

The Impact of the COVID-19 Pandemic on Internet Performance in Afghanistan, Nepal and Sri Lanka

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As the COVID-19 pandemic rages on, the Internet continues to provide a lifeline.

It's more important than ever that people can access a suitable device – with sufficient data and speeds – as businesses, schools and the public are forced to move their services online.

Yet, not everyone has access to a stable Internet connection. Ookla Insights, a network intelligence company, shows that Internet speed in Afghanistan,¹ Nepal² and Sri Lanka³ has declined since the pandemic emerged. When lockdown was imposed on the three countries during March and April 2020, there was a sudden surge in demand for Internet use at home. The Internet Society carried out an online survey to assess the impact of reduced performance and quality of Internet networks on users in these countries.

We carried out the survey using Wufoo from 9 to 21 September 2020.⁴ It was written in English and divided into four sections:

1. Respondent profile
2. Internet usage before and during the pandemic
3. Type, quality and cost of Internet services before and during the pandemic
4. Impact of reduced Internet performance on users' daily life during the pandemic

Over 200 individuals answered the survey: 48 from Afghanistan, 67 from Nepal and 87 from Sri Lanka. This report provides a country-by-country analysis of the findings, followed by a discussion on some common trends found across the three countries.

1. <https://www.speedtest.net/insights/blog/tracking-covid-19-impact-global-internet-performance/#/Afghanistn>

2. <https://www.speedtest.net/insights/blog/tracking-covid-19-impact-global-internet-performance/#/Nepal>

3. <https://www.speedtest.net/insights/blog/tracking-covid-19-impact-global-internet-performance/#/Sri%20Lanka>

4. <https://internetsociety.wufoo.com/forms/w1wrqu9f069wxem/>

Afghanistan

The majority of respondents from Afghanistan identified as male (76%) and lived in the capital city, Kabul (86%). They worked in a range of professions: 27% in the government sector, 20% in the business sector, 19% were self-employed, 17% students and 17% 'other'.

Almost all the respondents (over 90%) said they used the Internet every day, as they had done before the pandemic. No major changes in Internet usage patterns were noted; most respondents continued to use the Internet for social networking, information search, work, study and over-the-top services (for example, WhatsApp, Viber, Skype). These five activities were found to be the most common both before and during the pandemic, with social networking at the top of the list. The use of the Internet for social networking had reduced slightly since before the pandemic, together with use for work. This could be due to workplace closures. However, Internet use for entertainment, study, shopping, blogs, online newspapers/magazines and discussion forums had increased slightly during the pandemic.

Over 90% of respondents said they accessed the Internet with their mobile phones, and over 70% on their laptops. Internet access via desktops, tablets and smart TVs was significantly lower at 20%. No major changes in use of devices to access the Internet were noted in comparison with pre-pandemic use. Most respondents' primary home Internet connection had also remained the same as before the pandemic, with 60% of respondents using a mobile Internet connection at home.

However, about a quarter of respondents had switched their connection type, either from mobile Internet to fixed-line connection, mobile to wireless, fixed-line to mobile, or wireless to mobile. Over half of the respondents (60%) had subscribed to a new Internet connection since the beginning of the pandemic, and a quarter had increased their spending on connecting to the Internet during the pandemic. Over 40% of respondents were spending over USD20 per month for their connection. This compares with 25% prior to the pandemic.

Eighty percent of respondents said they faced regular Internet performance issues since the pandemic emerged. About 60% reported frequent disconnection, and/or voice and video quality deterioration as being the main problems. Based on speed test results that 13 respondents shared, the average download speed was 3.02 Mbps and the median value was 1.51 Mbps, which is lower than pre-pandemic speed.⁵

About 40% of respondents had reduced their ratings for the speed, reliability and steadiness of their Internet connection when compared with the pre-pandemic period. They'd also been less satisfied with their providers' customer service, and with expected Internet performance in relation to the price paid during the pandemic.

