ACCESS AWARENESS AND GOVERNANCE

PAPERS FROM THE TECH POLICY FELLOWSHIP

digitally right

ACCESS AWARENESS AND GOVERNANCE

Papers from the Tech Policy Fellowship

digitally right

ACCESS, AWARENESS, AND GOVERNANCE

PAPERS FROM THE TECH POLICY FELLOWSHIP

Editor
Mohammad Ershadul Karim

Author
Manisha Biswas
Umme Salma
Mohammad Pizuar Hossain
Mohammad Tauhidul Islam
Rajib Ahmed

Layout
Saeed Mahmud Sohrab

Publisher
Digitally Right Limited

Published
November 2023

978-984-35-9033-6

FORWARD

With the rapid rise of the internet and the adoption of new technologies in our everyday life, we see different technology-related laws and policies emerge at home and across the world. Digitally Right embarked on the Bangladesh Tech Policy Fellowship 2022, a pioneer project, to enable the young and mid-career professionals in Bangladesh, to understand the trends in tech policies and their role and impact on society. The programme aimed to empower the citizen's voices with the essential skills and knowledge to become an advocate for a free and open digital space.

The fellowship spanned for a period of six months where fellows from diverse backgrounds in academia, law, media, and civic advocacy were engaged in thorough training, and virtual deep-dives and produced research/papers under expert supervision.

In their research, fellows have focused on different areas of concern. For instance, while one of the papers emphasised on today's youth's interaction with the internet and their awareness of the rights and liabilities that come with it, another paper focused on how the Rohingya refugees are utilising the internet and the difficulties they face while doing so. It has also been found that the existing laws in terms of election are not sufficient to deal with the risks stemming from the digital space.

Two of our fellows attempted to assess the impact of the draft Data Protection Bill on internet-driven businesses, which is set to make data localization mandatory. Another time appropriate research flags concerns around Facebook's Bangla content moderation due to the language's ethno-linguistic diversity.

Digitally Right thanks everyone involved who have made this project a successful one. We would like to extend our deepest gratitude to Access Now, the knowledge partner of the fellowship programme, for extending support in training content development, mentoring and resources. We also thank Meta for imparting support and extending expert insights to our fellows.

We are immensely thankful to Victoire Rio, a digital rights advocate and founder of What To Fix and Joanne D'cunha, and Srishti Joshi from Centre for Communication Governance in National Law University Delhi, who have mentored our fellows in their endeavour. We are grateful to our editor, Mohammad Ershadul Karim, Senior Lecturer of Law at University of Malaya, for his efforts in reviewing all the reports and the invaluable suggestions he offered to the fellows.

We hope this publication and the reports by our fellows contribute to the existing knowledge and inform arguments, discussions, and debates for future actions in the tech policy space.

Miraj Ahmed Chowdhury
Founder & Managing Director
Digitally Right

TABLE OF CONTENTS

From Displacement to Connection: Rohingya Refugees' Use of Social Media to Foster Local Integration

Manisha Biswas [I]

[I] Ms. Manisha Biswas is working with BLAST as a Senior Advocacy Officer advocating for child rights, women & Gender-diverse Communities' Right and cyber security. In addition to that Ms. Manisha is currently acting as a communication focal of different coalitions comprised of multiple Civil Society Organization. Prior to joining BLAST, Ms. Biswas served as a "Case Management Supervisor" in the child protection unit during the Rohingya Emergency operation. Moreover, Ms. Biswas possesses a keen research interest and has currently completed a Fellowship on Digital Rights and Minority and also started another Fellowship programme with Tech Global Institute (TGI). She completed her Bachelor's and Master's degrees in Law from the University of Chittagong. Her goal is to explore the horizon of the development sector in Bangladesh and work for the backward section of the society.

ABSTRACT

Based on the experiences of Rohingya refugees in Bangladesh, this article focuses on displaced people's access to the internet, their unique methods of accessing the internet, Internet diet, and how they use it to seek long-term solutions. The article begins with a discussion of the Rohingya refugees' use of diverse digital platforms and Internet access methods. The article will paint a picture of how internet use aids a Rohingya refugee's self-development and social integration. A refugee's formal internet usage would pave the way for them to remain connected to their origins and give them hope for a connection with the rest of the world, according to field research findings. The research proposes hybrid solutions to overcome restrictions faced by the refugee community due to the host government's policies. Additionally, the results demonstrate that refugees are using the internet to search for other solutions to improve their lives, among which local integration is just one. The article discusses policy considerations regarding displacement and digital rights.

Keywords: Digital Adaptation, Local Integration, Internet consumption, Artificial Intelligence, Social Media, Internet Use

1. Introduction

The hallmark of the third industrial revolution, 'Computer', powered by the Internet has been playing an instrumental role in shaping the lives of millions of people from around the world. To Professor Manuel Castells, the "Internet is the decisive technology of the Information Age, as the electrical engine was the vector of technological transformation of the Industrial Age".[1] Due to its virtually limitless potential, the United Nations High Commissioner for Human Rights, Volker Türk, told the Human Rights Council in 2023 that it may be time to reinforce universal access to the Internet as a human right, not just a privilege.[2]

The latest data of the International Telecommunication Union, the most influential international player related to information and communication technologies (ICT) and a spcialised agency of the United Nations, shows that in 2022, 66% of the total global population or two-third of the world's total population i.e. 5.3 billion from 8 billion inhabitants used the Internet.[3] From the data, it can be seen that 73% of the global population aged 10 and above own a mobile phone in 2022. Of all the internet users, over 4.59 billion people used social media in 2022.[4] Even though one individual may use more than one social media platforms, the number is still very impressive as using various types of social media, an user can be hugely benefited, well-informed and better connected.

While the use of social media platforms can offer numerous benefits to an individual

---

1 Manuel Castells, David Gelernter, Juan Vázquez, and Evgeni Morozov. *Change: 19 Key Essays on How Internet is Changing Our Lives*. Turner House Publications, 2014. This book was published in 2014 by the BBVA, a global financial services group founded in 1857. This is the sixth edition of BBVA annual series that attempts to explore the important and contemporary key issues.

2 United Nations Office of the High Commissioner for Human Rights, available at https://www.ohchr.org/en/news/2023/03/it-may-be-time-reinforce-universal-access-internet-human-right-not-just-privilege-high (last accessed on September 23, 2023).

3 International Telecommunication Union, Facts and Figures 22: Missing Digital Development, Telecommunication Development Sector, available at https://www.itu.int/itu-d/reports/statistics/facts-figures-2022/ (last accessed on September 23, 2023).

4 Statista, Number of social media users worldwide from 2017 to 2027 (in billions), available at https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/ (last accessed on September 23, 2023).

human being, the prospects of these cannot be overstated in case of migrants and refugees for whom these can be considered as a small window open through which the wind of their hope for a secured life can reach to them more easily. Bangladesh, the most densely populated country in the world and a south Asian tiny coastal state, has been hosting almost a million Rohingya people, a stateless Indo-Aryan ethnic group originally coming from Rakhine State, Myanmar. When these people started to move to Bangladesh in August 2017, the government of Bangladesh was completed to accept them on humanitarian grounds and since then, supporting them with the help of internal aids and external supports from the development partners. These Rohingya people though theoretically deserve all human rights, including the access to the Internet, the reality is quite complex and complicated due to the involvement of various factors having socio-economic, cultural, and geopolitical consequences.

Internet was introduced in Myanmar in 1990, but the advantage of internet was confined in some wealthy and politically connected society till 2011.[5] Subsequently, the arrival of two international mobile providers Telenor and Ooredoo along with state provider MPT changed the whole statistics. This has contributed to more than 30% of people to have access to the internet.[6] By the year of 2016, 51 million Myanmar residents had access to the internet, which has revolutionized the entire communication landscape in Myanmar.[7] The paradigm of communication wholly shifted to Facebook as till 2017, many Internet users of the country did not consider the Internet to be much more than tools like Facebook.[8] Till 2017, an estimated 1 million people of the Rohingya community used to live in Myanmar.[9] There is hardly any credible information about the actual number of the people of this community having the access to the internet. The popular view is that only the wealthy sector of society could afford smartphones whereas others could use cellular phones and family members used to share one phone among themselves.

After the influx, the Bangladesh Telecommunications Regulatory Commission (BTRC) issued an order in September 2019 to the leading mobile operators in Bangladesh to halt the provision of 3G and 4G mobile Internet service in the region where the Rohingya camps are located due to security concerns and on the ground that mobile access was contributing to an increase in the illegal drug trade. Additionally, there were claims that refugees were obtaining network access using SIM cards obtained from the black market, as the purchase of SIM cards was restricted to Bangladeshi citizens having national identity cards.[10] Nevertheless, after a year of suspension, the Govt. of Bangladesh reconsidered this decision and restored the internet in 2020 with well

---

5 Brad Ridout & Others, 'The impact of social media on young people in conflict-affected regions of Myanmar', Save the Children, p. 3

6 Jenifer Whitten-Woodring & others, 'Poison If You Don't Know How to Use It: Facebook, Democracy, and Human Rights in Myanmar', The International Journal of Press/Politics, p. 1

7 Ronan Lee, "Extreme Speech in Myanmar: The Role of State Media in the Rohingya Forced Migration Crisis", International Journal of Communication 13(2019), pp. 3203–3224.

8 Ibid, p. 6.

9 Ibid, p. 3.

10 Drury, D. and Wilhoit, F. (2022) Data & Connectivity in the Rohingya Refugee Camps, NetHope, available at https://nethope.org/programs/connectivity-and-infrastructure/data-connectivity-in-the-rohingya-refugee-camps/ (Accessed: 07 August 2023).

functioning 3G and 4G networks.[11] Today almost every family has access to internet though which they can have the latest news, communicate with friends and relatives from oversees, use different contents for entertainment purposes.

Several researchers have already attempted to study social media use by the Rohingya refugees in Bangladesh,[12] use of social media by the Rohingya people in the time of the Pandemic,[13] Rohingya refugee representation on social media,[14] and visibility, resistance and transnational identity of social media.[15] In a recently published article, the researchers analysed the findings of a yearlong online ethnographic study with the aim to explore 'how diasporic civic and political e-activisms are transforming the very contours of Rohingya identity formation and their pursuit of recognition'.[16] However, no researcher, to the best of our knowledge, has so far investigated Rohingya people's access to the Internet, methods to access, their online behaviour, and how they use the Internet for the permanent solution to their problem they have been facing for a least the last four decades. Against this backdrop, this research using empirical and field work methodology attempted to explore how the Rohingya people use the internet for self development and social integration and remain connected to their origins and community people living in different corners of the world. In so doing, this research is divided into six parts. Part II shares the findings of the relevant literature reviewed, Part III deals with the methodology used in this study and Part IV discusses the findings of this research. Finally, Part V offers some policy recommendations that the stakeholders can consider in their decision making in this regard.

> Extensive research has been conducted in the context of the Rohingya population, specifically examining the adverse effects caused by the absence of internet connectivity in their camp areas, which hinders the provision of uninterrupted services to them.

2. Literature Review

Digital platforms such as google, facebook and others, require personal information to create an account, which basically directs the audience towards the content that suits such users. Once a user develops a specific

---

11 'Internet, mobile network restored for Rohingya refugees', Anadolu Agency, available at https://www.aa.com.tr/en/asia-pacific/internet-mobile-network-restored-for-rohingya-refugees/1957098 (last accessed on January 28, 2023).

12 Tania Nachrin, "Social media use by the Rohingya refugees in Bangladesh: A uses and gratification approach." *Int'l J. Soc. Sci. Stud.* 8 (2020): 1.

13 Nursyazwani, and Aslam Abd Jalil. "Grateful Politics: Rohingya and Social Media in the Time of the Pandemic." In *New Media in the Margins: Lived Realities and Experiences from the Malaysian Peripheries*, pp. 91-115. Singapore: Springer Nature Singapore, 2023.

14 Shorif Sonia, ""Without internet, we have no existence": Rohingya refugee representation on social media." PhD dissertation, University of British Columbia, 2023.

15 Abdul Aziz, "Rohingya diaspora online: Mapping the spaces of visibility, resistance and transnational identity on social media." *New Media & Society* (2022): 14614448221132241.

16 Anas Ansar and Abu Faisal Md Khaled. "In search of a Rohingya digital diaspora: virtual togetherness, collective identities and political mobilisation." *Humanities and Social Sciences Communications* 10, no. 1 (2023): 1-13.

habit on such content, he/she will be more exposed to those specific contents.[17] Since most of the Rohingyas get their first smartphone in Bangladesh and use the Bangladeshi SIM cards, it is very natural that they need to create their social media account with Bangladeshi phone numbers and use the account using Bangladeshi location. Additionally, living right next to host community and getting easy entry to village helps the Rohingyas to be friends with Bangladeshi National in person and via internet. As the digital platforms use advanced AI technologies to regulate every searches, likes, comment and views of users, it also provides content in line with the online behavioral pattern of users. This whole process is, both directly and indirectly, paving the way for digital integration. A very common example can be shared regarding this change of dress pattern of the Rohingya youth. It is evident that they have started to consider jeans, t-shirts and shirts instead of their traditional lungi and shirt in their day-to-day life.

Every displaced person in the world does aspire to go back to their mother land, if not, then at least, to live a secure life. Rohingya people are not an exception. Unfortunately, as the years are adding numbers, their hopes are also fading way. In this scenario they have two options left i.e. third country settlement and local integration. Given the risk in illegal third country settlement, anyone would choose informal local integration to live with recognition. The survivors who had experienced the persecution at an early age, are opting for this kind of durable solution. Additionally, a growing sense of belonging in Bangladesh among the youth leading them to adapt in new culture.

The social, ethnic, linguistic, and religious characteristics that the Rohingya share with the host population, particularly their shared adherence to Islam, contribute to their presence and overall, to the informal integration in Bangladesh. As a result, social media platforms are vastly used for sharing common and love interests which even leading to inter-marriage in these two communities, meeting new friends and so on. A closer look will explain that such marriage and adapting the behavior of a new environment are the informal approach to be accepted and acknowledged by others.

Time to time refugee express their urge in need of affordable and available connectivity to the world. Research carried out by UNHCR shows that, refugees view connectivity as a vital survival tool, frequently placing it above education, clothing, and health care.[18] According to Save the Children research conducted in the camps, 50% of refugee families have access to a smartphone and would thus be able to obtain information in this manner.[19] But due to restrictions and confinement situation in the majority of refugee camp settlements in Cox's Bazar, mobile Internet and calling access is highly unreliable or poor, with inconsistent data coverage and poor voice quality.[20] Bending the system with the urge of connecting to the mainstreaming world, these forcibly displaced Myanmar citizens are using SIM cards from two or three operators in Myanmar and Bangladesh,

---

17 See, generally, Kaplan, Andreas M., and Michael Haenlein. "Users of the world, unite! The challenges and opportunities of Social Media." *Business Horizons, vol.* 53, no. 1 (2010): 59-68.

18 Grandi, F. (2018) Internet and mobile connectivity for refugees – leaving no one behind, UNHCR Innovation, available at: https://www.unhcr.org/innovation/internet-mobile-connectivity-refugees-leaving-no-one-behind/ (last accessed on August 7, 2023).

19 Drury, D. and Wilhoit, F., "Data and Connectivity in the Rohingya Refugee Camps", (2022), NetHope, available at: https://nethope.org/programs/connectivity-and-infrastructure/data-connectivity-in-the-rohingya-refugee-camps/ (last accessed on August 7, 2023).

20 *Ibid,* p. 2.

which they obtained by registering illegally as locals.[21] As protracted refugees, they are, apparently, deprived of any sorts of formal education, employment, movement and access to justice which lead them to choose coping mechanisms with their surroundings letting the local integration be one of them.

Extensive research has been conducted in the context of the Rohingya population, specifically examining the adverse effects caused by the absence of internet connectivity in their camp areas, which hinders the provision of uninterrupted services to them. Various international non-governmental organisations (INGOs), non-governmental organisations (NGOs), and the United Nations (UN) have recognised this issue and have been actively working towards addressing it by devising strategies to resolve the problem. In this study, the author attempts to establish a correlation between digital accessibility and the process of local integration in Roingya refugee context.

2. Research Questions

This research has attempted to explore answers to the following research questions:

1. What is the nature of internet diet of Rohingya community as an attempt to fit in with host community?
2. Would the Rohingya community be opted for the local integration?
3. What is the co-relation between digital and local integration?
4. How AI contributes to the journey of adaptation in new environment?

3. Methodology

To attain the object of this research and find out the answer to the research question, ethnographic research in different camps was conducted. Key informant interview was chosen as an approach, as it was anticipated that this would help to extract the thought and largely the behavioral patterns of Rohingya people. As the study aimed to focus on the thoughts, behavioral patterns of young users, it selected 15 key informants between 18-32 ages, who have been working as volunteer, teacher and support staff in different NGO. The interviews considered scripted questionnaires to guide the interviewee within the theme of the research questions and the qustionaire was followed to maintain the flow of a natural conversation. However, to maintain the flow of discussion, and to explore even further, the study took a different approaches when desired. To ensure the privacy and comfort of the respondents, to the social media profiles of the respondents were not verified.

Furthermore, the daily activities and behaviours of the Rohingya community were closely observed and interactions with

> "Since I began learning freelancing in late 2022, I needed an uninterrupted internet connection. There are specific areas in the Camp area, e.g. at the top of hills where I can have such a smooth connection. After much deliberation, my friend and I decided to rent a room from a nearby host community with 24/7 WIFI facility. I can now spend the entire day on the internet without any concern and invest my time to learning." (man- Camp 10)

[21] Staff Correspondent, "Refugee camps: Teletalk Sims for Rohingya families likely", The Daily Star, available at https://www.thedailystar.net/rohingya-influx/news/refugee-camps-teletalk-sims-rohingya-families-likely-3305901 (last accessed on August 9, 2023).

every stratum of the community were made on a daily basis to get an entirely different perspective over the research topic and very thorough insights about the research question as reflected in the discussion.

3. Limitations of the Study

There are some limitations to this research. The research sample provides only a limited view of how people interact with mobile phones and the role these devices play in social settings. Thus, the findings of this research do not represent all types of digital users living in the Rohingya camp as a whole. Instead, it has attempted to provide fresh insights into the digital-social dynamics within this confined area. Due to the nature of the KII and time constraints, it was not possible, to some extent, to establish a high level of trust between the researcher and the respondents. To ensure the privacy and comfort of the respondents, to the social media profiles of the respondents were not verified also.

4. Findings

4.1 Mode of Accessing Internet in Camp

The use of SIM card in Bangladesh requires biometric registration by a citizen of Bangladesh. Thus, a Rohingya refugee, not a citizen of Bangladesh cannot purchase a SIM card legally.[22] It, nevertheless, is not a secret that the Rohingya refugees have access to smartphones and the Internet. Therefore, this study aimed to understand how a Rohingya manages to access to the internet and revealed the following-

1. The local mobile shops, SIM distributer even the local people sell SIM Cards to one Bangladeshi with one biometric thumb impression, but the seller would take 10-15 thumb impression at a time. So, what they do is, with this extra thumb impression and one National Identity (NID) Card they could issue 10-15 SIM Cards at a time. Refugees would be charged five times as much for this extra SIM Card as it actually cost. One respondent shared his experience in the following manner-

   "I bought my Teletok SIM from a local for 300 taka in late 2019. This kind of SIM has different range of price according to its utilization. For example, SIM with an active bKash account are the most expensive, you have to cost minimum 800-1000 taka for that" (man- Camp 9)

2. Most aspiring youth are now opted to take rented house near the camp area with Wi-Fi access so that their online work is not disrupted. Some of them have laptop or smartphone for their internet-based works. One respondent shared the following-

   "Since I began learning freelancing in late 2022, I have frequently required an uninterrupted internet connection. There are specific areas in the Camp area where I can have such a smooth connection that they are at the top of hills. After much deliberation, my friend and I decided to rent a room from a nearby host community with 24/7 WIFI facility. I can now spend the entire day on the internet without concern and invest my time to learning." (man-Camp 10)

3. Another intriguing scenario is that some host community families are providing internet access to youth, particularly adolescents and children, and this family has 20-25 smartphones readily accessible for rental on an hourly basis.

While the family members can have a cellular phone with restrictions, the situation, however, is quite the opposite when it comes to women and girls. A

[22] *Ibid*, 14.

very nominal number of married women have the access to the internet. They only communicate with their husband or son who lives abroad.

After the ban on the use of the internet was withdrawn by the Bangladeshi government in 2020, the availability of smartphones and internet connections progressively altered the Rohingya community's way of life. This study using in-depth interviews with informants found that most respondents are smartphone novices and they have been growing knowledge about the functionality, features and configuration of this device by using it.

4.2 Social Media Usage among Rohingya Refugees

The study investigated the most useful social media platform. Since no one can have a stable internet connection while at camp, the study also looked more deeply into the underlying social variables that influence people's decisions about what to put in their phones and how to use the information. Besides, the research also investigates the information sharing patterns, the manner to minimize internet problems, and social perception that revolves around the usage of internet. It was found that they frequently visit local computer stores to download news reports, amusing videos, songs, and movies to avoid internet problems and to enjoy them later at their convenience.

4.2.1 Popular Applications

Facebook and Messenger were found to be the most widely used social media platforms among Rohingya communities. Facebook is popular as provides a variety of content and it enables users to use Messenger without paying for data.

Imo is the next most popular social media platform. I It was found that in addition to communicating with loved ones, they use it to share material like photos, videos, reels, etc. Youtube has a major attraction among the Rohingya community since it provides informational content, diverse blogging, and videos. Given the unreliable internet connection, the informant stated that they utilize the YouTube download feature and many downloading programs, such as **Videmate, Snatube**, **Xender, Sharit** and **Tubemate**, to reduce their internet reliance.

The use of popular social based on age distribution is projected below-

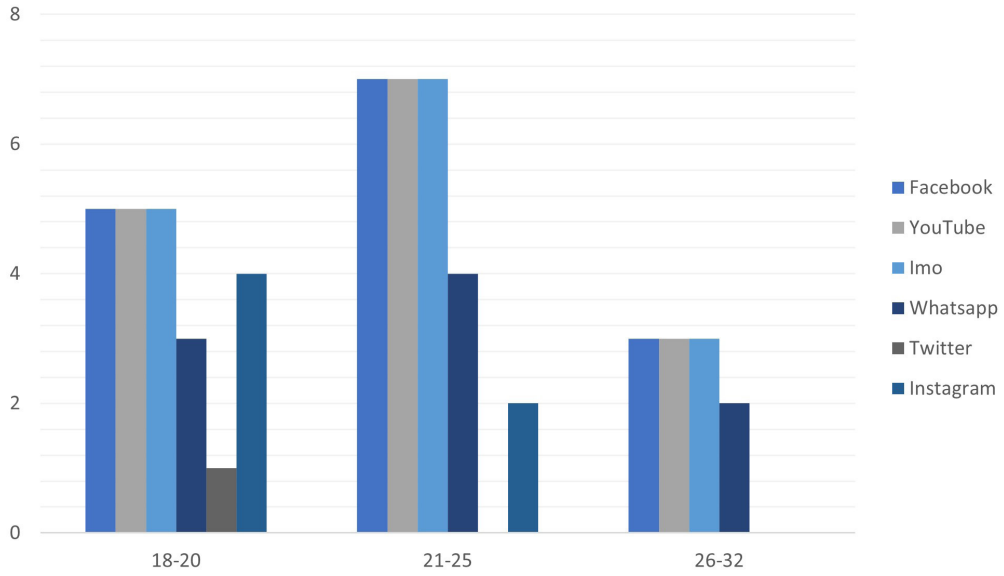


Figure 1: Age based social media usage

It can be seen from the above chart that all the respondents representing the age groups of 18-20, 21-25 and 26-32 years use Facebook, Youtube, IMO and WhatsApp. However, twitter is only used by the respondent representing the age group of 18-20, and they also use Instagram with the representatives of 21-25 age group. In addition to these, various other apps are used for other purposes and are becoming popular. Some of these are shared below-

- The younger generation's affinity for the app **TikTok** is growing at an impressive rate. Its straightforward functionality and more user-friendly features make it popular with them. Interestingly, they are not just passive consumers or audience of this app, they participate and make a plethora of reels on this platform as well. One respondent shared-

  "*I had one million viewers on TikTok, when I was regularly posting reels there. But my profile was banned recently for some reason.*" (Nur Sadek, Camp 9)

- Recently, online sports betting services like **1xBet** became well-known in the camp area due to the popularity of football and the opportunity to make money from it. Viewing games while placing bets on the team of choice has emerged as a new form of enjoyment, particularly for male users. There are rumors that you can earn up to 50,000 takas by using this platform, which makes people more interested in it.

- Apps like **Snapchat, Kinemaster** and **CapCut** offer some tempting capabilities that youthful users use for the purpose of video editing and taking aesthetically pleasing pictures. They frequently experiment with the many functions of the programme, including uploading shots and trying out new features. As stated by the informants, this serves as both a source of enjoyment for them and an effort on their part to become famous among their friends and family.

- Apps like **Free Fire**, **PUBG**, **Dream League**, and **Dream League Soccer** are also extremely popular gaming platforms. Some offline brain-teasing games, such as **Candy Crash**, **Carrom Board**, and **Ludu** are especially popular among women.

4.2.2 Data Cost

The availability of the network and authorization to leave the camp are the two main factors that affect how much data the community's residents could use. The functional internet connection in camps is reportedly provided by Robi and Grameenphone SIM. But outside of the camp, in the village and local bazaar, every SIM has a reliable internet connection. Nonetheless, those who reside at the summit of hills have better internet connections than the general population. They would then have to climb to the hill's summit in order to communicate during any emergency. For a male user, this is an ordinary matter, but a female user cannot do the same because they frequently have restrictions on leaving the house. One respondent shared the following-

"*Grameenphone has a superior internet network in Camp-9 than the other operators. But if we go for a walk and go to the market, Robi Sim functions perfectly. When you cross the police checkpoint and work your way towards the camp, the internet becomes slower*." (Volunteer, Camp-9)

The informants use mobile data on a daily, weekly, and monthly basis at their convenience. Due to the fact that the majority of informants are volunteers for various organizations, they could manage the data costs with their stipends. However, they believe that broadband is the most practical choice for them as it causes less buffering.

4.2.3 Social Media Platform as a Today's Teacher

The children and adolescents in the camp area receive the fundamental and basic education provided by the education sector. Nonetheless, most of the teens are dissatisfied with the schooling system in the camp area. They are worried that it will have a negative impact on their future generation because many of them hope to find better jobs and opportunities in the camp area. They believe that the activities and lessons that are delivered at the camp are more suited to children who are between the ages of five and ten, which basically corresponds to primary education.[23] In today's world, this educational void is increasingly being filled by the internet. They have recognized that they can use their mobile phones for higher studies e.g. learning about the solar system and develop their vocational skills like learning different designs of sewing, embroidery works and D.I.Y home decoration through YouTube.

Multiple informants noted that, while working as volunteers, particularly during Covid, when they were on the ground supporting the beneficiaries around-the-clock, they frequently received instructions and directives in English from the management. At that time, they managed to learn to use Google Translate to comprehend the true intent of the messages. Using this app, they even learn how to respond to messages. Apart from that some of them have learned how to fix their mobile by watching YouTube tutorials.

4.2.4 Self-Education

Young smart phone users maintain a constant interest in learning more about their own language, culture, and history. Besides, to adapt to the modern way of life, they subscribe to a variety of channels and pages on both Facebook and YouTube. According to the informant, the internet is a worthy medium for users of all ages since it provides access to knowledge, allows for self-directed learning that contributes to cognitive development, and helps users to polish their professional skills.

It was forbidden for members of the Rohingya population in Myanmar to study their native language. The educational institute placed an exclusive emphasis on the Burmese, Rakhain, and English languages, all of which are typically challenging for a Rohingya pupil to even comprehend. Teachers were not allowed to teach Rohingya history, culture, or language in schools, and they were even forbidden from using the term "Rohingya" in their classes.

> "Since the Bangladesh government stands in no position to promote the idea of integrating Rohingya refugees locally due to the country's high population density and financial constraints in supporting its own citizens, Rohingya community finding their way out to have a secure and peaceful life."

The circumstances, however, have managed to evolve. In camp area, apart from Burmese and English language, Rohingya dialect is also being taught and always being encouraged to study. Hence, to have in-depth knowledge about its practical utilization, young learners subscribe

[23] Tan, "Rohingyas face challenges to obtain higher education", RohingyaKhobor by Rohingya Journalist, < https://rohingyakhobor.com/rohingyas-face-challenges-to-obtain-higher-education/>, accessed 30th March 30, 2023.

to different YouTube channels and use WhatsApp. One respondent expressed the situation in the following way-

"In Myanmar, we cannot learn the Rohingya Language. We had no knowledge about the writing of Rohingya Language. But now using WhatsApp, I can learn the written version easily. Now I can both write and read Rohingya Language." (Camp-9, Young Mobile User)

4.2.5 Entertainment

Apart from communicating with people, and creating own network, entrainment is one of main reasons to buy a smart-phone. In that case both video and audio content have similar appeal in terms of consuming. The informants shared that they watch content from various languages -Bangla, Hindi and English.

- Humorous content will make it to the top of the list in terms of popularity. Video content from YouTube channel named **'CSC Music'** is reported to be the most viewed channel among the Rohingya community. According to them, characters named *Gura Miah, Leda Miah, Shona Miah* mostly reflect the camp culture in humorous manner. There are other channels such as **Omor on Fire**, **Free Motion** with similar contents which are appreciated by the young users.
- *Honla,* a type of traditional wedding song, is very well known among them. Local artists like Bulbul Akter and Astofa have significant fan-base from the rohingya community. Bangladeshi mainstream songs from artists like **Gogon Shakib** and **Imran Mahmudul** are also very popular among the male and female smart-phone users.

5. Refugee Integration Process: Where the Rohingya Refugees Stand

In multi-dimensional approach of integration, integration can be done either by *one-way* or *two-way* process.[24] While the former method only places the burden of assimilating into the host community on the refugee community, the latter strategy discusses the participation of both the host and refugee communities in the adaptation process.[25] These strategies, nevertheless, require direct involvement of government to enact policies and to develop a welcoming attitude towards the refugee at large, so that the massage could be disseminated to the host community who has a large role to play in this scenario.

