2

Methodology

Planning the research design is a key step in any sociological study. Research methods are conventionally divided into two ways quantitative and qualitative. In this study qualitative methods of research will be used.

For this study, descriptive design was employed with the Narrative Research approach. The study tried to survey on the people who are directly connected to the implication of the act as users, benefactors and people who whose livelihood depend of related aspects. To understand the present applicability as well as the risks that come with the act, the sampling methods had to be carefully chosen. The data collection systems were to be sought in such a way that the most bases of the study could be covered as well have justified representation of the population which would give a clearer and unbiased understanding. As such, the structure is mostly related to that of a Narrative Research. The focus was mainly to paint a generalized concept through the survey and so, interview through filling a questionnaire was also collected from 30 respondents. Sample respondent was chosen at random with **Simple Purposeful Sampling** within the criteria of the study.

Sampling

- ### Sampling Method

Owing to resource and time constraint, it was not physically possible to collect the needed data from all the people from the CHT who are supposedly get befitted from the digitalization of Para

Centers. Thus, the study population was limited to 30 People, who were picked through **Purposeful Random Sampling** in primary data collection.

These purposive sampling techniques include maximum variation sampling, homogeneous sampling, and typical case sampling, extreme (or deviant) case sampling, total population sampling and expert sampling. Each of these purposive sampling techniques has a specific goal, focusing on certain types of units, all for different reasons. The different purposive sampling techniques can either be used on their own or in combination with other purposive sampling techniques.

- ## Sampling Criteria

The sampling criterions are stated as below,

1. Para Center Chairmen (Para Karbari)
2. Authority representing Sustainable Social Service Projects in CHT
3. Committee members from Para Center Management Committee People who are the representatives of local communities. The members include teachers, representation of women demographic, social workers etc

In purposive sampling, we sample with a purpose in mind. We usually would have one or more specific predefined groups we are seeking. Purposive sampling, also known as judgmental, selective or subjective sampling, reflects a group of sampling techniques that rely on the judgment of the researcher when it comes to selecting the units (e.g., people, cases/organizations, events, pieces of data) that are to be studied.

Data Collection

The survey data collection system will be through in-person and telephone interviews:

A mixture of open and close ended question were in the questionnaire of this research. The respondents included the Para center management Committee (PCMC) and the representatives from CHT Development Board. The committee consists of 7 members with a decorum of chairman leading the committee. The chairman is known as the 'Para karbari'. He is generally the local elite and is selected by the local community. This committee plays the role of representing the target population of this research as the committee includes women representatives, primary school teachers and local leaders.

The respondents will answer the question from a specific set of options along with a choice to give their own opinion if the given options do not include their answer. In this research 30 sets of questionnaire were answered by the respondents.

Data Analysis Plan:

The key project of Para Centers was to create a network in the remote areas of CHT by establishing 5000 Para Centers and connecting them in order to create decentralized hubs for service providing. It is planned to establish 5000 Para Centers throughout the whole CHT for bringing all the marginalized communities under the umbrella of basic services and as of now 4800 Para Centers exist in around 4200 villages or paras. Over 70% of Para Centers are located in tribal areas, while remaining belong to non-tribal and mixed settlements.

The survey was conducted in 30 Para Centers which were already digitalized. The survey questions were designed in a way that could test the feasibility of digitalizing these centers and how it acts along with the other services a Para Center in supposed to provide.