5. According to Ookla Insights, the average download speed in December 2019 was 6.82 Mbps for mobile Internet connection and 6.92 Mbps for fixed Internet connection.

Most respondents (60%) said they were either dissatisfied or somewhat dissatisfied with the expected performance of the Internet in relation to the price paid during the pandemic (a 10 percentage point increase in dissatisfaction since the pre-pandemic period). The reliability and steadiness of Internet connection experienced the greatest rise in dissatisfaction from 30% of respondents expressing dissatisfaction pre-pandemic to 50% during the pandemic (20 percentage points). There was a significant rise in dissatisfaction with the speed of Internet connection, with 23% of the respondents expressing dissatisfaction pre-pandemic to 38% during the pandemic (15 percentage points).

Only 1 respondent in 10 was more satisfied with the speed, reliability and steadiness of their Internet connection and customer service. Two in 10 respondents expressed better value for money during the pandemic. In almost all cases, these respondents had changed their subscription plan, paid more or paid over USD20 per month for their Internet connection. However, no direct correlation was found between respondents' level of satisfaction and the type of connection they had (mobile, fixed or wireless).

Over half of the respondents said they'd faced difficulty working or studying during the pandemic due to reduced Internet performance. Some respondents mentioned the high cost of the Internet as a key constraint in access,⁶ along with a lack of support from government and Internet service providers in reducing or subsidizing Internet charges.

Nepal

The majority of respondents from Nepal identified as male (84%) and lived in Kathmandu Valley, which includes Kathmandu, Bhaktapur and Lalitpur (70%). They were employed across different professions: 9% in the government sector, 12% in the business sector, 27% were self-employed, 25% students and 27% 'other'.

All respondents said they used the Internet every day, as they did before the pandemic. Most respondents didn't report major changes in their usage patterns, continuing to use the Internet for social networking, information search, work, study and entertainment. These five activities were found to be the most common both before and during the pandemic, with social networking at the top of the list. Internet usage for work, study, banking and shopping had increased slightly since the pandemic began, while it decreased slightly for entertainment, information search, blogs, online newspapers/magazines and discussion forums .

About 90% of respondents said they accessed the Internet with their mobile phones and/or laptops, while access via desktops, tablets and smart TVs was significantly lower (15%). No significant changes in use of devices to access the Internet were noted in comparison with the pre-pandemic period. Most respondents' primary home Internet connection (80%) was via a fixed line. Only four respondents reported switching to a mobile or wireless connection during the pandemic. About 40% of

6. A 2019 news article indicated that an Internet connection cost USD60 per month for homes and offices in Afghanistan. <https://www.khaama.com/internet-cost-to-drop-from-96-to-60-for-the-homes-and-offices-in-afghanistan-hashimy-03431/>

respondents had subscribed to a new Internet connection since the pandemic began, but the majority (over 90%) hadn't increased their spending on Internet connection. About two-thirds of the respondents said they were spending between USD10 and USD20 per month on Internet connection, as they did before the pandemic, with fewer than 10% of respondents spending more than USD20 per month.

Seventy percent of respondents said they'd been facing regular Internet performance issues during the pandemic. Frequent disconnection was the most common complaint reported by about 60% of respondents, while about half of the respondents complained about voice and video quality deterioration. Based on speed test results that 25 respondents shared, Internet speed had declined slightly during the pandemic, with the average download speed at 20.13 Mbps and the median value at 20.56 Mbps.⁷ Speed varied greatly from a minimum of 2.36 Mbps to a maximum of 41.11 Mbps. About half of the respondents said they'd had difficulty working, studying and communicating with family and friends during the pandemic due to reduced Internet performance.

Pre-pandemic, a significant number of respondents (almost 70%) were satisfied or somewhat satisfied with the speed, reliability and steadiness of their Internet connection. However, during the pandemic, respondents reported a 30 percentage point drop in satisfaction in these areas. Pre-pandemic, there were fewer respondents who were satisfied or somewhat satisfied with the customer service of their provider (60%) and with expected performance of the Internet in relation to the price paid (50%), representing a 20 percentage point drop in satisfaction for these parameters.

