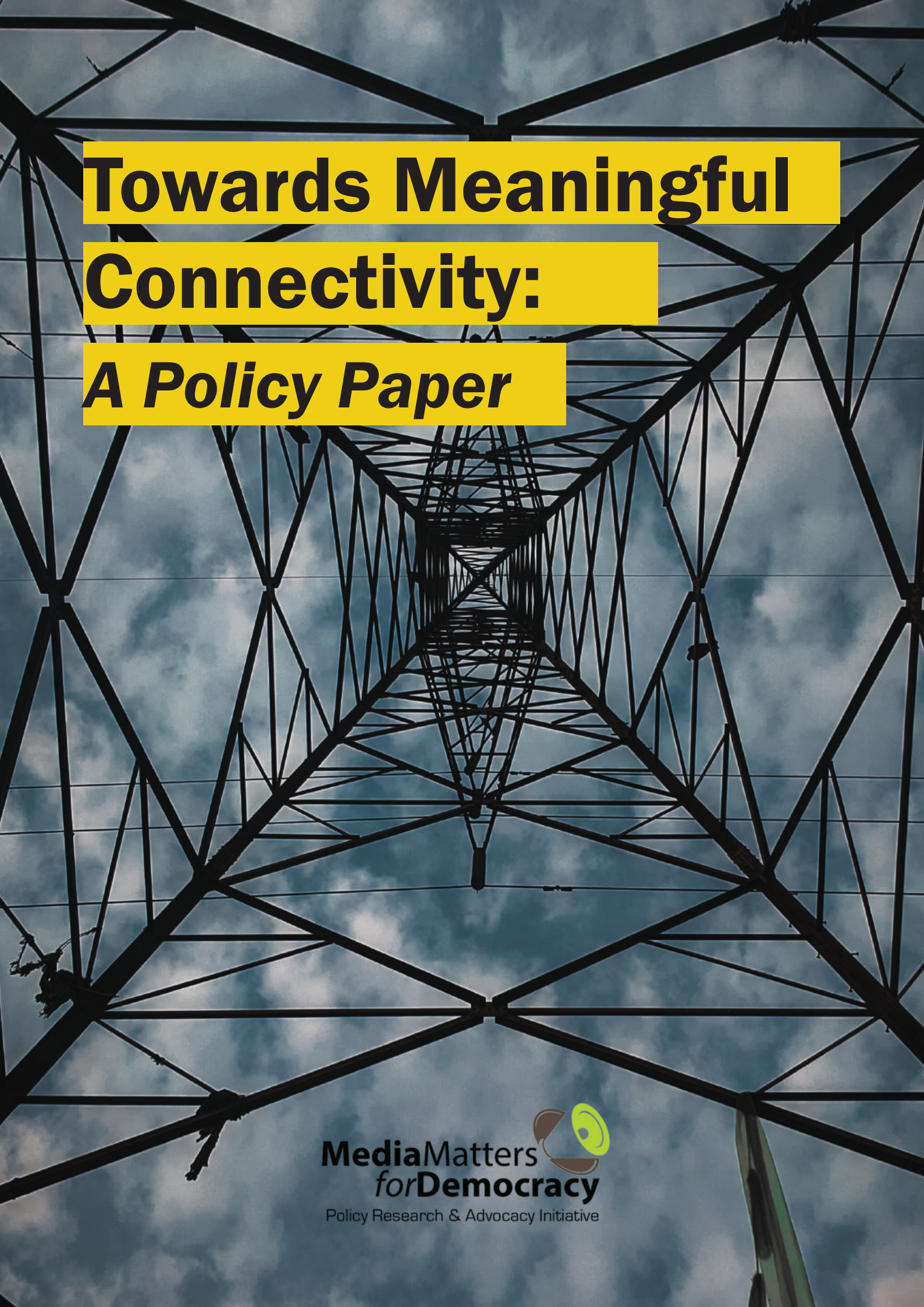

Towards Meaningful Connectivity:

A Policy Paper

MediaMatters forDemocracy

Policy Research & Advocacy Initiative

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A Policy Paper

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Section 1
Introduction and Context