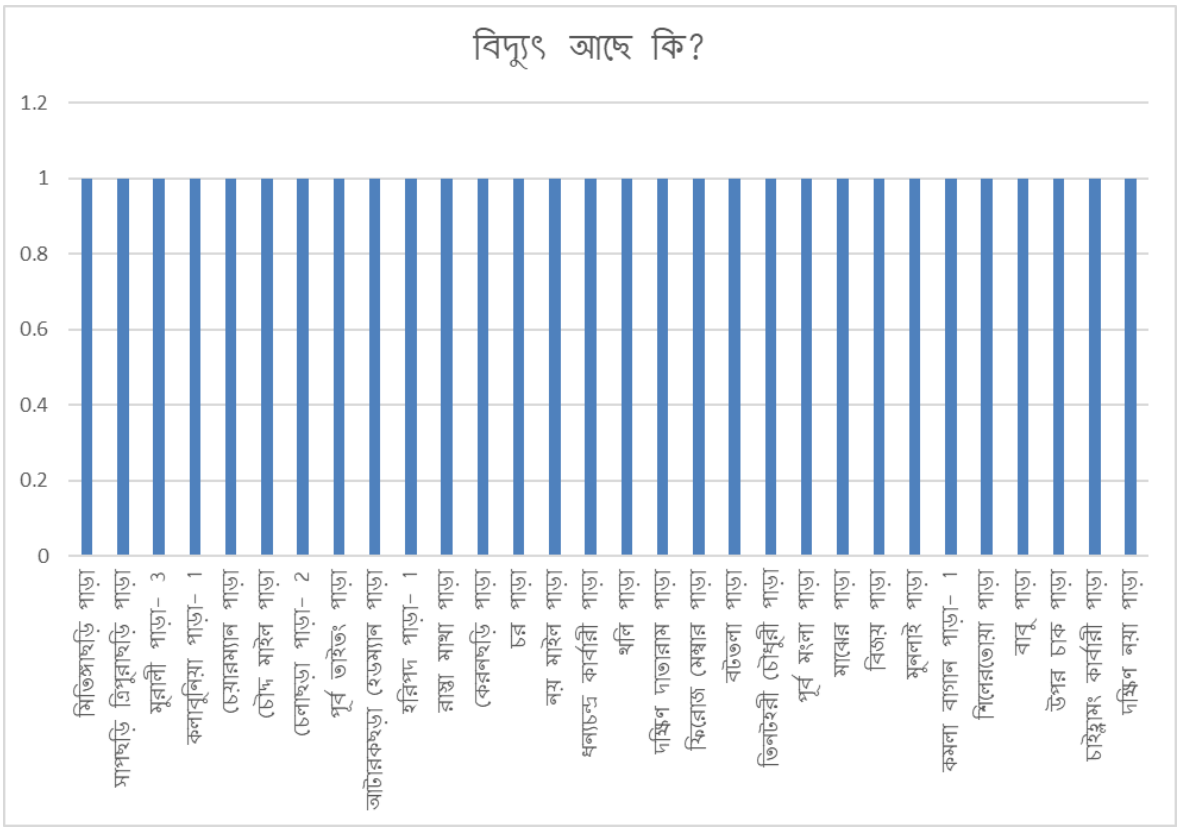
The survey questions could have been answered by mostly yes or no. To represent the results collected from the survey, yes has been defined as 1 and no has defined as 0. The survey data has been displayed through a method named histogram.

A histogram is a display of statistical information that uses rectangles to show the frequency of data items in successive numerical intervals of equal size. In the most common form of histogram, the independent variable is plotted along the horizontal axis and the dependent variable is plotted along the vertical axis.

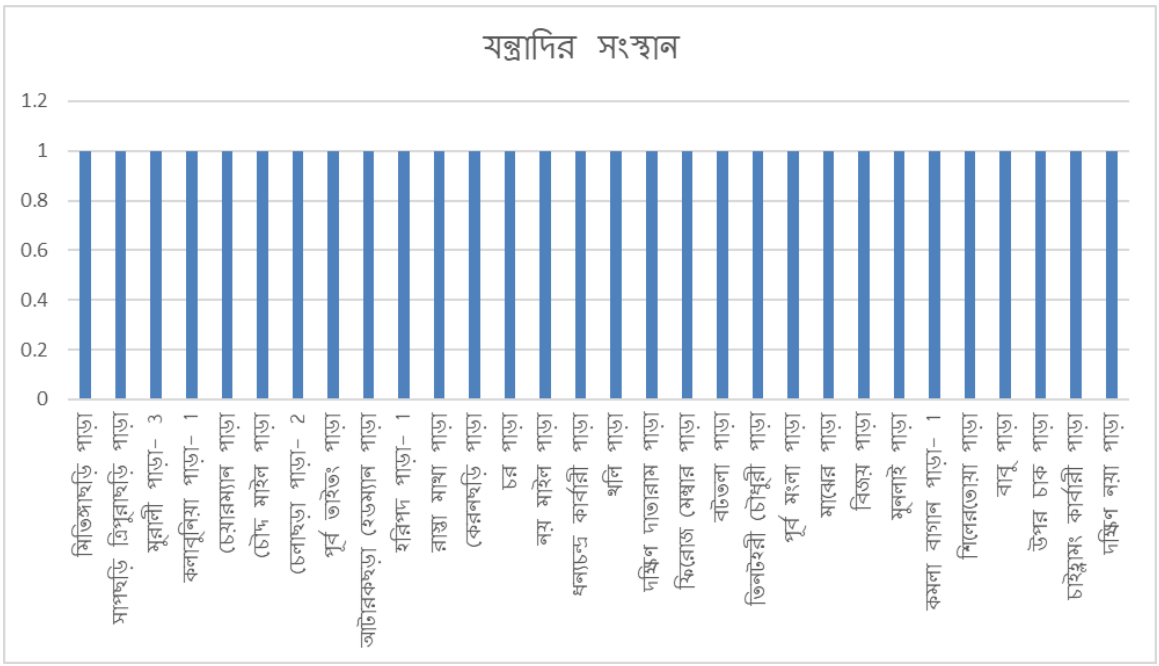
Chapter 3:

