Closing the digital divide; supporting vulnerable countries

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Context

It is now irrefutable that access to the internet is an essential public service. While most vulnerable countries have made progress towards increasing access to ICTs, particularly mobile service[1], the majority have no access to the Internet. The gap in Internet usage between more developed countries and the vulnerable countries is very stark. While 87 per cent of individuals in developed countries used the Internet in 2019, internet access and use in the least developed countries (LDCs) stood at just 19 per cent. In the landlocked developing countries (LLDCs), about a quarter of the population used the internet. In the small island developing states (SIDS), the figure is about 50 per cent, on average. This implies that most people in vulnerable countries, especially LDCs, do not fully benefit from the rapid expansion of digital technology and the opportunities it offers.

The coronavirus (COVID-19) crisis has exposed the disadvantages that vulnerable countries have been facing in carrying out online activities, which are being leveraged in developed and advanced developing countries. During the lockdown period, advanced economies were using online platforms to undertake many of their daily activities. Similarly, digitalization has allowed remote learning for millions of students in these countries. However, ironically, many vulnerable countries (LDCs, LLDCs and SIDS) have not been able to avail online facilities primarily due to insufficient broadband services. COVID-19 and its impact sound a clarion call for the need to promote digital access and broadband connectivity in LDCs, LLDCs and SIDS as one of the effective ways to build a resilient society in the face of new and emerging challenges.

Barriers to ICT Uptake and Use

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[1] Basic mobile telephony services have served as a platform for various applications to improve health, increase financial inclusion and advance livelihoods

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There are several barriers to greater ICT uptake and use in vulnerable countries. These include; inadequate infrastructure, high costs of access and usage, limited relevant online content and services and, limited skills[2].

- ❖ National backbone infrastructure and international Internet connectivity are critical building blocks for driving broadband demand, access and use. While vulnerable countries are making steady progress towards developing their key national Internet infrastructure, the majority of the population, especially in LDCs remain offline. This is partly a result of the high cost of rolling out services in the remote rural areas where roads are scarce, grid electricity rare and incomes low. In the recent past, while there was some Internet use from mobiles in these vulnerable countries, it was based largely on narrowband technologies. With the arrival of 3G and now 4G networks combined with smartphones, broadband mobile Internet is taking off in many of the vulnerable countries.

  However, in most vulnerable countries, successful applications are still largely narrowband. These range from text alerts with diet reminders for diabetics to mobile platforms for farmers to check agricultural prices, natural disaster monitoring and, increasing mobile money services. These services have been successful as applications operate on widely available basic handsets and they require modest user skills to operate.

- ❖ Affordability is another notable barrier. As highlighted by the report by ITU (2019) on ICT Price Trends[3], internet access is more costly in poorer countries. While entry-level fixed broadband subscription cost 1.4 per cent of GNI per capita in developed countries and about 13 per cent in developing countries, in LDCs, the cost was nearly 36 per cent, accounting for over a third of average GNI per capita. The UN Broadband Commission set a target for affordable entry-level service as 2 per cent of GNI per capita. As shown in Chapter 2 of the present report, 64 countries worldwide had achieved this target for fixed broadband. None of the LDCs meet the threshold. Only two LLDCs and six SIDS meet the 2% threshold for fixed-broadband services.

  For countries such as LDCs, analysing Internet affordability using prepaid mobile broadband basket is highly relevant. This is because the majority of Internet use is from mobile phones where prepaid predominates.

  In developed countries, the cost of a mobile-voice basket represented less than one per cent of GNI per capita. In developing countries, this ratio stood above 5 per cent,

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[2] The lack of a solid legal framework for the ICT sector on e-commerce provides additional challenges

[3] https://www.itu.int/en/ITU-D/Statistics/Documents/publications/prices2019/ITU_ICTpriceTrends_2019.pdf

whereas in LDCs it was just over 12 per cent (ITU, 2019). Although LDCs have the highest relative mobile broadband prices, that figure is less than half of what it was in 2013 (32.4%).

While affordability is a principal factor in determining take-up and use of Internet, other factors such as availability (highlighted above) and skills also influence Internet take-up.

❖ Capacity to use is a major barrier to Internet take-up and use. Inadequate skills and digital literacy are increasingly emerging as a leading barrier to Internet use in many vulnerable countries, especially LDCs. Lack of Internet skills is linked to educational attainment, in particular, upper secondary school. Although education sector policies are outside the realm of the ICT sector, there are nonetheless linkages. For example, LDCs that have adopted strategic ICT sector plans typically recognize the importance of skills and formulate requirements for collaboration between ICT and education ministries in terms of specific objectives.

