VIL/PB/RCA/2023/ 038
December 29, 2023

Advisor (CA&IT)
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg (Old Minto Road),
New Delhi – 110002

Kind Attn: Shri Anand Kumar Singh

Subject: Comments on the TRAI's Consultation Paper on "Digital Inclusion in the Era of Emerging Technologies" dated September 14, 2023

Dear Sir,

This is in reference to the TRAI's Consultation Paper on "Digital Inclusion in the Era of Emerging Technologies" dated September 14, 2023.

In this regard, kindly find enclosed herewith comments from Vodafone Idea Limited on the above-said consultation paper.

We hope our comments will merit Authority's kind consideration please.

Thanking you,

Yours sincerely,

For **Vodafone Idea Limited**

P. Balaji
Chief Regulatory & Corporate Affairs Officer

Enclosed: As stated above

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VIL Comments to the TRAI Consultation Paper on "Digital Inclusion in the Era of Emerging Technologies"

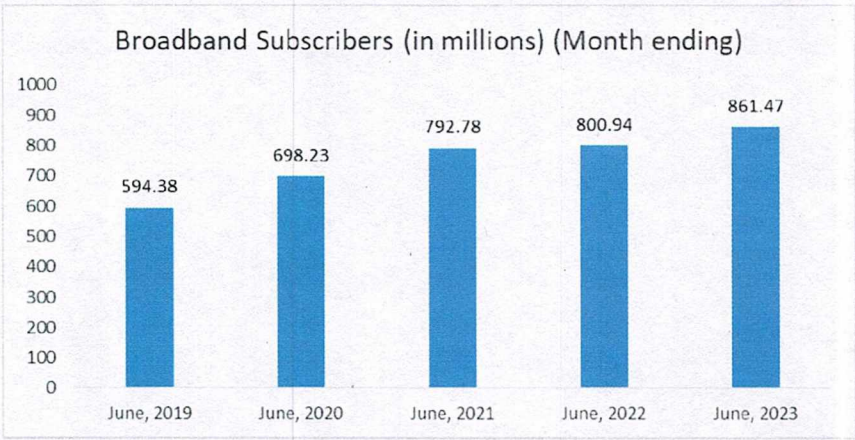
At the outset, we are thankful to the Authority for giving us this opportunity to provide our comments to the TRAI Consultation Paper on "Digital Inclusion in the Era of Emerging Technologies" dated September 14, 2023.

Preface:

1. The importance of telecom networks in Indian society has increased manifold. The telecom networks are propelling digital wave in the society, leading to huge push to new line of businesses, jobs and increase in economy along with propelling start-ups and unicorns. This could only be experienced by the massive network infrastructure, built by the TSPs, as it is connecting more people to the internet than ever before. Such infrastructure will continue to be the primary gateway to the internet and plays a pivotal role in achieving this objective of Digital Inclusion.

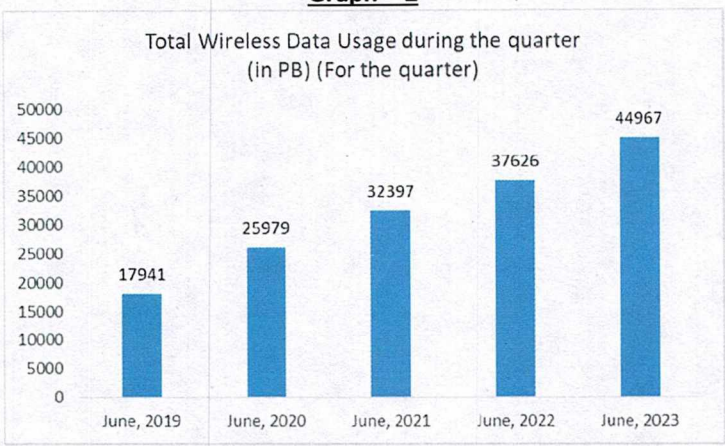
2. Further, the network connectivity supported by this infrastructure has played a crucial role in combating COVID-19 pandemic by enabling quick and easy accessibility across all the support systems of the country, further resulting in achieving the objective of Digital Inclusion in the country. The same is depicted through the remarkable increase of almost 100 million subscribers, using broadband, in the month of June, 2021 (almost year after lockdown), kindly refer Graph - 1 given below for reference.