25th October of 2022 marked the 5th anniversary of brutality of Myanmar military which led to the Rohingya people to be "Forcibly Displaced Myanmar Nationals (FDMNs)". In 2004, UNHCR identified this circumstance and referred to these refugees as "Protracted Refugees", where 25,000 or more people have been in exile for five or more years in developing countries with no immediate prospect of durable solution.[26] In such circumstances, refugees do not know about the future. Hopelessness and misery erode their sense of self-worth, while the interminability of the situation reduces the desire of donor nations to give sufficient goods and services to meet the refugees' fundamental requirements. The recent cut of food aid, from 10 USD per person from 12 USD will lead to greater food insecurity

---

24 Amanda Alencar (2017): Refugee integration and social media: a local and experiential perspective, Information, Communication & Society, DOI:10.1080/1369118X.2017.1340500, http://dx.doi.org/10.1080/1369118X.2017.1340500

25 Ibid.12

26 Executive Committee of the High Commissioner's Programme, "Protracted Refugee Situation", EC/54/SC/CRP.14, 10 June 2004,< https://www.unhcr.org/excom/standcom/40c982172/protracted-refugee-situations.html>, Accessed April 1, 2023.

and malnutrition for Rohingya Refugee community, and from this, one may get the hint about the deterioration of the crisis in the future.[27]. Since the Bangladesh government stands in no position to promote the idea of integrating Rohingya refugees locally due to the country's high population density and financial constraints in supporting its own citizens, Rohingya community finding their way out to have a secure and peaceful life. Since the two communities share similar social, ethnic, linguistic, and religious standards and principles, instead of facing government restrictions, the Rohingya community's members are finding their own paths to integration through intermarriage, illegally possessing land from their hosts, illegally obtaining Bangladeshi NID Cards, and engaging in informal employment. The presence of relatives from the host community in the Rohingya families is another noteworthy characteristic that contributes to their integration into this society.

There is a shop in camp-10 with mobile banking facilities like Bkash and Nagad. Upon further inquiry, it was discovered that the SIM was registered to a relative of the shop owner, his brother in-law, who appears to be a citizen of Bangladesh and holds a NID card. Based on this scenario the following diagram could be an explanation of such informal integration.

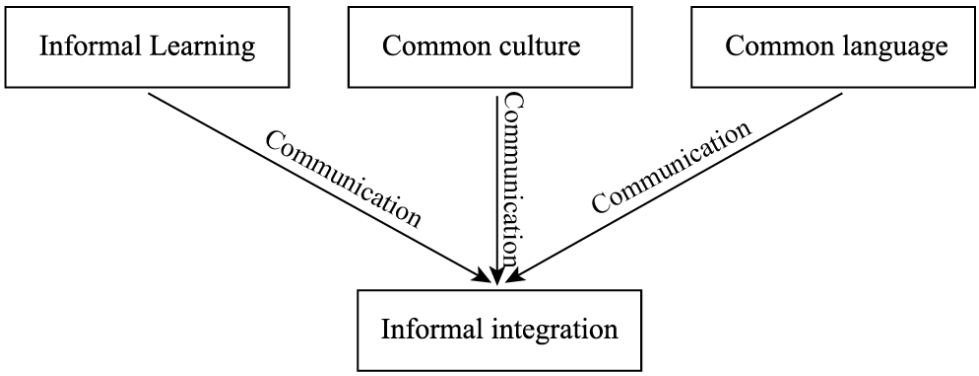


Figure 2: Factors to contribute to informal integration.

5.1 Social Media and Integration Process

Changes in interpersonal contact and interaction, the trade of commodities, services, and information, and the mobility of people from host to camp have all been looked at as part of emerging information and communication technologies.[28] The recent rise of social media platforms such as Facebook, Twitter, Instagram, Whatsapp, and TikTok etc. is also responsible for changing the face of social interaction. This change through social media is playing a vital role for migrants since they were born and raised in one country and are now finding their living in another. Connecting via social media, making friends on this platform, and interacting with them on a daily basis, as well as developing one's own personal network, promotes a strong sense of kinship across long distances. This phenomenon has introduced us

[27] "Cutting UN aid will spell disaster for Rohingya refugees", The Daily Star, Published at 18 February, 2023, < https://www.thedailystar.net/opinion/editorial/news/cutting-un-aid-will-spell-disaster-rohingya-refugees-3251196>, Accessed April 1, 2023.

[28] Lee Komito, "Social Media and Migration: Virtual Community 2.0", JOURNAL OF THE AMERICAN SOCIETY FOR INFORMATION SCIENCE AND TECHNOLOGY, Page-1075-1086, DOI: 10.1002/asi.21517

with phrases like "annihilation of space" and "death of distance", where it clearly denotes that distance is no longer a barrier for the communication and a new avenue for communication has opened up.

5.2 Making Friends

From the standpoint of Rohingya refugees, communication technology opens-up a new gateway to make friends from host community and all over the world at large. Most of the respondents revealed that, especially on Facebook, they randomly make friends by pressing the 'Add Friend' button. If the communication goes well then, they eventually get connected in the other social media platform as well. One respondent shared-

"We do have friend from all over Bangladesh. We have friends from Chittagong, Barisal, Dhaka, Teknaf. We send friend requests from the suggestion on Facebook. After having few chats with them, we do get along."

When question was asked if they tried to meet those social media friends in person, most of the male respondents responded positively. To be more specific, they met their virtual acquaintance from Teknaf, Kutupalong, and Chokoria personally. Two respondents mentioned-

"*Once I visited Chittagong and asked a Facebook friend from Barisal to meet me there. Since Barisal is far from Chittagong, he could not make it."*

"I met a few of my Facebook friends in person, they are all from Teknaf who has more than one million followers on TikTok."

5.3. Love Interest from Social Media

Since social media is widely and largely used for online dating around the world, the study investigated what young social media users think about it or how they use various features. Respondents, particularly the women, were found to be worried about the dangers of online dating. They knew that often, people misrepresent themselves and use manipulative tactics to entice women into a relationship. They may request intimate texts, images, and videos under false pretenses; and in many cases, they use this information to blackmail the women. As a result, the families of some women might decide to leave the camp and resettle in another location, such as Bhashanchar. One respondent mentioned-

"Since we do not know all the technicalities about the platforms and we do not have any safe access to the internet, sometime people try to blackmail us with video clips, photo and through chats. There are incidents where this kind of clip went viral on Youtube and Facebook, and the family had to leave the camp and shift to another camp to avoid the perpetrator." (Female volunteers, Camp-4)

However, the scenario is quite the opposite for male users. Men often converse with female social media users merely to pass the time. They converse with foreign women in addition to the local ones so they may flaunt about it to their friend network. Two respondents stated-

"In camp scenario, there are nothing much to do for an adolescent boy or even men. To pass their free time, they talk to women randomly online. Sometimes they don't even know whether it's a fake account or not. So, social media is used as dating app, but I would say it's merely for time pass and fun, nothing serious." (Volunteer, Camp-10)

"We do not have any relationship from Bengali locals, as they don't talk to us that much. But there are foreign girls who talk to us quite often and even propose to us." (FGD)

Social media provides a significant opportunity to connect with new people from various cultures having similar interests. Despite geographical and other restrictions, this medium also gives users

the chance to meet a romantic partner. While a refugee camp was constructed with serious movement restrictions imposing instructions on how to live, the refugees, especially the younger ones, get a sense of freedom at the tip of their finger owing to the internet with less restrictions; and this, to some extent, gives them a sense that they are more powerful in their own virtual world.

5.4 Inter-marriage between host and refugee community

Language, lexical expression, and other factors of effective social media involvement have been proven to influence the formation of community bonds and relationships, that can significantly impact on the behavioral pattern of a locality with multiple ethnicities.[29]

to explore the actual scenario regarding this hypothesis. Though the respondents were aware that the people might develop inter-community relationship and end up in marriage as well they did not see the social media had any significant role to play in their case. But they went on discussing that social media platforms such as WhatsApp, Imo, Messenger, etc. have contributed significantly to illegal third country settlement. These platforms help to communicate with brokers who could arrange everything for them. Nonetheless, when the respondents were asked if they came across any event like inter-marriage between these two communities, they responded in the following manner-

"There are examples- individuals from the camp got married to Bengali Nationals and left the camp. But it is very rare that any

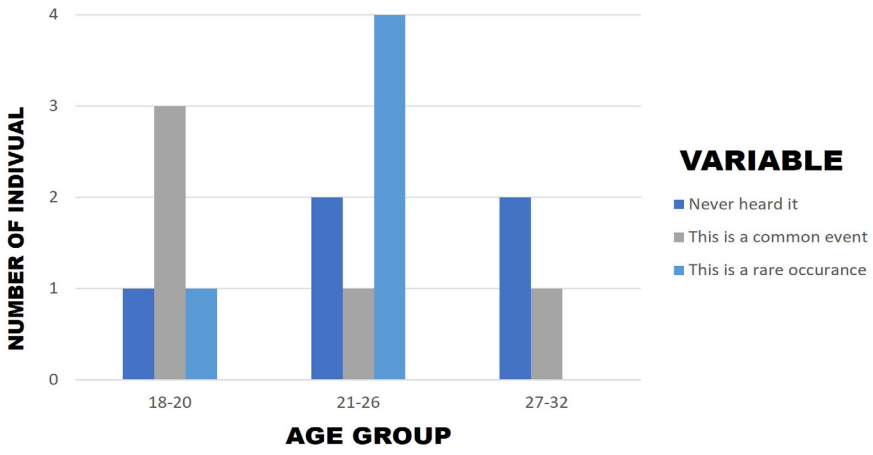


Figure 3: Response about inter-marriage

Since there are rarely any barrier regarding language, societal norms, and culture between host and Rohingya refugee community,

these factors have the potential to facilitate the connection between them which could potentially lead to inter-marriage between these communities. The study wanted

Bengali nationals left his/her country and living in camp with their partner. Rohingya people, especially women, have got married to Bengali nationals for the security and an identity." (FGD)

"There are women who left the camp marring Bengali people and have been living in cox's bazar". (Female Volunteer)

[29] Kizgin, H., Jamal, A., Dey, B.L. et al. *The Impact of Social Media on Consumers' Acculturation and Purchase Intentions*. Inf Syst Front 20, 503–514 (2018). https://doi.org/10.1007/s10796-017-9817-4

5.5 Learning Bangla

A 2017 study conducted by Translator without Boundaries (TWB) revealed something interesting. Rohingya people believe that the language spoken by the people of Chittagong, (popularly known as ***Chittagonian***) and the language of Rohingya were 70% linguistically similar.[30]Whereas, Chittagonian speakers considered that the Cox's Bazar dialect of Chittagonian and Rohingya had a 90% similarity.[31] However, since Bangla is commonly used by every NGO and INGO aid workers, and outside the camp all the signboard and direction are mostly written in Bangla, the study found that the young Rohingyas enthusiastic to learn Bangla.

In the camp area, there is a strict restriction that Bangla could be used as a medium of communication or learning since it has an obvious consequence regarding integration. When question was asked about learning Bangla, the respondents had very interesting following responses-

"Sometime when we visit any places outside of camp, we often find it difficult to know where we exactly are. We even often get lost in places." (FGD)

> Rohingya Refugees mostly discuss issues such as genocide and ethnic cleansing, daily updates of Rohingya camp and most importantly the scope of Rohingya voluntary repatriation on the internet. Various online news portals, websites and YouTube Channel have been created to facilitate this.

"If there is a doctor who cannot understand the Rohingya properly, it gets difficult for us to make them understand about the symptom of diseases." (FGD)

The respondents expressed their intentions and willingness to learn Bangla to make their life a bit easier. They also stated that learning Bangla could be a way to blend in with the mainstream community to avail different facilities from the locality. When question was asked if they know anyone trying to learn and read Bangla via the internet, they shared mixed responses. One respondent shared-

"Learning Bangla from internet seems quite tough to us, since it's a new language with different grammar. I think people who want to have permanent dwelling here and want to earn their living in a better way, are trying to learn Bangla as it may open new opportunities." (Volunteer, Camp-8W)

It was further revealed that the Rohingya refugees who are looking for the opportunity to obtain illegal NID Cards, get married with the Bangladeshi citizens, get access to the informal employment sector or avoid the police check have the tendency to learn Bangla. As there are various challenges in learning a new language and its use, they often try to learn the language by listening to others during interaction and taking tutorials from the locals. Besides, Rohingyas tend to have several friends and family member living in Bangladesh, who also assist them to learn the language.

6. The Role of Digital Technology on Rohingya Refugee

With digital technology, the Rohingya refugees have come a long way in terms of schooling, communication with the media, making money, etc. Additionally,

30 Khan, M. (2018) Chatgaya vs. Rohingya, The Daily Star. < https://www.thedailystar.net/star-weekend/news/chatgaya-vs-rohingya-1630219> (Accessed: April 8, 2023).

31 Ibid. 18

the Rohingya community has been able to connect across distances as they share similar challenges and same aspirations. Rohingya from across the world are using various internet based platforms to be vocal about their rights and their situation. As a result, a portion of Rohingya diaspora is actively bringing attention to their predicament which has provided a fresh opportunity to develop the collective Rohingya identity that, in the face of long-standing marginalisation, statelessness, and geographically dispersed settlement, would otherwise remain suppressed.[32] Rohingya Refugees mostly discuss issues such as genocide and ethnic cleansing, daily updates of Rohingya camp and most importantly the scope of Rohingya voluntary repatriation on the internet. . Various online news portals, websites and YouTube Channel have been created to facilitate this. For instance, Rohingya Vision, the first Rohingya satellite news station, has more than 240,000 Facebook fans and often posts political updates about the struggles that Muslim communities face around the world.[33]

While these news websites help to shape the opinions of Rohingya Refugees, they also, to some extent, describe terror towards the country which they were compelled to abandon. Moreover, lack of opportunity in the host country, various restrictions, and a constant dependency on NGO & INGO's Aid leaves the Rohingya refugees in complete darkness. To get rid of this, a recent trend is being noticed i.e. the adolescents boy, between age 15-18, have been leaving the camp to get involved as day-labour and some others are making perilous journeys across the sea for a better life. But the other side of the coin is that a very few youths are striving to get admission in higher studies in country like Turkey, Kuwait etc.[34] Posts from Facebook, Website circulation and assistance of various NGO has made it happen. One respondent stated that-

"Me and my friend regularly check university's scholarship programme and their requirements available online. We also talked to some of our acquaintances from there to understand the procedure properly. I with my friend want to study B.Ed. so that we could take teaching as profession." (Camp-10)

Travel videos of different places of Bangladesh and its people have made a huge appeal on the Rohingya people. Women who are facing restriction in their community is being enlightened about the Bangladeshi women who has free access to education and are free from social restrictions and superstitions. As refugees, they always have the urge to live a normal life like a citizen. Digital platforms have always worked as a bridge between their wish and hope in this regard.

Digital Platform or social media is helping to develop perspective among Rohingya refugee, and it is also patronizing Rohingya activists who are strongly and constantly advocating for the rights and identity of Rohingya people. One respondent described the situation in the following manner-

"When I see news about Myanmar, every time I pray for some miracle to happen. But now we all are struggling to keep the light

---

32 Ansar, A. and Khaled, A.F. (2023) "In search of a Rohingya digital diaspora: Virtual togetherness, collective identities and political mobilisation," Humanities and Social Sciences Communications, 10(1). Available at: https://doi.org/10.1057/s41599-023-01553-w.

33 Ibid.20

34 100 Rohingya girls living in Bangladesh camps get scholarship from Kuwait (no date) The Financial Express. Available at: https://thefinancialexpress.com.bd/national/100-rohingya-girls-living-in-bangladesh-camps-get-scholarship-from-kuwait-1618917478 (Accessed: May 5, 2023).

of hope alive within us. But we are very much hopeful about the trial of ICJ, feels like better things will going to happen." (Camp-8W)

7. The Contribution of Artificial Intelligence (AI) in the Adaptation of New Environment

Artificial Intelligence (AI) is well known in today's world and various applications and services powered by AI have been influencing and reshaping every aspect of life. The algorithms of AI are designed to make decisions, frequently using real-time data, which apparently means, we let the AI to mimic human intelligence and make decisions for us.[35] By letting them hear, speak, read and write for the human being, it is also flourishing its ability of accuracy to provide the better prediction over time via using the tool machine learning. The social media AI has been educated to analyses numbers, views, user interests, age, regions, internet profiles, user preferences, and purchasing patterns.[36] Using algorithms, significant data set and deep learning it can make recommendations and suggestions for users which even leads up to controlling the behavior on this platform. Today these sites create ***echo chamber*** or filter bubble which limits the people's exposures to diverse contents and derives to polarization among the acquaintances.[37]

The Rohingya refugees come to contact with the internet when the ban was uplifted by the government of Bangladesh in 2020. As people gradually settled in camps and started looking for sources for communication and entertainment, smartphones appeared as a solution to them. People bought mobile phones and started to use them even with minimum knowledge. Most young refugees are having their first mobile phone experience and the use of different social media platform in Bangladesh. As soon as they step into the virtual world, like the rest of us, they also automatically come under radar of AI, which develops and shape their behavioral pattern via algorithms, machine learning and automation. AI applications by creating filter bubble help its viewers to decide what to consume and what not. The Rohingya refugees also have similar experiences. It was reported that, current algorithms can decrease a person's exposures to diverse opinion and perspective, which eventually leads people to forget their own point of view, way of life and system of values.[38]

Moreover, to discuss how AI is helping the Rohingya community to adapt in new environment, the study identified three different factors; 1. Registering with the host community's location 2. Demographic information of a user, and 3. Online behavior.

7.1 Registering with the host community's location

Most of the Rohingya smartphone users have their first experience of the internet

---

35 West, D.M. and Allen, J.R. How artificial intelligence is transforming the world, North-South News. Centre for Euro-Mediterranean and African Studies. Available at:< http://www.cemas.org.uk/index.php/17-content/publications/2009-how-artificial-intelligence-is-transforming-the-world (Accessed: April 8, 2023).

36 Brisset, C. (2023) What is AI in social media and how to use it, ICUC. https://icuc.social/resources/blog/ai-in-social-media/#:~:text=Social%20media%20AI%20has%20been,different%20audiences'%20needs%20and%20interests, (Accessed: April 8, 2023).

37 Hampson, M. (2022) Smart algorithm bursts social networks' "filter bubbles", IEEE Spectrum. IEEE Spectrum. Available at:< https://spectrum.ieee.org/finally-a-means-for-bursting-social-media-bubbles#toggle-gdpr>, (Accessed: April 8, 2023).

38 Hampson, M. (2022) Smart algorithm bursts social networks' "filter bubbles", IEEE Spectrum. IEEE Spectrum. Available at: https://spectrum.ieee.org/finally-a-means-for-bursting-social-media-bubbles (Accessed: April 9, 2023).

world in Bangladesh. Initially they used to go to local computer shops to open any social media account, where the locals would help them. But now, they can easily open various accounts on such platforms. In both cases, whether the account was opened by any local shop owner or by the refugees themselves, without giving any thoughts or merely to conceal their own identity, they register those social media site with their address in Bangladesh, which has a remarkable influence on what content they are going to see on the news feed. Social media platforms frequently use location data to personalize content recommendations and advertisements for users based on their location, language preferences, and interests. Because the social network tracks the location of users' devices, it may suggest a user a friend who share the same GPS data point.[39] This means that Facebook may recommend a "friend" to some based on where he has gone and when, regardless of whether they have met each other. Hence, if two strangers share a common hobby, have recently visited the same place, and reside in the same area, they will both have each other in the "people you may know" portion of their respective social media handle. One respondent shared that-

"*We had very random Bangladeshi friend in our Facebook suggestion, we add them and after communicating with them for a while they become very good friend of us.*" (FGD)

7.2 Demographic information of a user

With the creation or use of social media platforms, the users always leave their digital footprint on the internet. As soon as a user agrees with the terms and conditions of this app, he/she directly allows the app to collect personal data. Demographic information such as age, gender, language, marital status, language preference, profile information, religious belief and shared content, etc. can measure how users would perceive certain content, information and massages.[40] This demographic information help social media platforms to create targeted advertisement and local news. So, if a refugee discloses his or her religious belief on social media, he may see different religious events near him, and video clips related to the subject in his suggestion. One respondent mentioned that-

"*I like to listen to the preach of different Imam on the internet, but Mizanur Rahman Azhari and Zakir Nayek are my most fovourite preachers that I often listen to.*" (Volunteer 1)

Beside this, demographic and personal interest also provide personalize data recommendations. Therefore, a refugee who identified himself as a young adult on social media may often see the content relevant to his age group. One respondent endorsed this in the following manner-

"*During the last world cup, there was few intra zila football tournament arranged by the local people, we used to know about these events through various Facebook groups and if possible, we would try to go and enjoy the match.*" (FGD)

7.3 Online Behavior

The algorithms used by the social media platforms also take into consideration the duration of online presence of an user, the content shared, liked or commented and

[39] Facebook denies tapping smartphone locations to recommend New Friends | CBC News (2016) CBCnews. CBC/Radio Canada. Available at: https://www.cbc.ca/news/trending/facebook-gps-location-data-new-friends-people-you-may-know-1.3656555 (Accessed: April 9, 2023).

[40] Hetler, A. (2023) 6 common social media privacy issues, WhatIs.com. TechTarget. Available at: https://www.techtarget.com/whatis/feature/6-common-social-media-privacy-issues (Accessed: April 9, 2023).

the features more used so that the AI could offer more similar contents.[41] For example, if a Rohingya refugee engages regularly with posts or accounts relevant to a specific topic or group, the platform's algorithm may recommend adding friends who are also interested in that issue or belong to that community. Furthermore, the algorithm may recommend adding friends who have mutual connections, such as friends of friends or people in the same groups. So, when a Rohingya refugee decide to add friend from Bangladesh or like, comment and share any Bangladeshi content, he is more likely to get similar type of content and friends from Bangladesh.

> Humanitarian organizations could establish formal cyber shops in various locations in the camp where both men and women could use the internet to enhance their skills and acquire new information about their health.

8. Recommendations and Concluding Remarks

As the Rohingya community is not officially recognised as refugees by the Bangladeshi government, they are denied access to smartphones and the internet, among other fundamental liberties. Despite this, people have discovered ways to acquire and utilise mobile phones, which have become a necessity. However, this comes with significant hazards for the community, as Rohingyas' cell phones are frequently confiscated by the government. In addition, many Rohingyas lack digital literacy and are oblivious of the dangers posed by social media platforms, making them susceptible to various crimes, harassment, scams, and blackmail. The situation worsens when a woman experience cyberbullying and harassment online, which can have direct consequences on her family. Due to underwhelming digital learning, criminal activities such as cyber harassment, blackmail, drug peddling, and the dissemination of deceptive information have become significant concerns. Moreover, as the internet reshapes the thoughts and perspectives of Rohingya refugees regarding the host country, for a better and more secure life, there is a growing tendency for them to assimilate with the host community, contributing to ad hoc local integration. If that would be the case then, the number of stateless persons will grow via inter-marriage of both host and refugee community, and they will be involved in countless crime to obtain illegal NID Card, which will eventually affect the tranquility of the society. Therefore, this study proposes to consider the following suggestion to prevent the ad-hoc local integration and regulate their internet usage-

1. Formalizing Internet for Rohingya Community

The Rohingya community has been using the internet despite the stringent restrictions imposed by the government of Bangladesh. This decision increases their vulnerability to some extent and raises different concerns for their safety and security. This situation could be changed by formalizing the internet for the Rohingya community. Refugee camps could be connected with low-powered internet or unique cloud technology, so that they could easily share

[41] Veer, E.A.V. Facebook: The missing manual, 3rd Edition, O'Reilly Online Learning. O'Reilly Media, Inc. Available at: https://www.oreilly.com/library/view/facebook-the-missing/9781449303600/ch04.html (Accessed: April 9, 2023).

information and application without having any restriction.

In addition, humanitarian organizations could establish formal cyber shops in various locations in the camp where both men and women could use the internet to enhance their skills and acquire new information about their health. These cyber shops can also be used to provide digital literacy training to educate the users on safe online usage and safety measures to be taken to safeguard in times of need.

2. Lessening the "Digital Divide" ensuring refugee friendly cyber space

While social media usage offers potential benefits, it also has the potential for harm, such as untrustworthy information, loss of secrecy, and privacy violations, etc. One significant limitation of the internet is its inability to provide a user-centric approach, meaning that it functions uniformly regardless of individual users. The experience and knowledge of an individual greatly influences his/her approach to interacting with internet interfaces. This discrepancy becomes particularly evident when comparing the actions of proficient users who possess a deeper understanding of online platforms, with those who are new to the internet and engage with it primarily for exploratory purposes. Social media platforms lack specific guidelines and fail to adequately address the needs and sensitivities of refugee users. Refugees fleeing persecution may experience a variety of emotional and physical health issues, which are exacerbated by low health literacy, education, and socioeconomic condition. In this manner, individuals are rendered vulnerable to the dissemination of false information and may engage in illicit activities through the utilisation of this particular platform. Such social platform usage can further victimize a refugee. Social networking sites can use the potential to incorporate specific features aimed at assisting refugees, such as the provision of comprehensive manuals and instructions on how to effectively utilise these platforms.

3. Legal Access to SIM Card

Since different Humanitarian Organization and Government Body provide multiple aid and services using unique identification process, Rohingya refugee could be provided with least temporary but legal access to SIM card following the same process. Apart from that, initiatives should be taken to impose formal restrictions preventing locals from selling SIM cards illegally. The whole process would also help to track down the Rohingya people who have any criminal tendency or criminal record.

4. Wi-Fi Support

Broad Wi-Fi coverage throughout the camps can be considered. With this, an open/minimally secured SSID can be included which will only provide access to specific content stored locally at the data center, and not the Internet as a whole. Refugees could use this network to gain access to targeted and customized content hosted on local servers and directed via SSID sign-in pages. Creating and publishing visual and audio content which will convey messages about the Rohingya History, Struggle from decades and also unique culture could be a breakthrough in this regard. Content characters like Gura Mia, Leda Mia, Shona Mia become popular among the community as they talk about their culture and Rohingya community can relate them to the content. This has been accomplished in other refugee/migrant situations, including IRC/Mercy Corps' Signpost and Refugee.info initiatives in Greece, Jordan, and Colombia, utilizing the networks that NetHope facilitated in those locations.[42] In addition to creating an

[42] Ibid, 9

exceptional cyber space, more content on Rohingya dialect should be created so that the young generation could know about their predecessors, history, and culture.

5. Intervention from Digital Rights Communities

Despite the fact that different INGOs and NGOs are working on various interventions, the issue of a formalized Internet facility has never been addressed. Since the number of informal internet user is growing without having minimum knowledge about this medium, it is high time that an evaluation framework is developed with the assistance of the digital rights groups to better determine the information and communication needs of the Rohingya population that has been displaced and initiate dialogue about safe internet use for the Rohingya community.

Tech-Policy Awareness Among Youth: Insights from Noakhali, Bangladesh

Umme Salma [I]

[I] Umme Salma, a young professional with a keen interest in policy advocacy on technology will be joining as a fellow under the Tech Policy Fellowship, 2022. Currently, she is working as a Programme Coordinator, Participatory Research & Action Network – PRAAN. She expected to get both theoretical and hands-on experience from this fellowship with a better understanding of the global and local trends in tech. It's her long-cherished dream to become a social advocate for ensuring the digital rights of the citizens.

Abstract

Increased availability of handy digital devices like smartphones as well as improved infrastructure has given internet usage a sharp growth over the past decade, especially among young people. Their dependency on technology has been again accelerated by the Covid 19 pandemic due to the shift of classes from in-person to online. This study focuses on the increasing internet usage among young people in Bangladesh including internet access, using pattern, awareness and understanding of tech related laws and policies among this demographic. The study aims to identify the level of tech-related law and policy awareness, knowledge, and scopes to increase awareness on tech policies and laws among youth in general. The Government of Bangladesh has implemented various policies and laws to safeguard cyber victims. There are many debates around these laws and policies about their use, misuse, restrictions, repression, censorship, hampering freedom of expression etc. For the youth to become informed citizens, their role in shaping tech related laws and policies for their betterment as well as for their security from cyber related issues are still questionable due to the lack of awareness among the youth. The study surveyed 60 youth aged 18-26 from the urban and rural areas of Noakhali. The study found a lack of awareness of policy, resolution, covenant, or law related to the right to internet access among the young people surveyed. The findings indicate that the respondents have insufficient knowledge of cyber security, which results in a low level of awareness regarding cyber threats. They do not have adequate knowledge of Tech Policy as well. There are minor differences between the respondents from rural and urban areas. The study proposed some evidence-based recommendations for Civil Society Organizations i.e. to initiate tech policy awareness campaigns and measures to enhance the overall tech policy literacy as well as accelerating responsible digital citizenship of young people in Bangladesh.

Keywords: Young People, Tech Policy, Digital Literacy, Youth Awareness, Cybercrime, Privacy and Personal Data Protection

1. Introduction: Background and Context

The youths are the future of any country and therefore, their involvement in policymaking, knowledge and understanding about social issues are crucial since these will affect them in the long run. Information and communication technologies (ICTs) are the driver of change and burgeoning technologies, applications and services powered by ICTs have been being introduced frequently in the market. While these offer prospects and benefits, there are concerns as well. The national policymakers therefore need to take policy initiatives so that the citizens can be benefitted exploiting these technologies. This is crucial that in this policy making process the youths get involved in every possible manner.

Bangladesh is currently experiencing a demographic dividend, with a large growing population of young people as well as a fast increase in the internet usage. Demographic dividend refers to the period of economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working-age population (15 to 64) is larger than the non-working-age share of the population (14 and younger, and 65 and older).[1] According to the Bangladesh National ICT Household Survey 2019, the rate of internet users is large in the 15- 34 age range which indicates the young demographics in Bangladesh. The

[1] United Nations Population Fund, "Demographic dividend", available at https://arabstates.unfpa.org/en/topics/demographic-dividend-6 (last accessed on September 23, 2023).

country now, according to the latest data of the Bangladesh Telecommunication Regulatory Commission (BTRC), has over 126.1 million internet users who have accessed the internet at least once in the preceding 90 days and the number of internet users increased by 26.21 million from January 2020 to August 2021.[2]

Access to the Internet presents significant opportunities for economic growth, social progress, and political change which paves the way for the youth to harness the potential of the Internet. Present youth, frequently considered digital natives, have been using various technology in a variety of ways-from necessities like education to entertainment, gaming, or communication like chatting or use of social media. The digital socialization process of youngsters is no doubt associated with the internet, though this is more connected the use of safe internet.

