Internet Access: A Chokepoint for Development

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In the 1980's internet connectivity meant allowing general public to communicate and share knowledge and expertise with each other instantly and where it was not possible otherwise. Take the story of Anatoly Klyosov, connecting Russia to the western world for the first time in 1982, as an example. A bio-chemist who was not allowed to leave the soviet territory for security reasons. The internet enabled him to participate in meetings with his counterparts at Harvard University, University of Stockholm and beyond.

With the evolution of the internet, the purpose of connecting to the internet has also evolved. People, now, can not only hold conversations but also get both public and private sector services at home such as healthcare, education, statistics, legal, financial, telecommunication and others. People are able to do business from home with the help of e-commerce and provide services beyond the traditional national boundaries.

The discussion here is how to enable people to connect to the internet and take advantage of all the benefits that the internet provides to them. What factors play crucial role in setting up the environment for connecting the unconnected individuals whether living in urban part of the world or rural. Surprisingly 57% of the world's population are urban unconnected. 68% of the population in Asia Pacific has no broadband connection.

At a regional IGF event in Taipei, Taiwan, the Asia Pacific regional Internet Governance Forum, where more than 500 Internet Governance practitioners and experts participated. I was given the task to present our group's understanding and analysis of the theme "Cyber Connectivity" where four sessions were held. We had sessions on *Disaster and Disabilities in terms of Crisis & Management, Overcoming challenges in APAC outreach and participation in the new Internet era, Promoting alternative access models at the last mile & Fostering MSME (Micro, Small & Medium Enterprises) participation in the digital economy*.

A number of use cases and examples of internet connectivity that has taken place in the region over the past decade were shared. Mahabir Pun from Nepal presented his efforts in connecting the remote rural villages of Himalaya, Vu Huang Lien shared his experiences of connecting the rural parts of Vietnam, Google representative shared their plans on connecting more people in India and Intel shared their experiences which they called "connecting people to their potential" where they spent US$ 1 billion globally on providing hands-on training and entrepreneurship skills.

All diverse sessions had somewhat common barriers or challenges for connectivity. While some of the challenges were not of relevance to participants from urban parts of Japan or Taiwan but the rural parts of

the same countries and many other developing and least developed countries still face most of the challenges that I will highlight briefly. While each of these challenges or needs could be and should be elaborated in-depth to verify them and study them further, I will be as concise as possible to highlight their hindrance in connecting or enabling the next ~4 billion to connect.

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1. *Government realization and support for broadband connectivity*: One of the fundamental challenges to internet growth is the governments' realization and support to the provisioning of internet access. This support could be in form of national policies and legislatures which will enable the market for either foreign investments or domestic economy. Google's representative Paul Harwood also emphasized on government support to local innovation, he said "Innovation in high speed Internet access should be a top public policy priority. Policy makers need to make sure that their countries are Internet ready".

2. *Basic Infrastructure*: In countries with rugged mountains especially with Himalayas that passes through Afghanistan, Pakistan, India, Nepal, Bhutan and China, or small Islands scattered all over the Pacific such as Vanuatu, Cook Island, Samoa, Fiji, Hawaii, Tonga etc. running fiber optic is challenging and very costly, which makes internet access almost "unaffordable" for end-users. Landlocked countries of Central Asia or Africa, in particular, face the challenge of fiber optic not available beyond the urban parts of the countries. The cost of IP transit takes a toll on the infrastructure development.

3. *Basic Literacy*: Literacy and internet have direct correlation, the increase in literacy rate allows in the increase of internet usage. A person's ability to read, write and speak in a language that computer applications usually support, is crucial in using the internet.

4. *Localization*: Some say local content will increase with large number of people getting online, however in the absence of technical possibility for people to write in their own language makes it hard for local content to grow organically. Large Operating System (OS) vendors play crucial role in the enablement of people to read and write in their local languages. There are still a large number of languages that are not supported by the leading desktop or mobile OSs. Language support in operating systems and applications is one hurdle to creating local content and language standardization is another. National localization policies should provide the standardization recommendations to Vendors to accommodate more languages.

5. *Local Content*: The lack of relevant local content, either locally produced content in a non-local language or local language content produced for that locality, is crucial for allowing citizens to use the internet for their development and livelihoods. The inability of writing text in an application because of OS not supporting the language or unavailability of broadband internet for users to upload large sized videos further deteriorates the content problem.

6. *Digital Skills*: Aside from basic literacy which allows a person to navigate the internet, digital skills were deemed necessary for making good use of the vast offerings of the internet. Digital skillset are required for using technology at home, at work and for entrepreneurial initiatives. The benefits and services of the evolving internet requires a continuous effort for awareness and education.

7. *The need for speed*: High speed internet service or broadband internet is required for citizens/consumers to participate, contribute and help evolve the development of the internet.

8. *Affordable prices*: Studies show that the next 3-4 Billion unconnected people are from the poorest

socio-economic group and this would require new business models in order to allow them to connect. Two areas where government and private sector need to focus are; affordable prices for broadband and mobile data, and affordable prices for devices.

9. *E-payment*: Electronic payment system is considered to be a barrier to e-commerce. Without an e-payment infrastructure and electronic transaction laws, local innovation and entrepreneurship in e-commerce could be a major challenge.

10. *Cyber-security*: Cyber-security incidents were considered a major threat to enabling people to come online or adopt new(er) technologies. Three recommendations were highlighted.

   a. Awareness about how end-users can protect themselves against cyber-security incidents.

   b. Reactive measures (CIRT establishment and collaboration at regional, sub-regional and global level for information exchange).

   c. Proactive measures for mitigation of cyber incidents.

11. *Social and organizational cultures*: Change could be identified as one of the big barriers for individuals and organizations to adopt new technologies. Technology applications are built-in with biases that limit people from adopting and using it. At the organization level, there has been internal digital divide within an organization or among the organizations. Take the example of e-government; one government entity will be better equipped to deliver public services through internet while others will be finding it difficult to communicate via email within their organizations.

12. *Legal framework*: The legal framework is one of the environment factors that facilitates the digital developments. Privacy and data protection laws, cyber-security laws, electronic payment & transaction laws etc. enable individuals' online protection as well as allows digital economy development through foreign or local investment. Large corporations don't make entries into economies that don't provide them legal protection.

13. *Regulatory framework*: A strong regulatory framework mitigates the negative implications of the internet on business as well as on society in general, by addressing the challenges faced by women and children online for example. Strong and positive regulation provides positive image of the use of the internet especially in cultures that associate negative aspects of the internet such as hacking, financial and social crimes, with the use of the internet. It's also important to consider that regulators at the national levels need the necessary skillset to design, develop and formalize regulatory policies.

One of the fundamental difference between local initiatives and foreign or corporate investments for connectivity was that corporate initiatives were focused on wiring more people. Whereas local initiatives had organic approach and their home-grown efforts were addressing the needs of the local communities. Their approaches were providing a package of connectivity and application. Providing the understanding of the variety of benefits that a home user or an entrepreneur can get from connecting to the internet paves the next few steps for them. This enablement of the user should be fundamental to the connection.

By **[Said Zazai](#)**. **Visit the blog maintained by Said Zazai [here](#).**

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