Graph – 1

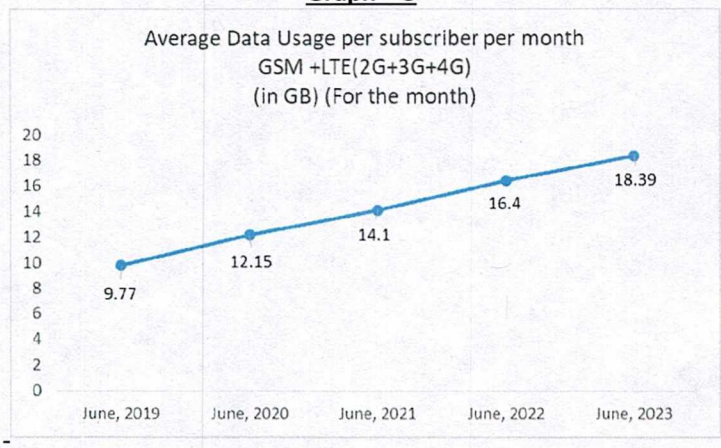


3. In addition to the above, total wireless data usage, and average data usage per subscriber (Graph -2 and Graph-3 below) also has been increasing in the past few years which clearly demonstrates the resilience of digital telecom networks.

Graph – 2

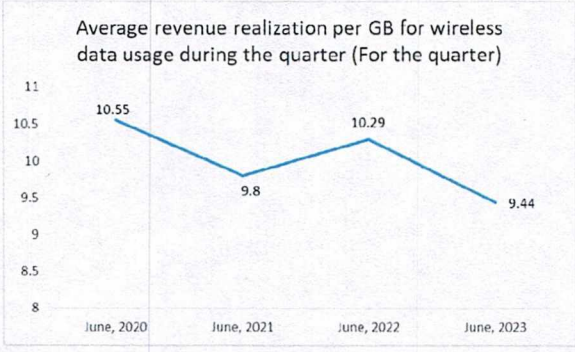


Graph – 3



4. However, even after such great increase in the users and the usage which is directly driving the Digital Inclusion, the Graph-4 below demonstrate affordability of data over telecom networks.

Graph – 4



5. **The above clearly shows that the telecom operators are providing digital connectivity with affordable prices to the citizens of the country. However, there are certain areas which have to be addressed through policy measures for bridging digital divide and supporting digital**

inclusion. Details of these areas and suggestive policy measures are provided in below given question-wise comments.

Kindly find below our question-wise comments to select questions for Authority's kind consideration.

Question-wise Comments

Q1. What should be the definition of Digital Inclusion? What all parameters should it include to highlight disparities across different segments of society to have a realistic assessment from a policy perspective? Please provide your answer with suitable justification.

VIL Comments to Q.1

1. India being a diverse market, has multiple factors leading to unconnected and under-connected population in the country. Certain section of society also has specific needs associated to differences of age, gender, ability, socioeconomic status and geography, which poses barriers to access and use of digital information and services. While many steps are being taken to bridge the digital divide, intensifying efforts as well as focus on the fundamental causes leading to barriers, will be beneficial.