There are several tech-related laws, regulations, and policies that govern the development, deployment, and use of technology in Bangladesh which come into discussion regularly about the pros and cons implied within these. The Government of Bangladesh has formulated some regulations, laws, and policies e.g. the National Information and Communication Technology (ICT) Policy, Cyber Law, Digital Security Act, and Information and Communication Technology Act, 2006 ("ICT Act, 2006") to encourage the growth and development of information technology, to control the instances of abuse on the cyber space and help the victims of cybercrime. Nevertheless, it is apparent that there is a lack of awareness and understanding of these laws and programs among this demographic. For instance, one study found that, despite the information being a means of empowering common people and ensuring accountability, around 78% of youths do not know anything about the Right to Information (RTI) Act.[3] The literacy of tech policy is crucial for all the netizens who even spend a second on the internet. For youth, this is more important because technology is increasingly intertwined with all aspects of society for them including but not limited to education, communication, entertainment, employment, and whatnot, and they will lead the future.

Bangladesh has over 126.1 million internet users who have accessed the internet at least once in the preceding 90 days and the number of internet users increased by 26.21 million from January 2020 to August 2021.

For achieving the Sustainable Development Goals (SDGs) as it offers transformative potential across various sectors, ICT knowledge is crucial. The World Summit for Social Development (WSSD, Copenhagen, 1995) recognized that the new information technologies and new approaches to access to and use of technologies by people living in poverty can help in fulfilling social development goals.[4] With easy access to information and educational resources,

---

2 Asifur Rahman, "Over 70% teenagers exposed to cybercrimes: survey", the Daily Star, November 9, 2021, available at https://www.thedailystar.net/news/bangladesh/news/over-70pc-teenagers-exposed-cybercrimes-2225446 (last accessed on September 23, 2023).

3 "78% youths in Bangladesh unaware of RTI Act: Study" , December 13, 2021, available at https://www.tbsnews.net/bangladesh/law-order/78-youths-bangladesh-unaware-right-information-act-study-343066 (last accessed on September 23, 2023).

4 United Nations, Department of Economic and Social Affairs Poverty, "Information and communication technologies (ICTs)", available at https://www.un.org/development/desa/socialperspectiveondevelopment/issues/information-and-communication-technologies-icts.html (last accessed on September 23, 2023).

such knowledge empowers individuals, including those in underserved areas, to acquire new skills and knowledge, driving sustainable development efforts. Moreover, by enhancing communication and collaboration using ICT facilitates, ideas and innovative solutions can be exchanged which can foster collective actions towards the achievements of SDGs on time. Awareness of ICT is equally important as it ensures safe and responsible technology use, promoting inclusivity and digital literacy. Informed individuals can actively participate in digital-driven initiatives, support sustainable development efforts and contribute to a more inclusive and sustainable future.

Side by side, having a basic understanding of tech policy can help individuals and organizations make informed decisions about technology use, engage in policy discussions, and advocate for policies that are aligned with their values and interests based on their development agenda. Technology policy decisions can have a significant impact on young people's lives. For example, policies around internet access, privacy, and cybersecurity can affect their ability to access information, communicate with others, and protect their personal data. As the use of digital spaces is spreading rapidly, this lack of understanding can lead to a variety of issues e.g. cybercrime, privacy violations, and misinformation, etc. and bridging these has turned into a big challenge for the policymakers of present time. Besides, there is a dire need for understanding the social and ethical implications of tech-related policies like issues around bias in algorithms, data privacy, and online harassment, etc. which will help young people infer those issues and speak about these as well as get engaged in policy discussion to ensure that tech policies are developed in a way that benefits them and the society as a whole.

With increased internet usage, understanding of tech-related laws and policies is crucial for making informed decisions, accessing opportunities, and safeguarding against cyber issues. Additionally, young people can actively participate in shaping policies that protect their interests and promote responsible digital citizenship. Here Tech law and policy refer to the legal and regulatory frameworks that govern the use and development of technology. It encompasses a wide range of issues, such as privacy, cybersecurity, intellectual property, digital rights, e-commerce, internet governance, and AI ethics. Tech policy involves the development and implementation of guidelines to address technology-related challenges and achieve specific goals, including promoting innovation, digital inclusion, and ethical technology use. These frameworks are essential in shaping a balanced and conducive environment for technological advancements while safeguarding individual rights and fostering responsible innovation.

Though this is extremely important, no study or research has so far addressed this in the Bangladesh context. Thus, there is a need to investigate this. Although there are other policies and laws related to information technology in Bangladesh, this study focuses on three specific laws- the Digital Security Act, 2018 (which has recently been repealed by and renamed as the Cybersecurity Act, 2023), the Data Protection Act (DPA)(Draft), and the Bangladesh Telecommunication Regulation Act that have been subject to repeated discussions and controversies regarding their implementation. Given that young people are the largest consumers of information technology and the internet, they are significantly impacted by these laws and often become victims of confusion and misapplication. Despite their importance, there is currently a lack of research on the awareness of these laws among the youth

in Bangladesh. Therefore, this study aims to fill this knowledge gap and provide valuable insights for future large scale studies. By examining the level of awareness and understanding of these laws among young people, this research will contribute to a better understanding of the challenges and opportunities surrounding their application and impact on the youth in the context of information technology in Bangladesh.

This study, as a part of the Tech Policy Fellowship 2022, was designed for young and mid-career professionals in Bangladesh. The fellowship, supported by Digitally Rights Ltd. (DRL), aims to equip participants with insights into global and local tech policy trends, emphasizing their role and impact. This study was conducted in Noakhali, a district in the southeastern Bangladesh and concentrated on assessing the knowledge and awareness level of cyber-related law and policy, as well as identifying the digital action and behavior of urban and rural youth in general. Moreover, to enrich the study, in-person interviews were conducted with development experts and activists exclusively focused on youth and cyber issues in Bangladesh. The findings from these interviews offer valuable perspectives and recommendations, complementing the survey findings and providing comprehensive insights into the subject matter.

Researchers have already attempted to explore how ICTs change the political attitude and behaviour of the educated youths in Bangladesh,[5] and privacy perception and vulnerability among Bangladeshi urban youth using mobile and computing devices.[6] Yet, this present research is important as it aims to identify the level of awareness of the Bangladeshi youth regarding tech-related law and policy. By providing evidence-based recommendations, the study proposes Civil Society Organizations (CSOs) to initiate tech policy awareness campaigns and bridge the awareness gap. Ultimately, the research seeks to enhance overall tech policy literacy and secure the youth from cyber-related challenges in both urban and rural areas of Bangladesh.

This study is structured into several sections, each presenting critical insights gathered from the survey conducted among young individuals in Bangladesh. The first section offers a comprehensive demographic profile of the survey participants, providing essential context for the subsequent findings. The second section delves into internet consumption patterns, covering aspects such as internet usage frequency, duration spent online, types of devices utilized for internet access, and the primary purposes for internet use. The third section focuses on social media and communications consumption, shedding light on the popular platforms among the youth.

Moving forward, the fourth section centers on awareness of internet access-related policies, exploring participants' familiarity with internet regulatory authorities and the prevailing laws governing internet access and services in Bangladesh. The subsequent section examines the level of awareness regarding cybercrime and cyber law, analyzing participants' experiences with cybercrime, their attitudes towards such offenses, and their awareness about protective measures against cyber threats. Following this, the study highlights the participants' awareness of privacy and related laws, investigating their

5 Mohammad Sahid Ullah, "ICTs changing youths' political attitudes and behaviors in Bangladesh." International Communication Gazette 75, no. 3 (2013): 271-283.

6 Faheem Hussain and Mohammad Sahid Ullah. "Mobile and Internet Communication: Privacy Risks for Youth in Bangladesh." Media Watch 4, no. 2 (2013): 134-144.

understanding of privacy rights, potential privacy violations, and laws safeguarding personal data.

Concluding the results and analysis, the final section provides a needs assessment related to a cyber policy awareness campaign. This section identifies effective means of informing and educating the youth about cyber-related issues and policies to foster responsible digital citizenship.

2. Objectives

The main objective of this research is to investigate the level of knowledge and awareness of tech-related law and policy among the youth of Bangladesh. This research also focuses on assessing the influence of cyber-related law and policy awareness on the digital behavior of young people and providing evidence-based recommendations for CSOs to enhance digital literacy among young people through cyber policy awareness campaigns and measures, to increase digital literacy and awareness of digital security among the youth in Bangladesh.

3. Significance of the Study

This study is significant as the findings of this study can be considered in the relevant policy making in the future. The potential impact of this research may include:

Improved understanding of the level of cyber-related law and policy awareness, knowledge of youth in Bangladesh.

> With increased internet usage, understanding of tech-related laws and policies is crucial for making informed decisions, accessing opportunities, and safeguarding against cyber issues.

Evidence-based recommendations for CSOs to enhance digital literacy among young people through cyber policy awareness campaigns and measures.

Contribution to identify and address the key factors that contribute to low digital literacy and lack of awareness of cyber laws and policies, and thus, contribute to the development of effective and efficient awareness campaigns and measures.

4. Methodology

The survey for the study followed a random sampling technique to collect necessary information from selected youths. The data was collected from 60 participants through social survey- face-to-face interviews with questionnaire from the young people age range 18-26 of three upazilas of Noakhali in March 2023.

As this research has an emphasis on exploring the different aspects of internet access and usage, types of internet users, hours spent online, social media usage, and differences of awareness on policies related to internet access among urban and rural youth, the survey covered 50% of its data from urban youth from college and university students of Noakhali Sadar, and the other 50% is from rural youth of Kabirhat and Begumganj Upazila. An equal number of males and females were interviewed to maintain the gender balance of the 60 participants. To be included in the study, individuals had to be at least 18 years. The participants were categorized into three different age brackets. The age groups were 18-20 years, 21-23 years, and 24-26 years old. The exclusion criteria included individuals who were aged more than 26 and not eager to respond to the survey.

In the questionnaire, a brief with the purpose of the survey and other necessary information including the name of the researcher, name of the organization affiliated with, choice of location, privacy,

and sharing related information was presented at the second portion of the beginning. The interview was brought ahead upon the consent of the interviewee. 100% of the randomly chosen individuals agreed to participate in this survey.

The questionnaire is divided into Eight sections. These include- 1. Survey Information: This section had questions on basic Information like area, consent, name, approval to be interviewed, etc. 2. Internet Consumption: questions including use of the internet, kind of internet use, hours spent online, types of devices used to access the internet, the purpose of internet use. 3. Social Media and Communications Consumption: includes questions about favorite social media platforms, communications platforms, etc. 4. Awareness on internet access related policies: questions about law and policy of Bangladesh related to internet access and services, familiarity with internet regulatory authority, etc. 5. Cyber Crime and Cyber Law Awareness: questions about cybercrime experience, attitudes towards criminal offenses, awareness about protection from cybercrime, etc. 6. Awareness of privacy and related laws: consists of questions about privacy awareness, violation of privacy, law related to protecting personal data etc. 7. Needs Assessment: Questions related to cyber policy awareness campaign, effective means of informing, and 8. Consists of questions about demographic details.

This study also includes in-person interviews with development experts and activists exclusively working with youth and cyber issues in Bangladesh to explore perspectives and recommendations.

5. Challenges & Limitations

Some challenges were addressed while interviewing with the questionnaire. The study attempted to investigate the level of awareness about tech related policy, cybercrime etc. It took a longer time then expected to accomplish a single interview as each and every words specially the sections of internet access related policies, Cybercrime and cyber law awareness and Awareness of Privacy and related laws had to explain to bring out the appropriate response from the respondents. There was a tendency among young people to prove that they have plenty of knowledge, which is natural for young people to try to prove their worth. So, while talking about the awareness on different laws and policies, though the study found the familiarity with these law and policies quite lower, still their statements on different laws revealed their severe lack of proper knowledge on the respective laws. Whenever this pattern of question comes 'Do you know this/that…?', the remarkable number of respondents answered instant 'yes'. We think the overall state of awareness could have been lower if answered regardless of the urge to show 'I know'.

There are some limitations of the Study. The study was completed within a relatively short timeframe and sample size. Nevertheless, this model of study and findings will hopefully serve as a foundation for a national level study in the future in understanding the tech policy awareness among the youth in Bangladesh.

6. Results & Analysis

6.1 Demographic Profile

The survey respondents were college and university students from three mentioned Upazila of Noakhali. The age range of the youth used in this survey is 18-26 years. The concept of youth is rooted in bio-physiological and legal factors as well as in the socio-political structure of a particular society in which he/she lives (Mia 1983). The definition and age range of youth varies from country to country and to organization. According to the National Youth Policy 2017 of Bangladesh, individuals aged 18-35 years are defined as a youth, while Bangladesh

Bureau of Statistics considered the age range 15-29 years for its Bangladesh Labour Force Survey. According to the United Nations as well as the International Labour Organization (ILO), individuals aged from 15-24 years are identified as youth.

To make our age-based definition of youth inclusive of all college and university students, we decided to consider individuals aged 18-26 years for the survey. Of the total 60 respondents to this survey, the 18- 20 age group makes up the highest percentage (which is 27 people), the 21-23 age group makes the second (which is 18 people) and the 24-26 age group makes the least (15). Regarding gender, the ratio of male and female respondents is 50-50 for urban and rural areas.

The educational background for this survey ranges from high school to Post-college/ advanced degree such as master's or doctoral degree. The highest number of youths surveyed, which is 37, have the highest level of education in some colleges but without any degree. 9 of the youth have identified their highest level of education as a four-year college degree. The others are from vocational high school backgrounds.

	Female	Male	Overall
Rural	15	15	30
Urban	15	15	30
Overall	30	30	60

Chart 1: Survey participants

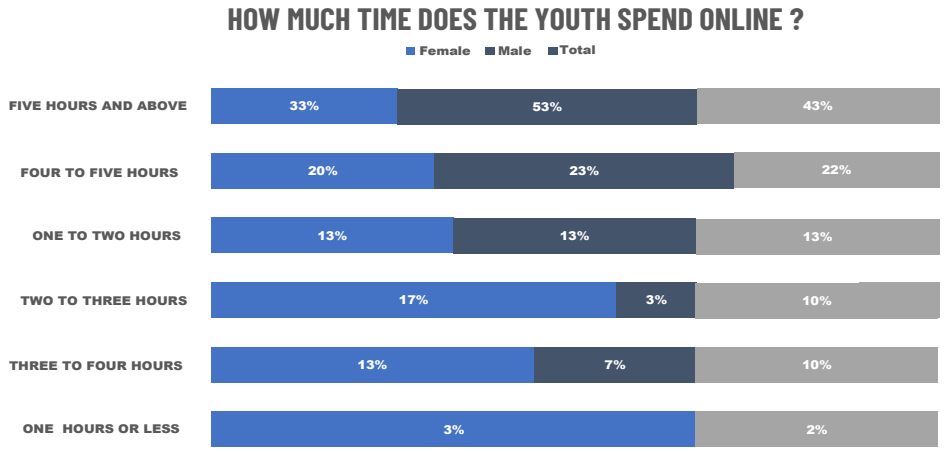
6.2 Internet Consumption

Pattern of internet consumption is considered necessary for this survey as it provides valuable insights into how people use technology and the internet as well as better tailoring the campaign strategies. Based on the question to the respondents about the use of the Internet, 100% of them responded that they use the Internet for their day-to-day activities. Most of the respondents, which make up 80% of the total, access the internet via mobile data, 78% reported using Broadband and 58% of them use both mobile data and broadband for internet connection. 21% have access to only mobile data and 20% have access to broadband connection only. 40% of the rural female respondents use only mobile data to connect to the internet against 13% of the urban female respondents. Male respondents have more broadband access compared to female respondents.

Respondents were asked about the average time they spent online. 43% of the participants said they spend five or more hours online. 27% of rural youths and 60% of urban youth spend five hours or more on the Internet.

At the same time, the study found an overwhelming proportion of urban youth, which is 60% of the total urban respondents spend five hours and above daily which indicates that urban youth spend more time online in comparison to rural youth. In all the instances, male youth spend more time than female youth. The table below shows a remarkable difference in daily online hours between males and females.

More than 90% of the total respondents marked that they use the internet for communication and accessing social media. 85% of them reported using the Internet for academic work. In comparison to the use of the Internet for communication, social media, entertainment, news, and information, a low percentage of users, only 7% reported using the Internet for accessing income opportunities. Use of the internet for Communication, Social Media, Entertainment, News and Information purposes were common responses for 100% of the urban male respondents. It is noticeable that 73% of the rural and 83% of the urban respondents were using the Internet for study and classes, which is mostly due to COVID and post-COVID shift to online classes.



How much time does the youth spend online?

Purpose of Using Internet	Rural		Urban		Overall
	Female	Male	Female	Male	
Communication	87%	93%	93%	100%	93%
Social media	87%	87%	87%	100%	90%
Entertainment	87%	80%	87%	100%	88%
News and information	73%	87%	87%	100%	87%
Academic work	93%	80%	73%	93%	85%
Income opportunities	0%	7%	0%	20%	7%

Chart 2: Purpose of using internet

The next question of the survey to the respondents was to know about the type of device they use to access the internet. 97% of the youth shared that they use mobile phones to access the internet. 100% of the urban and 93% of the rural youth have access to phones to use the internet. There are some demographic differences in device access. Older youth (24-26 age group) are more likely to have access to a computer.

There is still a sizable gender gap in digital access in Bangladesh, which came into discussion in the Covid-19 pandemic disadvantaging women relative to males. Age, geographic, and financial differences widen this gap. This study shows the same that 80% of rural females have access to only phones but no computer.

6.3 Social Media usage

The respondents were asked about the social media platform they use. All the respondents use some social media. Facebook was found to be the most popular social media among young people of Bangladesh.[7] This study result also

[7] Statcounter, "Social Media Stats Bangladesh: Aug 2022 - Aug 2023", available at https://gs.statcounter.com/social-media-stats/all/bangladesh (last accessed on September 23, 2023).

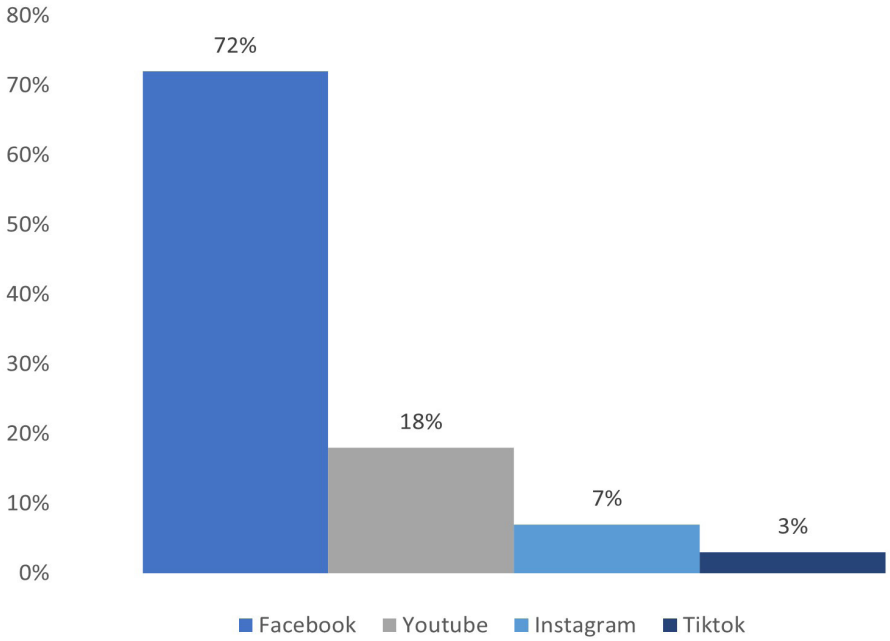


Figure 2: Most favorite social media platform

found the same that all the respondents have mentioned using Facebook. YouTube is the second most used social media with 97% of the respondents using it. Almost same proportion of the rural and urban youth i.e. 93% use YouTube. After YouTube, Instagram is the most used social media platform among the youth. This media is more popular with urban respondents than rural respondents. 77% of the urban youth, 37% of the rural youth reported using Instagram. TikTok is more popular among rural respondents than urban ones. One-fourth of the respondents use TikTok. 33% of rural and 17% of urban youth use Tiktok. While talking about TikTok, some of the respondents seemed embarrassed to mention this social media. They tried to explain their TikTok usage by saying, "I only watch videos, I don't make or post videos". This is noticeable that both the urban and rural youth are less likely to use Twitter.

Media for Communication	Rural		Urban		Overall
	Female	Male	Female	Male	
Messenger	87%	100%	93%	100%	95%
WhatsApp	67%	93%	93%	100%	88%
Imo	12%	12%	3%	10%	37%
Viber	0%	7%	7%	7%	5%
Signal	0%	0%	0%	0%	0%
Telegram	7%	7%	7%	20%	10%

Chart 3: Messaging app usage scenario

This figure shows here the information about the favorite social media platform among the surveyed young people. For 72% of the respondents, Facebook is the most favorite social media platform.

Instagram is comparatively more popular among urban youth whereas TikTok is comparatively more popular among rural youth. This is important to mention here that no male respondents marked Instagram and TikTok as their favorite social media platforms.

The survey participants were asked about the purpose of using social media. 88% of the respondents agreed with the statement that they use social media to get news updates and information, while 9% remained neutral about this which means they are not sure about this purpose. 86% agreed that they use social media to connect with friends and families, 86% agreed that they use social media for education and study, and 77% agreed that they use social media to watch videos and entertainment. It is a matter of hope that 71% of the respondents said they use social media to express their thoughts and opinions while 12% remained neutral on the topic. 25% agreed that they use social media to share the content they create and 85% disagreed with the statement that they use social media to earn money.

For communication, Messenger seems the most popular means among them. 88% of the respondents use WhatsApp for communication. Every youth surveyed uses either Messenger or WhatsApp for communication. One in every three (37%) respondents uses Imo. Rural youth are more likely to use Imo than urban youth and urban females are least likely to use Imo for communication. 10% of all the respondents and 20% of urban males use Telegram for communication. Only 5% of the respondents use Viber and no one uses Signal. Despite being considered as the best secure messaging app, the youth are not habituated with using signal for communication.

6.4 Awareness on internet access-related policies

Assessing the general awareness of internet access-related policies among the youth started with the question 'Are you aware of any law/policy in Bangladesh that enables access to reliable, reasonably priced and modern internet-services for the people?'.

57% of the respondents answered they were aware of such laws or policies. All of the urban males marked that they were aware of such laws whereas three in every four (27%) rural females are not aware. The findings show that urban youth were twice more aware on internet access-related policies than rural youth.

	Rural		Urban		Overall
	Female	Male	Female	Male	
Yes	27%	47%	53%	100%	57%
No	73%	53%	47%	0%	43%

Chart 4: Awareness on Internet access-related policies

Also, 25% of the respondents marked that they were aware of international policy, resolution, covenant, or law related to the right to internet access. No rural female knew about such a law or policy.

Internet shutdown is an intentional disruption of internet or electronic communications, rendering them inaccessible or effectively unusable, for a specific population or within a location, often to exert control over the flow of information.[8] This includes but not limited to

[8] accessnow, "Internet shutdowns and elections handbook: A guide for election observers, embassies, activists, and journalists", available at https://www.accessnow.org/guide/internet-shutdowns-and-elections-handbook/ (last accessed on September 23, 2023).

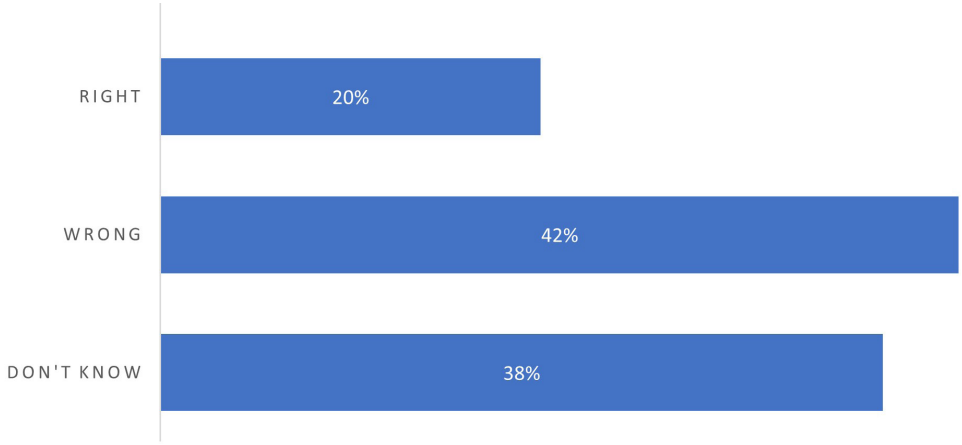


Figure 3: Which authority regulated access to internet in Bangladesh

Complete shutdown, reducing the speed of 3G/4G to 2G, blocking Facebook, YouTube, etc. Shutdowns can be imposed nationwide, or they can be targeted to a specific neighborhood, village, region, or province. Targeted shutdowns can be more difficult to detect and verify. The circumstances under which shutdowns are usually ordered reveal that governments actually deploy them as a tactic to restrict citizens' rights to freedom of expression and information, and to interfere with the right to freedom of assembly and association, particularly during events such as elections, conflict, or mass demonstrations.[9] The participants of this survey were asked 'Have you ever encountered any internet shutdown in Bangladesh?'. 83% of the respondents have identified that they have experienced internet shutdown in Bangladesh.

But most of the respondents are not aware of any policy, protocol, or law in Bangladesh related to the internet shutdown. This table shows the poor proportion of awareness on such laws or policies. Only 32% of the youth are aware of that. And the level such type of knowledge and information is drastically poor among the rural female in comparison with the Urban females.

When asked about the authority or organization that regulates access to the internet or is responsible for censoring the internet in Bangladesh, only 20% of

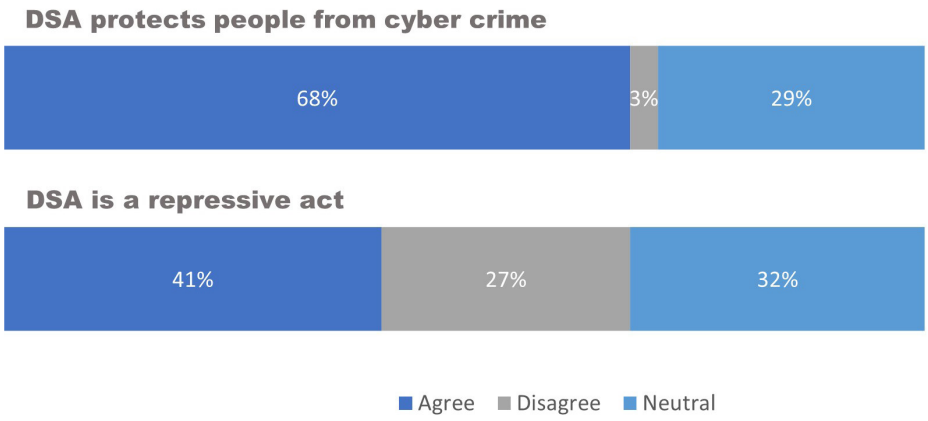


Figure 4: Statements on Digital Security Act.

[9] *Ibid.*

the respondents answered correctly of which 75% were male which indicates that female youth are less aware about such information. 40% of the 24-26 age group respondents answered correctly. 38% of the respondents admitted that they don't know which authority controls the internet in Bangladesh.

About the Bangladesh Telecommunications Act 2001, one-third of the respondents have heard of it earlier. Half of the urban respondents have heard of it whereas only 7% of the rural females have heard about it. Of those who have heard of it, 40% heard it from social media, 30% from the news, and 10% from textbooks. 15% said they can't recall where they heard about it.

The table below shows the problematic understanding of this Act among the respondents. 70% of the respondents who have heard about Bangladesh Telecommunications Act 2001 earlier think that the ensures the right to equal and affordable access to the Internet whereas this Act does not explicitly guarantee this right. Again, 80 % of the same respondents who stated their familiarity with the law believed that it enabled internet censorship in the name of blocking sites and slowing down the internet speed". This shows a lack of understanding and clarity about the Bangladesh Telecommunications Act 2001 among the respondents.

6.5 Cybercrime and cyber law awareness

Cybercrime is a complex topic to discuss and it covers many crimes. There is no specific or all accepted definition of cybercrime because different agencies and researchers gave the definition according to their place and situation. It can be said that cybercrimes are crimes which have the involvement of computer and network (Fafinski 2008:2, Kowalski 2002:7, www. Definitions and general information [Cybercrime].htm). According to the UN Office on Drugs and Crime, offences typically cluster around the following categories: offences that are computer-related and content-related, and offences related to infringements of copyright etc. Broadly, cybercrime can

	Rural		Urban		Overall
	Female	Male	Female	Male	
Yes	7%	27%	53%	40%	32%
No	93%	73%	47%	60%	68%

Chart 5: Awareness on Bangladesh Telecommunications Act

be described as having cyber-dependent offences, cyber-enabled offences and, as a specific crime-type, online child sexual exploitation and abuse. As the young people are the largest internet user group in Bangladesh, so the risk of being the victim of cybercrime and the tendency to conduct cybercrime, both remains high for this specific demographic.