How to close the digital gap

Without a doubt, once leveraged, investing in broadband can have both direct and indirect positive impacts on the economy. In order to close the digital gap, some of the actions to be taken include:

▪ It is important that supply and demand are developed in tandem. While some progress has been achieved on the supply side, the latter is lagging. Infrastructure is lagging, especially in some rural and remote areas. Furthermore, in most instances, even what exists in urban areas is not being leveraged sufficiently for social and economic development.

▪ There is need to identify rural, remote, low-population density and hard-to reach communities that need broadband coverage and that cannot be served through terrestrial connection. Governments should include satellite broadband as an available alternative and make it an integral part of any national broadband plan to bring broadband to rural and remote areas.

▪ In many SIDS, efforts need to be explored between public, private and international partners, for developing redundancy through additional cables and satellite back-up.

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Ultimately, these actions would make the Internet infrastructure e.g., submarine cables more resilient, in case of a cable cut.

Addressing transit challenges hindering LLDCs to access submarine cables is fundamental. There are generally no regional regulations that would establish fair interconnection and termination arrangements between countries, resulting in bilateral negotiations between transit operators and LLDC operators that can result in significantly high costs.

- There are several ways in which affordability can be improved, including through promoting a competitive market so that operators will compete for low-use customers through a variety of Internet plans that cater to different income levels. Ensuring a more competitive mobile Internet market can be done through regulatory actions such as infrastructure sharing, open and cost-based access to wholesale facilities, liberal spectrum policy, and promotion of IXPs[4]. Furthermore, taxes and other sector-specific charges need to be examined for their impact on affordability. Governments need to rationalize their ICT sector taxation and other fees and find the right balance between the need for revenue and the development of their digital economy[5]. In addition, making internet access available at community centres can serve as low-cost or free venues for accessing the Internet and can be used for training people.

The LLDCs continue to face high costs for broadband and more efforts are required to lower prices. Given the importance of digitalization of transit and customs procedures, investments need to be stepped up to reduce the digital divide.

- For areas that are economically unviable for commercial operators, universal service funds to subsidize the higher cost could be used. Sufficient spectrum needs to be awarded, particularly low-frequency spectrum made available by the transition to digital broadcasting, since it lowers investment costs by allowing coverage of a wider area.

- Digital literacy needs to be strengthened to enhance productive use of broadband and increase absorptive capacity. This includes actions targeting citizens, government and Micro, Small and Medium Enterprises and ensuring broadband services are in a language that is accessible to the majority of users.

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[4] Most vulnerable countries are lagging on regulations. For example, over half of SIDS are in the first or second generation of the ITU regulatory tracker, which may be a reflection of small market sizes where competition tends to be limited compounded with resource constraints. See https://www.itu.int/net4/itu-d/irt/#/about-tracker
[5] See http://unohrlls.org/custom-content/uploads/2018/02/ICT-LDCs-and-SDGs.pdf

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Digital literacy in vulnerable countries can be boosted through increased school enrolment and targeted programmes for those out of school. To ensure that women and girls are not left behind, special consideration must be given to the gender digital divide. Raising upper secondary school enrolment remains a challenge for many vulnerable countries owing to a lack of resources such as teachers and facilities; demand-side challenges, including high school fees, travel costs and the costs of other necessities, and, the need for children to work to the detriment of school attendance. However, given the strong direct link between upper secondary enrolment and Internet use and the overall socio-economic benefits it promises, school enrolment must remain a top priority in vulnerable countries. Additional resources should be made available to increase attainment of upper secondary school education. Another channel would be to leverage Technical and Vocational Education and Training (TVET) facilities, community centres and libraries, to provide formal, non-formal and informal computer learning opportunities.

In conclusion, while vulnerable countries have made notable progress in expanding telecommunications infrastructure, growing international bandwidth and mobile broadband coverage, there is still need for significant infrastructure growth. In addition, a notable gap in usage and applications exists. This is reflected in underdeveloped computer and information service sectors in many of the vulnerable countries.

Ultimately, in order to boost broadband, all three categories of access: availability, affordability and capacity to use need to be dealt with holistically.

References:

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http://unohrlls.org/custom-content/uploads/2018/07/Broadband-for-national-development-in-four-LDCs.pdf