2. For Digital inclusion definition to suit Indian context, predominant parameters should be identified and acknowledged, which can appropriately highlight disparities across different segments of society. Suggestive parameters are given as follows:

    a. **Variance in Geography:** Network coverage is critical for access to the mobile internet. The economic case for mobile operators to expand networks into remote, rural areas is challenging due to the cost of maintaining and powering cell towers in remote, off-grid locations, combined with lower revenues expected from thinly spread, low income populations.

    b. **Digital literacy:** In a developing country like India, literacy could be a major parameter across rural areas and marginalized groups, which can cause a major challenge in accessing content. Combined with an overall lack of awareness about the data and its potential uses and benefits, this creates a significant barrier for mobile internet adoption, even where coverage and affordability issues have been addressed.

    c. **Gender:** Studies confirm that fewer women than men own a mobile phone in low-to middle-income countries. Many factors like cost, awareness, illiteracy, culture and religion contribute to this variance, and disproportionately affect digital inclusion.

    d. **Variance in Age-group of end users:** Age group of end users also play a role in digital literacy and consumption of mobile internet for availing services.

    e. **Variance in Network Infrastructure:** The network infrastructure is a vital part of connectivity and setting up this network in every corner of the country involves substantial costs. The TSPs

have to carefully evaluate whether these returns will exceed the accompanying costs or whether building up such network will go along with economic losses. Particularly into remote or geographically challenging areas, deployment of such infrastructure is a key decision due to scarce population in such areas.

f. **Ownership of Smartphone:** The primary mean to access the internet and to become digitally included is heavily dependent on digital devices (smartphones). However, for low-income groups, cost of such devices is a challenge. A smartphone connected to internet is essential for civic & cultural participation in today's digital world.

3. **Considering these parameters, we submit that the Authority should formulate objectives which are to be achieved to ensure Digital inclusion. We recommend following objectives should be taken up for implementation:**

   a. **Minimizing variance in the above-said parameters, across sections of society.**

   b. **All TSPs are able to provide Digital connectivity through infrastructure built with public money (like USOF), at a prescribed commercial between TSPs.**

Q.2 Do you agree that the indices mentioned above and developed by various international organisations for assessment adequately represent the status of Digital Inclusion in the country? What other indices and factors need to be considered to identify the gaps in Digital Inclusion in the country?

VIL Comments to Q.2

1. There is merit in all the global indices mentioned in the TRAI's consultation paper like GSMA's Mobile Connectivity Index however, these indices would have to be aligned to Indian context.

2. Certain factors which need to be additionally considered in such indices for Indian context are given below:

   a. **<u>Digital Affordability:</u>**

      i. **Levies on TSPs:** The Indian telecom sector is amongst the most competitive in the world and has one of the lowest tariffs globally. The telecom sector is also exposed to huge levies like Licensee fee including USO levy, GST etc., which increases the cost for the operators. These levies wipe away considerable amount of revenue earned by the TSPs. Further, the sector is also laden with dual levies, wherein charges paid by an operator for inputs services, is also considered a revenue for the purposes of license fees etc.

      ii. **Spectrum prices:** Telecom sector is also burdened with huge spectrum prices, which include auction price of access spectrum as well as % of AGR based pricing for backhaul

spectrum. These prices are one of the highest globally, when compared with many matured markets.

b. **Digital Infrastructure:**

i. **Right of Way:** There is a huge dependency on ROW to deploy the network infrastructure in the country. RoW costs vary hugely across different states/UTs and within different areas of states. This is one such factor which greatly influences the cost of network deployment and should be one of the primary indicator.

3. All the above mentioned factors play a very important role in TSPs ability to provide quality and affordable connectivity.

4. We strongly feel that rationalization of these aspects would certainly go a long way, in helping operators' further support digital inclusion.

Q.4 Apart from efforts made by the Government through various Projects for provisioning of broadband connectivity under NDCP 2018 and NBM 2019 and other schemes, what additional measures are required to fulfil the objectives of universal connectivity in India?

And

Q.5 Whether connecting GPs/villages/village institutions through BharatNet has helped in improving digital connectivity in an effective manner? If not, what additional measures are required to ensure universal connectivity across all GPs/villages/village institutions in an efficient and time bound manner?

And

Q.6 Will the schemes supported by USOF other than BharatNet suffice the need of universal connectivity in the country? If not, what additional measures or changes in strategy are required to ensure universal connectivity to all unconnected areas? Please provide your answer with suitable justification.