1.1 Introduction

The internet has evolved from a small network connecting a dozen people to a global phenomenon where billions are reliant on it for all aspects of life, including education, healthcare, employment, housing and mobility. Access to the internet is now recognised as a basic and fundamental human right by many countries around the world. In July 2016, the United Nations adopted the resolution A/HRC/32/L.20[1] recognising the importance of "applying a comprehensive human rights-based approach when providing and expanding access to the internet and for the internet to be open, accessible and nurtured". Countries that adopted this resolutions promise to work on ensuring that internet access to all was to be treated as a fundamental human right,

Despite this, a huge part of the world remains disconnected from the internet. Where the gap in connectivity is dire around the world, many in developing countries bear the consequences intensely very frequently in the form of lost opportunities of livelihood, education, healthcare and various other basic needs of life. Another added layer to these implications of disconnect has been seen among lower-income households, and further among women and gender minorities that remain the most affected with the unavailability of the internet or digital technology.

A research by Media Matters for Democracy titled Women Disconnected: Feminist Case Studies on the Gender Digital Divide Amidst COVID-19 that looks at the impacts of gender digital divide on women in Pakistan, finds that women who come from low income households continue to face barriers in accessing the internet in Pakistan which are not only financial, but are also geographical and cultural.[2] Whereas over 76% of women who participated in the research thought that the internet was expensive in the country. The research further finds that the internet's unavailability impacted the healthcare of women, often leading to serious bodily harm and in severe cases led to the death of women because they were not able to reach medical help in time due to no connectivity. It also found that the internet's access has serious implications on women's ability to acquire education or seek job opportunities. The research also identifies regions where internet connectivity is completely missing due to political and security reasons, putting citizens at the risk of digital marginalisation.

Many of these implications of lack of internet access, or digital divide, are part of Sustainable Development Goals (SDGs). Hence web access becomes a prerequisite for many of the SDGs, from supporting education and reducing inequalities, driving economic growth and boosting health outcomes, and meaningful universal access will act as a foundation in working towards these goals. Universal access is a concept under which the entire world population has the right to access internet facilities and services.

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[1] United Nations Resolution A/HRC/32/L.20, https://digitallibrary.un.org/record/845728?ln=en#record-files-collapse-header

[2] Women Disconnected: Feminist Case Studies on the Gender Digital Divide Amidst COVID-19, Media Matters for Democarcy, January 2021
http://www.digitalrightsmonitor.pk/wp-content/uploads/2021/01/Women-Disconnected-Gender-Digital-Divide-in-Pakistan.pdf

1.2 Background

In 2021, Pakistan dropped one rank on the Inclusive Internet Index 2021, released by the Economist Intelligence Unit, standing at 90th place as compared to 89th in 2020. This ranking also makes Pakistan the least inclusive country in South Asia.[3] According to the Index, some of the major contributors to this rank was the large gender digital divide, low levels of digital literacy and poor network connections. During the Covid-19 pandemic, the digital divide became even more prominent as more people stayed home and relied on the internet for education, health, food and other basic necessities.

In the context of the coronavirus pandemic, as the country switched to virtual and online mode of education, students all over Pakistan were in great turmoil over the lack of efficient access to the internet for their education. The lack of access was more actually experienced by students from areas that are already marginalised, including Balochistan, rural and tribal regions of Khyber Pakhtunkhwa (KPK) and Gilgit-Baltistan (GB). Twitter hashtags like #ShameOnTelecomSector, #WeRejectOnlineEdu and #Internet4GilgitBaltistan highlighted the plight of many that have remained disconnected from the rest of the world. Students in these provinces protested through rallies,[4] petitioned the high courts,[5] conducted demonstrations and even hunger strikes,[6] however, they have had little success. They have even been subject to arrests and violence as was the case in Quetta, Balochistan during a June 24 protest against online education in 2020.[7] In January 2021, students of the National University of Modern Languages also approached the Islamabad High Court raising concern on how there was no internet access in remote areas, where a number of students faced trouble with online classes. The Chief Justice during the initial hearing remarked that access to the internet was a basic right and that no citizen should be deprived of such rights.[8]

It has become evident during the past year that economic and social development cannot be achieved without digital inclusion. Pakistan introduced its first Digital Pakistan Policy in 2018 with an aim to boost the digital ecosystem in the country by enhancing connectivity and promoting innovation, tech and e-commerce. With the Digital Pakistan Vision in place, one can hope that the Government will now prioritise universal access, and any discussion of a "Digital Pakistan" must not exclude the recognition of access as a basic human right as also acknowledged in the UN declaration in 2016.