About half of the respondents had reduced their ratings for the speed, reliability and steadiness of their Internet connection when compared with pre-pandemic period. Forty percent had reduced their ratings for their providers' customer service, and 30% for the expected performance of the Internet in relation to the price paid.

Only about 5% of respondents had increased their ratings for the parameters mentioned above during the pandemic. However, unlike Afghanistan, no direct correlation was found between this increased satisfaction and their subscription plan or the amount paid.

Sri Lanka

The majority of respondents from Sri Lanka identified as male (80%). Almost half lived in Colombo and its suburbs, with other respondents scattered across cities and towns in Sri Lanka's provinces. The respondents worked across various professions: 24% in the government sector, 26% in the business sector, 5% were self-employed, 31% students and 14% 'other'.

Only 2% of respondents reported not using the Internet every day before the pandemic, but the crisis had prompted all respondents to use it. No major changes in Internet usage patterns were noted, with most respondents using the Internet for social networking, study, entertainment, information search and over-the-top services (for example, WhatsApp, Viber, Skype).

7. Ookla Insights reported an average download speed of 20.87 Mbps for fixed Internet connection in December 2019.

These five activities were found to be the most common both before and during the pandemic, with social networking at the top of the list. Using the Internet for work came in sixth place.

Over 90% of respondents said they accessed the Internet with their mobile phones and/or laptops, while about a quarter of the respondents accessed the Internet using their desktops. Internet access via tablets and smart TVs was significantly lower at less than 10%. No significant change was noted in the use of devices to access the Internet when comparing behaviour before and during the pandemic.

Most respondents' (80%) primary home Internet connection also remained the same before and during the pandemic. About half of the respondents' primary home connection was via a fixed line, 40% used a wireless connection and 10% a mobile Internet connection.

About one-third of respondents had subscribed to a new Internet connection since the beginning of the pandemic, and half had increased spending on their Internet connection. The number of respondents spending less than USD5 per month on Internet connection had reduced by half during the pandemic (from 24% to 11%), while the number of respondents spending over USD15 per month had more than doubled (from 16% to 37%).

Over half of the respondents said they'd faced regular Internet performance issues since the pandemic emerged. Almost half of the respondents complained about frequent disconnection and poor video quality, while fewer complained about voice quality deterioration. Based on the speed test results that 22 respondents shared, the average download speed was 23.08 Mbps and the median value was 18.56 Mbps, which is slightly lower than pre-pandemic levels.⁸ Speed varied greatly, from a minimum of 0.06 Mbps to a maximum of 65.70 Mbps. About 40% of respondents reported difficulty working, studying and communicating with family and friends during the pandemic due to reduced Internet performance.

Pre-pandemic, a significant number of respondents (about 70%) were satisfied or somewhat satisfied with the speed, reliability and steadiness of their Internet connection. However, since the beginning of the pandemic, there was a 20 percentage point drop in satisfaction for connection speed, and a 15 percentage point drop for connection reliability and steadiness. Pre-pandemic, fewer respondents were satisfied or somewhat satisfied with their providers' customer service (55%) and with the expected performance of the Internet in relation to the price paid (50%). There was a 15 and 5 percentage point drop in satisfaction for these parameters, respectively.