Findings:

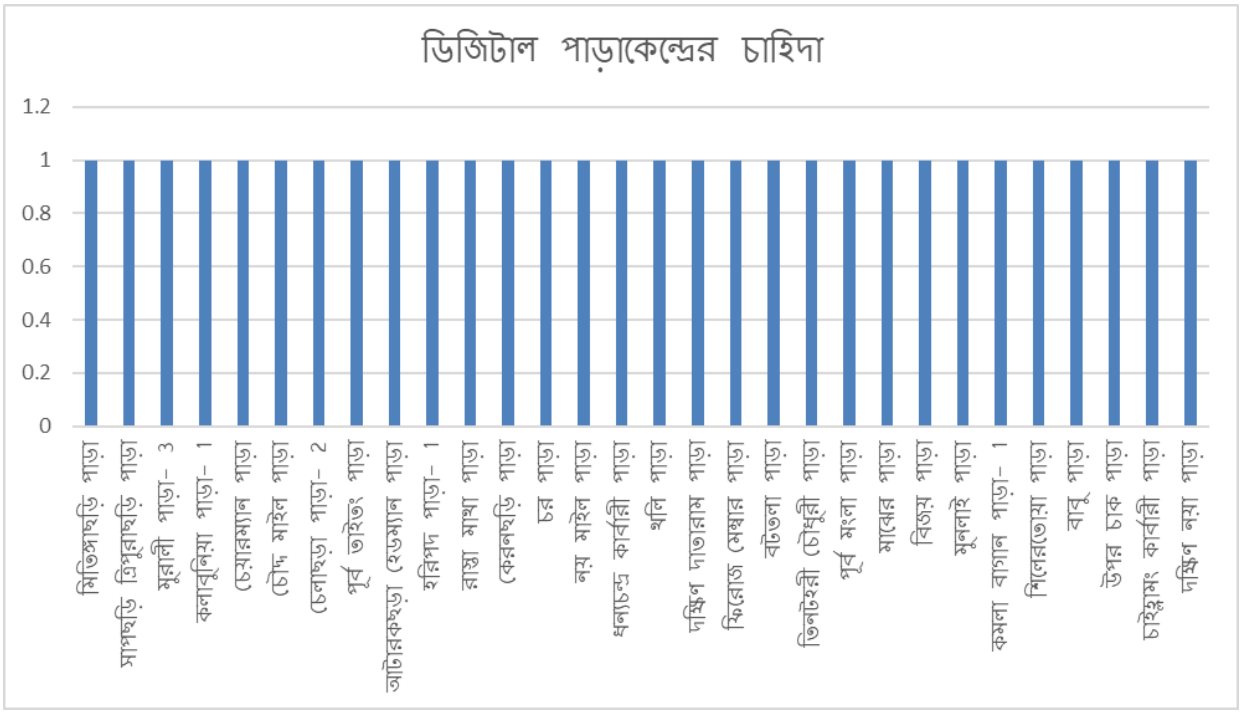
The survey data has been run through a data analysis software SPSS. The software shows the data in a statistically correct display. The findings has been represented through histogram. The bar charts from the test is shown below:


