Webinar Date: Thursday, October 6th, 2021 at 11:30 am PST
Webinar Moderator: Moderator – Board Member TM Islamabad
Webinar Speakers: -
Omar Malik – Member Telecom: Ministry of Information Technology and Telecom, Government of Pakistan
Aslam Hayat- ICT Expert.

Shan ul Haq- Head of Public Policy, Telenor Pakistan Pvt Ltd.

Amer Shahzad- DG Licensing, PTA, Government of Pakistan

Session Duration: 45 minutes to 1 hour

Sessions Format: It will be a talk show where questions will be fielded by the moderator to the participants.

TELECOM SPECTRUM:

A FUEL FOR LONG TERM ECONOMIC GROWTH

WEBINAR BRIEF

Background:

A study by ITU in 2018 states that both fixed and mobile broadband penetration in countries has a direct impact on GDP growth. In middle income countries an increase of 10 per cent in mobile broadband penetration yields an increase in 1.8 per cent in GDP whereas 10 per cent increase in fixed broadband penetration yields 0.5 per cent increase in GDP growth. These numbers are pre-pandemic. It is safe to assume that with Covid hastening digital adoption and use cases the impact on GDP would be higher.

In 2020 when everything moved indoors the importance of both fixed and mobile broadband services came into limelight and literally became the lifeline for everyone in Pakistan, like the rest of world. The quality and range of these services are dependent on the efficient use of spectrum allocated. With the data consumption almost tripling in last year it is evident that the Pakistani consumers are hungry for more and better services.

Successful spectrum management is a long-term effort. The primary goal in all spectrum awards should be to encourage efficient spectrum use and the significant investment necessary to provide high-quality mobile services. The basic tenants of a successful managing spectrum successfully are ensuring access to sufficient spectrum, providing predictability and avoiding costly restrictions. Ideally policymakers and telecommunications regulators seek to maximize the benefits of spectrum use for society, ensuring efficient use of a scarce resource.

However, governments and regulators in Pakistan and around the world struggle to find the right balance between short term monetary gains versus long term economic impact. Spectrum is usually seen as a mean to make a quick buck especially for governments which are under pressure fiscally. They are either unable or unwilling to take a long-term view on economy due to broadband penetration.

It is evident that operators in Pakistan need more spectrum to enhance their services due to the high demand. New and emerging businesses are also highly reliant on this technology. And with 5G on the horizon, with some countries having already launched the new technology, it is

imperative that Pakistan now starts looking at spectrum allocation from a new lens and take a long-term view on this scarce resource. 5G would require significant new harmonized spectrum as it is expected to fuel growth not just in consumer space but in enterprises and key verticals like smart cities, public safety, industrial use cases etc. 5G will be fueling the internet of things economy.

Panel Session:

The objective of the panel session is to steer the conversation on spectrum towards taking a long-term view on its allocation. The purpose is to get all key stake holders on the table and discuss the way forward. Also, to discuss the importance of Telecom Spectrum in Pakistan, and later the evolution, challenges, gaps and the ultimate impact on the economy of Pakistan. From the past 2 years we see everything moving from outdoor to working in door, whether it is health, education, business, or shopping. In 2019, Pakistan had 60 million online broad band users which is now in 2021 standing at more than 100 million broadband users. Also, data consumption has tripled during the pandemic. Where the blood line of the broadband services is Spectrum without which there won't be any services. In terms of efficiency, Pakistan has the lowest spectrum availability which faces a trade off with quality, affordability and choice. Hence spectrum management is of crucial importance which itself is a scarce resource and is allocated to the operators.

This document has highlighted some diverging thoughts coming from the government representatives and the private operators in terms of Spectrum management as a whole and spectrum availability, pricing, speed, quality and investment in particular.

DISCUSSION ON SPECTRUM MANAGEMNT AND ITS IMPACT ECONOMICALLY

Any country including Pakistan would not have been able to survive the pandemic economically without the broadband services. In Pakistan, it is much more pertinent because the 3G, 4G and spectrum is not even 10 years old. First time Pakistan saw 3G/4G auction was back in 2014 and we still are a very initial stage in terms of Next Generation Mobile Services.

Q1: In 2018 a study by ITU carried out a study in which it concluded that broadband penetration had a direct impact on GDP. According to which if the low-income countries increase their broadband penetration by 10%, it would lead to an increase in their GDP by 1.8%. Does this nexus between broadband penetration and GDP impact hold for Pakistan?