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[3] Inclusive Internet Index 2021, the Economist Intelligence Unit, https://theinclusiveinternet.eiu.com/explore/countries/PK/?category=overall&year=2021

[4] Protesting students arrested demanding internet facilities in Quetta, Express Tribune, June 25, 2020, https://tribune.com.pk/story/2249922/protesting-students-arrested-demanding-internet-facilities-quetta

[5] Petition against online classes filed in Balochistan High Court, Quetta Voice, June 23, 2020, https://www.quettavoice.com/2020/06/23/petition-against-online-classes-filed-in-balochistan-high-court-bhc/

[6] Zia Ur Rehman, Balochistan's students seek Internet access for online classes, The News, June 12, 2020 https://www.thenews.com.pk/print/671357-balochistan-s-students-seek-internet-access-for-online-classes/

[7] Muhammad Zafar, Protesting students arrested demanding internet facilities in Quetta, Express Tribune, June 25, 2020 https://tribune.com.pk/story/2249922/protesting-students-arrested-demanding-internet-facilities-quetta/

[8] Saqib Bashir, Islamabad High Court orders PTA to revive internet in former FATA, Express Tribune, April 14, 2020 https://tribune.com.pk/story/2197950/1-islamabad-high-court-orders-pta-revive-internet-former-fata/

1.3 Meaningful Connectivity

The struggle for universal access is not limited to providing an internet connection to every household around the world. While we work towards achieving that goal, our efforts would be futile without ensuring that there is "meaningful universal connectivity", meaning that the internet connection we use every day must be available, accessible, relevant and affordable.

The State of Broadband Report 2019 by the International Telecommunication Union (ITU) and United Nations Educational, Scientific and Cultural Organisation (UNESCO), notes that the division between 'connected' vs. 'unconnected' can be misleading, and present an inaccurate picture of the realities on the ground in many countries.[9] For instance, while a connection speed of 256 kbps is counted as 'broadband' for statistical purposes, the user's experience will be very different from those with a 100 Mbps or above connection which is now considered a standard speed. Moreover, access to efficient equipment like smart phones, tablets and laptops is necessary to be able to utilise the connection. Equipment also needs to be updated as new technologies emerge, and those belonging to the lower income class might not always be able to keep up with it.

Internet usage can be meaningful if all the users possess the required and equal skill set and opportunities necessary to navigate online spaces. This means that over the internet, the content must be accessible to everyone, multilingual, suitable for persons belonging to all parts of the world, and that special attention should be given to education to increase literacy rates- both general and digital. It also requires countries to take extra measures to make sure that women, gender minorities and other marginalised communities are provided with adequate resources to make use of the internet for a better quality of life.

In Pakistan, currently broadband penetration stands at 43.5%, with teledensity at 82.34%. This means that less than half of Pakistan's population has access to the internet.[10] Around 64% of Pakistan's population lives in rural areas[11] and with a significant rural- urban digital divide, full digital inclusivity cannot be achieved unless the government takes steps to ensure that remote and rural areas of the country are treated equally and provided with internet access.

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[9] The State of Broadband 2019, International Telecommunication Union (ITU), https://www.itu.int/dms_pub/itu-s/opb/pol/S-POL-BROADBAND.20-2019-PDF-E.pdf

[10] PTA Telecom Indicators, January 2021, https://www.pta.gov.pk/en/telecom-indicators

[11] Pakistan - Rural Population 1960-2019 Data - 2021 Forecast https://tradingeconomics.com/pakistan/rural-population-percent-of-total-population-wb-data.html

Section 2
Connectivity & Policy Around the Internet

This section outlines the broadband and universal access from around the world, including Pakistan, also highlighting some best practices that can be adopted by Pakistan in furthering their goal of increased connectivity.

2.1 United Kingdom

As part of their Digital Strategy formulated in 2017, the UK government introduced broadband as a Universal Service Obligation (USO) in order fulfil their commitment of ensuring that the UK has world class digital connectivity and inclusion.[12] The USO went into effect in March 2020 and it is yet to see how well the UK service providers, BT and KCOM, responsible for responding to requests under the USO, have performed in the past year in fulfilling their obligations of providing a decent broadband connectivity to households that demand it.