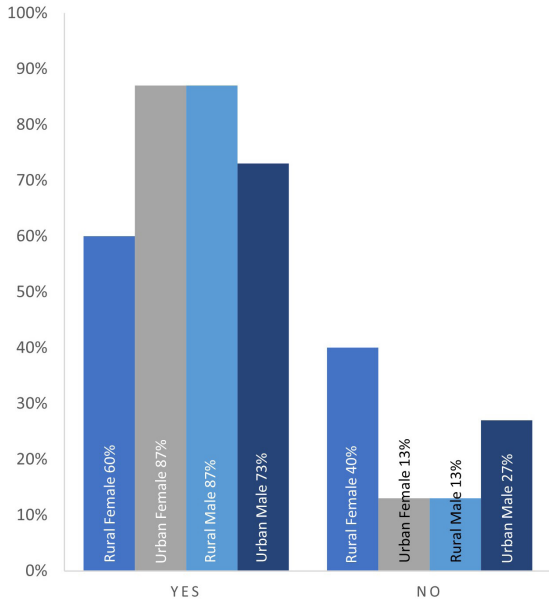


Figure 5: Have you ever experienced cybercrime

One of the sections of this study assesses cybercrime and cyber law related awareness among the participants. While answering questions related to cybercrime, 77% of the respondents have marked themselves that they experienced at least one form of cybercrime mentioned on the

Experience	Female	Male	Overall
I have seen or been sent materials that are violent, religious or political material advocating violence, or self-harm	37%	47%	42%
I've been cyberbullied	50%	20%	35%
Someone's hacked or tried to hack into my computer / device / online account	37%	30%	33%
Someone else pretended to be me online	37%	23%	30%
I've had a virus or other harmful software on one of my devices	23%	33%	28%
I've been the victim of a fraud online and lost money	17%	23%	20%
Someone has shared sexual content or images of me online without my permission	13%	10%	12%

Chart 6: Cybercrime experience

questionnaire. The ratio of male and female who have experienced cybercrime was 80% and 73% respectively.

The table below shows that the most common cybercrime experience is- seeing or being sent materials that are violent, religious, or political material advocating violence, or self-harm. Cyberbullying is the most experienced cybercrime for female participants. The urban females seem more likely to become a victim of cyberbullying. It can also be stated that rural women are in lack of awareness in identifying cyberbullying. Experiences like someone have hacked or tried to hack into their online accounts or devices and someone else pretending to be them online like someone created fake profiles using their name, phones, and information were also common. The ratio of being the victim of a fraud online and losing money was higher among male, while females seem highly in risk of getting their devices or accounts getting hacked as well as pretending their identity by someone else.

It is very difficult to find out all types of

Online Offensive Behaviors	Rural		Urban		Overall
	Female	Male	Female	Male	
Creating or distributing viruses or harmful software	80%	100%	67%	80%	82%
Using pictures or videos to blackmail someone	80%	100%	67%	67%	78%
Hacking into someone else's device or accounts	80%	100%	60%	73%	78%
Influencing one to join a group advocating violence	80%	93%	60%	80%	78%
Telling lies about someone online	80%	93%	67%	67%	77%
Posting or sharing racist messages	73%	93%	60%	73%	75%
Defrauding someone online so they lose money	80%	100%	60%	53%	73%
Posting or sharing threatening messages	53%	87%	67%	80%	72%
Posting or sharing rude or offensive messages	53%	87%	47%	67%	63%

Chart 7: Understanding about cybercrime

cybercrime because every day the new dimension of cybercrime is being invented, generated and identified. A list of activities that are identified as cybercrimes were presented before the participants. Then they were asked about the activities or online behaviors and if they are criminal offenses or not.

This table shows the difference of understanding among the male and female youth about cybercrime. All the mentioned behaviors, except responses of urban youth on 'Defrauding someone online so they lose money', were highly identified as cybercrimes by the male youth. So, this

using that law. The responses revealed that older age groups were comparatively more aware than younger age groups. Half of the urban females and two third of the rural females were not aware of any law or policy regarding cybercrime.

57% of the respondents have heard of the Digital Security Act. Older age groups are comparatively moreaware of the Digital Security Act (DSA) than younger age groups. Only 41% of the 18-20 group have heard about it, whereas 61% of 21-23 age group, and 80% of the 24-26 age group respondents heard of the DSA.

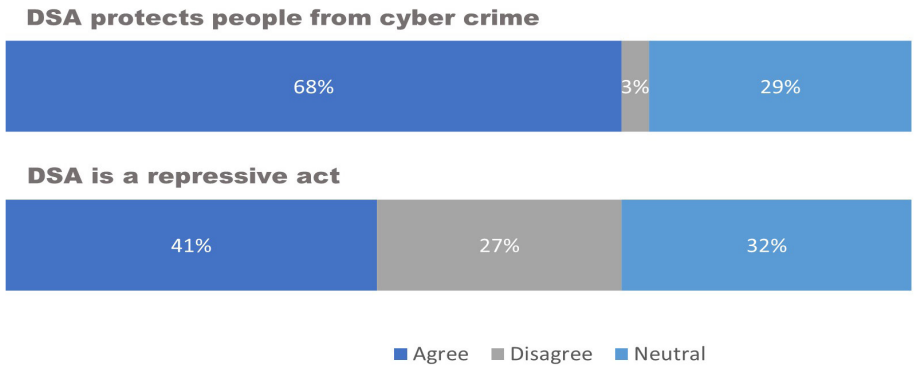


Figure 6: Statements on Digital Security Act.

can be clearly stated here that females were less knowledgeable than male youth in identifying cybercrime. Again, another remarkable information here is that urban female respondents are least aware.

On average 75% of the participants are aware of these cybercrime behaviors or activities. 84% rural, 66% urban, and 83% male, 67% female are aware of them. Urban female respondents are least aware only 61% of them are aware of these.

The participants were asked if they were aware that there are laws in Bangladesh to protect them from cybercrime. 60% of the respondents gave an affirmative answer. But almost none of them know the name of the law as well as the procedure how to get support to get protection from cybercrime,

47% of the rural and 67% of the urban participants and 43% of the females and 70% of males heard of it. 74% of rural females did not hear about the DSA.

Of those who heard of it, a vast proportion of them i.e. 61% came to know about it from social media, 24% from the news, and 6% from TV talk shows. Another 6% were unable to recall from where they heard about it.

The participants were provided with two contradictory statements about the DSA. . When they were asked that "DSA protects people from cybercrime" - 68% of the participants who heard of the DSA agreed to it. At the same time, 41% of the same people agreed that "DSA is a repressive

Act". This contradictory response suggests that there remains confusion among these group of people regarding the scope and purpose of the DSA. While the Act was enacted to protect citizens from cybercrime, it had been criticized for being misused by the government to stifle dissent voice and suppress freedom of speech. From its formation, the DSA was used to arrest journalists, activists, and social media users who expressed critical views of the government or its policies. As a result, there were widespread concerns about the chilling effect of the Law on free speech and the press in Bangladesh.

DSA	Rural		Urban		Overall
	Female	Male	Female	Male	
Yes	27%	67%	60%	73%	57%
No	73%	33%	40%	27%	43%

Chart 8: Awareness on Digital Security Act.

Therefore, the contradictory responses of the participants indicate a lack of clarity and understanding of the DSA's actual provisions and how it was being implemented in practice. It highlighted the need for greater public awareness and education about the DSA's potential impact on digital rights and freedoms. As the law has recently been repealed and renamed as the Cybersecurity Act with almost the same provisions, these findings will remain relevant.

6.6 Awareness of Privacy and related laws (Draft DPA)

The participants were asked some questions to assess their privacy awareness. In response of the question 'Do you consider sites recording your Internet activity with your knowledge to be a violation of privacy?' Half of the participants responded 'positively' whereas 73% of them considered it a violation of privacy when sites do it without their knowledge. For the latter, 23% did not consider it a violation of privacy. In both scenarios, 3% were unsure of it.

Whether with or without their knowledge, 43% of the respondents considered it a violation of their privacy when sites record their internet activities. For 30% of the respondents, it was not a violation when websites do so with their knowledge, but it was a violation when this is done without their knowledge. 18% of the participants did not consider it a violation of privacy even if it is done without their knowledge.

62% of the respondents considered it to be a violation of privacy when the government authorities record their internet activity or call so without their knowledge, and 63% of them considered it a violation of privacy when the government authorities or

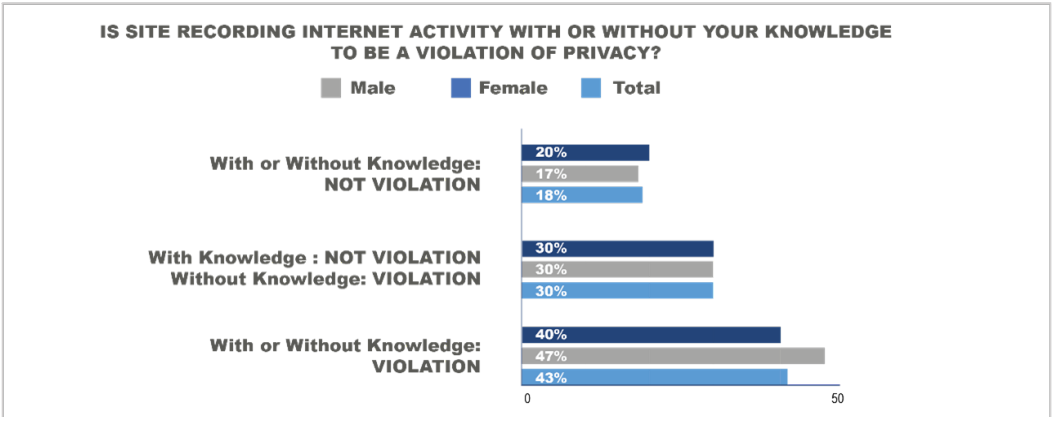


Figure 7: Is site recording internet activity with or without your knowledge to be a violation of privecy?

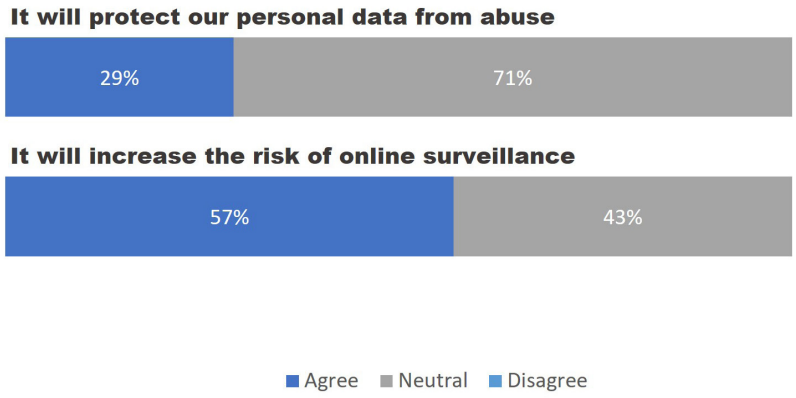


Figure 8: Statements on draft data protection act

telecom companies record their calls or messages without their knowledge. For both cases, 23% of the participants did not consider it a violation of privacy. The rest were unsure of it. 57% of the respondents shared that they were very concerned about the privacy of information given over the Internet. 12% were not concerned in this regard. 67% were very concerned about the privacy of communication on the Internet i.e. monitoring or recording of messaging and emails.

Privacy practice disclosure indicates that a site willingly discloses to the user what it plans to do with the information collected from the user. For example, it would disclose whether it retains the information only for exchanges between the user and that business, or make it available to third parties, or does not keep any information at all. 70% of the respondents said that they were aware of such disclosures. 20% were not aware of such disclosures and 10% were unsure.

45% of the respondents said that they have read the registration terms of social media platforms that state that when you sign into your account, you agree that it follows any of your online activities. Another 47% said that they did not read and 8% were not sure of it.

The participants were asked if they are aware of any law in Bangladesh that protects personal data. 18% of the participants said they were aware of it. 12% of the respondents said that they heard of the Draft DPA. Of these 12% of respondents, 43% heard of it on social media, 29% heard from the news and 14% heard from TV talk shows. Another 14% could not recall from where they heard of it.

Similar to the other laws and policies, the participants were given two contradictory statements on the Draft DPA. Of people who have heard of the draft DPA, 29% agreed with the statement that it would protect their personal data from abuse and the rest were neutral about it. 57% of the same respondents agreed that DPA would increase the risks of online surveillance.

6.7 Needs Assessment

After the long and detailed face-to-face interview, the participants were asked to overall awareness about technology related policies in Bangladesh. Only 3% of them were confident that they were much aware of the technology-related policies in Bangladesh. 22% of the respondents said they were aware, 23% were somewhat aware, 25% were little aware and 27% were not aware. The findings of the study reveal that urban youth were more aware than

Awareness Level	Rural		Urban		Overall
	Female	Male	Female	Male	
Not aware	33%	27%	47%	0%	27%
Little aware	40%	47%	13%	0%	25%
Somewhat aware	7%	13%	27%	47%	23%
Aware	20%	13%	7%	47%	22%
Much aware	0%	0%	7%	7%	3%

Chart 9: Awareness level on technology related policies

rural youth and males were more aware than females. 22% of the participants confirmed their participation in cyber policy-related awareness campaigns or activities of which almost all were from urban areas.

The participants were asked about the most effective way they prefer to inform them about tech policy issues. For the rural participants, the top three most effective ways they mentioned are- tech policy-related topics in the academic curriculum (43%), running social media campaigns (40%), and arranging training and workshops (37%). For the urban participants, the top three most effective ways suggested are to include tech policy-related topics in the academic curriculum (35%), arranging training and workshops (33%), and running social media campaigns (27%).

For all the participants, the top three most effective ways were to include tech policy-related topics in the academic curriculum (39%), arrange training and workshops (35%), and run social media campaigns (33%). Radio programs were believed to be the least effective way to inform about the tech policies with 0%, 5%, and 2.5 effectiveness among rural, urban, and all of the respondents combined respectively.

The respondents felt that different stakeholders did not take effective initiatives to increase their awareness of tech policies. They thought that the civil societies (60% of respondents) have been the least effective stakeholder in increasing awareness of tech policy. After that, academic institutions and technology companies were the least effective ones. According to the responses, media and government have been the most effective stakeholders but only 17% and 14% of the respondents thought that respectively.

On average 76% of the respondents thought that more awareness of tech policies would help them to protect their digital rights, help them to advocate for better policies in the future, help them to hold the state and the tech companies accountable, and make them better citizens and contribute to the society.

6.8 Awareness of the tech policies/laws

The participants were interviewed about their awareness of three technology-related laws of Bangladesh: The Telecommunication Act 2001, the DSA, and the draft DPA. 33% of the respondents were aware of the Telecommunication Act 2001, 57% were aware of the DSA, and only 12% were aware of the draft DPA.

This is important to be mentioned here that the national curriculum designed Information and Communication Technology book for class 11-12 has a section named

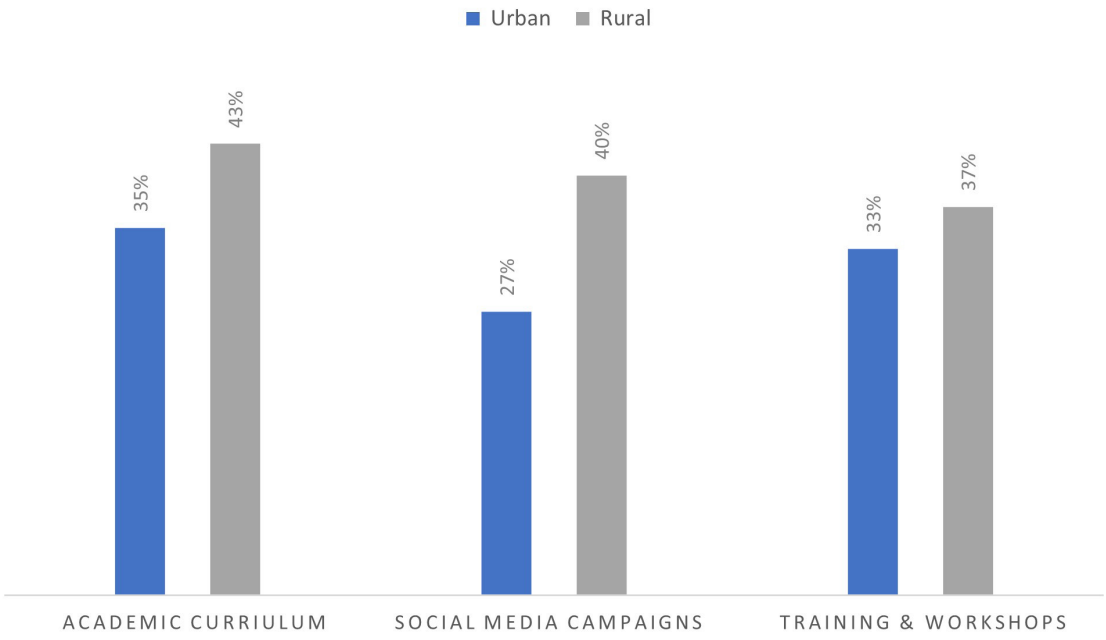


Figure 9: Most effective way chosen to get informed about tech policy

'Cyber Law' (page 29), where the name of the Information and Communication Technology Act 2006, Pornography Act 2012 and DSA 2018 have been mentioned, though in a very brief way.

The responses show that only 5% of the participants were aware of all three laws. Also, 33% of the participants were not aware of any of these laws. 25% of the participants were aware of any two of these laws. The exceptionally high awareness of DSA can be credited to the controversies created by the law and the discussion around it on social media.

Most of the participants who said they are aware of a law didn't mean that they are actually aware of what the law is about, what is in it, or how to utilize the law when they need help. By aware, they meant that they heard of the law i.e. they only know that such a law exists.

7. Expert Interview Analysis

Three experts working with tech related policies were interviewed to identify some potential measures to raise awareness among young people based on the current study. The interviewee panel includes Rezaur Rahman Lenin, academic, legal expert, and activist; Rezwan Islam; Shahzeb Mahmood, barrister and a research associate at the Centre for Governance Studies (CGS). The interviewees shared their opinions based on the study, marked some challenges of unawareness among the youth and provided suggestions to take measures to raise awareness among young people of Bangladesh in tech related laws and policies. Summary findings from the interviews are categorized into some distinct points as discussed below:

- Challenges due to unawareness of tech laws and policies among young netizens

All the interviewees mentioned that the policy making process lacks rights-based approach, lacks maintaining no discriminatory principle and lacks participation of youth which fails to create a sense of ownership among the demographics as a result of not being connected in the discussion. Again, due to unawareness of tech laws and policies, sometimes they are getting criminalized by some controversial acts like DSA. The

existing initiatives and campaigns are failing to create digital literacy among young people, their understanding of cyber space, cyber crime and content are not clear.

A large number of students have been dependent on virtual ways for learning since the onset of Covid-19. So many of them had no other way than using their parents' devices for education. So, the risks have again increased here. A remarkable number of young people use Facebook, messenger, Imo etc. in rural areas. But they are not informed with the security policies of such apps. Besides, one device is getting used by more than one user. As a result, getting wrong information through these will become terrible. All internet users are at inherent risk if they do not know about privacy, security, law and policy and anyone can be easily victimized if sh/e is targeted.

- Ensuring digital media literacy among users is crucial

All experts were requested to suggest a few recommendations to raise awareness among young people on tech related law and policies. They suggested that enhancing user digital media literacy is the most essential course of action. The users can benefit from specialized training, seminars, workshops, and campaigning. Lessons on digital media literacy may be included in curricula to educate students to be responsible users of the global web. Conducting mass campaigns and using mass media as a tool of shaping responsible digital citizen actions can contribute to ensuring responsible digital citizenship. Users can be informed about appropriate limitations to help them become aware of the dos and don'ts. Conscious user improvement may minimize the improper use of digital networks. People may become aware of their wrongdoings through good conscience as well as be aware of the laws and policies. Education has the power to significantly alter this scenario of the present incognizance.

They do not think that the initiatives regarding technology related laws and policies are very effective. This study's findings also support this claim. To address this issue, collaboration between policymakers, governmental and non-governmental organizations, and civic organizations can be established to launch effective campaigns. Targeted awareness campaigns can be conducted through popular social and communication media, including Facebook, WhatsApp messages, email campaigns, and newsletters. Furthermore, opportunities should be provided to young people, such as free memberships in tech-related law and policy meetings, seminars, and courses. Talk shows with young people can contribute to the popularization of the discussion on tech laws and policies. Creating innovative spaces like libraries, computer centers, and digital e-centers can also facilitate discussion among young people. Overall, any program or initiative designed to promote tech-related laws and policies should aim to generate interest among young people to learn more about this crucial topic.

- Starting from the basics and accelerating user friendliness

Studies on password security, cybercrime etc. should be covered in detail at high school level. With new technologies emerging every day, everyone needs to take steps to stay updated and ensure inclusion.

Most platforms on the internet, such as social media or any educational site, are in English. As a result, it is inaccessible to many. The terms and conditions of popular social media should be communicated to the users in Bengali and in simple language. In this case simple pictures/symbols can also be used along with writing. Not by agreeing to all the terms and policies, but by allowing a user to access the platform only by agreeing to the terms and conditions, initiatives must be taken to bring about

this change. The Government should also ensure providing opportunities specially for the young people to create availability of necessary program/apps so that the users can be safe from the risks of using unpaid versions.

- Tech Laws and Policies need to be promoted

Law is the foundation of citizenship, and every law affects the life of a citizen. It is important to know the law from the point of political, economic, social rights of a citizen.

In order to address the lack of awareness among many young people in society, it is pivotal to promote the relevant laws and policies in. If a law or policy is not widely publicized, there is a risk of confusion and misunderstanding. The language used in laws and policies in Bangladesh can often be difficult for the general public to understand. Many of these documents are written in legal jargon, which can make them inaccessible to those without a legal background. As a result, there is often a lack of awareness and understanding among the general population about their rights and responsibilities under various laws and policies. This can lead to a lack of compliance, as people may not be aware of what is expected of them. To address this issue, not only the tech related laws, there is a need to make all the laws and policies more accessible and understandable for all, regardless of their level of education or legal knowledge.

- Initiating collaboration between government and CSOs

The experts interviewed mentioned that collaboration between government and CSOs is essential to raise awareness among young people on tech policy and laws. CSOs can play a crucial role in reaching out to young people who may not have access to formal education or are marginalized due to socioeconomic status. By working together, the government and CSOs can develop effective and comprehensive programs that address the gaps in knowledge and awareness of digital literacy, cybercrime, and online safety. This collaboration can also help to ensure that policies and laws are rights-based and inclusive, taking into account the perspectives and needs of all members of society, particularly youth. Government should also collaborate with the right-based CSOs in the discussion of cyber space and other relevant issues and designing relevant programs. It is important to strengthen this collaboration to promote a safe, responsible, and inclusive digital society.

8. Summary

Overall, the study provides an insight into the digital landscape of Bangladesh, highlighting the internet usage patterns, social media preferences, and knowledge of cybercrime and privacy laws among young people. The findings show that the internet has become an integral part of daily life for most respondents, who primarily use mobile data to access it. However, there is a gender gap in digital access, with rural females having limited access to computers.

Social media platforms such as Facebook, YouTube, Instagram, and TikTok are popular among the respondents, with the majority using them for communication, news updates, education, and entertainment purposes. Messenger and WhatsApp are the most common means of communication. The study also revealed that rural females are less aware of internet-related policies and cybercrime, emphasizing the need for greater public awareness and education.

The findings of the study indicates that male youth have more access to broadband and computers compared to female youth and a significant proportion of female

youths are far behind in comparison with the male youth on several sectors like cybercrime, understanding of privacy and privacy measures, etc. This is essential to ensure maximum participation of female youth in every campaign and initiative with special focus on rural woman. The findings of the study also shows that urban youth are more aware of tech policies than rural youth and males are more aware than females. Therefore, there is a need to improve gender and regional equity in tech policy awareness programs.

The study found that most respondents have experienced at least one form of cybercrime, with exposure to violent, religious, or political material being the most common. The findings also indicate that there is a lack of understanding and clarity among the respondents about the Bangladesh Telecommunications Act 2001 and the DSA, highlighting the need for greater public awareness and education about cybercrime and cyber laws in Bangladesh.

Privacy concerns were also prevalent among the respondents. The study found that a significant number of respondents were not aware of any law in Bangladesh that protects personal data, emphasizing the need for greater public awareness of privacy laws and the draft DPA.

The study suggests that incorporating tech policy-related topics in academic curriculums, arranging training and workshops, and running social media campaigns are effective ways to increase awareness of technology-related policies among young people in Bangladesh. Media and government were perceived as the most effective stakeholders in increasing awareness, while CSOs were seen as the least effective. Most participants believed that more awareness program of tech policies would help them protect their digital rights and contribute to society.

Based on these findings, this Study proposes the following recommendations-

9. Recommendations

Raising Awareness of Young People on Tech related Law and Policies

1. The civil societies, media, and academic institutions need to work together to improve awareness of privacy laws and their implications among young people.
2. The government and academic institutions need to work together to include these topics in the curriculum to increase awareness among young people.
3. Civil societies, government, and academic institutions can conduct in person workshops and training programs to increase awareness.
4. Running social media campaigns can help raise awareness of tech policy issues among both urban and rural young people.
5. Targeted awareness campaigns like WhatsApp messages, email messages can be conducted to reach young people.
6. There is a need for involving and improve the effectiveness different stakeholders such as government, academic institutions, civil societies specially community level organizations in awareness initiatives to ensure maximum reach to the diversified group of people.
7. Beside arranging inclusive and engaging events, there is a need to increase overall participation in these campaigns, especially among rural participants.
8. It's critical to conduct tailored initiatives to address and ensure that all individuals have equal access to digital possibilities. Creating interest to know

more should be the prime technique for designing campaigns and initiatives to raise awareness on tech related law and policies.

Accelerating the Basic Literacy

9. As social media is a popular means of communication and accessing information, efforts should be made to promote social media literacy, including critical thinking and fact-checking skills, to ensure that youth can use social media in a responsible and informed manner.

10. Cybercrime is a serious problem in Bangladesh, and there is a lack of awareness and education about it. The government and other stakeholders should take initiatives to increase public awareness about cybercrime and educate people on how to identify and protect themselves from it.

Facilitating Equity

11. Efforts should be made to promote gender equity in access to technology, including providing equal access to technology and technology-related education for both genders.

10. Conclusion

The study on tech policy literacy among young people in Bangladesh reveals a concerning lack of awareness and knowledge regarding cyber laws and policies. With the increasing use of technology and the internet in all aspects of life, it is crucial for the youth to understand the social and ethical implications of tech-related policies. This lack of understanding can lead to various issues like cybercrime, privacy violations, and misinformation, which can have significant impacts on their lives. As an active user of internet, this is important to know about tech related laws and policies from the point of political, economic, social rights. Every law affects the lives of citizens. So if an internet user is ignorant or unaware of the laws and policies e.g. what security, rights are being provided by a law or policy, what rights are being repressed of violated, s/he cannot protect him/her and get protection of the law or cannot refine his/her internet behavior by knowing the right and wrong or cannot participate in the discussion if something violates the rights as well. So, whoever is working on citizen's rights, this is important to initiate activities to raise awareness on tech laws and policies at the same time accelerating tech policy literacy among the netizens.

The International Telecommunication Union (ITU), United Nations specialized agency for information and communication technologies – ICT in its youth strategy include- encouraging youth participation in ITU programmes, events and activities; promoting ICT youth-related policies within ITU Member States to ensure inclusiveness and empower youth, particularly in developing countries; and engaging in regular dialogue and consultations with youth to undertake concrete actions. Therefore, there is a need for CSOs to initiate cyber policy awareness campaigns and measures to enhance the overall tech policy knowledge among young people in Bangladesh. The findings of this study provide some evidence-based recommendations to address this issue and contribute to the development of campaigns and initiatives that benefit the youth and the society as a whole.

Addressing Bangla Hate Speech on Facebook: Lessons from the Arabic Context for Bangla Content Moderation

Mohammad Pizuar Hossain [I]

[I] Mohammad Pizuar Hossain is a Senior Lecturer in Law at East-West University, Bangladesh. He provides pro bono support for the victims of human rights violations as a Consultant of Bangladesh Office of Asia Justice and Rights, Indonesia. He also offers expert advice for various research projects undertaken by Digitally Right, Bangladesh. His research interests cover International Law, Criminology, Cybercrimes and Cyber Security, and Human Rights. He published papers in Holocaust and Genocide Studies, International Annals of Criminology, International Journal of Human Rights, Commonwealth Law Bulletin, Journal of Parliamentary and Political Law, Asia Pacific Journal of Environmental Law, and Australian Journal of Asian Law.

Abstract

This paper explores the shortcomings of Bangla content moderation on Facebook. While there has been an uptake in the moderation of Bangla content since 2020, many have raised concerns that moderation continues to be widely inaccurate, with serious implications for ethno-religious conflict and freedom of expression in Bangladesh. This paper builds on the existing resources to assess Facebook's challenges with Arabic content moderation, to uncover potential causes for moderation errors and shortcomings in Bangla. Much like Arabic, Bangla (also known as Bengali) is spoken across several markets with ethno-religious and linguistic differences. Reflecting on what is known of Facebook's Arabic setup, as well as available information regarding Bangla content moderation, this paper raises concerns, among others, that Bangla content moderation may be disproportionately influenced by ethno-linguistic considerations from West Bengal, India. It provides suggestions for future considerations to effectively address the issue of hate speech in the Bangla language on Facebook and highlights the need for further research.

Keywords: *Bangla hate speech, contextual diversity, linguistic diversity, artificial intelligence, human reviewers, Bangladesh, India.*

1. Introduction

Speech is defined as an 'act of doing, where a certain "force" is acted upon another', but when it comes to the concept of hate speech, it is still contested as too broad and subject to manipulation.[1] In contrast, more dogmatic concepts like "fear speech" and "dangerous speech" have been extended to concentrate on the aptitude of speech to incite conflicts and crimes.[2] In recent times, many scholars of the global North dealing with hate speech have focused more on social and political aspects than its innate content.[3] The aspects are: first, it threatens out-group members owing to their 'race, ethnicity, religion, gender, gender identity, or sexual orientation'; second, it uses dehumanized terms to indicate out-group members as social threats; and last, in-group members construct a hateful discourse against out-group to recruit and fraternize new members.[4]

The definitions of hate speech and implementations of pertinent laws have a significant variety and inconsistency across the countries.[5] Within the international law framework, defining hate speech involves trade-offs because where the prohibition of hate speech is subject to certain conditions, the protection of free speech is also not unqualified.[6] The 1948 Universal Declaration of Human Rights (UDHR)[7] and the 1966 International Covenant on

---

1 Matthew Williams, *Virtually Criminal: Crime, Deviance, and Regulation Online*, 2006, Routledge; Iginio Gagliardone, "Defining Online Hate and Its "Public Lives": What is the Place for "Extreme Speech"? *International Journal of Communication,* 2019, 13: 3068-87.

2 Antoine Buyse, "Words of Violence: 'Fear Speech,' or How Violent Conflict Escalation Relates to the Freedom of Expression." *Human Rights Quarterly,* 2014, 36 (4): 779–97, at p.780.