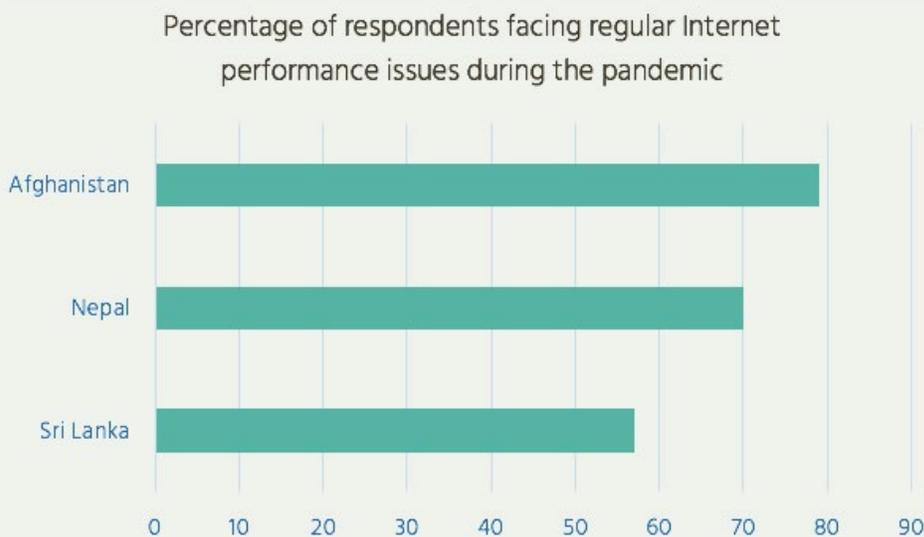
About 40% of respondents reduced their ratings for the speed, reliability and steadiness of their Internet connection when compared with the pre-pandemic period. Thirty percent reduced their ratings for providers' customer service, and 20% for the expected performance of the Internet in relation to the price paid.

8. Ookla Insights reported an average download speed of 22.15 Mbps for mobile Internet connection and 27.45 Mbps for fixed Internet connection in December 2019.

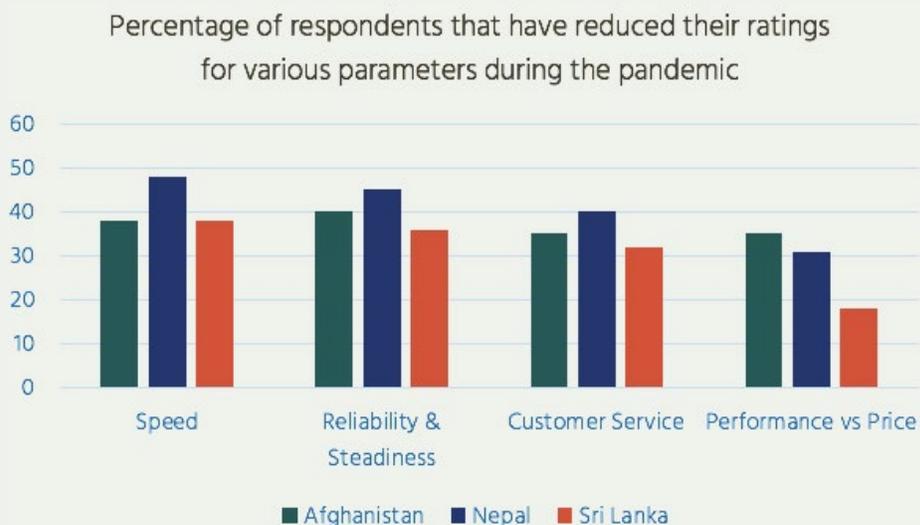
However, about 10% of respondents increased their ratings for customer service and the expected performance of the Internet in relation to the price paid during the pandemic. But unlike Afghanistan, no direct correlation was found between this increased satisfaction and their subscription plan or the amount paid.

