

# AFFORDABLE BROADBAND OF ADEQUATE QUALITY THROUGHOUT NEPAL

## POLICY BRIEF

Broadband literally signifies high-speed internet connection. Its value chain involves Network/connectivity, services, devices, application and contents. Broadband should reach to critical mass with affordability to ensure positive network effects, access and optimal utilization.

All sector specific authorities should collaborate for the development of broadband through promotion of key digital life (e-governance, e-health and e-education) and digital agendas like accessibility, affordability, diffusion, infrastructural synergies, institutional and regulatory readiness, electronic national ID, online payment infrastructures, cyber security provisions, enhancing ICT skills/literacy, locally relevant contents, effective co-operation and collaboration among all stakeholders.

Per capital income of the nation, tariff of broadband services, regulatory cost for service providers like royalty fee, renewal fee, service commission charge, other taxes etc. are some of the factors/elements which influence the affordability of broadband in Nepal. Similarly, location of hosting sites, CDN cache, fixed internet line, coordinated efforts in managing, maintenance and layout of basic infrastructure are some elements that contributes to the quality of broadband services.

### SUMMARY OF FINDINGS/ RECOMMENDATIONS

- **Regulatory environment** should be enabling as well as predictable, licensing/approval requirement for innovative/digital services supporting usage of broadband should be liberalized/quicker, ensure optimal allocation of radio frequency by NTA, enforce proper disclosure to ensure consumers have the pricing and performance information and QoS requirement for broadband service providers.
- **Telecommunication taxes or charges** are unreasonably high in Nepal. So, to ensure affordability of broadband; concerned regulator (NTA), Ministry (MOIC) and Nepal government as a whole should make effort to lower them. Hence, taxes, service commission, renewal and royalty fees levied in telecommunication service or its operations or broadband should be reduced significantly as well as arrangement to provide tax incentives/subsidy to expand broadband service to rural and geographically adverse locations should be prioritized to make broadband affordable and accessible.
- **Efforts and activities supporting development of digital skills**, software, terminal devices, user capacities and innovation to stimulate demand for broadband services should be in place.
- **Reach of broadband network and services to be expanded to rural and remote areas** by including broadband in universal service/access definition through effective mobilization of Rural Telecommunications Development Fund.
- Mobilize Rural Telecommunications Development Fund (RTDF) to expand access to broadband via development of national backbone networks.
- Infrastructure sharing, collaboration and PPP initiatives for win-win outcome should be focused.

### THE RESEARCH

#### I CAUSES FOR LOW BROADBAND ADOPTION IN SOUTH ASIA

As per the GSMA research (2016), the main reason for low broadband adoption in South Asia are lack of digital skills which accounts for 24 percent, affordability that accounts for 25 percent, lack of awareness and locally relevant content that accounts for 72 percent as illustrated in the figure 1:



Figure 1. Reasons for low broadband adoption in South Asia

## II AFFORDABILITY MATRIX OF BROADBAND IN NEPAL

As per the table below, GNI per capita of Nepal is 730 and typical fixed broadband tariff is 8.40. ITU guidelines suggest 5% of GNI can be considered as the affordable tariff for broadband. As per the table no.1, Nepal stands at 10<sup>th</sup> position in affordability ranking signifying broadband service is relatively higher among the countries with which comparative assessment is made.

**Table 1: Comparative Assessment of Affordability of Broadband**

Country	GNI per capita	Typical FBB Tariff	Affordability (monthly ppp per capita GDP/FBB tariff)	Average download speeds (Mbps)	Internet Penetration	Affordability Ranking
Malaysia	10,570	19.00	2%	7.0	71%	1
Thailand	5,620	18.90	4%	7.1	39%	2
India	1,590	8.00	6%	2.7	26%	3
Vietnam	1,980	11.00	7%	5.9	53%	4
Philippines	3,540	21.38	7%	3.7	41%	5
Indonesia	3,440	22.00	8%	4.8	22%	6
Laos	1,730	17.00	12%	2.1	18%	7
Bangladesh	1,190	13.00	13%	1.6	14%	8
Cambodia	1,070	12.00	13%	3.0	19%	9
Nepal	730	8.40	14%	1.2	18%	10
Myanmar	1,280	32.40	30%	1.0	22%	11

Source: PowerPoint presentation in Nepal Broadband Forum 2017 by Dr. C.W Cheung

## III QUALITY DIMENSIONS FOR BROADBAND

Broadband should be always on high capacity connectivity, ensuring high speed internet connection. Following are some of the aspects that helps to enhance the quality of broadband services or its implementation:

- Promote hosting of local sites/contents within country instead of being hosted in other countries just to reduce cost by addressing cost differences. It helps to reduce latency and expedites access to site.
- Analyzing traffic usage trend of different sites/contents accessed in Nepal, we need to have CDN (Content Delivery Network) cache for frequently used sites/contents in Nepal which speeds up access to data and reduces demand on bandwidth for faster accessibility with less cost and quality usage of broadband capacity. For example: You tube streaming is much faster in Nepal than any other sites/contents as Google has placed cache server in Nepal.

- Fixed internet line like FTTH carries internet band-width in optical fibre and it can provide better network strength than is with wireless networks.
- There should be coordinated efforts in managing, maintenance and layout of basic infrastructure like road service, water service, electricity poll, cable poll while planning for broadband infrastructure.
- Nepal is landlocked country. We do have a two path to connect Internet. If we can connect to it, we will be nearest to internet server such that we shall be faster and quality accessible to the Internet content. For ex. Bringing internet from China.
- Trying to put local traffic local by ensuring proper interconnection among different ISP's/telcos.

## SOURCES

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