3 Michael Waltman and John Haas, *The Communication of Hate*, 2011, Peter Lang Publishers; Michael Waltman and Ashely Mattheis, "Understanding Hate Speech," *Oxford Research Encyclopedia of Communication,* 2017, available at https://oxfordre.com/communication/view/10.1093/acrefore/9780190228613.001.0001/acrefore-9780190228613-e-422 (last accessed on March 6, 2023).

4 *Ibid*, Michael Waltman and Ashely Mattheis, 2017.

5 Katharine Gelber and Luke McNamara, "Evidencing the harms of hate speech," *Social Identities,* 2016, 22(3): 324-41.

6 August Reinisch, "The Changing International Legal Framework for Dealing with Non-state Actors," In Philip Alston (ed) *Non-State Actors and Human Rights*, 2005, Oxford University Press.

7 UN General Assembly, Universal Declaration of Human Rights, 10 December 1948, 217 A (III).

Civil and Political Rights (ICCPR)[8] are the prominent international instruments that guarantee freedom of speech.[9] According to Article 20 of the ICCPR, hate speech that must be prohibited includes 'any advocacy of national, racial or religious hatred that constitutes incitement to discrimination, hostility or violence; and all dissemination of ideas based on racial superiority or hatred, and on incitement to racial discrimination.' Furthermore, under the purview of Article 29 of the UDHR, restrictions must be targeted and balanced in situations where a speech is likely to pose a serious danger to the enjoyment of others' rights or where 'just requirements of morality, public order and the general welfare in a democratic society' are endangered.

Facebook, a highly interactive media, has become a vital room for public dialogue and more destructive behaviour, such as spreading hate statements, in some countries with the fast growth of mobile broadband and low-priced smartphones.[10] The proliferation of online hate speech has emerged as a prominent factor in the escalation of violence against ethnic and/or religious minority communities in Bangladesh and India. To address this phenomenon, Facebook has increased its content moderation in Bangla (also called "Bengali"), among others, which can be considered a step towards halting hate speech on this platform. However, it is argued that Bangla content moderation is still inadequate.[11]

Facebook's inadequacy concerning Bangla content moderation is having very serious real-world impacts in the Indian subcontinent, primarily in Bangladesh and some parts of India, such as West Bengal, Odisha, Tripura, Bihar, and Assam.[12] For illustration, the current violence against minorities caused by online hate speech highlights three significant trends. First, hate speech easily exacerbates discriminatory attitudes towards minorities in these nations, ***i.e.***, Hindus in Bangladesh and Muslims in India.[13] Second, political and religious stakeholders sometimes use hate speech to exploit destructive religious sentiments in a political context.[14] Finally, the COVID-19 pandemic exacerbated hate

> Bangla is not a unique language for Facebook as a similar situation can be seen in the case of the Arabic language which, with several dialects, is spoken by millions spreading in various countries, predominantly in Middle Eastern Asia.

8 UN General Assembly, International Covenant on Civil and Political Rights, 16 December 1966, United Nations, Treaty Series, vol. 999.

9 Article 19 of both the UDHR and ICCPR guarantee freedom of speech.

10 Cherian George, "Managing the Dangers of Online Hate Speech in South Asia," *Media Asia, 2016,* 42 (3-4): 144-156.

11 Sheikh Saaliq and Krutika Pathi, "Facebook dithered in curbing divisive user content in India," *The Associated Press*, October 24, 2021, available at https://apnews.com/article/coronavirus-pandemic-technology-business-media-religion-9255fdedb5e238bd3ec74781f50d35f4 (last accessed on March 7, 2023).

12 *Ibid*.

13 Georgia Giannakarou, "The Role of Collective Identities in Democratization Processes: The Case Studies of the European Union and East and Southeast Asia." *Journal of Eastern European and Central Asian Research,* 2015, 2(1): 1-11.

14 Porimol Palma, "'Rise in hate speech, mob violence over past year has created precarious situation for minorities.'" *The Daily Star*, May 17, 2022, available at https://www.thedailystar.net/news/bangladesh/diplomacy/news/rise-hate-speech-mob-violence-over-past-year-has-created-precarious-situation-minorities-3025691 (last accessed on February 27, 2023).

speech against ethnoreligious minorities, who were targeted and victimized throughout these nations.[15]

In Bangladesh, recent examples include a series of attacks on Hindu communities and temples in different localities,[16] as well as the alleged participation of some political leaders with local Muslims in both the 2012 Ramu attacks against Buddhists and the 2021 violence against Hindus in Bangladesh, sparked by images posted on Facebook.[17] On the other hand, discriminatory hate campaigns targeting Muslim groups have been observed in various parts of India, and the Bharatiya Janata Party (BJP), a major Indian political party, has recently supported several attacks on Muslims across India, including West Bengal, Odisha, Tripura, Bihar and Assam, based on the Facebook and Twitter trend #CoronaJihad, which claimed that Muslims were intentionally spreading COVID-19.[18] Also, during Assam's Citizenship Count in 2019, Avaaz's investigative team found that 'Bengalis, Muslims in particular, are facing an extraordinary chorus of abuse and hate in Assam on Facebook'.[19]

Bangla is not a unique language for Facebook as a similar situation can be seen in the case of the Arabic language which, with several dialects, is spoken by millions spreading in various countries, predominantly in Middle Eastern Asia. As a part of Facebook's response to such issues in certain Asian nations, it claimed to have employed native speakers throughout the region and trained automated classifiers to detect and eradicate offensive content.[20] though there are questions regarding the success and effectiveness of this initiative.[21]

An estimated 272 million speakers - mostly spread across Bangladesh and India, with cultural differences and differences in dialects, notably use the Bangla language.[22] As of April 2023, Facebook has an estimated 59 million Bangla speaking

---

15 Shweta Desai and Amarnath Amarasingam, *#CoronaJihad: COVID-19, Misinformation, and Anti-Muslim Violence in India*, 2020, London, Washington DC, Beirut, and Toronto: The Institute for Strategic Dialogue.

16 South Asia Collective (SAC), "South Asia State of Minorities Report 2021: Hate Speech against Minorities." December 2021, available at https://minorityrights.org/wp-content/uploads/2022/01/SASM2021.pdf (last accessed on February 25, 2023).

17 Anbarasan Ethirajan, "Bangladesh's Hindus living in fear following mob attacks." *BBC News*, 22 October, 2021, available at https://www.bbc.co.uk/news/world-asia-58999047 (last accessed on March 2, 2023).

18 *Supra*, footnote no. 15.

19 Avaaz, "Megaphone for Hate: Disinformation and Hate Speech on Facebook during Assam's Citizenship Count.", 2019, available at https://avaazpress.s3.amazonaws.com/FINAL-Facebook%20in%20Assam_Megaphone%20for%20hate%20-%20Compressed%20(1).pdf (Last accessed on September 3, 2023).)

20 Giovanni De Gregorio and Nicole Stremlau, "Internet Shutdowns and the Limits of Law." *International Journal of Communication*, 2020, 14: 4224-43.

21 A key informant of this research, a civil society representative who focuses on digital rights in Bangladesh, asserts:
I can inform you, based on my five years of experience, that a large number of Facebook users in Bangladesh, predominantly young people, have reported Facebook groups that frequently share false and misleading religious and political information. Unfortunately, however, Facebook appears to take little action against these groups.

22 The largest Bangla-speaking population outside of Bangladesh resides in various Indian states, including West Bengal, Odisha, Tripura, Bihar, and Assam, with more than 106 million speakers. Ethnologue. 2023. "Bengali", available at https://www.ethnologue.com/language/ben/ (last accessed on February 27, 2023).

users.[23] Thus, considering that Bangla is a widely spoken language around the world, with numerous Bangla speakers in various nations, identifying relevant elements to understand the Bangla moderation setup and its shortcomings through the lens of Facebook's key issues with its Arabic content moderation can be insightful.

2. Methodology

This paper has primarily attempted to understand the likely causes of shortcomings of Bangla content moderation on Facebook through the lens of the case of Arabic content moderation on Facebook. This research uses content analysis of relevant resources to investigate the limitations in Bangla content moderation utilizing the Arabic assessment as a key aspect. One significant limitation of this study is the dearth of authoritative sources pertaining to Facebook's content moderation in general. Also, due to the time constraint of the current undertaking, merely the Bangla language is the focus of this research.

In this research, four key informants (KIs, if singular Ki) two male and two female aged between 28 to 35, were interviewed using Zoom video conferencing. The KIs include a diverse group of individuals with expertise in various areas. They consist of a civil society representative, a digital rights activist, a minority rights activist, and a representative from Facebook who wished to remain anonymous. These individuals have either worked directly on or have extensive knowledge about the issue of hate speech in the Bangla language, specifically in Bangladesh, and Kolkata and Assam of India. During the interviews, an open-ended questionnaire was followed, which mainly covered the experiences and opinions of each KI concerning Bangla hate speech and Facebook's approaches to addressing the same. Each discussion continued for 20-30 minutes. The interviews were recorded with the consent of the KIs and then transcribed verbatim.

In the following sections, this paper provides a concise explanation of how content moderation is intended to function on Facebook, with a specific focus on the Bangla language. The next section outlines the concerns with Facebook's online content moderation by contextualizing the primary challenges with Arabic content moderation and how Facebook solved them to combat Arabic online hate speech. The subsequent section describes whether issues such as Arabic content moderation are present in Bangla content moderation. The concluding section suggests the knowns and the unknowns involving Facebook's Bangla content moderation, with the aim of highlighting potential areas for further investigation and future considerations.

3. Facebook's Approach to Bangla Content Moderation

Facebook's content moderation refers to the enforcement of its policies whenever a user violates its community standards. Its enforcement is divided into two main components. The first is "detecting violations," while the second is "taking action." There are two methods for detecting violations: "technology", which is the use of Artificial Intelligence (AI), and "review teams," which review likely cases of

[23] Statista, "Leading countries based on Facebook audience size as of January 2023." January 2023, available at https://www.statista.com/statistics/268136/top-15-countries-based-on-number-of-facebook-users/ (last accessed on March 2, 2023).

violations identified through classifiers or user reports.[24]

AI or technology is the primary method for detecting, reducing, removing, or informing inappropriate content on Facebook. For AI to detect violations and take appropriate action, it is crucial for those providing labels to AI to comprehend the language, dialect, and cultural context of the data they are labeling. "Labeling" is the process of providing specific data with a meaningful or informative label so that AI can contextualize the data. Hence, despite the technology-driven nature of the technique, the function of humans remains of the utmost importance. Humans are responsible for feeding AI labels, data, and logic in the first place.

> Facebook's content moderation refers to the enforcement of its policies whenever a user violates its community standards. Its enforcement is divided into two main components. The first is "detecting violations," while the second is "taking action."

It should be noted that "reducing" implies Facebook's restrictions on the distribution of flagged content on its platform.[25] The "remove" approach refers to eliminating content, profiles, pages, and even groups that contain infringing material.[26] Lastly, the "inform" approach provides users with the context of misleading or sensitive information when they access it via its platform.[27]

Facebook employs a worldwide set of community standards and utilizes a combination of human reviewers and AI tools to enforce these standards on its content, Bangla content in this case. Regarding the moderation of Bangla content, it has been reported that image-based classifiers are currently being utilized to detect visual elements, such as graphic violence or pornography. It is noteworthy that Facebook's Bangla classifier is one of the oldest, while it started auditing in 2020.[28] The number of reviewers evaluating Bangla content and their ethno-religious-linguistic background remain undisclosed. Furthermore, there is a lack of information regarding the specific categories of linguistic abuses that are currently encompassed by the language classifiers, as well as the nature of the data utilized for training these classifiers.

---

24 Transparency Center, "How technology detects violations." *Meta*, 19 January, 2022, available at https://transparency.fb.com/en-gb/enforcement/detecting-violations/technology-detects-violations/ (last accessed on March 6, 2023); Transparency Center, "How review teams work." *Meta*, 19 January, 2022, available at https://transparency.fb.com/en-gb/enforcement/detecting-violations/how-review-teams-work/ (last accessed on March 6, 2023).

25 Transparency Center, "Reducing the distribution of problematic content." *Meta*, 4 October, 2022, available at https://transparency.fb.com/en-gb/enforcement/taking-action/lowering-distribution-of-problematic-content/ (accessed March 6, 2023).

26 Transparency Center, "Taking down violating content." *Meta*, 22 February, 2023, available at https://transparency.fb.com/en-gb/enforcement/taking-action/taking-down-violating-content/ (accessed 6 March 2023).

27 Transparency Center, "Providing context on sensitive or misleading content." *Meta*, 19 January, 2022, available at https://transparency.fb.com/en-gb/enforcement/taking-action/context-on-sensitive-misleading-content/ (accessed March 6, 2023).

28 Amit Kumar Das, Abdullah Al Asif, Anik Paul and Md. Nur Hossain, "Bangla Hate Speech Detection on Social Media Using Attention-based Recurrent Neural Network." *Journal of Intelligent Systems,* 2021, 30(1): 578-91.

4. Facebook's Content Moderation Challenges: The Arabic Diagnosis

Drawing on the existing resources, the case of Arabic content moderation has been analyzed under four sections – namely, contextual, and linguistic diversity, translations, human reviewers, and automation.

4.1 Contextual and linguistic diversity

Facebook's main finding, as it relates to Arabic, was that the company treats Arabic as one language, when it is in fact a family of languages, with multiple dialects, occasionally mutually intelligible, spoken across two distinct regions and a multiplicity of countries, with widely different socio, political and religious contexts.

Arabic is presently the third most common language used on Facebook.[29] This language is spoken in over thirty countries and has over twenty dialects (Middle East Eye 2021). Facebook classifies all Middle Eastern nations except Western Sahara as "At-Risk Countries" (ARCs), spanning from Tier 1 to Tier 4.[30] In a sensitive region such as the Arab world, it is therefore crucial to comprehend the context of explicit violent content. Nevertheless, the data demonstrate the disparate and concentrated hiring of representatives from certain countries, such as Morocco and Syria, while other countries of the region remain severely underrepresented or are not represented at all.[31] It should be noted that varying contexts of a single word (or graphic content) in various countries cannot be distinguished and that the corresponding meaning and implications cannot be understood adequately.

Despite having a large number of users in the Arab region, approximately 220 million, Facebook's content moderation in Arabic remained nonexistent to some extent.[32] However, the problems deriving from Arabic content moderation have not gone unnoticed by Facebook administrators, rather it is probably the most widely moderated, though not properly and not for the right reasons.

4.2 Translations

The Localization Lab, an organization that supports the translation and localization of internet freedom tools, and Internews, a global media support organization, investigated the Community Standards translation for Arabic,[33] and found that the standards had been translated to Modern Standard Arabic, which can be challenging to comprehend for many Arabic dialect

---

29 Tom Simonite, "Facebook is Everywhere; Its Moderation is Nowhere Close." *WIRED*, 25 October, 2018, available at https://www.wired.com/story/facebooks-global-reach-exceeds-linguistic-grasp/ (last accessed on February 8, 2023).

30 Mark Scott, "Facebook did little to moderate posts in the world's most violent countries." *Politico*, 25 October, 2021, available at https://www.politico.com/news/2021/10/25/facebook-moderate-posts-violent-countries-517050 (last accessed on March 6, 2023).

31 *Ibid*.

32 Marwa Fatafta, "Facebook is bad at moderating in English. In Arabic, it's a disaster." *Rest of World*, 18 November, 2021, available at https://restofworld.org/2021/facebook-is-bad-at-moderating-in-english-in-arabic-its-a-disaster/ (last accessed on February 11, 2023); The Arab Weekly, "On Facebook, Arabic lost in translation as language gaps sow confusion." 26 October, 2021, available at https://thearabweekly.com/facebook-arabic-lost-translation-language-gaps-sow-confusion (last accessed on February 8, 2023).

33 Localization Lab and Internews, "Wait, Who's Timothy McVeigh? A Translation Review of Facebook and YouTube Content Moderation Policies in Amharic, Arabic, Bengali, and Hindi." November 11, 2022, available at https://internews.org/wp-content/uploads/2023/01/Wait-Who-is-Timothy-McVeigh_PUBLISHED-1.pdf (last accessed on April 29, 2023).

speakers. They also found several quality issues with the translation. Key terms, such as "phone calls" (in Arabic "almukalamat," or "تاملاكملا") were wrongly translated as "calls to violence".

There were also several typos in the document, and it appeared to be translated using English syntax, which made it unnatural and difficult for native Arabic speakers to follow. Though Facebook does not disclose the volume of reports received by the country, the Facebook papers included an overview of the percentage of content appealed per market. The rates of appeals were nearly double in markets, such as Morocco (59%), suggesting that the level of understanding of the rules and users' rights may have a direct impact on users' likeliness to act upon those rights.

4.3 Human reviewers

Facebook's top-level finding related to Arabic is that human resources to support content moderation and data labelling do not match the diversity of the region - resulting in content being routed to reviewers that may not be able to understand the content, not least the context.

Facebook asserts that its evaluators with cultural and linguistic competence moderate the content on its platform.[34] The reality, however, begs to differ, particularly in terms of Arabic content moderation. Yemen, for example, despite being a Tier 1 risk country with minimal cross-dialect and cultural understanding, has almost no representation among reviewers.[35]

Morocco, which is a Tier 4 at-risk country, was selected as the top country dialect by a maximum number of locally recruited Arabic content reviewers. Syria was selected as the finest country dialect by 25 percent of reviewers.[36] Yemen, on the other hand, was not selected despite being a Tier 1 high-risk country.[37] Only one percent of evaluators selected Iraq, a Tier 2 high-risk nation.[38]

These actively conflicted and delicate nations mentioned above require adequate content moderation. Yemen has the lowest rep consistency in the Arabic region due to the need for greater Yemeni representation among reviewers. As a result, the likelihood of human error during Arabic content moderation is high in the Arab region, where countries, dialects, and cultural understanding are not represented proportionally.

4.4 Automation

The key finding from the Arabic case is that Facebook's classifiers are applied uniformly across all content identified as Arabic, without consideration for the market and differences in dialects or context. Also, it should be highlighted that words that may be used as slurs in some countries are benign in others: "*faral*" – a slur in Egypt and Algeria, while "chick" in Libyan; and

---

34 Transparency Center, "How review teams work." *Meta*, 19 January, 2022, available at https://transparency.fb.com/en-gb/enforcement/detecting-violations/how-review-teams-work/ (last accessed on March 6, 2023).

35 Rishi Iyengar, "Facebook has language blind spots around the world that allow hate speech to flourish." *CNN Business*, 26 October, 2021, available at https://edition.cnn.com/2021/10/26/tech/facebook-papers-language-hate-speech-international/index.html (last accessed on March 6, 2023).

36 Mark Scott, "Facebook did little to moderate posts in the world's most violent countries." *Politico*, 25 October, 2021, available at https://www.politico.com/news/2021/10/25/facebook-moderate-posts-violent-countries-517050 (last accessed on March 6, 2023).

37 *Supra*, footnote no. 35.

38 *Supra*, footnote no. 36.

"*Zamel*" – a slur in Morocco, while a type of popular singing in Yemen.

AI generally detects and responds to violations automatically. Occasionally, AI sends content for human review rather than acting.[39] Nonetheless, the involvement of humans is of paramount significance in both processes. In Arabic content moderation, the rep consistency, *i.e.*, appropriate labeling, is concerning due to the underrepresentation of labelers who have a strong contextual comprehension of the dialects of all Arabic-speaking countries. As most countries are ARCs, contextual knowledge of content during moderation is even more crucial.

Yemen can be examined to better comprehend the issues with Arabic content moderation and labeling. It adheres to Tier 1 of the ARCs, which is the highest tier. It is a country plagued by problems such as war, juvenile soldiers, terrorism, etc., where hate speech and graphic acts of violence are prevalent.[40]

Yemen is an Arabic-speaking country, but its dialect is vastly distinct from that of other countries in the region. The cross-dialect comprehension is inadequate, and essentially only Yemenis can comprehend it. In addition, cultural awareness is minimal to nonexistent.[41] However, Yemenis are almost entirely absent from the reviewer pool. As there are no reviewers for Yemeni while automation relies on labelled content, this is, in turn, a problem for automation.

5. Implications for Bangla Content Moderation on Facebook

Much like Arabic, Bangla is subject to linguistic diversity and spoken in diverse contexts, with socio, religious, and cultural differences. Thus, the implications and lessons from Arabic content moderation on Facebook are suggestively relevant to Bangla content moderation.

5.1 Context and linguistic diversity

There are several Bangla dialects in Bangladesh, which are grouped into four categories: North Bengal dialect,[42] East Bengal dialect,[43] Rajbanshi dialect,[44] and South Bengal dialect.[45] In West Bengal, Bangla is broadly divided into the Rarhi and Jharkhandi dialects.[46]

Bangladesh's culture is dominated by Islam, whereas West Bengal's culture is heavily influenced by Hinduism. Consequently, the Bangla language is utilized differently in these two locations. On the other hand, cross-dialect comprehension can be of a lesser degree than comprehension of the dialect of West Bengal and a few dialects of Bangladesh, even though the majority of Bangladesh's districts are dominated by Muslims and the culture shares similarities.

Due to the diverse number of Bangla dialects and differences in meaning in the context of different countries, content moderation in Bangla could encounter similar challenges to content moderation in Arabic. However,

---

39 *Supra*, footnote no. 24.

40 *Supra*, footnote no. 36.

41 *Ibid*.

42 North Bengal dialects, such as Dinajpur, Rajshahi, Bogra, and Pabna, are included in this category.

43 East Bengal dialects comprise: a) Dhaka, Mymensingh, Tripura, Barisal, and Sylhet dialects, and b) Faridpur, Jessore, and Khulna dialects.

44 Rajbanshi, the dialect of Rangpur.

45 South Bengal dialects, including Chittagong and Noakhali, as well as Chittagong Hill Tracts dialects.

46 Abul Kalam Manjoor Morshed, "Dialect." *Banglapedia*, available at https://en.banglapedia.org/index.php/Dialect (last accessed on March 18, 2023).

because there are differences between these languages in terms of the number of dialects, the number of countries that speak these languages, and the magnitude of active conflicts, each language would confront its unique challenges. In contrast to the Arabic-dominated Middle East, Bangladesh and West Bengal are not actively at war. However, this does not mean that there are no conflicts in this region of the globe. Conflict deriving from political and religious intolerance is pervasive in these Bangla-speaking regions.

In recent years, Facebook has been accused of fueling religiously motivated hate speech and the ensuing violence in Bangladesh.[47] It is claimed that Facebook has also played an important role in the spread of religious hatred, which has manifested in offline violence in the Indian state of West Bengal.[48] In these two nations, however, the roles of perpetrators and victims are reversed. In West Bengal, Hindus were the aggressors, while Muslims were the victims. In contrast, Muslims assumed the role of perpetrators, while Hindus became the victims of the ensuing violence in Bangladesh. For example, 'মালাউনের বাচ্চাদের বাংলায় কোনো স্থান নাই।' ('Hindus have no place in Bangladesh.') is considered a hateful statement towards the Hindu minority group in Bangladesh. On the other hand, the statement: 'মুসলমানরা আল-কায়দা, তালেবান এবং জঙ্গি।' ('Muslims are Al-Quaeda, Taliban, and Terrorists.') might have larger negative effects on Muslims in India.[49]

About the recent events of violence triggered by religious hatred on Facebook, a KI of this study, an anonymous member of Bengali.AI Community Facebook group, posits:

Facebook treats minority populations of the Indian subcontinent with little or no value. Can we declare it with absolute certainty that it is a form of racism?

As a matter of fact, the issue is not only about the Hindu-Muslim clash; instead, it is about how the minorities in each country faced primary concern as even Buddhist and other religious minorities also became the victims of the incidence of violence. Nevertheless, Facebook failed to prevent the incitement and hate speech that surfaced on its platform, resulting in offline violence.[50]

5.2 Translations

Similar to the Arabic language, the user understanding of the community guidelines in Bangla is also dependent on the study conducted by the Localization Lab and Internews found issues with Facebook's content moderation in Bangla under eight criteria, ***i.e.***, accuracy; errors; clarity of meaning; quality of expression; consistency; diversity, equality, and inclusion; user accessibility, register and tone; and context. According to the study, translation from English to Bangla of community guidelines was done by machine translation. Consequently, an accurate but

---

47 Mubashar Hasan, Geoffrey Macdonald, and Hui Hui Ooi, "How Facebook Fuels Religious Violence." *Foreign Policy*, 4 February, 2022, available at https://foreignpolicy.com/2022/02/04/facebook-tech-moderation-violence-bangladesh-religion/ (last accessed on March 21, 2023).

48 Snigdhendu Bhattacharya, "West Bengal violence over FB post: BJP's Roopa Ganguly arrested, Basirhat calm." *Hindustan Times*, July 16, 2017, available at https://www.hindustantimes.com/india-news/bengal-violence-over-fb-post-basirhat-peaceful-blockades-lifted-after-meeting-between-police-locals/story-c4xyOMzHMYZIWMxGMlvd9H.html (last accessed on March 21, 2023).

49 Md. Rezaul Karim, Bharathi Raja Chakravarti, John P. McCrae, and Michael Cochez, *7th IEEE International Conference on Data Science and Advanced Analytics*. 2020, IEEE.

50 *Supra*, footnote no. 19.

not so functional translation of community guidelines took place.[51]

For instance, the term "immediate family members" was translated into Bangla as "অবিলম্ব পরিবারের সদস্য" ("abilamba paribārēra sadasya"), which is closer to saying "quick" or "prompt" member of the family rather than what was intended.[52] Moreover, although the translation had relatively fewer spelling mistakes, it used many irregular and uncommon words, not used in day-to-day life, e.g., '"marijuana" was transliterated into Bengali as "মারিজুয়ানা" ("mārijuẏānā"), when most Bengali speakers refer to marijuana as "গাঁজা" ("gām̐jā").'

In addition, formal expressions that end users may not understand have been employed in the translations. According to Facebook's policy on inciting violence, "places of worship" are locations where violence is rigorously forbidden. However, while translating "places of worship," the Bangla word "উপাসনাস্থল" ("upāsanā sthala") was used, which largely refers to a place of worship of Hindu people. The place of worship of Muslim people, which is left out, is translated in Bangla as "মসজিদ" ("masajida").[53] The aforementioned issues are a few of the many present on the end users' side in reporting any violations of community guidelines. The evidence discussed also indicates that the translation of the Bangla language on Facebook highlights a bias towards India.

5.3 Human reviewers

The primary concern regarding Bangla content moderation on Facebook is related to the composition of human moderators. In content moderation, AI cannot always accurately assess a situation, and human assessors may be required at times. According to the discussion of Arabic content moderation, human evaluators play an important role in content moderation, particularly when the content is ambiguous to AI. However, it has also been seen in Arabic content moderation that a lack of proportionate representation based on cultural context and dialect can lead to major mishaps. For example, human reviewers may need to gain knowledge of a given dialect or cultural context to confirm hate speech. Similarly, in Bangla content moderation, understanding cultural context, linguistic forms, and dialects is very much necessary to appropriately moderate content in Bangla. Thus, given the context of violence against minorities in Bangladesh and India based on Bangla hate speech, Facebook must audit its human reviewers' cultural context, language forms, and dialects of Bangla content.

Human reviewers are working to review hate speech content and other violations in Arabic content moderation. Nonetheless, in addition to the proportional representation of culture and dialect, the precise number of exclusive Bangla content human reviewers, if any, must be clarified. TV9 Bangla Digital reports that a Facebook's anonymous representative opined:

Instead of relying solely on artificial intelligence, Facebook authorities have appointed a data checker for more than 20 Indian languages. Through which an attempt is being made to curb any kind of provocative and false information.[54]

---

51 *Supra*, footnote no. 33.

52 *Ibid*.

53 *Ibid*.

54 TV9 Bangla Digital, "Facebook: Failed to stop 'Language Terrorism' in Bengal! Sensational information." October 7, 2021 available at https://tv9bangla.com/west-bengal/facebook-not-being-able-to-understand-local-indian-languages-as-bengali-or-hindi-failing-to-stop-hate-speech-432649.html (last accessed on April 27, 2023).

It should, however, be mentioned that if AI is incapable of detecting hate speech and other violations, and reports are made, it is highly unlikely that they will be reviewed correctly, as a human reviewer who understands not only the language, but also the cultural context, linguistic forms, and dialects is required to conduct a proper review. Moreover, it is necessary to have a deliberate intention to incite hatred among individuals, a clear mention of potentially harmful outcomes, and a close connection to the threat in the language used. Therefore, identifying hate speech should primarily rely on human involvement to assess the varying degrees of severity in hateful Facebook posts, as it varies from one case to another.

5.4 Automation

The key concern involving automation on Facebook is the lack of information about when and why the classifiers get introduced and what it can tell us about how they are labelled and developed.

Most of Facebook's violation detection and enforcement is performed by AI technology. Human evaluators perform a negligible fraction of content moderation. Long ago, AI began operating in Arabic content moderation. However, because of the cultural diversity and low inter-dialectal comprehensibility, the labeling and classifier were under extreme pressure. Particularly in actively conflicted nations such as Yemen and Iraq, where dialects have very low cross-dialect comprehensibility, the issue has become even more problematic, as these nations have little to no representation in the labeling and classifiers.

Compared to Arabic, Facebook did not introduce Bangla classifiers until 2020, which is not a long time.[55] Clearly, time is required to feed labels to the classifiers. Like Arabic, Bangla is a complex language due to its cultural diversity and dialects. Therefore, if there are insufficient representatives, who label the data and who comprehend each of the cultural contexts and dialects, the classifiers will be erroneous, such as in Arabic.[56] A KI of this research, a minority rights activist from Kolkata, India, states:

In India, it is commonly perceived that Hindus and Muslims see themselves as distinct from each other. Sometimes, I realize that what may be considered freedom of speech in West Bengal or other parts of India, where Hindus are the majority, is perceived as hate speech in Bangladesh where Hindus are a minority. If Facebook fails to differentiate the same, this could potentially lead to religious violence in both places.

This paper limits to demonstrate any specific examples on this point, but this statement underlines the concern that if the context of the content is unclear to Facebook, ***i.e.***, the classifier, it may be unable to detect such hate speech and cause violence between Hindu and Muslim communities in either or both countries. It is therefore Facebook's liability to consider cultural context and dialects when providing labels to the classifier to moderate Bangla-language content.