And

Q.9 What measures are required for adopting a collaborative approach to utilise Digital Connectivity Infrastructure created by the service providers or through government-aided schemes to extend connectivity to the people in unserved areas? Please provide your answer with suitable justification.

VIL Comments to Q.4, Q.5, Q.6 and Q.9

1. The Government has made efforts through various Projects for provisioning of broadband connectivity under NDCP 2018 and NBM 2019 and other schemes however, the objective of universal connectivity in India is yet to be achieved.

2. In our view, apart from the efforts made by the Government, additional measures are required to build robust and constantly evolving infrastructure to fulfil the objective of universal connectivity in India.

3. The Universal Service Obligation Fund (USOF) is met by resources raised through a 'Universal Access Levy (UAL)', which is a percentage of the revenue earned by all the operators under various licenses. However, presently the term "Universal" is being addressed through a narrow and short-term goal of extending coverage of a single TSP. Public interest outcomes would be better achieved if the projects funded by Public money (e.g. USOF) are made mandatorily accessible to all the contributors of the fund.

4. This present arrangement whereby the project serves the purposes of only one TSP, cannot be called "universal" as it creates assets only for a single TSP more than providing connectivity to the public hence, it is not in interest of general public.

5. The funding provided to only one TSP doesn't leads to universal service, instead, it gives undue advantage to a TSP with a good financial health and allows them to build network and assets on their balance sheets giving coverage to their own subscribers instead of general public, basis public money or special dispensation from Government.

6. **Therefore, it is most important to firstly prescribe a definition of 'Universal Connectivity'. We recommend that Universal Connectivity should be defined as Digital connectivity from all TSPs providing wireless access service, serving public at large.**

7. In this regard, we would like to draw your attention towards shortcomings of the present arrangements, given as follows:

   a. **Establishing connectivity economically unviable:** Setting up network in every corner of the country involves substantial costs. It is hence a necessity to carefully evaluate whether these returns will exceed the accompanying costs or whether building up such network will go along with economic losses.

   b. **Universal Service Obligation should not mean service from one TSP:** The resources for meeting the Universal Service Obligation (USO) are raised through a 'Universal Access Levy (UAL)', which is a percentage of the revenue earned by all the operators under various licenses. Hence, it is unfair to extend this fund to a single TSP.

   c. **Present tender conditions leads to deep pocketed player winning the bid:** Considering the tender structure and bidding, usually the deep pocketed player will be able to bid on lowest prices (USOF support).

   d. **Public Money should be used for Public good and not one TSP good:** This arrangement creates assets only for a single TSP more than providing connectivity to the public, hence, not in interest of general public. The funding provided to only one TSP, gives undue advantage to a TSP with a good financial health and allows them to build network and assets on their

balance sheets giving coverage to their own subscribers instead of general public, basis public money or special dispensation from Government.

e. **Monopolistic service from one TSP - Not good for Public:** As it is clear that it is economically unviable to create infrastructure/connectivity in areas where Government funding is being extended, coupled by the fact that the funding is being given to only one TSP in a particular area, will lead to connectivity from only one TSP in such area, as other TSPs will never be able to provide coverage/connectivity to that area. This will lead to consumers getting service option from one TSP only.

f. **Creates competitive arbitrage between deep pocketed large players and comparative weaker players – that too based on Government funding:** Such distribution of funds on the basis of reasonable bidding, widens the competitive gap between the financially strong TSP and the weaker one. This is because the USP creates its connectivity island in such areas adding onto the subscribers and revenue, on the strength of public funds.

g. **USO agreement allows sharing but, no TSP is willing to share:** Even though the scope of Agreement of USOF allows the USP to share infrastructure with other Licensed Service Providers basis compliance of DoT, but no USP has been found keen to practice this. This is because any USP would consider such network (setup based on Government/public funds) to be giving them competitive advantage.