Cross-country trends

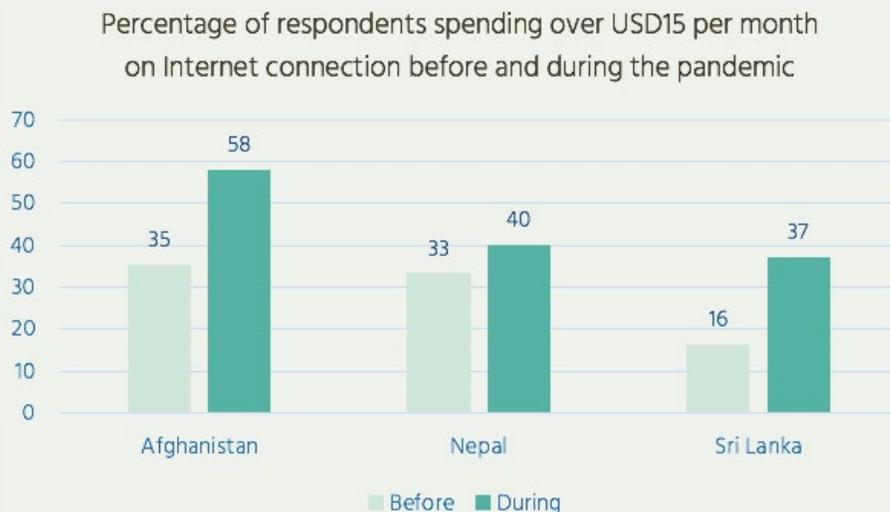
Around 50-80% of users continue to face regular Internet performance issues during the pandemic. About half of the respondents have had difficulty working, studying and communicating with family and friends during the pandemic due to reduced Internet performance. This is despite some respondents switching connection type and subscription plans and/or increasing their spending on Internet connection.



Generally, users have become more dissatisfied during the pandemic with the speed, reliability and steadiness of their Internet connection, and also with their providers' customer service and the expected performance of the Internet in relation to the price paid. About half of the respondents reduced their ratings for the speed, reliability and steadiness of their Internet connection during the pandemic, with a 15-30 percentage point drop in satisfaction.



Users are spending more money on their Internet connection during the pandemic, but this is more prominent in Afghanistan and Sri Lanka than in Nepal.



Users from Afghanistan are spending the most on their Internet connection, with over 40% of respondents currently spending over USD20 per month (compared to 25% prior to the pandemic).

In Sri Lanka, the number of respondents spending less than USD5 per month on their Internet connection has reduced by half during the pandemic (from 24% to 11%), while the number of respondents spending over USD15 per month has more than doubled (from 16% to 37%).

In Nepal, less than 10% of respondents have increased spending on their Internet connection during the pandemic. About two-thirds of respondents said they continued to spend between USD10 and USD20 per month on their connection, as they did before the pandemic.

Most users (90%) access the Internet with their mobile phones and/or laptops, while Internet access via desktop, tablet and smart TV is significantly lower. Generally, there have been no major changes in the use of devices to access the Internet since the pandemic emerged.

The primary type of home connection varies between countries with most respondents using mobile Internet in Afghanistan, fixed-line connection in Nepal, and fixed-line or wireless connection in Sri Lanka. Fewer than a quarter of the respondents had switched their type of home connection during the pandemic.

Social networking was the most common activity in all three countries, both before and during the pandemic. Other top activities include using the Internet for work, study, information search, over-the-top services and entertainment.

Top five Internet activities	Afghanistan		Nepal		Sri Lanka	
	Before	During	Before	During	Before	During
Social networking	1	1	1	1	1	1
Work	3	4	3	3		
Study	4	2	5	2	2	2
Information search	2	3	2	4	4	5
Over-the-top services (e.g., WhatsApp, Viber, Skype)	5	5			5	4
Entertainment			4	5	3	3

It's important to keep in mind that the survey respondents are predominantly tech-savvy, living in cities and towns. They're generally well-equipped with the technology to access the Internet and are willing and able to increase their spending on Internet connection.

However, despite some respondents switching connection type and subscription plans and/or increasing spending on their Internet connection, they have been more dissatisfied with the performance and quality of Internet services during the pandemic. These issues, along with a lack of interventions to make the Internet more affordable, have had an impact on users' ability to work, study and communicate with family and friends.

As the global pandemic continues to unfold and people adjust to increasingly digitalised ways of working and living, it's important that government and Internet service providers accelerate efforts to increase network capacity and reliability, and address urgent access gaps. At the same time, short-term actions can be taken to ease users' ability to connect, for example, by subsidising Internet charges, waiving late fees, maintaining services for those behind on bills and increasing data allowances.