বিদ্যুৎ আছে কি?
1.2
1
0.8
0.6
0.4
0.2
0
মিতিপাছড়ি পাড়া
সাপছড়ি ত্রিপুরাছড়ি পাড়া
মুরালী পাড়া- 3
কলাবুনিয়া পাড়া- 1
চেয়ারম্যান পাড়া
চৌদ্দ মাইল পাড়া
চেলাছড়া পাড়া- 2
পূর্ব ভাইতং পাড়া
আটারকছড়া হেডম্যান পাড়া
হরিপদ পাড়া- 1
রাস্তা মাথা পাড়া
কেরলছড়ি পাড়া
চর পাড়া
নয় মাইল পাড়া
ধলাচন্দ্র কার্বারী পাড়া
খলি পাড়া
দক্ষিণ দাতারাম পাড়া
ফিরোজ মেম্বার পাড়া
বটতলা পাড়া
তিলটহরী চৌধুরী পাড়া
পূর্ব মংলা পাড়া
মাঝের পাড়া
বিজয় পাড়া
মুলাই পাড়া
কমলা বাগান পাড়া- 1
শিলেরতোয়া পাড়া
বাবু পাড়া
উপর চাক পাড়া
চাইক্লাংং কার্বারী পাড়া
দক্ষিণ নয়া পাড়া