6. Conclusion

This briefing paper concentrates primarily on Facebook's moderation of Bangla content to combat hate speech and incitement to violence in Bangladesh and certain areas in India. It identifies issues under the headings of context and linguistic diversity, translations, human reviewers, and automation of Arabic content moderation in the context of Arabic-speaking countries to determine what lessons can be learned for Bangla content

---

55 Elizabeth Culliford and Brad Heath, "Language Gaps in Facebook's Content Moderation System Allowed Abusive Posts on Platform: Report." *The Wire*, October 26, 2021, available at https://thewire.in/tech/facebook-content-moderation-language-gap-abusive-posts (last accessed on March 21, 2023).

56 *Supra*, footnote no. 32.

moderation on Facebook. It identifies the following issues and recommendations to be considered in the future concerning Bangla content moderation:

Firstly, the contextual and linguistic differences down to the influence of the majority religions - Hinduism and Islam - in Bangladesh and some parts of India make it challenging for Facebook to moderate Bangla content without errors. As a primary step, like Arabic (re: ARCs), Bangla-speaking communities in Bangladesh and India's West Bengal, Odisha, Tripura, Bihar, and Assam should be categorized to navigate the risk of Facebook's Bangla hate speech. This suggestion also calls for a context-specific approach to defining hate speech by the policymakers to help address hate speech contents.

This paper thus suggests four factors, on top of the intrinsic content of a speech, that can be considered to define hate speech given the contextual diversity of Bangla-speaking people in Bangladesh and India. First, the role of the "speaker" in society because an influential person's speech can create a more adverse impact on the community, although the trends discussed earlier highlight that a general public's Facebook post can also have a dangerous effect. Second, the social and cultural position of the "audience" as Muslims in India and Hindus in Bangladesh are more vulnerable. Third, the social and historical context of the "content", 'including language, [image, video clip], cartoons, memes or graphic content'. Last, "platform" for publicizing a speech because a community might be familiar with specific platforms for various news or information.[57]

Secondly, based on the pertinent resources reviewed in this research – though limited in number, it is evident that Facebook's translation of the Bangla language is heavily influenced by India's Western Bengal's dialect (see, ***e.g.***, Localization Lab and Internews 2022).[58] As a result, many vocabularies and sentence structures may be complex for the people of Bangladesh to comprehend, as their wording varies based on context. Thus, Facebook should involve sufficient representatives for labelling the data and develop a nuanced Bangla language classifier considering Bangla colloquial terms to avoid false alarms or even a lack of user reports against Bangla hate speech and incitement to violence due to their incomprehensibility.

Thirdly, in the case of Bangla content moderation, the number of human reviewers is unknown. It is also uncertain what is the composition of the human reviewers or whether the human reviewers understand the differences between Bangla dialects and the contexts, ***e.g.***, religious context and their influence on the language. These questions must be answered to comprehend Bangla's content moderation susceptibility.

Finally, it was determined in Arabic that labelers who feed classifiers to the AI comprehend the diverse dialects, linguistic forms, and contexts were not well-trained. It is likely to have been the same for Bangla content moderation too. Particularly, the country from which the labelers are recruited is also unknown. As a result, the central issue of the labelers' competence in

---

57 Naganna Chetty and Sreejith Alathur, "Hate Speech Review in the Context of Online Social Networks." *Aggression and Violent Behavior,* 2018, 40: 108-18; Penelope Kemekenidou, "11 r/ChokeABitch Feminist Tactics against Hate Speech in Capitalist Social Media Platforms." In: Polak, Sara and Trottier Daniel (eds) *Violence and Trolling on Social Media*, 2020, Amsterdam University Press; United Nations General Assembly, *Annual report of the United Nations High Commissioner for Human Rights*, 2013, A/HRC/22/17/Add.4. available at https://www.ohchr.org/sites/default/files/Documents/Issues/Opinion/SeminarRabat/Rabat_draft_outcome.pdf (last accessed on April 5, 2023); Isabelle van der Vegt, Maximilian Mozes, Paul Gill and Bennett Kleinberg, "Online Influence, Offline Violence: Language Use on YouTube Surrounding the 'Unite the Right' Rally." *Journal of Computational Social Science, 2021,* 4: 333-35.

58 *Supra*, footnote no. 33.

Bangla has yet to be adequately determined.

For further research, conducting a comprehensive case study on Bangla content moderation on Facebook regarding online hate speech and violence against ethnoreligious minorities in Bangladesh and India by interviewing a considerable number of key stakeholders may contribute to a great extent. Because of the inadequacy of data points, this paper cannot fully substantiate the argument, although the report of Localization Lab and Internews suggests that Bangla moderation is over influenced by India's Western Bengal's Bangla to a great extent.[59] Hence, further research can address the questions as to what impact are lack of human reviewers training about Bangla colloquial terms and the absence of nuanced Bangla language classifiers having and what would be rebalancing moderation, not just at the human but also classifier level. Furthermore, although the paper focuses primarily on Bangla content moderation through the Arabic case, it will pave the way for future research in other languages. Urdu, for instance, is a language that is primarily spoken in Pakistan, India, and certain regions of Bangladesh. In addition, Tamil is spoken by a large population in both the south of India and Sri Lanka, where a long-lasting conflict has been observed due to language differences. Future researchers may examine the content moderation issues in Urdu and Tamil in terms of various dialects and contexts to determine if there are any lessons to be learned from the content moderation issues in Arabic and Bangla.

[59] *Ibid*.

Data Localisation and its Impact on Businesses in Bangladesh: A Perception Survey

Mohammad Tauhidul Islam [I] **& Rajib Ahmed** [II]

[I] Mohammad Tauhidul Islam, an open data enthusiast with 18 years of experience in Business Journalism, now serves as the Coordinator of Outreach and Communication at Transparency International Bangladesh (TIB). Passionate about utilizing public data to unveil governance gaps, he recently authored "e-Government Procurement in Bangladesh: A Trend Analysis of Competitiveness (2012-2023)." Beyond his impactful work, his idea triumphed in HackCorruption in Kathmandu, aiming to transform the monitoring of the e-procurement system in Bangladesh and Nepal. A recipient of the UN RAF Memorial Journalist Fellowship in 2015, Mr. Islam holds a degree in International Relations from Dhaka University and received training at the International Anti-corruption Academy (IACA).

[II] Rajib Ahmed, a senior reporter and Deputy Head of Reporting (online) of Prothom Alo, one of the leading dailies in Bangladesh, began his career in journalism in 2007. He reports on a variety of topics as a reporter, including economics, trade, labor disputes, food security, data security, privacy, press freedom, and human rights. Rajib Ahmed graduated from the University of Dhaka with an MSS in journalism and mass communication. He participated in a number of local and international organizations' training sessions on privacy, new media legislation, conflict journalism, fact-checking, reporting on indigenous people, and other topics.

Abstract

Bangladesh government has released several Drafts of the Data Protection Bill containing provisions, inter alia, on mandatory data localisation and cross-border data transfer restrictions. While it can easily be understood that recent similar moves by some other countries might have encouraged the drafters of the Bill to include such provisions in the Draft, no justification or explanation behind such move has not been shared so far. In this data-driven globalised economy, though there are some obvious benefits, there are some challenges for making provisions for mandatory data localisation as well, especially for the newcomers in this field like Bangladesh. This survey-based study explores the potential impact of mandatory data localisation provision and cross-border data transfer restrictions on businesses across various sectors in Bangladesh. To this end, it first discusses the trends of data localisation around the world and in Bangladesh and the Banking and Financials, Telecom, IT, E-commerce, and Retail industry respondents' concerns about the potential impact and consequences of these regulatory measures. The survey highlights challenges related to infrastructure changes, increased costs, reduced efficiency, and operational complexities that businesses may face in complying with data localisation requirements. It also emphasizes the need for tailored approaches considering industry-specific needs, extensive stakeholder consultations, transitional periods, and support mechanisms to facilitate compliance. The paper concludes that policymakers need to strike a fine balance between data localisation objectives and businesses' needs, to ensure a conducive environment for digital growth and competitiveness.

Keywords: data Localisation, cross-border data transfer, data Protection,

1. Introduction

"…Trust must be earned through action, not words. Building trust is above all an engineering and governance effort, not a public relations exercise. We will go above and beyond, so our community and regulators can see and verify our actions… The centrepiece of our work is called **Project Texas**. Project Texas is an unprecedented initiative dedicated to safeguarding both U.S. user data and U.S. national security interests. This initiative addresses key issues of corporate governance, content recommendation and moderation, data security, and system access. It is a comprehensive package of measures with layers of independent oversight to protect against backdoors into TikTok that could be used to manipulate the platform or access U.S. user-protected data. . . To ensure that the data of all Americans is stored in America and hosted by an American headquartered company, we have contracted with Oracle, an industry leader in cloud-based services, to store TikTok's U.S. user data. Currently, 100 percent of U.S. user traffic is being routed to Oracle and USDS-controlled infrastructure in the United States…" this was how, TikTok Chief Executive officer Shou Chew detailed the data localisation effort of his company to appease the U.S. House Committee on Energy and Commerce on March 23, 2023. [1]

In the era of a data-driven digitally connected world, it can be a burning example of data localization of big tech to do business in a big market. There is a continuing worry

[1] Testimony of Shou Chew, Chief Executive Officer, TikTok Inc., *"Testimony Before the U.S. House Committee on Energy and Commerce"*, Written Statement of Testimony, March 23, 2023, available at https://docs.house.gov/meetings/IF/IF00/20230323/115519/HHRG-118-IF00-Wstate-ChewS-20230323.pdf (last accessed on September 23, 2023).

within US intelligence that TikTok's parent company, ByteDance, could share user data with the Chinese government based on a 2017 law that requires companies to provide any relevant personal data for national securitypurposes.[2] Although there is no evidence that TikTok has done so, concerns persist because of the significant amount of user data e.g. browsing history, location, and biometric identifiers have been collected by the platform and some US users data have been stored in China.[3]

More recently, many countries have adopted data localisation and cross-border data flow regulation in the name of security, privacy, and data protection. The United Nations Conference on Trade and Development (UNCTAD), the intergovernmental organization responsible to promote the interests of developing countries in world trade, in its Digital Economy Report 2021 terming this trend as "divergent data nationalism". highlighted that this trend may lead to the fragmentation of the data-driven digital economy, which can pose significant challenges to technological progress and lead to reduced competition, oligopolistic market structures in various areas, and a stronger government influence.[4] Furthermore, it can limit business opportunities by making it harder for users and companies to access supply chains and restricting data flows across borders. Such an impact can be highly detrimental to the interests of developing countries, including the Least Developed Countries (LDCs).

Bangladesh has intended to jump onto the bandwagon of data localisation through provisions in a draft Data Protection Act ('DPA'), released in the first quarter of 2022. It has undergone several changes over the last year and the latest draft version states that ***'sensitive data, user-generated data and classified data shall be stored in Bangladesh'.***[5] In other words, the Draft Bill establishes mandatory data storage within Bangladesh and new restrictions on transferring specific types of data.

The findings of a study conducted by CUTS International and Research and Policy Integration for Development (RAPID) suggests that restrictions on Cross-Border Data Flows (CBDF) in Bangladesh could have a negative impact on the country's digital service exports, and therefore, on its overall output (GDP).[6] The severity of Cross-Border Data Flow (CBDF) restrictions could cause Bangladesh's digital services exports to decline by an estimated range of 29 to 44 percent and result 0.58 to 0.76

---

2 Haleluya Hadero, *"Why TikTok's security risks keep raising fears"*, The Associated Press, March 17, 2023, available at https://apnews.com/article/tiktok-ban-bytedance-china-biden-administration-14ef5f93dc2114e4ade110b2e85433fd

3 Alexandra S. Levine, "*Exclusive: TikTok Confirms Some U.S. User Data Is Stored In China*", Forbes, June 21, 2023, available at https://www.forbes.com/sites/alexandralevine/2023/06/21/tiktok-confirms-data-china-bytedance-security-cfius/?sh=268bbfff3270 (last accessed on September 23, 2023).

4 United Nations Conference on Trade and Development, "Digital Economy Report 2021: Cross-border data flows and development: For whom the data flow", available at https://unctad.org/system/files/official-document/der2021_en.pdf (last accessed on September 23, 2023).

5 Section 44, the Data Protection Bill, 2023, available at https://ictd.gov.bd/site/page/d05a8088-8272-49b4-883c-1698796dce3e/Draft--Acts-&-Rules-and-Policy- (last accessed on September 23, 2023).

6 CUTS International & Research and Policy Integration for Development, *"Impact of Cross-border Data Flow Restrictions on Bangladesh Economy"*, available at https://www.rapidbd.org/wp-content/uploads/2022/12/Impact-of-Cross-Border-Data-Flow-Restrictions-on-Bangladesh-Economy-Report-Two.pdf (last accessed on September 23, 2023).

percent fall in GDP.[7] If key trading partners and importers retaliate by imposing similar restrictions, the impact of such restrictions on Bangladesh's GDP would be even greater. According to another study conducted by the Information Technology & Innovation Foundation (ITIF), sticking to the strict data restrictions could result in a 6 percent decrease in Bangladesh's trade volume after five years, with imports declining by 7.7 percent.[8] Bangladesh's import prices are also expected to increase by 2 percent. The ITIF study also evaluates the cost of data localisation in Hong Kong, Indonesia and Pakistan and a comparison indicates that Bangladesh is likely to be the most impacted among the other countries.

Besides business and economic-related apprehensions, the proposed DPA has generated significant human rights concerns. The United Nations and Amnesty International observe that if the data is localised within the country, it would provide authorities with unbridled access to individuals' personal data without any judicial oversight, thereby violating citizens' privacy rights. [9] Citing the experience of the Digital Security Act in Bangladesh, they apprehend that the DPA is going to be the newest addition to efforts in which the government wants complete access and control over the digital lives of its citizens.

In this study, we began by exploring the data localisation concepts and categories and global trend and the data restrictiveness of Bangladesh based on the regulatory spectrum for cross-border data flows classified by UNCTAD (Digital Economy Report 2021). Secondly, the paper shares findings of a perception survey of various industry stakeholders on the impact of data localization requirements as per the proposed DPA. It assesses the impact on businesses in different industries in terms of effect on existing practices, cost and investment that may be required to comply with the new regulation. The question of which services may be most affected by data localization can be explored. Additionally, the impact of data localization on data security can be assessed to determine whether it enhances or imperils. Thirdly, based on the survey findings and global experience we suggest a few policy recommendations that should be considered before codifying the data localization provisions in the proposed DPA.

2. Data Localisation: Concepts and Categories

The Internet has allowed businesses to gather data in new ways, and the amount of collected data has been rapidly increasing. This shift has transformed the global economy and how businesses operate across borders. In 2020, the world's internet traffic was over 3 zettabytes, equivalent to 3 trillion gigabytes. This means data was moving at

---

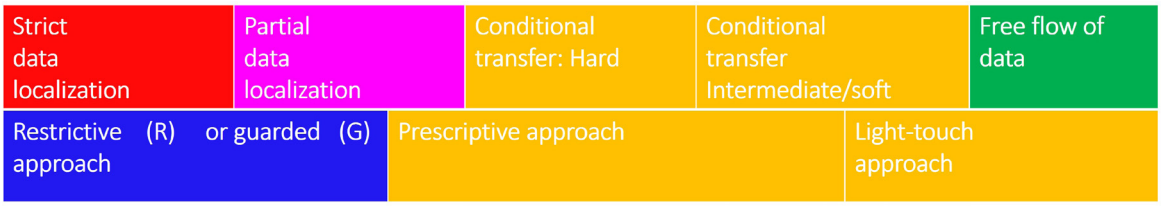
7 CUTS International & Research and Policy Integration for Development, *"Digital Services Exports of Bangladesh will Data localization propel or imperil?"* available at https://www.rapidbd.org/wp-content/uploads/2022/12/Data-localisation-and-digital-services-exports-from-Bangladesh-Report-One.pdf (last accessed on September 23, 2023).

8 Nigel Cory, Luke Dascoli and Ian Clay, *"The Cost of Data Localization Policies in Bangladesh, Hong Kong, Indonesia, Pakistan, and Vietnam",* Information Technology & Innovation Foundation, available at https://itif.org/publications/2022/12/12/the-cost-of-data-localization-policies-in-bangladesh-hong-kong-indonesia-pakistan-and-vietnam/ (last accessed on September 23, 2023).

9 Suhada Afrin, *"Data Protection Act: Creates Opportunities to Surveillance than protection"* (in Bangla), Prothom Alo, September 22, 2022, available at; https://www.prothomalo.com/bangladesh/dit8zqvj2r (last accessed on September 23, 2023); Amnesty International, *"Bangladesh: New data protection bill threatens people's right to privacy"*, available at https://www.amnesty.org/en/latest/news/2022/04/bangladesh-new-data-protection-bill-threatens-peoples-right-to-privacy/ (last accessed on September 23, 2023).

a speed of 100,000 gigabytes per second.[10] By 2022, it reached 150,000 gigabytes per second, resulting in a total global internet traffic of 4.8 zettabytes. According to IDC, by 2025 the Global Datasphere is expected to grow to 175 zettabytes.[11] As the data flows increased around the globe exponentially, countries have four main concerns about unrestricted data flow: storing data on foreign servers affecting access for national security, economic loss from foreign data use, worries about foreign surveillance, and misuse of personal data violating privacy rights.[12] To address these issues, countries implemented cross-border data restrictions and data localization policies. Data localization means storing, processing, or handling data within a specific jurisdiction's borders. These measures include requiring businesses to keep data on local servers and prohibiting cross-border data transfers. In 1980, for the first time the Organisation for Economic Co-operation and Development (OECD) created Guidelines for safeguarding privacy and the transborder movement of personal data, acknowledging the rising cross-border data flow.[13] Though we can trace back the origin of cross-border data restrictions in Europe following World War 2 mostly targeted to protect personal data and privacy.[14] Countries around the world adopted different localisation policies to attain different goals. UNCTAD (2021) categorized those based on the extent of restrictions and approach.[15]

The first category is based on the extent of restriction: strict localization; partial localization; conditional transfer – hard, intermediate and soft; free flow of data. And the second category labels the approach taken by countries when applying these restrictions.



Based on Digital Economy report 2021

[10] The World Bank, *"World Development Report, 2021"*, available at https://wdr2021.worldbank.org/stories/crossing-borders/ (last accessed on September 23, 2023).

[11] Analyze the Future White Paper, *"The Digitization of the World from Edge to Core"*, available at https://www.seagate.com/files/www-content/our-story/trends/files/idc-seagate-dataage-whitepaper.pdf (last accessed on September 23, 2023).

[12] Anirudh Burman and Upasana Sharma, *"How Would Data Localization Benefit India?"* Carnegie Endowment for International Peace (2021) available at https://www.jstor.org/stable/resrep31117.4 (last accessed on September 23, 2023).

[13] International Regulatory Strategy Group report (2020), "How the trend towards data localisation is impacting the financial services sector", available at https://www.irsg.co.uk/assets/Reports/IRSG_DATA-REPORT_Localisation.pdf (last accessed on September 23, 2023).

[14] Richard D. Taylor, *"Data localization": The internet in the balance"*, Telecommunications Policy, Volume 44, Issue 8, September 2020, 102003.

[15] *Supra*, footnote no. 4, Digital Economy Report, 2021, pp. 122-127.

The extent of restrictions: (Definition)[16]

• **Strict localization refers to a legal requirement to store and/or process data in the country, and may potentially include a complete prohibition on cross-border data transfers (even for the purposes of processing).**	
• **Partial localization refers to a legal requirement to store data locally but does not include a prohibition on transferring or storing copies of the data abroad, although specific compliance requirements may be imposed for cross-border data transfer and storage.**	
• **A conditional transfer requirement means that data can be transferred abroad subject to the data processor complying with specified regulatory requirements. Depending on the design of these compliance requirements, conditional transfers may be categorized as hard, intermediate or soft.**	
i) Hard conditional transfers entail a comprehensive compliance regime that includes country-specific approvals for transfers (e.g. an adequacy approach), regulatory approvals for transfers, approved contracts for transfers (e.g. standard contractual clauses (SCCs) and binding corporate rules (BCRs) provided under GDPR), and are subject to strict regulatory audit.	ii) Intermediate or soft conditional transfer requirements refer to easier compliance requirements.
• **The term "free flow of data" typically refers to regulations that do not impose any specific restrictions on cross-border data flows.**	

Definition of those approaches[17]

• **A light-touch approach implies that all data, including personal data, can generally flow freely across borders with minimal regulatory requirements.**
• **A prescriptive regulatory approach entails that cross-border data flows are subject to rigorous compliance requirements – for instance, in domestic data protection/privacy laws.**
• **A restrictive regulatory approach means a complete or partial ban on cross-border data flows for reasons of public security, national security and establishing absolute political control over the domestic Internet, including the data accessed and produced by the citizens, often dubbed "data sovereignty.**
• **A guarded approach, emphasizing the unequal economic impact of unhindered global digitalization of the economy, thereby focusing on regulatory measures necessary to enable meaningful domestic economic gains from the digital economy.**

16 *Ibid.*

17 *Ibid.*

3. Rise of Data localisation

The National Security Agency (NSA)'s former contractor Edward Snowden's revelations about large-scale surveillance programs conducted by the United States, sparked a strong global response to protect data privacy from foreign surveillance and boosted data localisation.[18] In December 2013, the United Nations General Assembly passed a resolution (68/167) that raised concerns over the negative impact of surveillance and communication interception on human rights. The resolution recognized that online rights should be protected to the same extent as offline rights and called on all countries to safeguard the right to privacy in digital communication.[19] It urged countries to review their laws, procedures, and practices concerning communication surveillance, interception, and personal data collection and stressed the importance of fulfilling their obligations under international human rights law.[20]

The Snowden revelations also initiated several legal cases filed by consumers and civil liberties organizations to challenge the extent of the surveillance. One of the most well-known cases to emerge was by Maximillian Schrems, an Austrian privacy activist, who filed a complaint against Facebook to prevent the company from transferring his personal data from the EU to the US. [21] Schrems argued that the EU-U.S. Safe Harbor Framework, which was designed to ensure an adequate level of protection for EU citizens' personal data, was inadequate, and the presumption of adequacy created by the framework should be Invalidated. The final result of the case and subsequent cases was far-reaching,[22] creating significant challenges to the Trans-Atlantic Data transfer as US law falls short of the principle of 'proportionality' and 'minimum safeguards'. Following the Schrems II ruling, Europe has tightened its measures for data transfers to the United States, despite not invalidating the widely used Standard Contractual Clauses (SCCs) that comply with the EU's General Data Protection Regulation (GDPR).[23] Researchers Nigel Cory and Luke Dascoli termed the situation as a de facto localisation.[24] Data transfers being so complex, expensive, and

---

18 Anupam Chander & Uyên P. Lê, Data Nationalism, 64 Emory L. J. 677 (2015); Hill, Jonah, The Growth of Data Localization Post-Snowden: Analysis and Recommendations for U.S. Policymakers and Business Leaders (May 1, 2014). The Hague Institute for Global Justice, Conference on the Future of Cyber Governance, 2014, available at SSRN: https://ssrn.com/abstract=2430275 (last accessed on September 23, 2023).

19 United Nations Conference on Trade and Development, *"Data protection regulations and international data flows: Implications for trade and development"*, available at: https://unctad.org/system/files/official-document/dtlstict2016d1_en.pdf (last accessed on September 23, 2023).

20 *Ibid*.

21 *Ibid*, pp.15-16.

22 134 Harv. L. Rev. 1567, *Data Protection Commissioner v. Facebook Ireland Ltd.* Court of Justice of the European Union Invalidates the EU-U.S. Privacy Shield, available at: https://harvardlawreview.org/print/vol-134/data-protection-commissioner-v-facebook-ireland-ltd/#footnote-ref-4 (last accessed on September 23, 2023).

23 Nigel Cory, Ellysse Dick and Daniel Castro, *"The Role and Value of Standard Contractual Clauses in EU-U.S. Digital Trade"*, Information Technology & Innovation Foundation, December 2020, available at: https://itif.org/publications/2020/12/17/role-and-value-standard-contractual-clauses-eu-us-digital-trade/ (last accessed on September 23, 2023).

24 Nigel Cory & Luke Dascoli, *"How Barriers to Cross-Border Data Flows Are Spreading Globally, What They Cost, and How to Address Them,"* Information Technology & Innovation Foundation, July 2021, Available at: https://itif.org/publications/2021/07/19/how-barriers-cross-border-data-flows-are-spreading-globally-what-they-cost/ (last accessed on September 23, 2023).

uncertain leaves firms with no choice but to store data locally to avoid hefty fines and GDPR risks to be the world's largest de facto localisation framework.[25] Moreover, the Facebook-Cambridge Analytica scandal,[26] which surfaced in March 2018, made 'data localization' a quick-fix panacea for countries to solve trust issues. [27]

From 2017 to 2021, the number of countries implementing data localisation requirements has almost doubled from 35 to 62. [28] In the same period, the total number of data localization policies, including both explicit and de facto, has increased from 67 to 144. Approximately, 38 additional data localization policies have been suggested or are under consideration globally. UNCTAD identifies four different data governance models due to the lack of consensus on data governance and data flows at international and regional levels. [29] China and Russia advocate for the "cyber-sovereignty" approach, which is fundamentally different from the US's "free flow of information" approach, while the EU's digital sovereignty model, indicated above, is not in harmony with the US's data governance model. In addition, emerging developing economies such as India advocate digital economic development and data regulation models that prioritize keeping data within national borders, contradicting the free flow of information, and diverging from both Chinese and European regulatory models.

Each regulatory model is heavily influenced by the business interests of that country/ region as this is indicated by the global e-commerce market, which, interestingly, is dominated by the US and China, with six American and four Chinese firms among the top ten in the list.[30] However, US firms tend to be pure digital services firms while two of the top three Chinese firms sell physical goods. China also has giant digital firms like Baidu and Tencent, but they serve the domestic market almost exclusively and do not demand free cross-border data flow. The EU's restrictive privacy rules are seen as a form of "digital protectionism" to fend off American and Chinese firms.[31]

As a result, every model has a different perspective to data localisation that has significant cost implications for the business and economy as a whole.[32] A study conducted by the European Centre for International Political Economy (ECIPE) found that complying with data localization

---

25 *Supra*, footnote no. 23.

26 Cambridge Analytica obtained millions of Facebook user data violating the social network's policies. They utilized the information to construct at least 230 million psychographic profiles of users and their associates, which were used for targeted political advertisements in the United Kingdom's Brexit referendum campaign and by Trump's team in the 2016 US election. See, Carole Cadwalladr, *'I made Steve Bannon's psychological warfare tool': meet the data war whistleblower,* The Guardian, March 18, 2018, available at: https://www.theguardian.com/news/2018/mar/17/data-war-whistleblower-christopher-wylie-faceook-nix-bannon-trump (last accessed on September 23, 2023).

27 Ashit Srivastava, *"Data Localisation in South-Asia"*, available at: https://lawandtech.ie/data-localisation-in-south-asia/ (last accessed on September 23, 2023).

28 *Supra*, footnote no. 24.

29 *Supra*, footnote no. 4.

30 Andrew Bloomenthal, *"World's Top 10 Internet Companies",* Investopedia, available at: https://www.investopedia.com/articles/personal-finance/030415/worlds-top-10-internet-companies.asp (last accessed on September 23, 2023).

31 Asian Development Bank, *"Unlocking the Potential of Digital Services Trade in Asia and the Pacific"*, available at: https://aric.adb.org/pubs/unlocking-the-potential-of-digital-services-trade/Unlocking-the-Potential-of-Digital-Services-Trade_Complete.pdf (last accessed on September 23, 2023).

32 *Supra*, footnote no. 13.

requirements in the EU is expensive, costing the EU economy $52 billion annually.[33] However, removing these regulations would result in GDP gains of $8 billion per year. Digital Europe estimates that, "If data transfer mechanism are largely made unusable" the EU stands to lose 1.3 trillion euros of extra growth, 116 billion euro export value (per year) and 1.3 million jobs.[34] Another study estimated that if the following countries implement economy-wide data localisation requirements, the GDP losses would be significant- Brazil (-0.8%), the EU (-1.1%), India (-0.8%), Indonesia (-0.7%), and Korea (-1.1%).[35] Domestic investments would also decrease considerably.[36] The welfare losses could amount to up to $63bn for China and $193bn for the EU, and the loss per worker could be as much as 11% of the average monthly salary in India and almost 13% in China and around 20% in Korea and Brazil.[37] Additionally, exports from China and Indonesia would decrease by -1.7% as a consequence of a direct loss of competitiveness. An assessment by the Leviathan security group shows that if countries impose mandatory data localization laws, domestic companies would have to pay significantly higher costs, ranging from 30% to 60% more, for their computing requirements compared to if they could access computing resources outside their country's borders.[38] In the financial sector, customers are adversely affected by data localization measures as it reduces their options and leads to increased prices for financial products.[39] Based on the above discussion, the next section looks at the Bangladesh approach to data governance regarding cross-border data flows, as outlined in the draft Data Protection Act of 2023.

4. Data Localisation: An Assessment of Bangladesh's Regulatory Framework

Bangladesh is going to adopt a formal data localisation regime when it plans to transition from a Digital Bangladesh to a data-driven, highly digitized Smart Bangladesh.[40] According to Boston Consulting Group (BCG), Bangladesh is projected to become a trillion-dollar economy in the coming decades.[41] BCG tagged Bangladesh as "An Unmatched Growth Story" for its average annual GDP growth rate of 6.4 % between

---

33 Matthias Bauer Martina F. Ferracane Hosuk Lee-Makiyama Erik van der Marel, *"Unleashing Internal Data Flows in the EU: An Economic Assessment of Data Localisation Measures in EU Member States"*, European Centre for International Political Economy, 2016, available at https://ecipe.org/publications/unleashing-internal-data-flows-in-the-eu/ (last accessed on September 23, 2023).

34 Global Industry Statement in Support of a New Trans-Atlantic Data Privacy Framework, available at: https://globaldataalliance.org/wp-content/uploads/2022/04/04072022gdagltr.pdf (last accessed on September 23, 2023), Digital Europe, *"Data flows and the Digital Decade"*, available at: https://www.digitaleurope.org/resources/data-flows-and-the-digital-decade/ (last accessed on September 23, 2023).