Key messages by the Government representatives: -

- Not just the broadband but entire broadband ecosystem contributes towards the GDP; inclusive of financial and digital services.
- Broadband can be dis-integrated into fixed and mobile broadband. The data usage since 2019 per user has increased from 1GB to 5 GB. There has also been an increase in demand for services with cheap packages
- Including the government and its ministries, everyone has been demanding better quality of service following cheap packages per data usage.
- The need for students to attend online classes from home during pandemic needs to be further addressed in future.
- Since 2019, broadband has helped in creation of new jobs, thus adding up to the GDP of the economy. Different businesses like home delivery services have popped up during this time, and their dependance was more on mobile broadband.
- A number of established companies, previously reluctant in establishing fixed broad band due to heavy investment and long-term returns are now demanding new connections. There is an increased requirement of the spectrum resources which would translate into development of the digital ecosystem and hence causing an impact on the GDP.
- Government needs to analyze the future demand for spectrum and maintain quality, otherwise the economy might not be able to sustain, based upon the economy's dependency on spectrum.
- There's around 60% connectivity worldwide, government of Pakistan is trying to reach even more than that, so both rural and urban sectors can contribute somewhat to GDP.

Key messages by the Operator: -

- Since the pandemic, digital adoption has accelerated significantly in Pakistan and worldwide. In Pakistan, the major reliance is on mobile broadband; hence, the near future is going to be mobile broadband.
- There is an increased requirement for spectrum resources which would further translate into development of the digital ecosystem, and thereby an impact on GDP.

Key messages by the Telecom Industry Expert: -

- The advent of COVID 19' has proved broadband to be one of the driving forces of the economy which, in terms of, industrialization and services like health and education is the future.
- The main issue with the broadband service is the quality. Poor penetration of optical fiber cable and complications in deployment of telecom infrastructure mirrors the fragile state of telecom sector.
- The quality is not improving with incremental adoption of technology. Unless the quality Is there, Pakistan won't be able to get benefit of the broadband which the ITU study states.
- For industrialization, economy, health or education, broadband is the engine for growth for all other sectors. Since 2014, a number of jobs have been created because of the availability of broadband, therefore, 4G and 5G are extremely important. If the broadband is made available with quality, it would yield more benefits than the ITU study states.

Comment by the moderator, *"Level of investments coming from Pakistani startups in 2021 have far exceeded what came in last year. In September Pakistan had $233 million coming in from Pakistani startups where last whole year it was able to generate roughly around $70 million."*

Q2: As per GSMA, the basic challenge of spectrum management is to ensure sufficient spectrum availability and avoiding strictly restrictions, where the government and regulators find it challenging to balance between short run monetary gains and long-term economic benefits, especially true for the countries facing fiscal and monetary pressure. Keeping this in view, how would Pakistan look at spectrum management?

Key messages by the Government representatives: -

- Currently spectrum is being managed as per international standards and the government is following a transparent process either by hiring international consultants or by following all rules and regulations in the country.
- The value of spectrum is analyzed as per market assessment which then determines the price. All the available spectrum has been offered to the operator as per international standards both in 1800 and 2100 MH.
- The operators are given an option to either pay lumpsum amount for the price of spectrum or in installments for a period of 5-10 years. If they predict the $ price going up, the best strategy is to pay the whole amount.
- The real challenge is to create a balance. If regulators lower the price benchmark, this would affect the overall quality of spectrum.
- Spectrum management should be based on a 3D matrix approach i.e citizens of Pakistan industrial growth and the Government of Pakistan.

- 1.6m subscribers are adding up to the network by the operators every month. Operators do not seem to lose the game.
- In 2.5 years, the government must be enhancing the speed and quality of spectrum by touching 4MB per second.
- Pakistan taking a whole decade to launch 3G and 4G signals shows the extent of hurdles faced by this sector.
- The spectrum auction 2021 was designed to

    - Uplift the quality of service.
    - Exhaust 4G spectrum in order to increase broadband connectivity.
    - To move towards upcoming technologies i.e 5G.

- Doubling the bandit can increase revenues for TELCOs.
- Pakistan's per capita income is very low, where the county has less than $20 billion of foreign reserves as compared to Bangladesh which has $48 billion reserves. Therefore, we should not make comparisons with other countries.