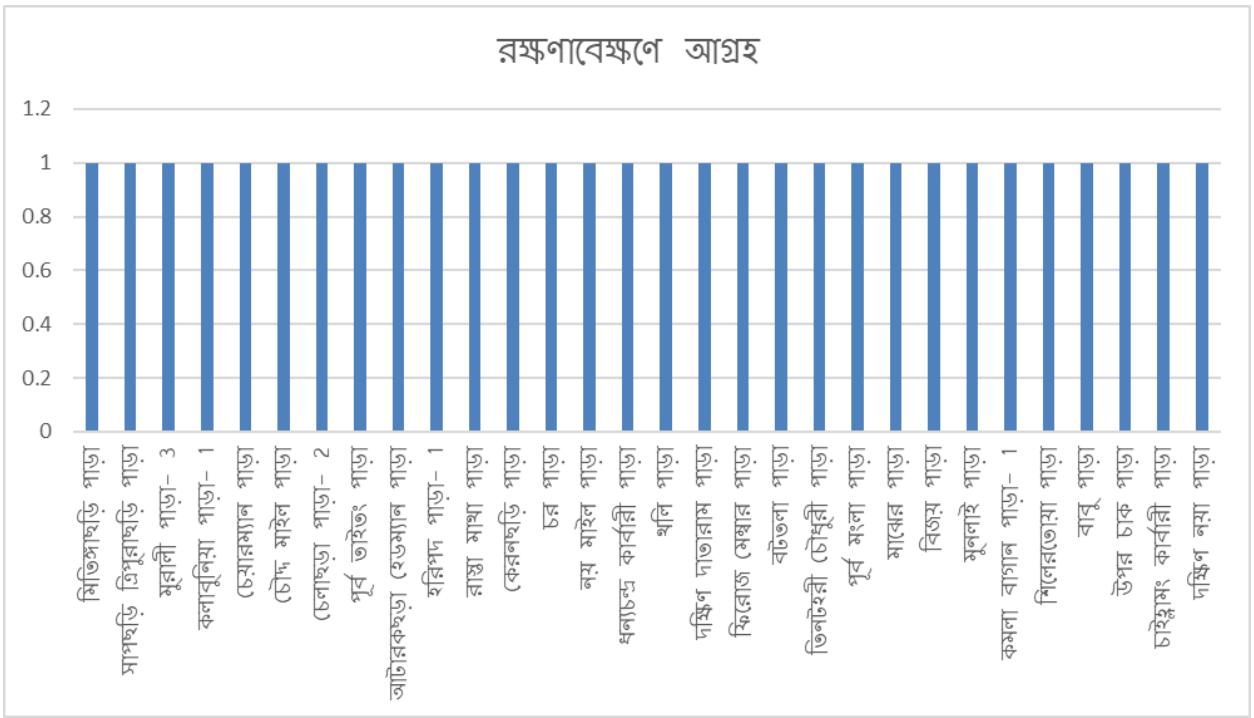
Histogram 1


যন্ত্রাদির সংস্থান
1.2
1
0.8
0.6
0.4
0.2
0
মিতিপাছড়ি পাড়া
সাপছড়ি ত্রিপুরাছড়ি পাড়া
মুরালী পাড়া- 3
কলাবুনিয়া পাড়া- 1
চেয়ারম্যান পাড়া
চৌদ্দ মাইল পাড়া
চেলাছড়া পাড়া- 2
পূর্ব ভাইতং পাড়া
আটারকছড়া হেডম্যান পাড়া
হরিপদ পাড়া- 1
রাস্তা মাথা পাড়া
কেরলছড়ি পাড়া
চর পাড়া
নয় মাইল পাড়া
ধলাচন্দ্র কার্বারী পাড়া
খলি পাড়া
দক্ষিণ দাতারাম পাড়া
ফিরোজ মেম্বার পাড়া
বটতলা পাড়া
তিলটহরী চৌধুরী পাড়া
পূর্ব মংলা পাড়া
মাঝের পাড়া
বিজয় পাড়া
মুলাই পাড়া
কমলা বাগান পাড়া- 1
শিলেরতোয়া পাড়া
বাবু পাড়া
উপর চাক পাড়া
চাইক্লাংং কার্বারী পাড়া
দক্ষিণ নয়া পাড়া