35 Erik van der Marel Hosuk Lee-Makiyama Matthias Bauer, *"The Costs of Data Localisation: A Friendly Fire on Economic Recovery"*, European Centre for International Political Economy, 2014, available at https://ecipe.org/publications/dataloc/ (last accessed on September 23, 2023).

36 *Ibid.*

37 *Ibid.*

38 Leviathan Security Group, *"Quantifying the Cost of Forced Localization"*, available at https://www.leviathansecurity.com/media/quantifying-the-cost-of-forced-localization (last accessed on September 23, 2023).

39 *Supra*, footnote no. 13.

40 The ICT Master Plan 2041 (Draft).

41 Zarif Munir, Saibal Chakraborty, Tausif Ishtiaque, *"The Trillion-Dollar Prize: Local Champions Leading the Way"*, BCG, November 2022, available at; https://web-assets.bcg.com/6e/15/0081bc4b4871b53ea0f25348bb0d/the-trillion-dollar-prize-local-champions-leading-the-way.pdf (last accessed on September 23, 2023).

2016-2021, and outperforming other major Asian countries.[42] Bangladesh has achieved this through a combination of factors such as a growing consumer market, a young and skilled workforce, and a thriving digital economy.[43]

Over the last decade, Bangladesh has seen growth in its startup ecosystem with the emergence of thousand-plus active startups in various industries such as FinTech, logistics and mobility, and e-commerce. These startups have attracted significant funding that has exceeded $700 million. With a strong economic foundation, Bangladesh aims to achieve Upper Middle-Income Country (UMIC) status by 2031 and High-Income Country (HIC) status by 2041.[44] As part of the next phase of development, BCG has put forward an eight-pillar strategy for Bangladeshi emerging business champions, with a particular focus on the importance of data-driven solutions.[45]

Creating a comprehensive and business-friendly data ecosystem is crucial in achieving the goal of a smart Bangladesh and becoming a HIC. The development of a sustainable regulatory environment for privacy, security, and responsible use of data is necessary, and the draft DPA, 2023 is a positive step towards achieving this. However, the draft has raised concerns among stakeholders, as opposed to being as a wholly positive initiative. The draft has included provisions on mandatory data localisation and cross-border data transfer requirements which have elicited concerns from global tech giants and multinationals regarding the potential adverse effects on their business operations in the country. Additionally, local data-driven businesses have expressed apprehensions that complying with the new requirements would lead to increased operating costs and necessitate substantial new investments. There are concerns among human rights organisations that the proposed legislation may have been formulated by the government with the intention of surveilling citizens, rather than protecting their privacy.[46] Prior to delving into further analysis of Draft DPA's provision, it is necessary to examine the context of data localisation in Bangladesh to determine whether it is a novel concept or not.

5. Sector-specific data localisation and restrictions

Under Section 12 of the Bank Company Act, 1991 of Bangladesh, banks are prohibited from transferring business-related documents beyond borders without obtaining prior approval from the Central Bank. In order to align this section with the digital landscape, this section was subsequently amended (in 2013) to include "any banking

42 Ibid.

43 Ibid, BCG estimates (The expanding middle- and affluent-class consumer market is expected to grow from around 19 million in 2020 to approximately 34 million by 2025, is a crucial driver of the economy. The country has a young workforce of around 114 million people, a growing gig economy with about 650,000 freelancers (the second-largest online workforce globally), and a rising digital adoption rate with approximately 177 million mobile subscribers, while internet subscription grew from minimal users to 70% penetration in last 10 years. The digital economy in Bangladesh is experiencing a surge in growth, driven by enhanced digital connectivity and improved digital consumer engagement. The volume of digital financial transactions has more than doubled from 1.7 billion in 2019 to an estimated 3.5 billion in 2022).

44 The ICT Master Plan 2041 (Draft).

45 *Supra*, footnote no. 41.

46 Ashif Islam Shaon, *"Data Protection Act: Protecting privacy or surveilling citizens?"*, Dhaka Tribune, May 11, 2022, Available at: https://www.dhakatribune.com/bangladesh/2022/05/11/data-protection-act-protecting-privacy-or-surveilling-citizens

activities processed by Information and Communication Technology (ICT)".[47] Similarly, in the telecommunications sector, Bangladesh Telecommunication Regulatory Commission issued 3G(2013) & 4G(2017) services guidelines mandate that telecom operators store customer data for a specific period of time but did not specify storage location.[48] In 2017, the Bangladesh Road Transport Authority issued guidelines for app-based ride-sharing service providers operating in the country. According to these Guidelines, all data and information pertaining to drivers and riders must be processed and preserved solely within the borders of Bangladesh and transfer of this data outside of the country is strictly prohibited.[49] To comply with the Guidelines, it is imperative to maintain data servers in Bangladesh.

A nationwide data localization requirement was initially prescribed in the National Information and Communication Technology Policy 2018,[50] published in the gazette on December 15, 2018. Specifically, Strategic Subject 2.9 of the Policy outlines that Bangladesh must take necessary measures to ensure that all data is hosted within its geographical boundaries. The initial impact of the 2018 ICT Policy's data localization requirement was felt by the banking industry. Several banks had to discontinue their social media banking services, which were offered through Facebook Messenger, WhatsApp, and Viber, as these platforms lacked a data localisation mechanism within the country.[51] Bangladesh Bank was concerned that clients' financial data security could be at risk without data storage within the national boundaries.[52]

Following the 2018 ICT Policy prescription, the Draft Cloud Computing Policy 2021 and Draft DPA, 2023, have put data localization and transfer restrictions at the forefront.

The Draft Cloud Computing Policy includes data localization provisions and restrictions as follows:

***"The primary location of cloud service provider's data storage must be in Bangladesh**. Information may be allowed to be taken outside Bangladesh for back-up and retrieval purposes where such (sic.) information do not have any personal, sensitive or any such information and information which is not harmful to the security and critical information infrastructure of Bangladesh. All that information should be hosted in those countries where the Government of Bangladesh has multilateral or*

---

47 The Bank Companies Act, 1991(Bengali Version) available at: http://bdlaws.minlaw.gov.bd/act-751/section-30761.html (last accessed on September 23, 2023).

48 Section (23) call records 4G - LTE Regulatory and Licensing Guidelines available at: https://btrc.portal.gov.bd/sites/default/files/files/btrc.portal.gov.bd/page/1c1ea1c0_f8ef_4cdf_9005_d8a34b9ca554/2022-02-27-08-55-0f83cc91583f2f93804a9f43d01f3d15.pdf (last accessed on September 23, 2023), Section 31, the Licensing Guidelines for 3G Cellular Mobile Phone Services, available at: https://btrc.portal.gov.bd/sites/default/files/files/btrc.portal.gov.bd/page/1c1ea1c0_f8ef_4cdf_9005_d8a34b9ca554/2022-05-09-05-32-6e2505345f9c37ace5868c4a9c197821.pdf (last accessed on September 23, 2023).

49 The Ride Sharing Service Guidelines, 2017 (Bengali Version) available at: https://brta.portal.gov.bd/sites/default/files/files/brta.portal.gov.bd/legislative_information/7dca74c7_fe8c_46a3_8053_1ddc646767aa/Ride%20Sharing%20Service%20Guideline%202017%20(Gazette).pdf (last accessed on September 23, 2023).

50 The National ICT Policy 2018.

51 AKM Zamir Uddin, *"Social media banking faces a setback"*, the Daily Star, January 30, 2022, available at: https://www.thedailystar.net/business/economy/banks/news/social-media-banking-faces-setback-2950236 (last accessed on September 23, 2023).

52 Zisan Bin Liaquat, "BB: Social media banking need data localisation to ensure consumer privacy", Dhaka Tribune, January 30, 2022, available at: https://www.dhakatribune.com/business/2022/01/30/bb-social-media-banking-need-data-localisation-to-ensure-consumer-privacy

bilateral relations for unconditional and instantaneous laws can prevail.[53]

The Global Data Alliance (GDA) has expressed concerns with the draft Cloud Computing Policy highlighting that it does not adequately consider the fundamental principles of cloud computing.[54] As cloud services are designed to operate across national borders and their viability hinges on access to regional and global markets, the GDA contends that restrictive policies that create trade barriers could impede or hinder the growth of cloud computing.

Moreover, it was also found that the Policy lacks a clear definition for categories of restricted data, including "personal information," "sensitive information," and "information that is harmful to the security and critical information infrastructure." [55] As a result, companies may err on the side of caution and overclassify information into these categories, leading to broader localization of data. The latest version of the draft DPA 2023, unfortunately, contains similar provisions.

6. Draft Data Protection Act: Data Localisation & Restrictions

In the first draft, mandatory data localization requirements & conditions of cross-border data transfer are covered under the heading, "Data Storage and Transfer Related Provisions," of Chapter X. Despite stakeholders' repeated concerns, the new version of the draft (V-2023) largely remains the same with a few changes. The new draft has revised the data localization requirement maintaining the option to store data outside the country as long as companies also maintain data residency within Bangladesh. It means companies (local or international) are forced to additionally create a local data storage to operate in Bangladesh. However, the problem remains with the broad definition of user-generated data which states that ***"any private data of a data subject (for example text, message, images, videos, audios, reviews, email or any other private documents or similar other subject matter) which are created or generated by an individual or a group of individuals for limited use or share and not intended for public use."***[56] This requires that a large amount of data needs to be stored. Asia Internet Coalition raised concerns with the technical challenges in differentiating such broad and vague data categories.[57] Companies would need to monitor and analyze user data globally to identify specific categories to ensure compliance with transfer restrictions. By doing so data localisation would be highly expensive and operationally complex, particularly for small and medium-sized enterprises lacking the necessary resources and infrastructure.[58] Global Data Alliance believes that inclusion of data categories like "sensitive," "classified," and "user-generated" extends the reach of these provisions beyond personal data, encompassing a wider range

---

53 The Draft Cloud Computing Policy 2021.

54 Global Data Alliance, *"Comments to the People's Republic of Bangladesh on The Draft Cloud Computing Policy"*, available at: https://globaldataalliance.org/wp-content/uploads/2021/07/05122021gdabdcloudpol.pdf (last accessed on September 23, 2023).

55 Ibid, p. 2.

56 Section 2(r), the Data Protection Bill, 2023, available at https://ictd.gov.bd/site/page/d05a8088-8272-49b4-883c-1698796dce3e/Draft--Acts-&-Rules-and-Policy (last accessed on September 23, 2023).

57 Industry Submission by Asia Internet Coalition (AIC) on the Draft Data Protection Act, 2023, available at https://aicasia.org/policy-advocacy/ (last accessed on September 23, 2023).

58 *Ibid*. Global Data Alliance Comments on Bangladesh Data Protection Act of 2022, available at https://globaldataalliance.org/wp-content/uploads/2022/09/09072022gdabgdpa.pdf (last accessed on September 23, 2023).

of non-personal data types.[59]

Section 45 of the draft requires conditional cross-border data transfers. Data can be transferred if user consent is obtained and for purposes such as interstate commerce or international relations, as specified by the government. Additionally, the draft mandates that cross-border data transfers must also adhere to guidelines set by sectoral regulators like the Bangladesh Bank, the Bangladesh Telecommunication Regulatory Commission, and the National Board of Revenue. This means businesses must comply with multiple requirements set by each regulator. Asia Internet Coalition has expressed concerns that this creates more confusion and uncertainties. For example, tax and financial data sent via user-generated content hosts could potentially be regulated by a multiplicity of actors such as the central bank, the tax authority, and the data protection agency.[60]

Researchers Cory, Dascoli and Clay believe that Bangladesh is following in the footsteps of its neighboring countries - China and India, in implementing restrictive measures on data transfers.[61] These measures aim to protect data privacy, cybersecurity, law enforcement, and national security. However, the researchers argue that such measures are misguided and could have negative implications.

However, India appears to move away from its stance to mandate strict data localization and data transfer restrictions for personal data.[62] Further, unlike other nations, Bangladesh combines privacy and content moderation and mandates that firms store sensitive data and user-generated data locally, which is difficult and infeasible.

Relying on the categories identified by the UNCTAD Digital Economy Report, we assess the data localization provisions of the draft Data Protection Act 2023. The classification of Bangladesh's data localisation policy is somewhat ambiguous. While it falls under the category of partial localisation since cross-border data transfer is not prohibited, it also includes a wider coverage of data types such as "sensitive," "classified," and "user-generated". This broader scope makes it more closely resemble a strict localization policy. Due to the difficulty in distinguishing between different data types, it becomes highly impractical from a technical standpoint, and complete localization may be the automatic result.

However, it is difficult to categorise the current draft Act into the basket of a restrictive regulatory approach. Nor can it be considered to be a guarded approach as there is no clear reason to suggest that Bangladesh's economy would significantly gain from the proposed data regime. The economic motivation behind the data localization requirements remains unknown, but the control mechanisms built in offer some clarity. The combined effect of sections 10(2)(d), 38(2)(a)(ii), (iv) and (v), 41(1), 42 and 64(1) suggest a framework that allows unfettered government access

---

59 *Ibid*.

60 *Supra*, footnote no. 57.

61 Nigel Cory, Luke Dascoli and Ian Clay, "The Cost of Data Localization Policies in Bangladesh, Hong Kong, Indonesia, Pakistan, and Vietnam", Information Technology & Innovation Foundation, available at https://itif.org/publications/2022/12/12/the-cost-of-data-localization-policies-in-bangladesh-hong-kong-indonesia-pakistan-and-vietnam/ (last accessed on September 23, 2023).

62 section 17, the Digital Personal Data Protection Bill, 2022 available at: https://www.meity.gov.in/writereaddata/files/The%20Digital%20Personal%20Data%20Protection%20Bill%2C%202022.pdf(last accessed on September 23, 2023).; Bibhudatta Pradhan & Santosh Kumar, *"India to Ease Data Storage Rules in Relief for Google, Meta"*, Bloomberg, available at: https://www.bloomberg.com/news/articles/2022-11-18/india-s-new-data-protection-bill-seeks-to-ease-storage-norms#xj4y7vzkg (last accessed on September 23, 2023).

Evolution of Data localisation related provisions in different versions of Draft DPA	
Initial version (DPA 2022)	Existing version (DPA 2023)
42. Storage of sensitive data, user generated data and classified data. **(1) Sensitive data, user generated data and classified data shall only be stored in Bangladesh and no other state's court, law enforcing agency or authority other than the courts, law enforcing agencies or authorities of Bangladesh shall have jurisdiction over such data.** **43. Provision regarding data transfer mentioned in section 42.** **(1) Any data under section 42 that is specified, from time to time by general or special order, by the Government as classified data, shall not be transferred to a place or system outside Bangladesh without prior authorisation of the Government.** **(2) Notwithstanding anything contained in sub-section (1) or any other provisions of this Act-** **(a) the sensitive data of a data-subject and any other data, including usergenerated data, with his consent,** **(b) for the purpose of maintaining international relations, cross-border business,immigration or any other data as specified, from time to time, by the Government, may be transferred to any state or organisation outside Bangladesh or any international organisation.** **(3) The Director General shall be notified in a manner, as may be prescribed by the rules, regarding any data transfer under this GDAsection to any other state or international organisation outside of Bangladesh**	[Section 44] Subject to the provisions of section 45, sensitive data, user generated data and classified data shall be stored in Bangladesh in the manner prescribed by the rules. [Section 45] (1) Subject to compliance with the provisions of the rules made in accordance with the principles of data protection under section 5 of this Act, the data mentioned in section 44 [of this Act] can be transferred outside Bangladesh for the purposes of interstate commerce, international relations, or any other matter specified by the government. (2) In addition to whatever is stated in sub-section (1), the relevant sectoral regulator, such as the Bangladesh Bank, the Bangladesh Telecommunication Regulatory Commission, the National Board of Revenue, etc. shall comply with its respective legal provisions in carrying out the activities in relation to the matter stated in the said sub-section. (3) Notwithstanding anything contained in other provisions of this Act — (a) the government may, from time to time, by notification in the official Gazette, declare a list of open data, and no permission shall be required from the government or Director General or any other authority for transferring any such listed data outside Bangladesh, and its use abroad; and (b) if necessary for the data subject, any of his data, including sensitive data and user generated data, with his consent, may be transferred in the manner prescribed by the rules to any other state or organisation, or international organisation, outside Bangladesh.

to data. Similarly, sections 38(2)(a)(ii), (iv) and (v) and 42 allow the proposed data protection regulator to access data for the purpose of examination or if it is necessary for its functions, the data controllers and processors must provide information requested. These provisions are broad and unclear if the obligation extends to only user data, or all data held by the data controllers and processors. It is also uncertain as to how these provisions will apply if they conflict with foreign laws. Ferracane and Marel term this approach as a limited transfer and processing model

where extensive exceptions are provided for government access to personal data, in the name of security and social order.[63]

7. Business Perception Survey

Following the release of the draft DPA for stakeholder consultations, three studies were conducted to assess the impact of data localisation and cross-border data restrictions on the economy as a whole and digital services exports of Bangladesh.[64] These studies primarily focus on economic impact, in terms of GDP and digital services export, but no study has covered the business sector's perspectives on the impact of the draft DPA. Interestingly, global tech giants were more active in the DPA consultation process than local business entities. To bridge this gap, we conducted a business perception survey to understand and showcase the local business entities' and sectors' views on data localisation.

7.1 Methodology

The survey focused on data-driven technology companies that process significant amounts of data for business purposes and use a wide range of digital services for day-to-day business. However, no government entities engaged in data collection and processing were included in the survey.

To conduct the perception survey, based on the literature, we developed a survey questionnaire using Google Forms, where we used a Likert scale-based response to capture the business sentiment. Respondents rated their answers from 0 to 4 based on the level of impact, with 0 being no impact and 4 being extreme impact and were encouraged to provide explanations. The questionnaire (Questions no 1 to 7) asks respondents about impact of data localization in their industry, impact level on the data-driven services, measure the changes in the current business practices, and what extent business operation cost increase or new investment is needed. Besides, the respondents rated their answers (questions no 8 & 9) from -1 (negative Impact) to 1 (positive impact) and 0 (no impact) whether data localisation enhance data privacy (in terms of preventing violations) and data security (in terms of preventing cyber-attacks, breaches, etc.).

The questionnaire was sent to 30 companies from various sectors, (selected through purposive sampling) including banks, financial service providers, MFS, fintech, telecom, IT, software, e-commerce, retail, transport and logistics. Responses were collected from March 15 to April 10. Survey form links were sent to the Chief executive officer/ Chief technical officer & Chief regulatory officer of the selected companies through email and with subsequent phone follow-up. Out of the 30 companies, 21 responded to the survey.

Given the small sample size, significant weightage is placed on the market share held by companies within pertinent industries. Companies with larger market shares are given higher priority for inclusion in the survey. To ensure sector-wide representation, a minimum of three companies were chosen from each category. In the telecommunications industry, three prominent market leaders collectively hold

---

[63] Ferracane and Marel, *"Regulating Personal Data: Data Models and Digital Services Trade"*, Background Paper, World Development Report 2021, World Bank Group, available at https://documents1.worldbank.org/curated/en/890741616533448170/pdf/Regulating-Personal-Data-Data-Models-and-Digital-Services-Trade.pdf (last accessed on September 23, 2023).

[64] *Supra*, footnote nos. 6 & 7. CUTS International, *"Data Localisation: India's Double-Edged Sword?"*, available at https://cuts-ccier.org/pdf/data-localisation-indias-double-edged-sword.pdf (last accessed on September 23, 2023).

a substantial 97% market share in terms of subscribers.[65] The survey reached three of them and all responded. In banking and financial (MFS & fintech included) sector has around 150 companies, we chose 10(4 Banks, 3 MFS & 1 Fintech) of them and 60% responded. IT industry in Bangladesh encompasses software development and IT-enabled services (ITES), which includes business process outsourcing (BPO) services. Within this sector, there are over 4500 operational IT/ITES firms, primarily constituting medium and small enterprises. Out of these, 9 enterprises were chosen for the survey, and 75% of them participated and provided responses. According to e-Commerce Association of Bangladesh (e-Cab), there are over 2,500 e-commerce platforms. 4 of them reached out and 75% responded. There are around 15 technology-driven startups operating in the logistics and transport sector in Bangladesh.[66] 3 of them reached out but responded 30 %. There are few retail chains operating with a significant online presence in Bangladesh. 3 of them reached out 60% responded. The heterogeneous size of the sectors and small number of samples made it difficult to ensure representation properly but by careful choice of sectoral businesses it was fairly represented.

7.2 Findings of the survey

According to the survey findings, a significant majority of respondents (77%) believe that the proposed mandatory data localisation and cross-border data transfer restrictions would have a notable impact, ranging from moderate (18%) to high (59%). Further, 9% believe that the impact could be extreme. The survey also highlights sector-specific results, with more than 66% of entities in the Banking and Financial and the Telecom sector considering the potential impact of data localisation to be high. Similarly, 57% of entities in IT, 50% in Retail, and 33% in E-commerce have also indicated high impact. Interestingly, 33% of E-commerce platforms anticipate an extreme impact – highest compared to other sector respondents, while the corresponding figure of Banking and Financials entities is 16%. (Shown in Figure 1)

Impact on Industry specific data-driven services

Erik van der Marel's research demonstrates that imposing limitations on cross-border data flows hampers firms' capacity to efficiently utilize data where its value is most advantageous, thereby obstructing their potential to leverage comparative advantages in digital services.[67] This conclusion is reinforced by the outcomes of a survey conducted by Frontier Economics. [68] So the survey question was formulated to understand how businesses perceived the potential impact of data localization on their services.

When asked about the potential impact of the proposed DPA on industry-specific data-driven services, 59%- a significant number of respondents foresee a high impact with 18% expecting extreme impact across sectors. Similarly, 18% of respondents

---

65 Association of Mobile Telecom Operators in Bangladesh, *"Mobile Phone Subscribers in Bangladesh"*, available at https://www.amtob.org.bd/home/industrystatics (last accessed on September 23, 2023).

66 Naziba Ali, "The State of Fast-growing Logistics Startups in Bangladesh 2021 (Part 01)", Future Startup, June 13, 2021, available at https://futurestartup.com/2021/06/13/the-state-of-logistics-tech-startups-in-bangladesh/#:~:text=A%20new%20generation%20of%20logistics,reshaping%20the%20local%20logistics%20landscape (last accessed on September 23, 2023).

67 *Supra*, footnote no. 31.

68 Frontier Economics, "*The Extent And Impact Of Data Localisation*" available at; https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1125805/Frontier_Economics_-_data_localisation_report_-_June_2022.pdf (last accessed on September 23, 2023).

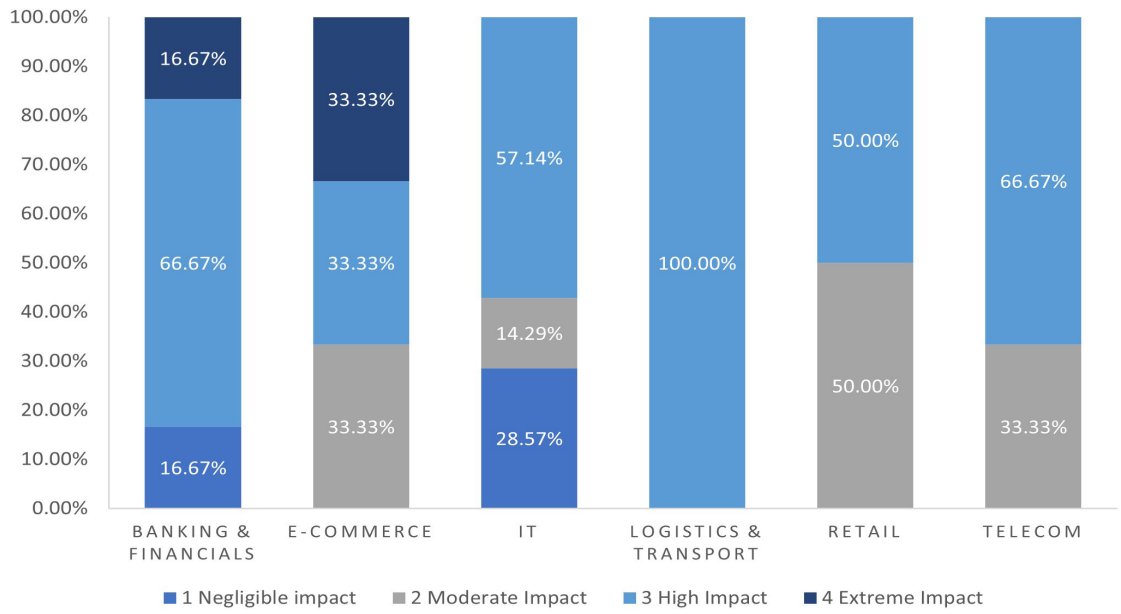


Figure 1: Industry wise perceived impact of data localisation

anticipate a moderate impact. At the sectoral level, Logistics & Transport sector expressed the highest level of concern, with 100% believing that the impact would be high. Similarly, in the Banking & Financials and Telecom sectors, 66% - the majority of respondents anticipated a high impact. In IT, 57% of respondents expected a high impact. On the other hand, respondents in the E-commerce sector were divided, with 33% anticipating a moderate impact, 33% expecting a high impact, and 33% believing that the impact could be extreme. In the Retail sector, half of the respondents anticipated a high impact, while the other half expected extreme impact (shown in Figure-2).

One of the respondents from the retail sector detailed the problem by following statement.

In the retail industry, various analytics, such as business analytics, customer analytics, and pricing analytics, play a crucial role. Making data-driven decisions relies on fast processing and obtaining immediate actionable insights. To fulfill these needs, we depend on trusted partners with a proven track record in the field to provide us with the best solutions. These partners typically utilize their own storage or servers, such as AWS or GCP, to store our data and offer us a platform to utilize their solutions. However, the introduction of data localization requirements would have a substantial impact on these partnerships, resulting in increased costs and reduced efficiency.

The findings from the Frontier Economics YouGov Business Survey indicate that businesses in sectors such as IT & telecoms, retail, finance & accounting, and transportation & distribution share the belief that they would experience significant repercussions if there were alterations in data storage requirements.[69] This alignment in perspectives resonates with our own survey results. Results also show that sectors dependent on data-driven services are affected most.

69 *Ibid.*

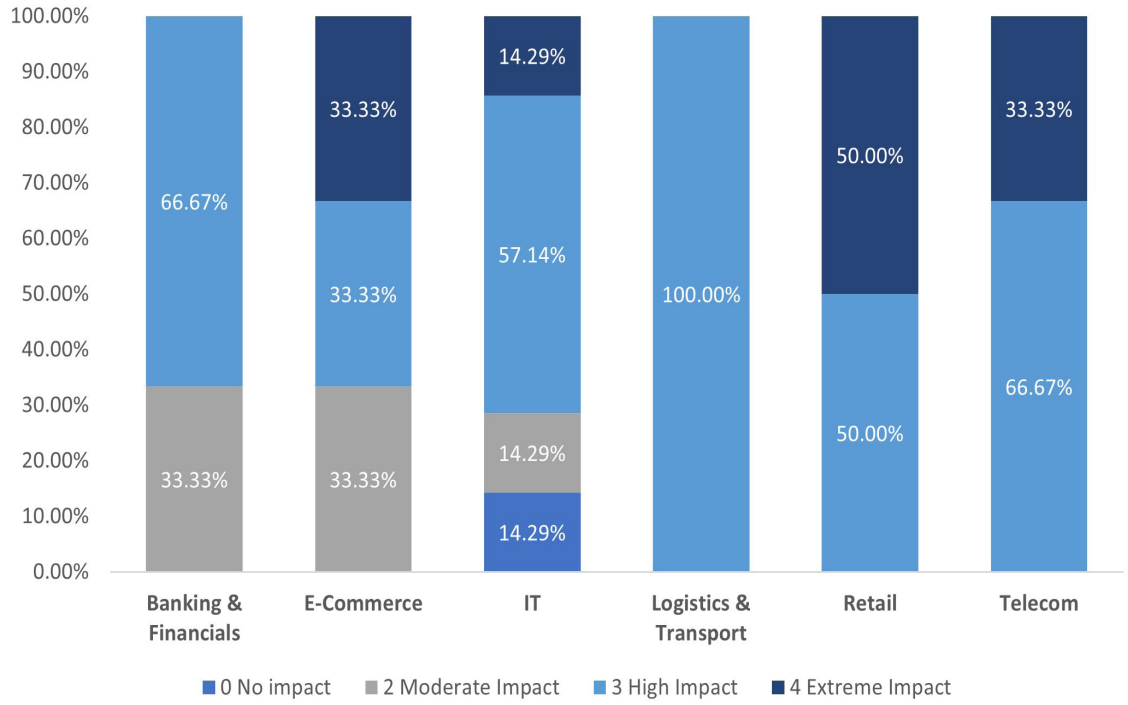


Figure 2: Impact on industry specific data-driven services

7.3 Perception of Change in current practices to comply with the DPA

The CUTS International study underscores that adhering to data localization mandates would prompt companies to restructure operations and system architecture.[70] Moreover, leading global tech firms like Amazon, Apple, Meta, Google, and Microsoft contend that local data storage requirements could hinder their ability to provide consistent services globally.[71] Just think about a small F-commerce firm, that depends on global firms to deliver its services and faces significant hurdles if localisation restrictions become a reality. Based on the existing literature it is imperative to know the sectoral view in Bangladesh.

To meet the upcoming data localisation requirements, many respondents indicate that current business practices will need to change In the Banking & Financials and Telecom sectors, the majority of respondents (67% respectively) anticipate a significant change. In IT, 43% of respondents expect a significant change, while 29% expect a moderate change. In the E-commerce and Logistics & Transport sectors, all respondents expect a significant change, while in Retail, half of the respondents anticipate a moderate change, and the other half expect a significant change. Overall, the survey results indicate that a significant change is expected across all industries due to the proposed DPA, after e-commerce and Logistics & transport with the highest expectations in the Banking & Financials, Telecom, and IT sectors. Only a small percentage of respondents expect minor or wholesale change (Shown in Figure 3).

The respondents from the E-commerce and retail sector feel that to comply with the proposed data localisation provisions in the DPA, the following challenges need to be addressed-

70 *Supra,* footnote no. 66, CUTS International, *"Data Localisation: India's Double-Edged Sword?"*.