8. **Considering the above, we urge the Authority to recommend following:**

   a. **Prescribe a definition of 'Universal Connectivity'. We recommend that Universal Connectivity should be defined as Digital connectivity from all TSPs providing wireless access service, serving public at large.**

   b. **Projects where public money is provided as grant/subsidy or any other form, should enable connectivity for all TSPs, through mandatory sharing and roaming on a prescribed commercial basis.**

9. Further, in certain rural areas where coverage is available, it does not lead to meaningful connectivity for the consumers, due to inadequate backhaul.

10. In this regard, we submit that **additional measures are required** to ensure Universal Connectivity to unserved as well as under-served GPs/villages/village institutions in an efficient and time bound manner. Some of these additional measures are given as follows:

    a. **Abolishing USOF and Reducing License fee from 3% to 1%:** Telecom operators are burdened with one of the highest levies globally. Telecom licensees pay license fee of 3% and USO levy of 5%. While USO fund presently has a large corpus which is continuing to remain unutilized. Further, 3% of license fee is also huge considering the access spectrum is to be bought through auction. This leads to a significant outflow from the revenues of TSPs, which otherwise would get spent in enhancing digital and meaningful connectivity in the unserved and under-served areas. **Therefore, we request TRAI to recommend abolishing levy of USO fund contribution for at least 5 years and license fee be brought down from 3% to 1%.**

b. **Utilize existing USOF funds for tower fiberization of under-covered and uncovered areas:** USOF should also be provided for fiberization of towers in under-served rural areas as well (let's say where the towers have tenancy of at least two TSPs). This will help provide good quality 4G and 5G services and uplift digitally deprived areas and reduce digital disparities.

c. **Handset subsidy:** One of the inverse reason for inadequate digital connectivity is often skewed ratio of smartphones devices in certain geographies. The USO fund should also be used to provide subsidy to public through their TSP, to migrate their feature-phone devices to smartphone devices. Kindly also refer to our comments to Q13, Q14 and Q15.

d. **Incentivize Collaboration:** To incentivize sharing of infrastructure and network elements, no LF/SUC should be levied on payments made for any telecom input resource by one TSP to another TSP. This will remove double taxation in the telecom levies, which is also envisaged in NDCP, 2018 and encourage TSPs towards sharing of infrastructure and network elements.

11. Implementation of measures given at point no. 9 and 10 above, would enable a truly meaningful and Universal Connectivity, which will play a crucial role in Digital Inclusion.

Q.7 What steps should be taken to encourage service providers for effective utilisation of the BharatNet infrastructure in provisioning of connectivity to Institutions/households/ individuals?

VIL Comments to Q7

1. The Government has launched mission Antyodaya thereby aiming to bring rural or poorest of poor public to get the same services as would be with the public in urban/semi-urban areas. To achieve Antyodaya in Telecom, there is a need to encourage and incentivize service providers for effective utilization of the BharatNet infrastructure in provisioning of connectivity to Institutions/households/ individuals. This can be achieved by fiberization of towers in rural areas in the following manner.

2. **Accessibility to BBNL fibre on commercial grade basis:** BBNL has already laid out vast route length of fibre across the country, which is available in the under-covered and uncovered rural/semi-urban areas as well. This fibre should be made available to the TSPs but, on a commercial grade SLA basis i.e. with >99.9% uptime along with penalty clauses. Also, the fibre has to be made available on market pricing applicable to such rural/semi-urban areas. Accordingly, relevant provisions of Policies/guidelines/Master service agreements/Acts should be amended.

Q.8 Is there any need to take steps to make satellite internet a viable option for providing connectivity to remote/ inaccessible areas? If yes, please provide your answer with suitable justification. If not, what are the other alternatives for provision of connectivity in these areas?

VIL Comments to Q8

1. It is too early to discuss the viability of satellite internet services for providing connectivity to remote/ inaccessible areas since the services are still under inception and not yet launched. Further, availability of devices which supports satellite is a challenge at this stage.

2. The same can be reviewed after few years, once substantial rollout of services has been achieved along with device ecosystem availability. It is of utmost importance that efforts in terms of incentives/subsidy and policy push should be made to reduce the bottlenecks being experienced in case of terrestrial networks and its users.

