nmhh
Nemzeti Média- és Hírközlési Hatóság

THE STATE OF THE OPEN INTERNET IN HUNGARY IN 2025

Annual report for the period between 1 May 2024 and 30 April 2025

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1. INTRODUCTION

The internet has become one of the most important pieces of basic infrastructures in society and the economy, and without question plays a key role in virtually all segments of our lives. Most EU Member States consider it a priority to avoid situations where ownership of the network infrastructure providing internet access to subscribers leads to exclusive control over the content and services provided via the network. The importance of this has not diminished, but increased, with the growing role of platforms and large content providers, in an era of debates generated by the reordering of value chains on the internet. Thus, the conditions, restrictions attached to access to the internet and the concept of the open internet have become a major concern for all economic and social actors, and in particular for end-users.

The basic rules for open internet in the EU are set out in the TSM Regulation[1]. The purpose of the TSM Regulation is to ensure equal and non-discriminatory treatment in the provision of internet access services with regard to traffic management, and to ensure that end-users are able to exercise their rights as set out in the Regulation.

As the national regulatory authority, the National Media and Infocommunications Authority (hereinafter referred to as 'NMHH' or the 'Authority') ensures that end-users can effectively exercise their rights, and that the rules on providing open internet access are respected by service providers. In addition to enforcing the rules, it is responsible for monitoring changes in technologies and markets on an ongoing basis, and identifying any potential need for regulatory change.

In accordance with the provisions of the TSM Regulation, the NMHH prepares an annual report on developments concerning the state of the open internet in Hungary, enforcement of the relevant rules, and any related activities and results. The NMHH publishes the report on its website[2] and sends it to the European Commission and the Body of European Regulators for Electronic Communications (BEREC).

This annual report describes the state of the open internet in Hungary, as well as the Authority's enforcement activities regarding the TSM Regulation during the period between 1st May 2024 and 30th April 2025 (the reporting period). As in previous years, the NMHH monitored electronic communications operators' practice during the reporting period, analysed end-user submissions to the Authority in order to identify if they were connected the open internet regulations, and continued the monitoring activities started in the previous reporting period. It also initiated developments to ensure that the data sourced from service providers' general terms and conditions are fed more quickly and efficiently into its measurement system, enabling the comparison of measurement results and tariff plan data. It has also relied on market reports based on service provider data and market research results to better monitor the continued availability of state-of-the-art, non-discriminatory internet access services, and to track end-user experience and issues. As a result of the activities described in detail in the following sections of the annual report, the NMHH has concluded

[1] *Regulation (EU) No. 2015/2120 of the European Parliament and of the Council of 25 November 2015 laying down measures concerning open internet access and amending Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services and Regulation (EU) No 531/2012 on roaming on public mobile communications networks within the Union*, http://data.europa.eu/eli/reg/2015/2120/oj

[2] https://english.nmhh.hu/open-internet

that there were no evident systemic problems with the implementation of open internet rules in Hungary during the reporting period, and that service providers adequately ensured compliance with the relevant provisions of the TSM Regulation. During the reporting period, the NMHH did not receive any end-user complaints regarding violations of the open internet access rules in the TSM Regulation, and the experiences of subscribers regarding the quality of service remain positive.

During the reporting period, the Authority did not set any additional requirements for technical characteristics or a minimum quality of services, beyond those stipulated in the TSM Regulation.

The BEREC Guidelines[3], which are issued under the mandate of the TSM Regulation, provide explanations and interpretative guidance which the national regulatory authorities should take into account as far as possible when applying and interpreting the TSM Regulation. The structure of this annual report follows the recommendation in the Guidelines.

[3] BoR (22) 81 BEREC Guidelines on the Implementation of the Open Internet Regulation, 09 June 2022 (https://www.berec.europa.eu/sites/default/files/files/document_register_store/2022/6/BoR_%2822%29_81_Update_to_the_BEREC_Guidelines_on_the_Implementation_of_the_Open_Internet_Regulation.pdf)

2. BRIEF OVERVIEW OF THE REGULATION

The basic principle of regulations on the open internet is that end-users have the right to access and distribute information and content of their choice, to use and provide applications and services of their choice, and to use terminal equipment of their choice, through their internet access service, regardless of the location of the end-user or service provider, or the location, origin or destination of the information, content, application or service.