71 *Supra*, footnote no. 6.

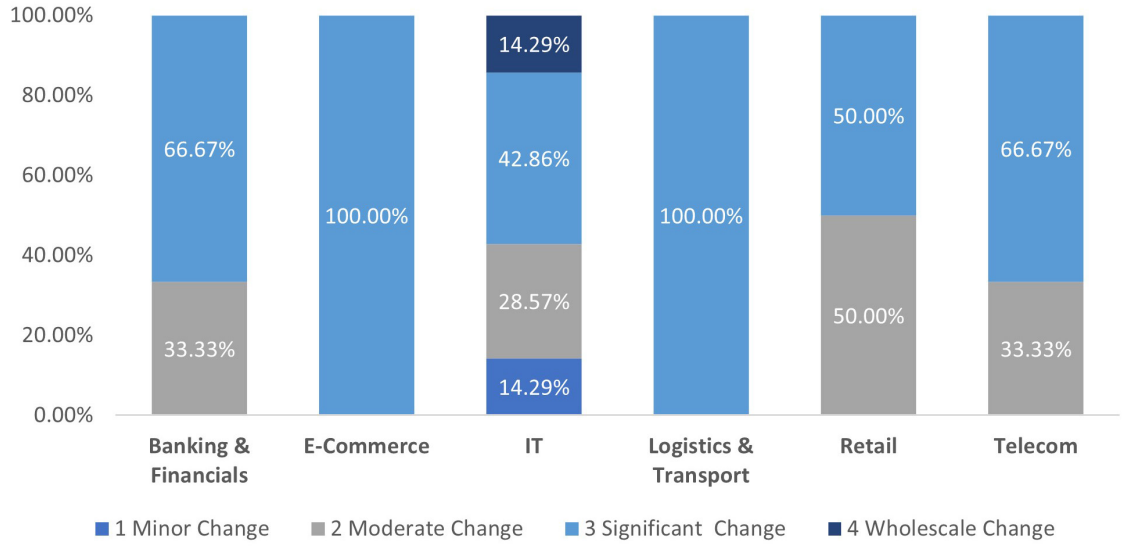


Figure 3: Perception of change in current practices to comply with DPA

Retail and ecommerce firms that currently store data on servers located outside of Bangladesh would need to invest in local data centers or cloud services that meet the DPA's data storage requirements. This would involve significant changes in terms of infrastructure and IT operations, as well as potentially higher costs associated with setting up and maintaining local data storage facilities.

In addition, firms that rely heavily on cross-border data transfers or operate in a global data center environment may need to adjust their data management practices to ensure compliance with the data-flow restrictions and data-subject rights outlined in the DPA. This could involve changes in the way customer data is collected, processed, and shared, as well as investments in data encryption and security protocols.

Survey results and responses are similar to the findings of the IRSG report. Report states that Data localization laws often force financial services companies to adopt intricate and cumbersome operational solutions in various jurisdictions to meet local requirements. An instance of this is the obligation to employ local software providers or data repositories for processing and storing local data or copies. These solutions might not align with corporate or international standards, lack scalability, and could even be unavailable or impractical.[72] Global Data Alliance (GDA) 2021 survey found almost similar results on EU enterprises to comply data transfer restriction.[73] 62% EU companies stated that they are no longer able to provide certain products and services if restrictions stayed. 29% of EU SMEs have stopped or reduced their sales of products or services that require personal data transfers.[74]

7.4 Investment requirement

Our findings indicate that respondents believe compliance with data localization requirements will necessitate new investments across various industries. In the Banking & Financials sector, the majority of respondents (66.67%) anticipate a high investment requirement, while 33.33%

72 *Supra*, footnote no. 13.

73 *Supra*, footnote no. 34, GDA statement on Trans- Atlantic data transfer (2022).

74 *Supra*, footnote no. 34, GDA statement on Trans- Atlantic data transfer (2022).

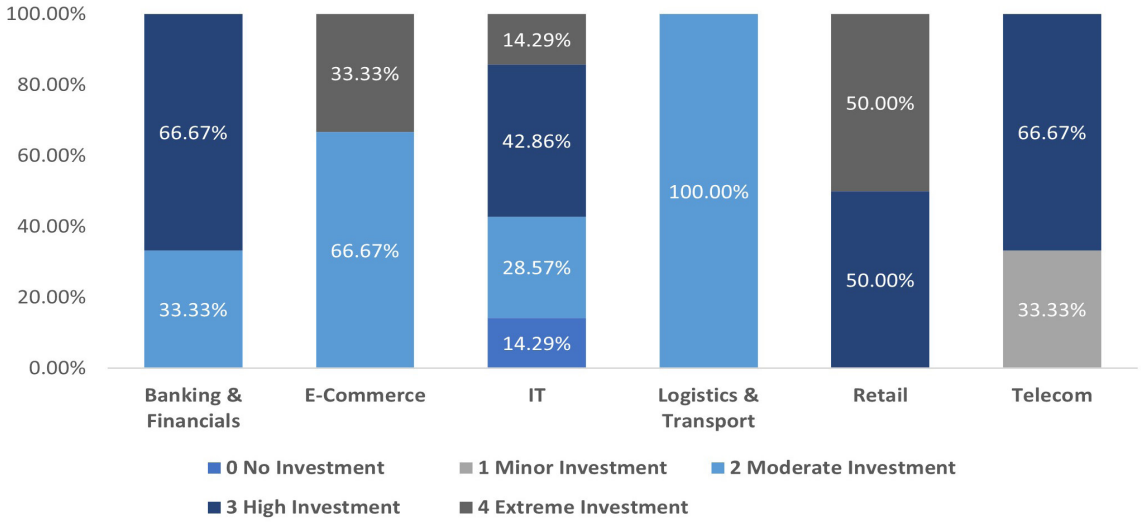


Figure 4: Investment requirement

expect a moderate investment. In the E-Commerce sector's 66.67% of respondents believe that a moderate investment is necessary, while 33.33% perceive the need for an extreme investment. In IT 42.86% of respondents expect a high investment, followed by 28.57% anticipating a moderate investment. Logistics & Transport sector respondents (100%) perceive a need for a high investment. In Retail half of the respondents (50%) expect a high investment, while the other half anticipates an extreme investment. In Telecom 66.67% of respondents believe a high investment is required, with 33.33% perceiving a need for a moderate investment.

Overall, the majority of respondents (45.45%) across all sectors anticipate a high investment requirement. 31.82% of respondents expect a moderate investment. 13.64% of respondents perceive a need for an extreme investment. Only a small percentage of respondents (4.55%) believe no investment is required.

To meet data localisation requirement, businesses might choose hardware storage as an alternative to cloud storage, despite its higher cost and lower security. For instance, Mastercard allocated $350M from a $1B investment in India for localization compliance.[75] The unavailability of cloud services due to localization leads to increased data handling costs, impacting consumers. Without localization mandates, cloud-based virtual/ digital banks could provide basic financial services to the underserved at low costs, tapping into vast untapped markets.[76] However, localization might render such market access unfeasible, excluding the poor due to low profitability. This policy's effects extend beyond financial firms, with data-intensive industries, like online businesses, being significantly affected.

---

75 Dr. Pavan Duggal, "Data Localization: A Review of Proposed Data Localization Legislation in India, with Learnings for the United States", Data Catalyst, available at https://datacatalyst.org/wp-content/uploads/2020/06/Data-Localization-Pavan-Duggal.pdf (last accessed on September 23, 2023).

76 David Medine, *"Data Localization—a Hidden Tax on the Poor"*, March 27, 2023, Center for Global Development, available at https://www.cgdev.org/blog/data-localization-hidden-tax-poor (last accessed on September 23, 2023).

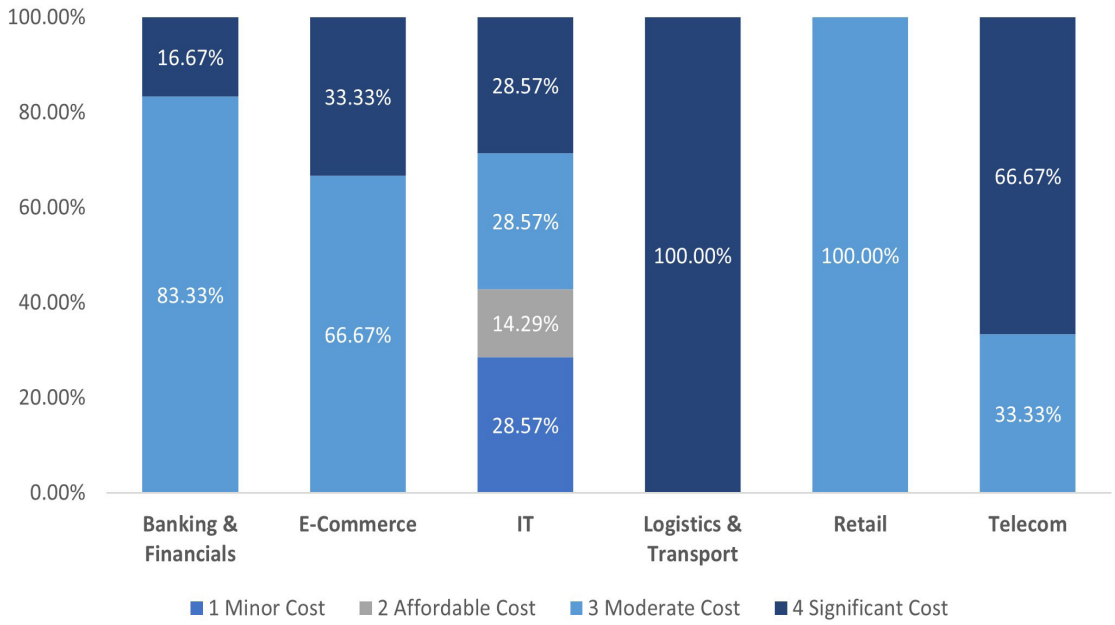


Figure 5: Impact on business operation Costs across industries

7.5 Impact on Business operation Costs across industries

The survey results also show that implementing the DPA will increase Business operation Costs across industries. The majority of respondents (83%) in the Banking & Financials sector anticipate moderate cost impact and a smaller portion significant cost impact (16%). In the Telecom sector, 66% of respondents anticipate significant costs, while 33% anticipate moderate costs. Conversely, in the E-commerce sector, 66% of respondents anticipate moderate costs, while 33% anticipate significant costs.

In the IT sector, respondents are almost evenly distributed across the cost levels, with 28% anticipating significant, moderate and minor costs each and, 14% anticipating affordable costs. Interestingly, the Retail sector and Logistics & Transport sector remain undivided, with all respondents anticipating moderate and significant costs, respectively.

Overall, the data suggests that a significant proportion of respondents across industries anticipate moderate to significant costs to comply with the data localization requirements, while only a smaller proportion anticipate minor or affordable costs.

Almost every existing literature on data localisation found that any restriction on the data flow costs data- driven businesses in the era of digital economy. Leviathan group stated that data localization measures can increase the costs of data hosting by 30-60%.[77] Our survey results also aligned with that. ECIPE study also shows that of EU SMEs would consider halting trade with the United States, if the costs of complying with a new data transfer mechanism exceeds 5% of their revenue.[78] Sometimes, compliance expenses are excessive, prompting large multinationals to exit markets, harming users. For instance, PayPal suspended its Turkish operations due to a requirement mandating complete localization of its

77 *Supra*, footnote no. 38.

78 Ibid, GDA statement (2022)

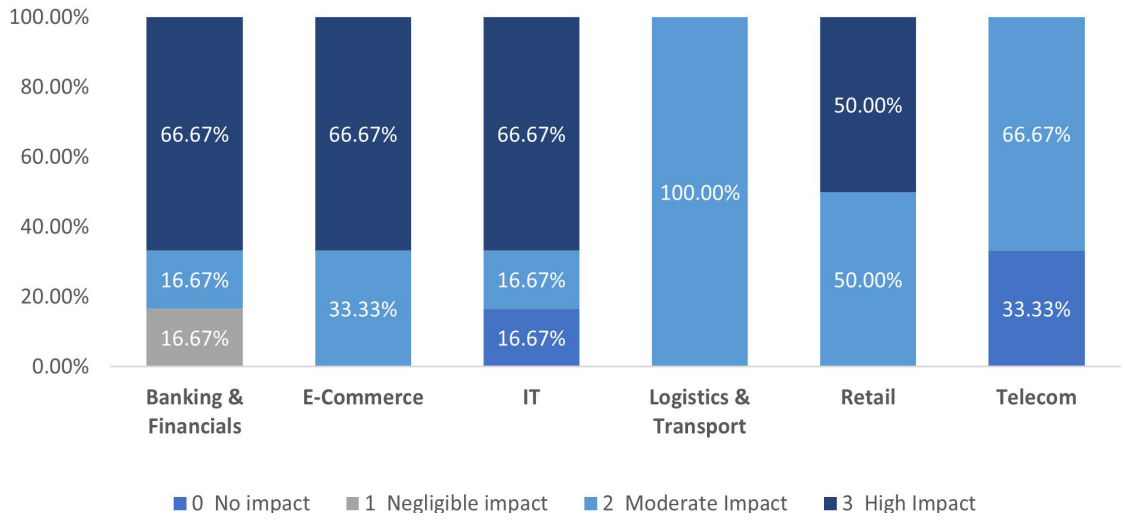


Figure 6: Impact on the quality and reliability of digital services

systems within Turkey.[79]

7.6 Impact on the quality and reliability of digital services

When data has to stay within a country's borders, it needs to be temporarily taken out of the worldwide data collection. This makes things slower and costs more. Back in 2016, Google's research showed that 40% of smartphone users would leave a website if it takes more than three seconds to load. This "loading time" is probably even shorter now.[80] A 2020 study by Deloitte Ireland "Milliseconds Make Millions" showed that a mere 0.1s change in mobile page load time can influence every step of the user journey: "With a 0.1s improvement in site speed, retail consumers spent almost 10% more, while lead generation and luxury consumers engaged more, with page views increasing by 7% and 8% respectively."[81] So customer experience is important when policy change has a significant impact on quality and reliability of digital services.

The survey results indicate that the new data localization requirements are expected to have a significant impact on the quality and reliability of digital services, from the perspective of customer experience.

The e-commerce, IT, retail and banking and financial industries all expect high impact from data localization, which suggests that these industries may face significant challenges in complying with the requirements and ensuring the quality and reliability of their services. The retail industry expects equal high and moderate impact, indicating that compliance with data localization may be challenging but may not have as significant an impact on customer experience compared to other industries. The logistics and transport industry is the only industry that expects only a moderate impact, suggesting that compliance with data localization may be less challenging

79 DeFilippo and Coleman, *"Market Opportunities and Key Initiation Foreign Trade Restrictions"*, United States International Trade Commission, available at https://www.usitc.gov/publications/332/pub4716_0.pdf (last accessed on September 23, 2023).

80 Institute of International Finance, *"Data Localization: Costs, Tradeoffs, and Impacts Across the Economy"*, available at Finance, https://www.iif.com/portals/0/Files/content/Innovation/12_22_2020_data_localization.pdf (last accessed on September 23, 2023).

81 Deloitte Digital, *"Milliseconds Make Millions"*, Deloitte Ireland (May 2020)

for this industry. Overall, more than half of the respondents expect high impact from data localization, which highlights the need for careful planning and preparation to mitigate the potential impact on customer experience.

7.7 Impact on innovation and the use of new technology

Machine learning and artificial intelligence have become vital tools for startups to develop innovative solutions, enhance efficiency, and gain a competitive edge. Cloud computing platforms offer scalable infrastructure for running ML and AI workloads, making it accessible to startups without massive upfront investments. But data localization requirements can restrict access to global cloud platforms and services. This can limit startups' ability to leverage high-end data processing tools and global infrastructure, hindering innovation. Moreover, compliance with data localization laws may necessitate building or renting local data centers, which can be expensive for startups with limited resources.[82] The U.S.-U.A.E. Business Council has cautioned that the introduction of data localization regulations in the U.A.E. may pose a risk to the country's aspirations of establishing itself as a thriving innovation hub for cutting-edge technologies such as AI, IoT, and cloud computing.[83]

The highest percentage of respondents (47.62%) from all industries expect a high impact on innovation and the use of new technology due to the draft DPA. 23.81% of the respondents expect a moderate impact on innovation and the use of new technology and 19.05% of the respondents expect negligible impact (Shown in Figure-7).

Only a small percentage of respondents expect no impact (4.76%) or extreme impact

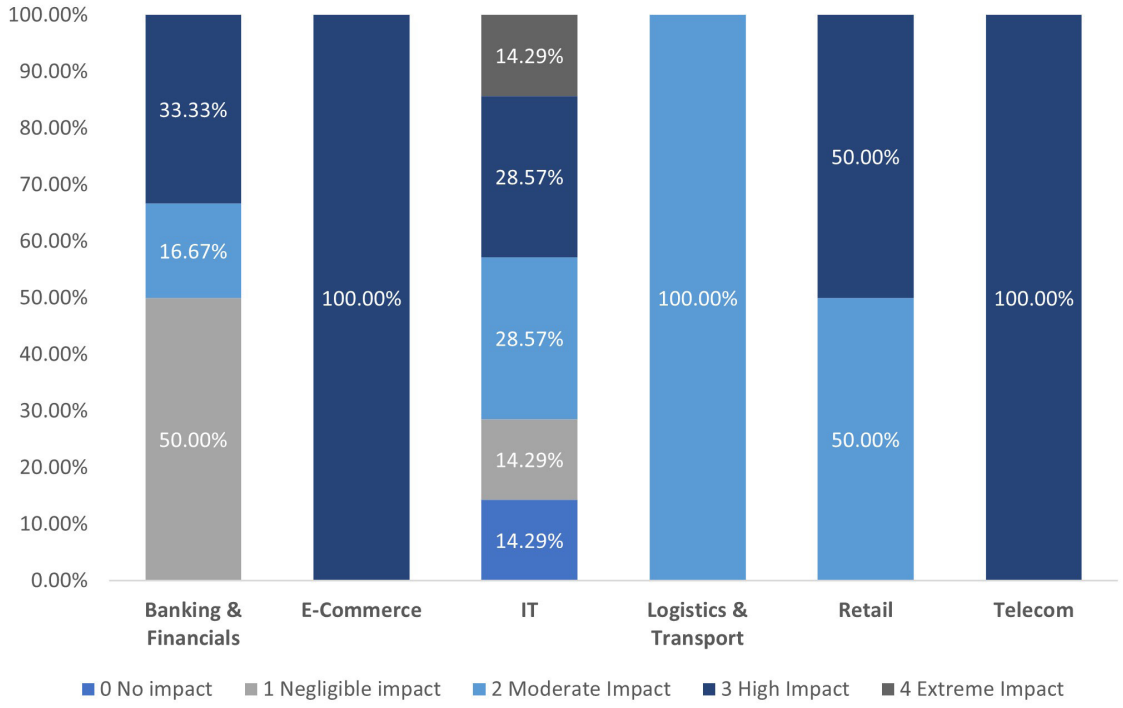


Figure 7: Impact on innovation and the use of new technology

82 Supra, footnote no. 82.

83 US-UAE Business Council, *"Promoting Free and Secure Data Flows: Data Privacy and Localization"*, available at https://usuaebusiness.org/focusareas/promoting-free-and-secure-data-flows-data-privacy-and-localization/ (last accessed on September 23, 2023).

(4.76%). Among the various industries, the highest percentage of respondents expecting high impact are from the Telecom and E-commerce industry (100% respectively) followed by retail (50%), the banking & financial industry (33.33%) and IT industry (28.57%).

The logistics & transport industry is the only industry where all the respondents expect moderate impact on innovation and the use of new technology due to the draft DPA.

7.8 Data Localisation and its impact data privacy (in terms of preventing violations)

In the data localisation debate, the trickiest question is, whether it enhances data privacy. More and more countries turning to data localisation to protect personal data.[84] Other literature also focused on that issue also.

The survey asked respondents about the impact of data localization on data privacy, in terms of preventing violations. In terms of the overall impact of data localization, the data suggests a mixed perception among respondents. Approximately 28.57% believe that there will be a positive impact, 38.10% expect a negative impact, and 33.33% indicate that there will be no impact. (Shown in Figure-8).

The industry wise results indicate that the telecom industry is the most skeptical about the impact of data localization on data privacy, with 66.67% of respondents expecting no impact. The banking and financial industry is more optimistic, with 33.33% expecting a positive impact and 50% expecting no impact.

The e-commerce industry is the most optimistic, with 66.67% of respondents expecting a positive impact. The logistics and transport industry appears to be the most certain, with 100% of respondents expecting negative impact. Overall, the results suggest that there is a lot of uncertainty about how data localization will impact data privacy, with roughly equal numbers of respondents expecting positive, negative, and no impact.

Storing data into a national border does not enhance data privacy if we consider the case of the recent data breach of the birth registration directorate. Millions of personal information are impacted by that though

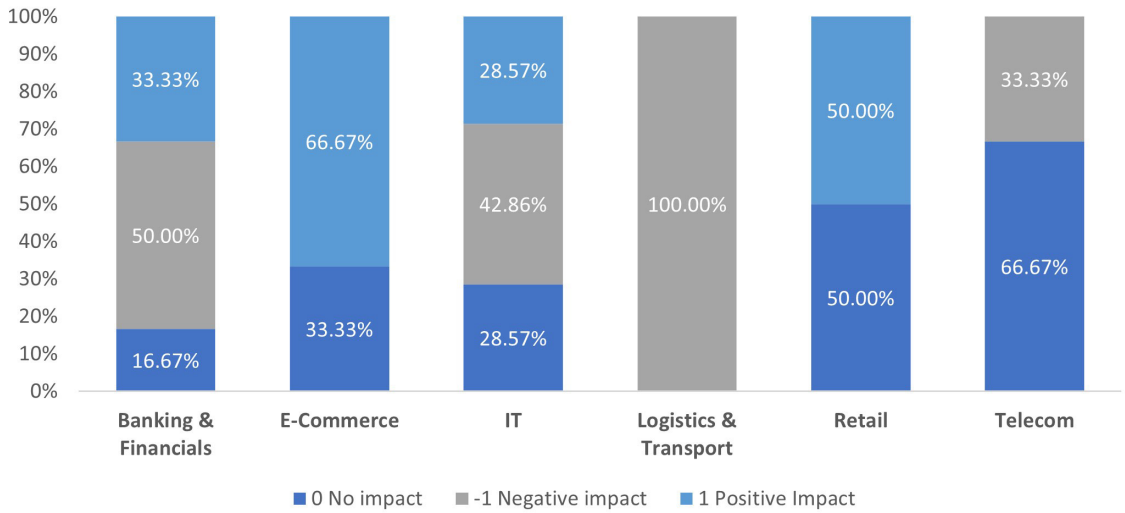


Figure 8: Data localisation impact data privacy (in terms of preventing violations)

[84] Yogesh Hirdaramani, *"Why data localisation may not be a panacea for data privacy woes in ASEAN"*, GovInsider, October 03, 2022, available at https://govinsider.asia/intl-en/article/why-data-localisation-may-not-be-a-panacea-for-data-privacy-woes-in-asean (last accessed on September 23, 2023).

that data is stored in local jurisdiction. So, it is obvious that privacy and security depends on the measure not location. The mixed answers of the respondents are also understandable because data localisation has pros and cons.

7.9 Impact on data security

Most of the literature stated that data privacy and security are not dependent on the server's location.[85] having complete control over the physical setup doesn't guarantee security like it used to. Storing data in the cloud is safer because it's spread across many systems, not just one place. When it comes to keeping data safe, spending on infrastructure and upkeep matters more than where the data is kept physically. When all data is kept in one area, its safety is weakened because it's more vulnerable to physical dangers and focused cyberattacks. Usually, companies use two or more cloud providers to be extra safe. The smart way in cloud computing is to have extra storage in different places, so if one spot is attacked, data can be quickly shifted to another spot.[86]

According to the survey results, 38.10% of respondents believe that data localization will have a positive impact on data security in terms of preventing cyber-attacks and breaches. On the other hand, 42.86% of respondents believe that data localization will have a negative impact on data security, while 19.05% of respondents believe that it will have no impact at all (Shown in Figure-9).

Interestingly, the responses are divided among industries, with the Logistics & Transport industry being the only sector, where all respondents believe that data localization do not have any impact on data security. The Banking and Financial industry respondents are split evenly between those who believe that data localization will improve data security and those who believe it will have a negative impact. The IT and telecom industries are more negative, with over 50% of respondents in both industries believing that data localization will have a negative impact on data security. The retail industry is split evenly between those who believe data localization will improve data security and those who believe it will have no impact at all.

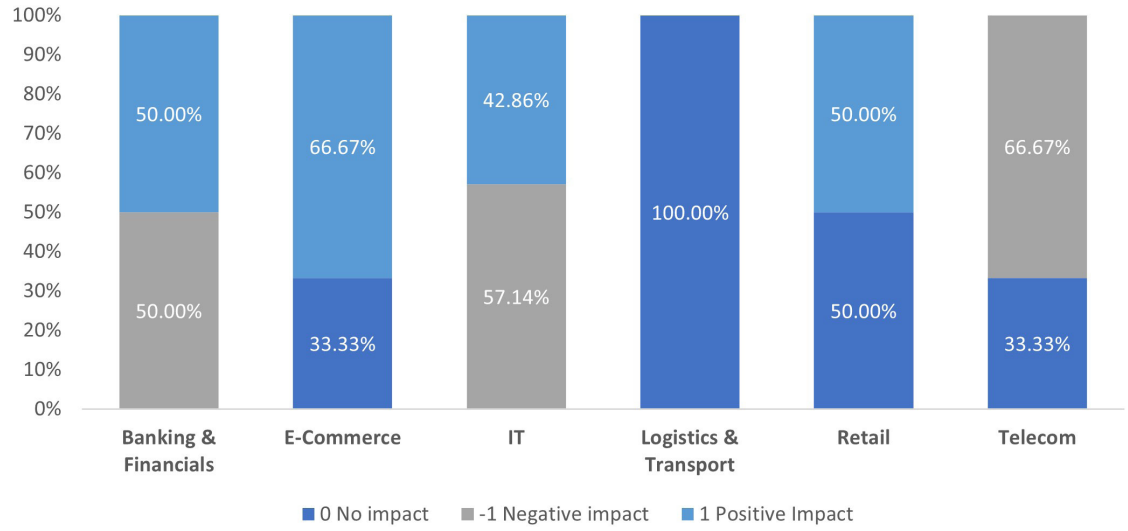


Figure 9: Impact on data security

85 *Supra*, footnote no. 4.

86 *Supra*, footnote no. 82.

Those who were positive about data security improvement through data localization argued that data localization can enhance data security in several ways. Firstly, it can limit potential entry points for cybercriminals seeking unauthorized access to sensitive information. Secondly, it can facilitate more efficient and effective monitoring and management of data security. Finally, data localization can reduce the risks associated with cross-border data transfers. However, other measures such as strong access controls, regular security audits, and data encryption should also be implemented to ensure the protection of consumer data. But negative impact supporters believe that the security of data depends on the way it is stored not the location it is stored.

The latest draft of the Data Protection Act (DPA) published in August 2023 introduced a significant overhaul to the data localization section. In Article 50, it now states that, as determined by the government, "classified data" must be stored in Bangladesh, replacing the previous requirement that "sensitive data, user-generated data, and classified data" be stored there. This change is seen as a positive step toward facilitating the free flow of data. However, regulatory uncertainty still lingers due to the absence of a clear definition for "classified data." This lack of a specific definition adds to the ambiguity, as government agencies could potentially designate any data as "classified."

8. Policy Recommendation

Based on the survey findings regarding the potential impact of mandatory data localisation and cross-border data transfer restrictions, as well as the challenges and perceptions expressed by respondents, the following policy recommendations can be considered:

Consider Industry-Specific Needs: Policymakers must acknowledge the varying impact of data localisation on different industries and sectors, as well as among businesses based on their size (large, medium, and small). A deeper assessment of these aspects is necessary before implementing the DPA. It is imperative for the government to tailor the implementation of data localisation policies to address the specific needs and challenges faced by each industry.

Consultation with Stakeholders: Policymakers should engage in thorough consultations with industry stakeholders, particularly representatives from sectors that raised concern most about data localisation, such as Banking and Financials, Telecom, IT, E-commerce, and Retail. This engagement will provide valuable input and feedback, allowing policymakers to gain a better understanding of the potential impact of data localisation requirements and effectively address the concerns.

Provide Transitional Period and Support: The draft DPA should include a staggered transitional period that considers the size of businesses, granting longer implementation timelines for startups and potentially exempting small enterprises. Additionally, policymakers should offer comprehensive support mechanisms, including technical assistance and guidance, to help businesses comply with the regulations while minimizing costs and avoiding disruptions to their operations.

Foster Innovation and Technology Adoption: Policymakers should alleviate concerns regarding the impact on innovation and the adoption of new technologies by implementing supportive policies and providing incentives. Encourage businesses to explore innovative solutions that facilitate compliance with data localisation requirements while preserving their competitive advantage.

Promote Data Security Best Practices: Emphasize the significance of robust data security measures, irrespective of data localisation requirements. Encourage businesses to implement stringent access controls, conduct regular security audits, employ data encryption, and adopt other best practices to safeguard consumer data.

9. Conclusion

In the economy like Bangladesh what impact mandatory data localisation provision and cross-border data transfer restrictions brought. To explore that we did a purposive sampling survey among data driven technology companies. Based on the survey results, it is evident that industry representatives strongly believe that the proposed data localisation requirements will necessitate changes in business practices and require new investments to ensure compliance. Furthermore, there is a consensus that these requirements may lead to a significant increase in business operation costs across industries.

The perspectives shared by industry professionals also highlight potential challenges in terms of innovation and the adoption of new technologies, such as big data, artificial intelligence, and blockchain. However, it is important to note that the impact of data localisation can vary across industries, underscoring the need for a comprehensive industry-specific assessment. Such an assessment would provide a deeper understanding of industry-specific concerns and the wider implications of data localisation.

Without clear guidelines and a thorough evaluation of industry-specific factors, adhering to a single data localisation model could have detrimental effects. Therefore, it is crucial to approach data localization policies with caution, considering the unique characteristics and requirements of each industry. This will help strike a balance between data protection objectives and the growth and competitiveness of businesses in the digital economy.

978-984-35-9033-6