The strategy also promises effective regulation by creating an environment that would encourage investment in digital infrastructure of the UK. The country's independent regulator, Ofcom, is at the centre of ensuring there is healthy competition. They aim to do this by relying on laws and regulations to make it easier for operators to invest into the infrastructure. For instance, the "Access to Infrastructure Regulations" ensure telecommunication providers can access each other's physical infrastructure, across a range of sectors, on fair and reasonable terms.[13] Moreover, reforms in mobile planning laws in England have reduced planning requirements, allowing new sites to be developed quicker, and the recent changes to the Electronic Communications Code, made through the Digital Economy Act, further encourage an efficient use of infrastructure by promoting site sharing.

Part of the "better connectivity" aspect of the strategy also covers improved regulation of the consumer market through clear and honest advertisements, something that lacks in many digital policies around the world. It promises that there will be no gap in what is shown to the public by service providers in terms of speed and what they actually receive, creating a relationship of trust between consumers and operators.

The UK's Digital Strategy also prioritises its commitment to digital literacy and capability. While the country has spent millions of pounds on digital skills training programs in 2014-2015,[14] they are still built into the strategy as core components. The government promises, along with other steps, special attention to tackle digital exclusion by developing the role of libraries in improving digital literacy and providing free WiFi and computers where needed. The policy also highlights the need for

[12] UK Digital Strategy 2017, https://www.gov.uk/government/publications/uk-digital-strategy/uk-digital-strategy

[13] The Communications (Access to Infrastructure) Regulations 2016

[14] UK Digital Strategy 2017

interventions from private sector companies to work with the Government to provide digital skills training. These companies include those from the UK's own telecom sectors, global companies like Microsoft, Google, and banks like Barclays to encourage the use of digital banking.

2.2 India

India's 2012 National Telecom Policy lays down plans for better access and connectivity by developing an "ecosystem for broadband" through which all government departments and functionaries are required to work together in order to ensure that the process of broadband roll-out is carried out smoothly, and that more policies are set up to promote competition so that service providers are able to offer broadband service at a cheaper and non-discriminatory price to all citizens.[15] Through this policy, India also set up the Universal Service Fund for broadband after recognising the internet as a basic necessity, and introduced the concept of "Right to Broadband" recognising it as an essential human right.

The Telecom Policy aims to provide reliable and affordable internet to rural and remote areas by installing fibre optic cables, wireless, VSAT[16] and other technologies, and to give service providers incentive to roll out these services in rural areas. It also strategised to use the existing regulatory framework to utilise cable TV networks in rural areas for the rollout of high-speed and reliable broadband services.

The government, through this policy, promised to work together in synergy with broadband service providers to encourage digitisation by switching to e-governance and e-banking systems. There is also an emphasis on the need for more local and regional language content to stimulate the demand for broadband services.

Like many other countries, India also stresses the importance of skill building in its 2012 policy. By partnering with telecom research and other educational institutes, it aims to work towards capacity building of citizens, especially those in the rural areas which amount to 450 million as of 2017.[17]

2.3 Rwanda

In 2016, the Rwanda Utilities Regulatory Authority (RURA) estimated that the internet penetration rate stood at just 33% of the population.[18] The same year, Rwanda introduced its "Vision 2050" policy,[19] a follow up document to the "Vision 2020". And with the United Nations Conference on Trade and Development (UNCTAD) naming the country East Africa's number one ICT nation,[20] the country prioritised transforming itself into a knowledge based middle income economy by 2020 under the Vision 2020.

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15 National Telecom Policy 2012, https://dot.gov.in/relatedlinks/national-telecom-policy-2012

16 Very Small Aperture Terminal

17 Statista, October 16, 2020, Population by Urban and Rural India 2017-2020, https://www.statista.com/statistics/1012239/india-population-by-region/

18 Rwanda Utilities Regulatory Authority (RURA) Report, http://www.rura.rw/fileadmin/docs/Statistics_report_1st__quarter___2016_01.pdf

19 Rwanda Vision 2050, https://www.nirda.gov.rw/uploads/tx_dce/Vision_English_Version_2050_-31_Dec_2020.pdf

20 UNCTAD, 2013, Broadband for an inclusive digital society, https://unctad.org/system/files/non-official-document/Broadband%20for%20an%20inclusive%20digital%20society%20-%20Rwanda.pdf

And for the fulfilment of this vision, Rwanda put forth increased focus on ICT-led developments to achieve this.