Q.10 Please suggest the best practices being followed internationally that can be adopted in the country to provide universal connectivity to all individuals, households, and communities?

VIL Comments to Q.10

1. Globally, many countries had already realized the concern of expanding services of multiple telecom service providers to provide Universal Connectivity to all individuals, households, and communities. Their major efforts lie in resolving the issue of poor connectivity in uneconomical geographies like rural areas, with support from Government funds.

2. One of the major objective in many of these schemes is to achieve Universal Connectivity i.e. service from multiple telecom service providers. The public funds are provided to create network infrastructure which can be availed by all telecom service provider, enabling connectivity to all consumers and public at large. They do not aim to create connectivity islands i.e. connectivity only for subscribers of a particular TSPs. This is well established across many countries as being focused on public good as well as benefit to the economy, resulting in meeting the objective of Digital Inclusion.

3. Some of the global examples who have implemented schemes for universal connectivity are given as follows:

   a. **United Kingdom[1]:**

      i. The UK Government and the other TSPs are working to put together a joint solution to issues around coverage in rural areas. This model has the potential to be implemented in other countries as everyone benefits from the same as below:
         - Government can achieve their policy goals in terms of coverage at a reasonable cost.
         - TSPs can reasonably deliver network expansion without onerous and distortive coverage obligations.
         - Consumers get better services by more Mobile Network Operators (MNO) in more places.

      ii. The UK Government realized two main concerns regarding coverage:

[1] https://www.ofcom.org.uk/__data/assets/pdf_file/0027/174645/letter-nicky-morgan-to-sharon-white-25-oct-19.pdf

- Significant parts of the country had coverage by some but not all MNOs (called as partial not-spots)
- Significant part of the country didn't have any coverage at all (total not-spots).

iii. To address the issue, it was proposed to build a Shared Rural network (SRN) over a period of 20 years to:
- Address partial not-spots (i.e. places where only some operators are present), TSPs committed themselves to upgrade their existing rural sites so that they can host all four TSPs.
- Address total not-spots by jointly building new sites.

iv. This collaboration of TSPs could be possible as the Government planned that if only one TSP won the coverage obligation, then it would impose national roaming on it. It was expected that this scheme will provide high-quality 4G coverage to 95% of the country by 2025 (each MNO will reach at least 92% by this date – expectation is that 88% coverage by each MNO should be achieved through increased sharing on existing sites).

b. **Germany[2]:** The Government has approved a €1.1bn plan to fund building of around 5,000 sites in the country, with the aim to increase coverage to 99.95% of households and 97.5% of the landmass.

c. **Australia:**

i. The Australian Government has also implemented similar schemes by allocating a substantial fund to boost mobile coverage through multiple carriers rather than restricting it to single entity. It has been done by them to further increase digital inclusion, provide social and economic possibilities, and enhance public safety thereby serving the public interest. Kindly refer extract from the website[3] of Australian Government (Department of Infrastructure, Transport, Regional Development, Communications and the Arts) as below:

Better Connectivity Plan for Regional and Rural Australia
The Better Connectivity Plan is a key initiative and part of the Australian Government's telecommunications agenda and is providing more than $1.1 billion to rural and regional communities. This commitment forms part of the Government's investment of more than $2.2 billion in regional communications.

The Plan includes $656 million provided in the 2022-23 October Budget over five years to improve mobile and broadband connectivity and resilience in rural and regional Australia. Initial funding allocations under the Plan include:

- *$400 million to **boost multi-carrier mobile coverage** on regional roads, improve mobile coverage in under-served regional and remote communities, and increase the resilience of communications services and public safety communications facilities;*

[2] https://www.bundesregierung.de/breg-de/service/archiv/mobilfunkstrategie-1693528
[3] https://www.infrastructure.gov.au/media-communications-arts/better-connectivity-plan-regional-and-rural-australia