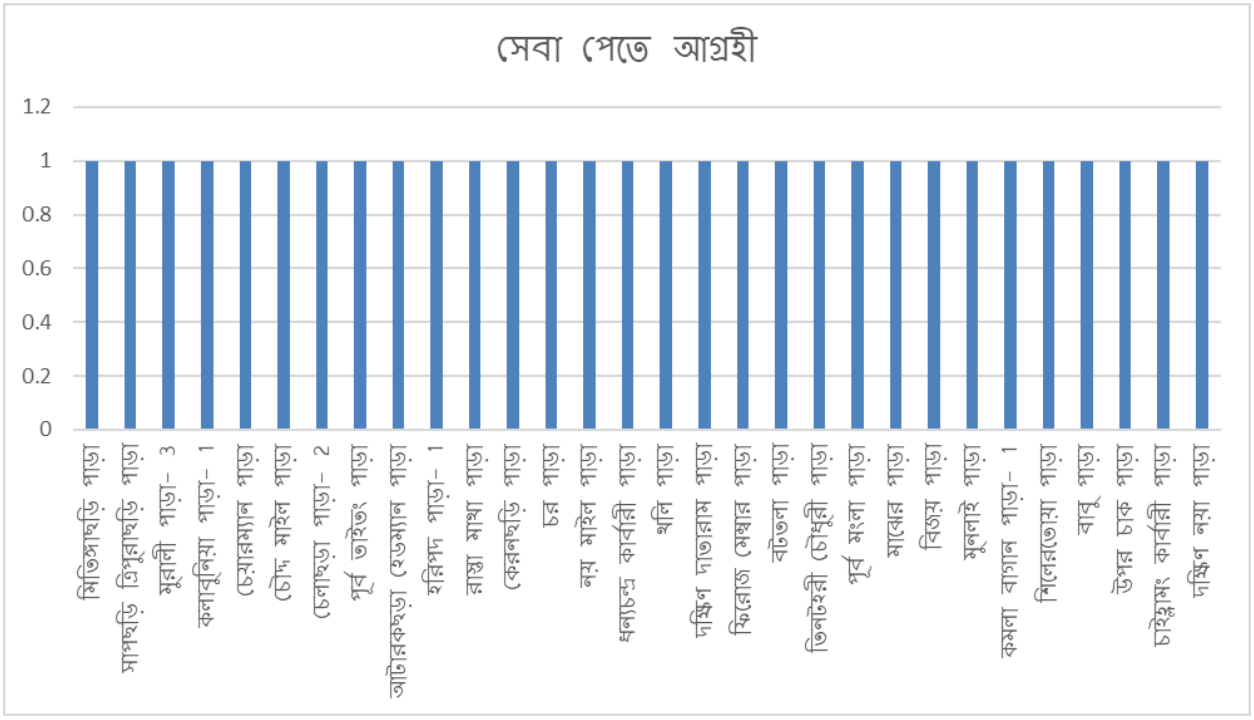
Histogram 2



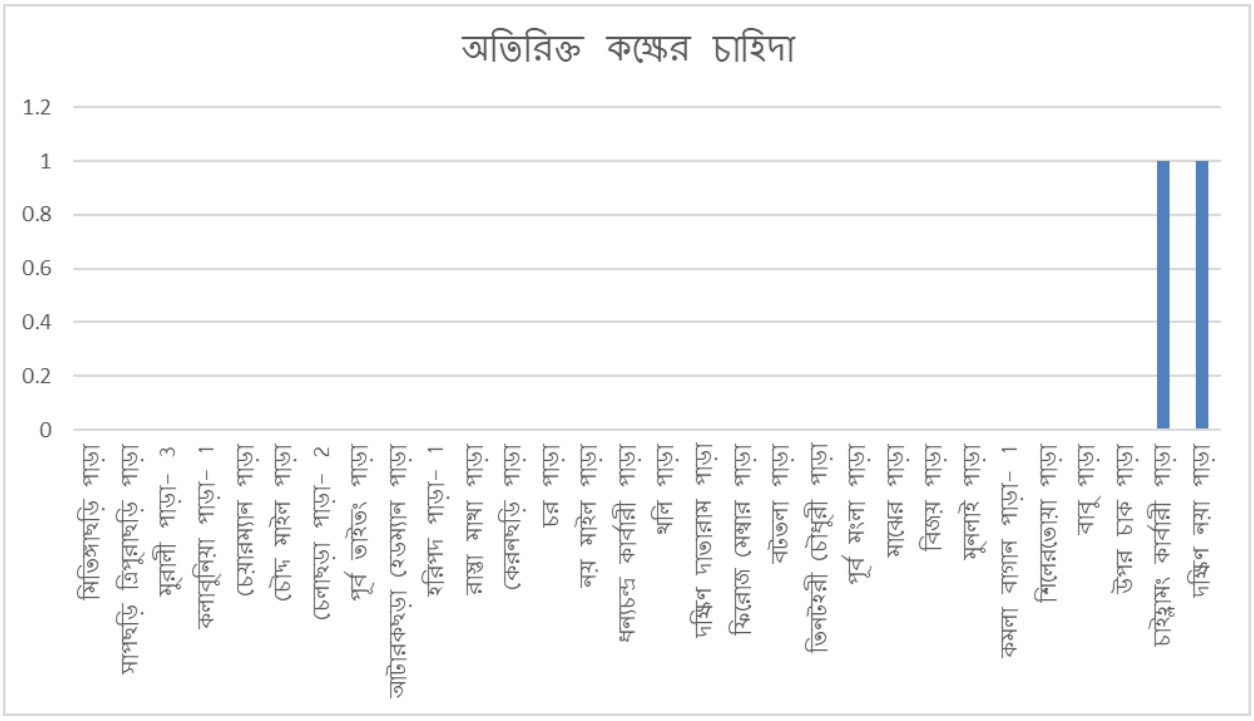
Histogram 3



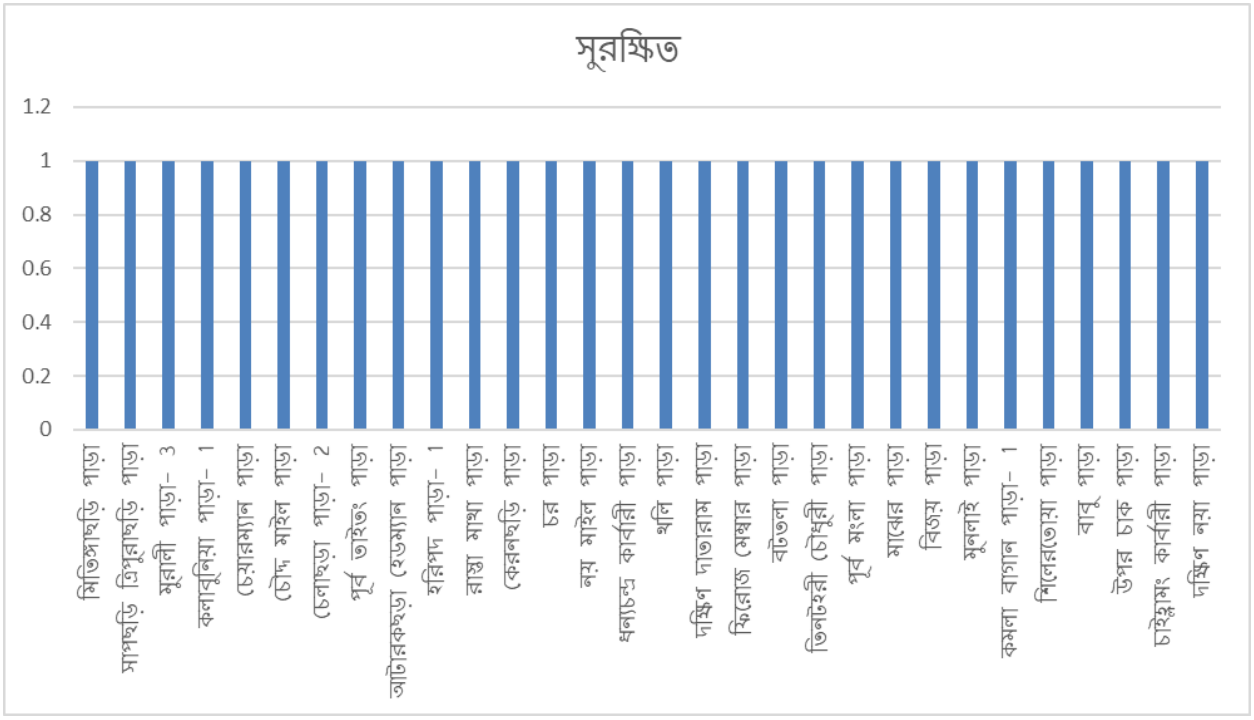
Histogram 4



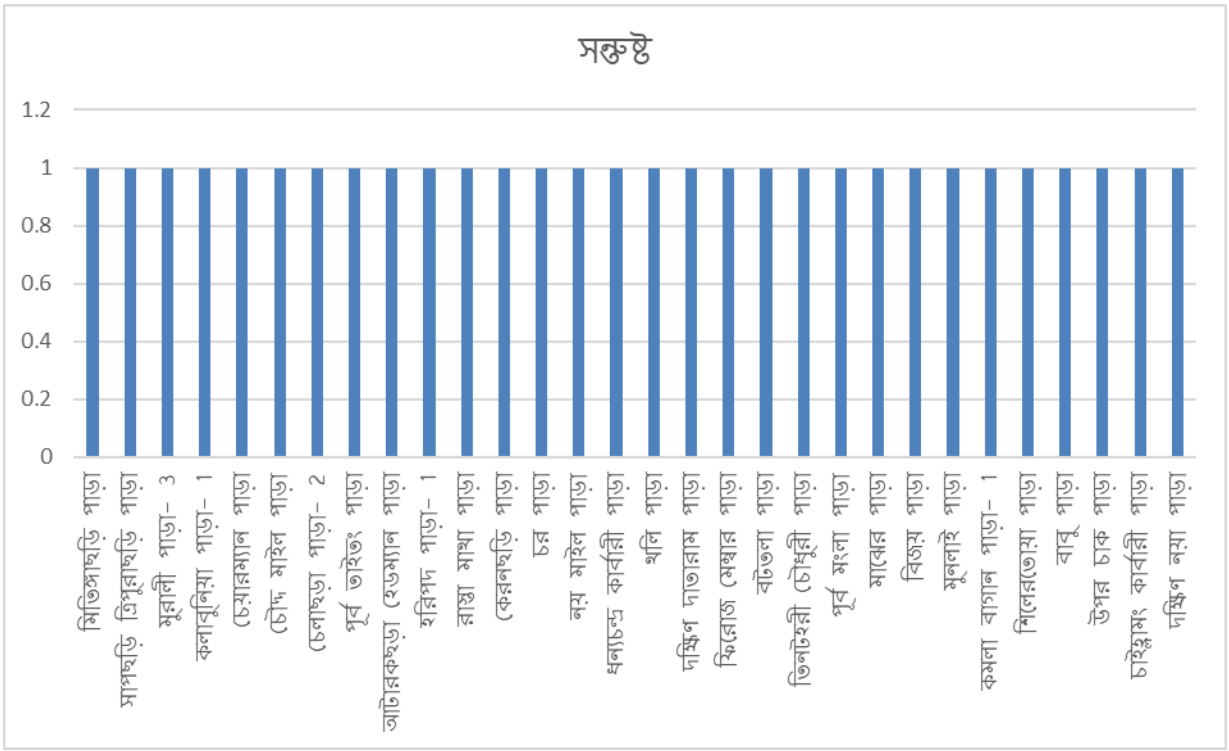
Histogram 5



Histogram 6



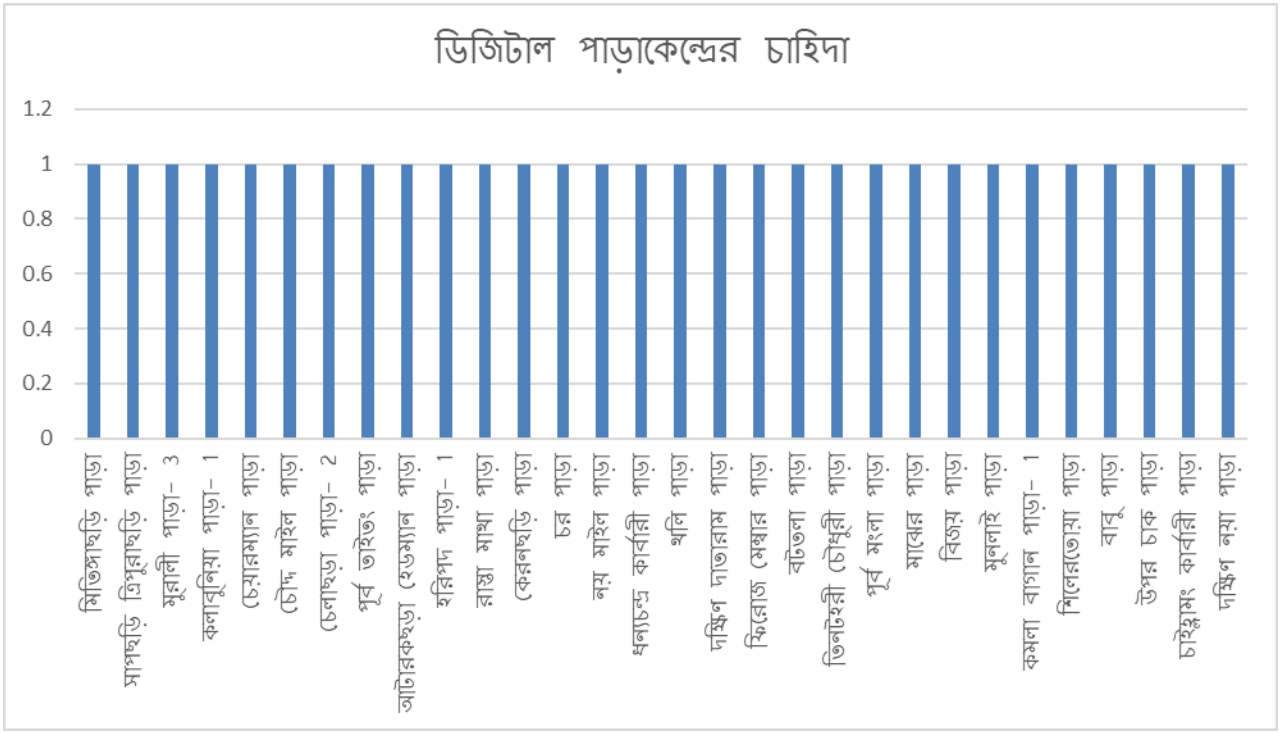
Histogram 7



Histogram 8

টাওয়ারের দুরত্ব (Distance of the tower)	
Mean	4.433333
Median	2.5
Standard Deviation	4.546187

জনসংখ্যা	
Mean	338.0667
Standard Error	25.52744
Median	312
Standard Deviation	139.8196



Histogram 9

Observation and discussion:

The survey questions were designed in manners of a qualitative research. However, in order to test the feasibility of the para centers to be digitalized, a numerical representation was more appropriate. Through histogram, an approximate representation of the distribution of numerical data was shown in the previous section of this report. As mentioned earlier, positive answers for each question was treated as 1 and negative answers were regarded as 0 in order to express the survey results statistically.

We can see a trend in each set of answers as most of the results were a 100% similar.

Recommendation

Conclusion

Annex