In 2016, in partnership with different companies, the government launched a laptop purchase program for students in university on a loan scheme to facilitate ICT-based learning and for accelerating the penetration of smart devices and increasing country-wide broadband penetration.

The policy places special emphasis on universal access to the internet as a key player in improving the quality of life and living standards of its citizens by implementing ICT-led initiatives in basic facilities that the government offers. The policy outlines inclusion of technology in universal access to healthcare, education, financial services, housing and pension/ savings as key elements that play a role in improving the quality of life. Rwanda has recognised that in order to achieve these goals, it must pay special attention to ICT development and bridging the digital divide which stands at 52 percent of the total population as of 2019 based on mobile ownership.[21]

2.4 Malaysia

The National Broadband Implementation Strategy, or better known as National Broadband Initiative (NBI), is Malaysia's national strategy that aims to bring broadband internet connection to the whole nation. In 2007, when the individual internet penetration stood at 55.7 percent of the total population,[22] the Government of Malaysia set its target to achieve 50 percent household broadband penetration by the end of 2010. In order to do this, they introduced public internet access centers, or Mini Community Broadband Centers to promote connectivity, 1 Million Netbook Initiative to distribute notebooks to students in lower-income communities nationwide, set up E-Kiosks and focused on the expansion of Cellular Coverage. As of 2018, Malaysia has set up 860 internet facility centers to boost internet connectivity among local communities.[23]

2.5 Pakistan

The 2004 Broadband Policy of Pakistan has laid down in detail, the objectives and strategies for broadband access in Pakistan.[24] It starts off by promising the development of more localised content to stimulate the demand for broadband internet connection and then addresses the issue of affordability in detail and lays down guidelines on how to make the broadband internet services affordable for the masses. To facilitate this, it aims to remove restrictions on the number of service providers operating in Pakistan to avoid monopolisation.

The 2004 policy also takes into account the cost of digital devices and equipment to access the internet, like the PCs, that is borne by the consumers, and vowed to introduce incentives to service providers to donate these devices to low income communities, provide loans for such equipment through service providers, and to remove import

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[21] AfterAccess: Understanding the Gender Gap in Global South, page 12, Figure 1, https://afteraccess.net/wp-content/uploads/2018-After-Access-Understanding-the-gender-gap-in-the-Global-South.pdf

[22] The World Bank Data, https://data.worldbank.org/indicator/IT.NET.USER.ZS?locations=MY

[23] Alliance for Affordable Internet, Guide to Public Access in Southeast Asia - 2019 Affordability Index, Malaysia https://a4ai.org/2019publicaccess/#Malaysia

[24] Broadband Policy for Pakistan 2004, https://usf.org.pk/assets/rules-pdf/broadband-policy.pdf

duties levied on inputs and finished products used in providing broadband services in order to reduce cost.

Following this, the Universal Service Fund (USF) policy for broadband services in Pakistan was introduced in 2005 with the goal of increasing teledensity, building telecenters and to increase broadband penetration. The USF policy expected that by the end of 2010, 85 percent of the total population of the country would have access to the internet, and that by the end of 2015, 95 percent of the country should have broadband internet coverage and access. However, as of December 2020, only 43.5% of the population had broadband access.

A decade after the USF Policy was passed, the Telecom Policy of 2015 went on to introduce public WiFis for the very first time for commercial use, based on international standards. It also eased right of way requirements and procedure in order to make it convenient for telecom operators to build infrastructure as required. The policy also stated that the internet and other data traffic will be exchanged within Pakistan using local peering or exchange points as use of international peering points in other countries is expensive and poses a security risk. This is likely to bring down costs for Internet Service Providers (ISPs).

Lastly, access to the internet is prioritised in the Digital Pakistan Policy of 2018, with digital inclusion as one of its main components. It promises the development of IT Zones and Software Technology Parks at major cities to promote digitisation, and to set up telecenters in unserved areas of Pakistan. However, the policy does not take into account other factors, such as digital literacy, infrastructure issues or gendered inclusion that have acted as a major contributors to the digital divide in the country.