- *$200 million for two additional rounds of the Regional Connectivity Program to invest in place-based digital connectivity infrastructure projects in regional communities;*
- *$30 million for on-farm connectivity, so farmers can take advantage of connected machinery and sensor technology;*
- *$20 million to conduct an independent audit of mobile coverage to better identify black spots and guide investment priorities; and*
- *$6 million to boost funding for the Regional Tech Hub, which supports regional consumers to access advice and support on digital connectivity options.*

4. **Therefore, we urge TRAI to also recommend that:**

   a. **Prescribe a definition of 'Universal Connectivity'. We recommend that Universal Connectivity should be defined as Digital connectivity from all TSPs providing wireless access service, serving public at large.**

   b. **The projects completed or in process, which involve grant of public funds (USO fund), partially or fully funding the project, should create Universal Connectivity for all telecom service providers, through infrastructure sharing and mandatory roaming.**

Q.11 Whether various measures taken by the Government such as focusing on local manufacturing are sufficient to bring down the prices of smartphones in India? If not, what additional measures are required to be taken to make it more affordable? Please explain your answer with suitable justification.

VIL Comments to Q. no. 11

1. As mentioned in the instant Consultation Paper also, Government has shown clear focus on promoting local manufacturing of electronic equipment and digital devices.

2. Government has formulated a National Policy on Electronics (NPE), 2019 and aims to position India as a global hub for Electronics System Design and Manufacturing (ESDM) by encouraging and driving capabilities in the country for developing core components, including chipsets, and creating an enabling environment for the industry to compete globally.

3. Government has further introduced schemes e.g. **PLI scheme for Large Scale Electronics Manufacturing** notified vide Gazette Notification No.CG-DL-E-01042020-218990 **dated April 01, 2020**. This scheme offers a production linked incentive to boost domestic manufacturing and attract large investments in mobile phone manufacturing and specified electronic components, including Assembly, Testing, Marking and Packaging (ATMP) units. The Scheme aims to tremendously boosting the electronics manufacturing landscape and establish India at the global level in electronics sector. The Scheme is open for applications for a period of 4 months initially which may be extended. Under this scheme, application of 16 companies were approved[4].

[4] https://www.meity.gov.in/writereaddata/files/List%20of%20Companies%20under%20PLI%20LSEM.pdf

4. **Second Round of the Production Linked Incentive Scheme (PLI) for Large Scale Electronics Manufacturing:** After the success of the first round of PLI scheme in attracting investments in mobile phone and electronic component manufacturing, the proposal for accepting applications under Second Round of the PLI Scheme was approved by the Government. The target segment for the purpose of this round shall be Specified Electronic Components. Second Round of PLI Scheme shall be applicable from 01.04.2021. Under this scheme, application of 16 companies were approved[5].

5. The production-linked incentive (PLI) scheme for smartphone manufacturing has resulted in local value addition of 20 %[6] within a span of two-three years

6. **Handset Subsidy:** Besides above, there is still lot to be done in terms of helping migrate feature phone users to smartphones, especially those belonging to low income group category. There should be one additional scheme which should provide handset subsidy to feature phone users through their TSPs, to migrate to smartphones. This should be funded through USO fund. Kindly also refer to our comments to Q13, Q14 and Q15.

Q.13 Whether schemes undertaken by various states for distribution of smartphones and laptops to students and support for the connectivity are effective mechanisms to increase Digital Affordability in the country? If yes, what are the measurable parameters to assess the effectiveness of such schemes? If not, what could be the alternative policy interventions/ schemes with measurable outcomes that can support affordability of the devices? Please support your answers with suitable information.

And

Q.14 Is there any need for policy interventions to increase Digital Affordability (digital devices and digital connectivity) among specific sections of society, for example, women, students, farmers, fishermen, economically weak, etc.? Please respond with suitable justification.

And

Q.15 What measures should be taken to make digital devices and digital connectivity affordable to the citizens for empowering them to maximize the benefits of an inclusive digital society? Please provide your answer with best practices being followed internationally in this regard.