Key messages by the Operator: -

- Spectrum pricing has been very costly in Pakistan as it is 3 to 4 times more than that in developed countries. In developed countries, average revenue is $20-$30 per subscriber.
- Where terms and conditions associated with the spectrum are also very excessive. There is a need of an economic modelling to gauge the spectrum prices.
- Also, interest bearing installments do not benefit the operators.
- Every auction discovery price; the maximum price for last auction, becomes the reserve price for the next spectrum auction. Crazy bidding pricing leaves no room for investment in spectrum infrastructure for the operators.
- 10 years back Europe faced problem similar to Pakistan today; bidding and pricing of spectrum, ultimately, no money left for investment.
- Unless economy's currency is solid, making payments in Dollars would not let the operators work when they earn in Rupees.
- The telecom sector of Pakistan has lost a number of jobs since 2014 due to the poor quality of 3G and 4G services.
- The government instead of adopting a revenue maximization approach by offering high prices and burdening the operators, should prioritize delivery of high quality and affordable tele communication services.

Key messages by the Telecom Industry Expert: -

- USD domination for spectrum does not sound like an adequate policy especially when operators earn profits in local currency.

	Auction Revenue in $	MH	Rupee against Dollar
2004	291m	900 and 1800	55
2014	1.12b	1800 and 2100	100
2016	395m	850	102
2017	295m	1800	110
2021	279m	1800 and 2100	162-170

Source: Author's compilation from newspapers

- Another example is India, where the government is now bailing out operators. And the operators are not investing enough in their networks; less than 10% of towers are connected with fiber.
- In Pakistan, average revenue per subscriber is $1.2 which hinders the provision of quality service to the user.
- Keeping in view the fact that Pakistan's mobile industry is one of the most spectrum deprived in the world, the operators are not given a road map on the future availability of spectrum and hence they cannot plan their investment and spending. When would be the next spectrum available? 2 years, 3 years, 5 years?
- If the quality, affordability and choice is being compromised, then the government needs to review its short-term goals on spectrum management.

Q3: How long would Pakistan take to launch 5G; keeping in view the present spectrum regime of the country?

Key messages by the Government representatives: -

- Pakistan is entering into the 4th industrial revolution where 5G is the need of the day. The government of Pakistan and PTA are working tirelessly on the launch of 5G.
- Frequencies for 5G launch are available where PTA has already given 26 licenses to mobile manufacturing devices that includes 4G, 5G inter-operatable devices.
- The holistic approach for 5G launch includes;
    - Manufacturing of 5G devices in Pakistan.
    - Pakistan needs to go for inter- operatable bands i.e. 2.3 and 2.6
    - Big cities of Pakistan like Khi, Islamabad, Lahore, Quetta, Peshawar, already have hands on 4G, therefore, Pakistan would first go for spectrum release and fibration with low cost following a final launch of 5G.
    - A regime for neutral power would be opened in Pakistan where approximately 4-5 BTS towers already available in an area of 500 meters, shall be connected with operated fiber. Avoiding mess of towers needs to be considered.
    - The cost per device is $150-160. Identification of the device eco-system is on plan.

- The 5G launch is not a local level discussion. It requires a comprehensive, detailed and rigorous analysis.

Key messages by the Operator: -

- 5G does not just include the broad band but some other industrial applications as well.
- The operators need to know when the government would release the bands and what would be the quantity of spectrum release?
- The government of Pakistan should step in and ensure the provision of spectrum and go for a partnership with the operators to develop the spectrum infrastructure that too 'free of cost'.

Key messages by the Telecom Industry Expert: -

- Based on the rate of return, base price of spectrum, and current 4G quality, operators do not see 5G happening very soon in Pakistan.
- A quality 4G should be ensured within the country, even if that happens, the industry would be pleased.

The delivery of the quality service that the technology promises has not been evident in Pakistan's history. With that, excessive pricing, poor quality service, little or no investment, lack of adequate infrastructure, strictly terms and conditions i.e. payment in dollars, insufficient spectrum availability and government's aim for maximizing profits on the cost of operators, has been discouraging the operators to participate in spectrum auction and investment in telecom sector. Operators are looking for concrete support from the regulators and the government through a government-private partnership to develop the telecom eco-system.



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