

**What are the challenges and opportunities for expanding Internet connectivity, particularly to remote and under-served areas? What are the roles of governments and non-government actors in overcoming these challenges?**

While it is now estimated that 4.1 billion people or more than 50 per cent of the world population use the Internet and rapid growth has been recorded since WSIS, there remain manifold divides in the issues of internet access.<sup>1</sup> For instance, the proportion of individuals using the Internet in developed countries is now more than four times that in the least developed countries.<sup>1</sup> In terms of affordability, the cost of fixed and mobile broadband subscriptions exceeds 5 per cent of average gross national income per capita in various developing and the least developed countries while it is less than 2 per cent in developed countries.<sup>1</sup> The gender divide also remains a grave concern: on average, women are still 17 per cent less likely than men to use the Internet.<sup>1</sup> The quality of infrastructure is also an issue - International Internet bandwidth in developed countries is, on average, twice that in developing countries and nine times that in the least developed countries.<sup>1</sup>

Here, governments and non-government actors have multiple roles that they can potentially play. On the supply side, the expansion of ICT infrastructure is important to make the Internet more accessible, and continuous and growing investments are essential in this effort. Particularly for underserved and unserved areas, governments can turn to several mechanisms to extend ICT infrastructure: using Universal Service Funds (USFs) to ensure the flow of investment to the underserved areas, licensing competing service providers while including specific network rollout obligations in the license conditions, promoting network infrastructure sharing and mutualization among operators to reduce costs for them and applying public-private partnership concepts to projects to reduce the burden of private companies.<sup>2</sup> These measures are aiming to correct market failures in ICT infrastructure where private investments often remain suboptimal level and also to make the infrastructure commercially viable (and hence potentially lower the price) in the long run by creating the initial demand for ICT services in those areas.

On the demand side, skills and awareness are critical factors. In this regard, government programmes should be designed such that they support firms, schools and civil society organizations in providing ICT skills training, particularly in a manner that effectively reaches marginalized segments of populations such as women and low-income households.<sup>2</sup> As for awareness, government programmes should be targeted to raise awareness of marginalized populations on the benefits of being connected to the Internet. For instance, community e-centres have been used as a solution to bring to rural and poor areas the connectivity infrastructure.<sup>2</sup> Although mobile connectivity reduced the need for a centre as a place to connect but has not eliminated the need for a place to raise awareness of the benefits and solutions available through the Internet.<sup>3</sup> The rising skills and awareness will in turn fuel the demand for ICT services, making the market more attractive for commercial operators to extend their ICT infrastructure and services.

For example, while e-commerce and the overall digital economy cannot thrive without efficient, accessible and affordable Internet connectivity, investment cannot be mobilized without looking at interconnected policy areas. These relate to the overall policy framework in place to support the digital economy, the legal framework applicable to online transactions, the possibility to share

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<sup>1</sup> [A/75/62-E/2020/11](#).

<sup>2</sup> UNCTAD (forthcoming). *Technology and Innovation Report 2020: Frontier Technologies and Inequalities - Leave no one behind*. (United Nations publication, New York and Geneva).

<sup>3</sup> [E/CN.16/2020/CRP.1](#).

infrastructures and inter-operate platforms for financial services and other value added services, the availability of funding and the capacity to offer business development services geared to support the scaling up of Internet-based business models, the availability of efficient logistics services to deliver goods ordered online.

UNCTAD has identified 7 key policy areas of particular relevance to e-commerce development<sup>4</sup> as part of the eTrade for all multi-stakeholders partnership<sup>5</sup>. It has carried out eTrade Readiness Assessments in 25 Least Developed Countries<sup>6</sup> highlighting actionable recommendations. With regard to enhancing Internet connectivity, the assessments concluded that large segments of the population access the Internet primarily through smartphones, particular urban and densely populated areas. However, fixed broadband access remains limited and expensive, rural consumers and businesses often remain cut off from the benefits of e-commerce. Country-tailored recommendations echo some of those mentioned above, such as: i) Increase access to fast, reliable Internet in rural and less-populated areas through infrastructure sharing among operators to cover less-populated areas, and government incentives to attract private capital), ii) support PPPs to strengthen backbone infrastructure, iii) facilitate last-mile connectivity for homes, offices and consumers through a competitive licensing process with private operators, and iv) invest in ICT infrastructure to meet growing demand for international bandwidth by building fiber-optic networks, submarine cables and satellite links.<sup>7</sup>

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<sup>4</sup> i.e. E-commerce readiness assessment and strategy formulation, ICT infrastructure and services, Trade logistics, Payment solutions, Legal and regulatory frameworks, E-commerce skills development, and Access to financing

<sup>5</sup> <https://etradeforall.org/>

<sup>6</sup> [https://unctad.org/en/Pages/DTL/STI\\_and ICTs/ICT4D-eTrade-Readiness-Assessments.aspx](https://unctad.org/en/Pages/DTL/STI_and ICTs/ICT4D-eTrade-Readiness-Assessments.aspx)

<sup>7</sup> <https://etradeforall.org/development-solution/e-t-ready-rapid-e-trade-readiness-surveys-least-developed-countries-getting-started-e-commerce-development/?main-policy=e-commerce-assessments>