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Q1: Respondent details

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Q2: Country or Customs territory

- MULTILATERAL OR REGIONAL DEVELOPMENT BANK

Q3: Organization

Other (please specify) Regional Development Bank

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Q4: Title of case story

Digital Economy Study in Central and West Asia (Unleashing the Potential of the Internet in Central Asia, South Asia, the Caucasus and Beyond)

Q5: Case story focus

E-commerce development and efforts to bridge the "digital divide".

Q6: Case story abstract

The socioeconomic and demographical characteristics of the 10 countries under review in this report— Afghanistan, Armenia, Georgia, Kazakhstan, the Kyrgyz Republic, Pakistan, Tajikistan, Turkmenistan, and Uzbekistan—show a set of 'natural disadvantages' acting as barriers to Internet diffusion, such as low population densities in some cases and vast rural areas and hinterlands in others that can be difficult to cover by physical networks, i.e., they are 'uneconomic'. In many cases, nevertheless, the countries have experienced rapid rates of economic growth in recent years—on average around 5% per annum. The demographics also point to comparatively young populations who are likely to be the early adopters of new and mobile technologies, and who will be agents of adoption, diffusion and change.

Q7: Who provided funding?

Other (please specify) Asian Development Bank

Q8: Project/Programme type

Regional

Q9: **Your text case story**

The average penetration rate across the subregion, as of 2014, was still only 21%—significantly lower than the average globally (43%) and lower than that for the ASEAN subregion (29%), but on par with the African continent. However, once Pakistan, with a population of 185 million people—more than half the subregion's total—is excluded, average Internet penetration for the remaining nine countries increases significantly to 33%. With the exception of Georgia and Pakistan, all eight other countries are landlocked, and unable to benefit from direct submarine cable access. Moreover, the countries' mountainous and/or desert terrain adds to the difficulty in deploying telecommunications and Internet infrastructure. Landlocked countries must either use satellite access, which can be prohibitively expensive as well as being comparatively slow, or depend upon neighboring countries for terrestrial access through to submarine cable landing stations.

The low levels of connectivity mean that there is room for growth. While policy makers cannot control for geographical factors, they can still play influential roles in stimulating demand and supply through policy.

Most of the Central Asia+5 countries suffer from a lack of adequate international bandwidth—in many cases substantially so. Taking the 10 countries together as a singular subregion, it can further be said that the subregion as a whole lacks sufficient bandwidth—and this is in stark contrast to other subregions such as ASEAN which had more than enough bandwidth supply regionally, even where certain countries were struggling to access it.

The Central Asia+5 countries are rapidly 'leapfrogging' to mobile first connectivity. Mobile access has become nearly ubiquitous, while mobile broadband appears to be following closely behind. This has three important policy ramifications:
(i) Connectivity growth increasingly needs to be defined in terms of mobile connectivity. This shouldn't be to the exclusion of fixed line connectivity, but rollout and connectivity policies and programs do need to recognize that mobile is the agent of change and most people coming online now are doing so via a mobile device;
(ii) Assumptions around 'uneconomic' subscribers need to be challenged—as points of social inclusion and potential economic demand, outlying or marginalized individuals and communities should be proactively targeted for mobile connectivity; and
(iii) Internet access and national digital economy plans need to be adjusted to recognize the increasing mobile centricity of the population. In turn, applications and processes need to be designed and made natively for mobile platforms.

Q10: **Lessons learnt**

To justify the investment required to proactively promote—and in some cases rollout—mobile connectivity, measures to stimulate demand, much of which is latent, also need to be in place. Policy makers and industry need to work together on the two major determinants of demand: accessibility and affordability. In practical terms, for most citizens this means gaining access through wireless networks, and the most direct way to stimulate demand is to encourage the extension of wireless networks to unserved and under-served areas. Governments themselves have the opportunity to show leadership in the way digital services can be delivered, particularly through e-government, social protection, and inclusion (e.g., financial inclusion) programs.

Network interconnection is not only the cornerstone of the Internet but, along with interoperability, provides the necessary springboard into a digital economy. Interconnection is key to driving network effects, which give rise to economies of scale. Seamless and cost-effective interaction of different players over a network through interoperability of platforms and services gives rise to new services and innovation. All are vital components in transitioning an economy toward becoming digital.

The 10 countries under review trail much of the rest of the world in terms of broadband access and Internet take up. While most have achieved mobile penetrations on par with, or above, global averages, they still lag in broadband penetration. To support growing broadband use and data traffic, including—and perhaps particularly—over mobile and stimulate the development of online government services and business innovations, substantial fiber-based national backbones and backhaul infrastructure will be essential.

Improve ease of doing business. Encouraging investment and market participation requires transparency and, even more importantly, regulatory clarity. This extends to regulations and policies toward imports of software and hardware (such as handsets) and equipment type approval procedures. To this end, the Central Asia+5 countries should look at developing and accelerating Mutual Recognition Arrangements (MRAs) that simplify and speed up certification of imports.

As countries transition toward the development of a digital economy, capacity building has become a dual-edged knife. On the one hand, empowerment of marginalized persons and communities has long been an objective of governments and development groups in using communications networks to spread the benefits of the Internet. On the other hand, bureaucrats and policy-makers increasingly have to adapt to the cross-sectoral impacts of the Internet. Financial inclusion, home-based and remote healthcare, distance education, cross border data transfers and data privacy, and sharing economy applications are all increasingly premised on Internet access, but challenge existing regulatory frameworks. Thus, to ensure effective policy making, capacity building needs to go beyond awareness raising of consumers and to include training.

Develop statistical benchmarks. Data is the currency of the digital economy, and policy makers need to recognize that, to be able to plan and develop successfully, there needs to be both a framework and a process for the collection, accounting, and analysis of statistics and data. Moreover, just as the digital economy requires interoperability—the ability for communication applications to 'talk' to each other—so too, policy benchmarks require statistics and data to be comparable across platforms, sectors and countries—a rendering of 'apples to apples'.

Promote infrastructure sharing. Expanding broadband access is still a cost-intensive exercise. In rolling out broadband communication networks civil works such as ducting, excavation and physical infrastructure are the dominant cost items, typically representing 70% to 80% of the total cost. To counter this and to increase cost effectiveness and social welfare, governments should proactively support the sharing of scarce resources such as towers and ducts to maximize network competition; as well as the sharing of certain radio spectrum (or dynamic spectrum assignment) to utilize frequencies in bands of underused or unused spectrum.