In recent years, the USF has awarded multiple contracts to telecom companies to provide broadband access in rural areas. In April 2020, Jazz was awarded a Rs. 92 million contract to develop next-generation broadband in Kurram Lot district of Khyber Pakhtunkhwa. Another contract was awarded to Jazz worth Rs. 254 million to provide high speed mobile broadband services in rural and remote areas of Jhelum and Chakwal.

During the lockdown period due to the Covid-19 pandemic, a number of petitions were filed in the high courts of the country to appeal for better internet coverage in remote and rural areas. The Islamabad High Court in April 2020 ordered the PTA to restore 3G and 4G services in the tribal districts of Khyber-Pakhtunkhwa (the former FATA regions). Even though the decision was set aside by the Supreme Court, the case attracted global attention to Pakistan's connectivity issues and also highlighted that despite having multiple policies in place that promise access, there is a lot more that needs to be done to implement these policies.

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[25] USF Policy for Pakistan 2005, https://usf.org.pk/assets/rules-pdf/usf-policy.pdf

[26] PTA Telecom Indicators, January 2021, https://www.pta.gov.pk/en/telecom-indicators

[27] Jazz awarded contract for provision of broadband services in ex-FATA, Ghulam Abbas, Pro Pakistanii, April 21, 2020, https://profit.pakistantoday.com.pk/2020/04/21/jazz-awarded-contract-for-provision-of-broadband-services-in-ex-fata/

[28] USF, Jazz sign contract, The News, January 26, 2021, https://www.thenews.com.pk/print/779648-usf-jazz-sign-contract

[29] Islamabad High Court orders PTA to revive internet in former FATA , Saqib Bashir, Express Tribune, April 14, 2020, https://tribune.com.pk/story/2197950/1-islamabad-high-court-orders-pta-revive-internet-former-fata

[30] IHC seeks help in plea demanding 3G/4G services in tribal areas, Malik Asad, Dawn, May 12, 2020 https://www.dawn.com/news/1556489

Section 3

Key Elements to be Considered Regarding Access Related Policies

3.1 Affordability

One of the major problems with universal access to the internet in Pakistan is the affordability of broadband services. All the policies that have so far been introduced to increase broadband internet penetration in the country talk on the infrastructural level, but do not take into account the cost of accessing the internet on the user level. Where unavailability of infrastructure is one challenge in getting them online, where some kind of internet is available, the cost of access continues to make the internet a luxury for these communities.

Where the impact of this inaccessibility is faced by everyone, women and gender minorities experience exacerbated implications of this disconnect of the internet due to the expensive cost. For a country to truly prioritise digital access, it is important for it to take into account the larger population's buying power and subsidise the connection to suit their affordability. This discussion needs to happen on a policy level to ensure a way towards meaningful universal access.

3.2 Infrastructure and Availability

According to the Inclusive Internet Index 2021 released by the Economist Intelligence Unit (EIU), Pakistan ranked 97th out of 100 in terms of availability, a category that examines the quality and breadth of available infrastructure required for access and levels of internet usage, dropping from 86th place in 2020. Due to higher capital investments and low returns in rural areas due to the low buying capacity of communities in the regions, many remain disconnected and often have to resort to expensive mobile data that is also not widely available.

The connectivity issues in Gilgit-Baltistan that were recently brought to wider public attention due to the coronavirus pandemic and remote learning also highlighted the issues with infrastructure in remote and rural areas. For instance, the people of Gilgit-Baltistan still await 3G and 4G services. The fibre-optic cables that run through the region as part of the China Fiber Optic Project, also do not provide internet connectivity to the area.[31]

Another major issue with internet availability is the constant disruption of electricity due to load-shedding in the country. A reliable and uninterrupted source of electricity is needed to support the required ICT infrastructure.

[31] Would you climb a mountain for internet access?, Alizeh Kohari, Rest of World, November 24, 2020, https://restofworld.org/2020/the-hills-are-alive/

3.3 Digital Literacy and Local Language Content

It is also crucial to promote digital literacy in the country through creation and translation of online content in local and regional languages. Without digital literacy, full social and economic benefits of universal access cannot be achieved. The Digital Pakistan Policy aimed to create more content in the local/ regional languages and collaborate with local technology associations, academia and industry incubation centers to promote the use of the content in these languages.[32] However, the extent to which this was achieved as part of the policy is unknown.