VIL Comments to Q.13, Q.14 and Q15

1. Various State Governments introduce schemes from time to time, for distribution of smartphones and laptops to different sections of society. These schemes are introduced with defined objectives, linked to socio-economic goals identified by competent authorities and thus, would cater to a definite section of society.

[5] https://www.meity.gov.in/writereaddata/files/List%20of%20Companies%20under%20PLI%20LSEM.pdf
[6] https://www.business-standard.com/industry/news/pli-scheme-for-mobile-production-led-to-20-value-addition-says-govt-123061301263_1.html

2. The measurable parameters to check the effectiveness of such schemes would differ from scheme to scheme, depending upon the socio-economic goals it is trying to address. Further, the effectiveness of such schemes would entail a detailed study.

3. **Alternative Policy Interventions/Schemes:**

   a. In addition to existing schemes, there is a need to have a central and pan-India based scheme which can cater to the consumers who are in bottom of the pyramid and using feature phones.

   b. These consumers having these feature phones are generally using older technology i.e. 2G and are not able to access the new generation technology i.e. 4G, despite availability of connectivity.

   c. There is issue in upgrading of phones from feature phones to smartphones due to affordability and starting price point of smartphones. Also, large number of users may not have enough money to buy a smartphone.

   d. This leads to the users continuing on older technology and hence, not using digital services and most likely ending up being not updated on digital technologies and services. This is the major factor which causes digital divide.

   e. There has to be a concerted effort and push required with incentives and subsidy from Government, to address it.

   f. One of the alternative would be that the Government provide funds as handset subsidy to consumers at large, through their concerned TSP, for giving up feature phones and purchasing subsided smartphones. This can help such consumers to start digital journey thereby, bridging the digital divide. If such stimulants are not taken timely, the digital divide will keep on increasing with advancement in technologies.

4. Transitioning of users from feature phone to smartphone will increase the ability of the rural masses to participate in the market economy, directly leading to better earnings and also bridging digital divide. Further, it will also expand ecosystem of other sectors and players having digital services which rely on consumers using mobile broadband services over smartphones.

5. This scheme can be funded through the existing corpus lying in USOF and would also meet the objective of Universal connectivity for the low income consumers.

6. **We urge the TRAI to recommend Government for coming out with a handset subsidy scheme through concerned TSP, to support poor people for upgrading their handsets from feature phones to smartphones.**

Q.26 What efforts are required to provide reliable digital connectivity to MSMEs at affordable costs to empower them through new technologies for effective participation in the digital economic activities?

And

Q.27 Whether the schemes of fibre connectivity in villages and rural areas such as BharatNet can be leveraged to provide the digital connectivity to MSMEs at affordable costs? If yes, please suggest the steps to be taken to extend such connectivity?

VIL Comments to Q.26 and 27

1. MSMEs are backbone of the Indian economy. By making MSMEs stronger digitally, it would be easier for the country to become 5 trillion dollar economy.

2. At present reliable digital connectivity and technological solutions are provided to MSMEs at affordable costs, thereby helping empower them for effective participation in the digital economic activities.

3. To help MSMEs in the rural areas, it would be important to have meaningful connectivity in the said rural areas. While many areas would already have connectivity of new generation technologies however, backhaul remains a challenge which leads to sub-optimal experience of access services.

4. Steps should be taken to support effective backhaul in the rural areas which can support huge bandwidth required for next generation technologies like 4G and 5G.

5. **For this, we urge the TRAI to recommend that:**

   a. **Definition of 'Universal Connectivity' should be prescribed. We recommend that Universal Connectivity should be defined as Digital connectivity from all TSPs providing wireless access service, serving public at large.**

   b. **USO funded projects should mandate infrastructure sharing and roaming on a prescribed commercial basis.**

   c. **USOF should provide support for fiberization of towers.**

   d. **Availability of backhaul spectrum at reasonable and rationalized prices.**

   e. **SLA based and carrier grade connectivity from BharatNet.**

   Kindly refer to our comments given above to Q4, Q5, Q6 and Q9, for further details on above suggestions.

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