Local language content is also a key element of meaningful connectivity. Even if a country were to provide affordable and efficient internet access, the vast majority of users will not be able to benefit from it unless the content they consume is available in languages they understand as the general literacy in English language is extremely limited amongst the local population.

3.4 Security Concerns and Internet Shutdowns

An important aspect of meaningful connectivity is the internet that is reliable and can be accessed regularly. Internet users in Pakistan routinely face regular disruptions in internet access, even those living in larger, metropolitan cities. Network shutdowns have been used as a tool by the government to maintain "law and order" for the sake of "national security" in times of protests,[33] days of national significance like the Independence Day,[34] Pakistan Day, religious processions like the Ashura,[35] and during public unrest.[36] Deemed unnecessary by activists[37] and a source of major inconvenience for many as it disrupts everyday life and business, especially in times of Covid-19 when most people are using the internet for work and educational purposes, internet disruptions are a hindrance in achieving meaningful universal access in any economy.

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[32] Digital Pakistan Policy 2018, Ministry of Information Technology and Telcommunication, Pakistan, https://www.moitt.gov.pk/SiteImage/Misc/files/DIGITAL%20PAKISTAN%20POLICY.pdf

[33] Pakistan temporarily blocks social media over potential protests, Asad Hashim, Al Jazeera, April 16, 2021, https://www.aljazeera.com/news/2021/4/16/pakistan-temporarily-blocks-social-media-amid-anti-france-rallies

[34] Cellular services briefly suspended on 'Pakistan Day', Digital Rights Monitor, March 23, 2019, https://www.digitalrightsmonitor.pk/islamabad-under-partial-network-shutdown/

[35] Network shutdowns across the country for security reasons over Ashura, Digital Rights Monitor, September 10, 2019, https://www.digitalrightsmonitor.pk/network-shutdowns-across-the-country-for-security-reasons-over-ashura/

[36] Mobile data services shutdown in parts of Punjab, KPK and Islamabad during JUI-F's 'Azadi March, Digital Rights Monitor, October 31, 2019, https://www.digitalrightsmonitor.pk/mobile-data-services-shutdown-in-parts-of-punjab-kpk-and-islamabad-during-jui-fs-azadi-march/

[37] Security v Access: The Impact of Mobile Network Shutdowns, Bytes for All, September 2015, https://bytesforall.pk/publication/network-shutdowns-pakistan

Section 4
Recommendations

In order to promote universal access in Pakistan, it is important that the government takes necessary steps to meet global standards of provision of internet on a policy level. The regulators must ensure that best practices are adopted to be incorporated in these policies. Based on the overview of the aforementioned policies from various countries, some recommendations for the rules to further internet access in Pakistan are as under:

4.1 Infrastructure

The government must work towards installing, expanding, utilising and improving the efficiency of new and existing infrastructure to expand broadband services in disconnected areas. If certain areas are not accessible by roads, then wireless technology should be introduced in the regions. In addition to this, a reliable source of electricity is needed to support the required ICT infrastructure. Solutions include using renewable energy sources to provide electricity in such areas if the traditional infrastructure is not yet in place.

4.2 Market Competition and Affordability

In order to increase affordability of broadband services, on a policy level the government needs to encourage market growth, attracting new operators to invest and to make sure there are no legal barriers to such entries. It is imperative for the government to prioritise public interest in formulating these policies to ensure that their implementation is in the best interest of the citizens and the digital economy of the country.

4.3 Digital Literacy, Local Language Content

The government needs to actively engage with civil society and the private sector for potential partnerships on digital literacy training throughout the country, with special focus on rural areas. There needs to be a thorough process of curriculum development, with input from all stakeholders, that can be used for both trainers and trainees. The government, through the Ministry of Information Technology and Telecommunication (MoITT), can also reach out to engage and promote local content creators, especially those creating content in local languages like Urdu, Punjabi, Pashto, Balochi and other regional languages in order to fuel a demand for such content, and to promote the usage of the internet in the country. This will help bring in more people online that do not possess literacy in English language that make up most of the Pakistani population.

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