End-users and internet service providers are free to enter into agreements on the use of internet access service packages (tariff plans) with specific data plans and speeds. However, neither the commercial practices of service providers nor these agreements can result in a restriction of these rights. For service providers, this means an obligation to handle all internet traffic in a neutral and non-discriminatory way. The legislation only allows exceptions to the extent that service providers may take reasonable – transparent, non-discriminatory and proportionate – traffic management measures to ensure the efficient use of network resources and optimise transmission quality.

In addition to reasonable traffic management measures, service providers may apply other measures only in the following three exceptional cases, and only to the extent and for the duration necessary to achieve the specified objectives:

- to comply with legislation, or decisions mandated by a court or public administration,
- to maintain the integrity and security of the network, where necessary,
- to prevent or mitigate the effects of network congestion.

The regulation also requires providers of internet access services to inform end-users in a clear manner how traffic management practices deployed might have an impact on the quality of internet access services, end-users' privacy and the protection of personal data, as well as about the possible impact of services other than internet access services to which they subscribe – provided by the same provider on the same physical infrastructure – on the quality and availability of their respective internet access services. In order to enable end-users to make informed decisions, internet access service providers must inform end-users in the subscriber contract about the speed they can actually provide, as well as the remedies available to them if the provider cannot deliver the expected performance.

In addition to the TSM Regulation, the regulation on open internet in Hungary includes:

- NMHH Decree 22/2020 (XII. 21.) on the detailed rules of electronic communications subscription contracts, which requires service providers supplying internet access services to provide access to their services for subscribers and users of the quality specified in their general terms and conditions and individual subscriber contracts; and
- NMHH Decree 13/2011 (XII. 27.) on the requirements for the quality of electronic communications services in relation to protecting subscribers and users, and on the authenticity of billing which requires all fixed and mobile internet access providers to specify certain quality requirements (indicators) determined in the decree.

3. MONITORING THE IMPLEMENTATION OF THE TSM REGULATION

The NMHH performs its official duties in relation to the open internet as part of its supervisory powers stipulated in Act C of 2003 on Electronic Communications.

As part of its supervisory activities, the NMHH carries out both planned checks as specified in its annual Supervision Plan and also in justified cases unscheduled checks –, initiated on the basis of complaints, and reports from end-users or its own observations – to establish whether service providers are in compliance with the rules on open internet.

Following the judgments of the Court of Justice of the European Union on 2 September 2021, domestic operators have not sold any zero-rated offers after 15 November 2022 and their existing subscriber contracts have not included zero-rating since 31 March 2023.

Continuing the monitoring started in the previous reporting period, the NMHH continued its investigation into service providers' practices regarding the use of zero tariffs (concerning non-discriminatory treatment of internet traffic) on certain sites for measuring internet connection speed and the providers' own customer service application, as well as publicly advertised data tariffs intended for smartwatches requiring the purchase of terminal equipment (potentially limiting the freedom of choice of terminal equipment). These investigations are expected to be concluded soon.

Given that, as in previous years, there were no blatant or general irregularities in this reporting period which could be considered as restricting end-user rights or affecting the performance of Internet access services, the NMHH continued to focus on monitoring market and technological changes, and analysing reports from end-users. The NMHH checked the websites and advertisements of service providers, and carried out spot checks of the general terms and conditions of those mobile and fixed internet access providers with the largest number of subscribers. In addition, the NMHH also used the results of crowdsourced measurements in its broadband metering system in order to monitor whether the actual quality of services experienced by end-users confirms the service quality commitments, in particular download and upload speeds, undertaken by the service providers in their offers (see Chapter 4, below).

4. THE BROADBAND MEASUREMENT SYSTEM

The NMHH launched its Broadband Project in 2012; then, in 2015 it began operating an interactive system[4] publishing the results of its measurements of certain quality indicators for internet access services and net neutrality parameters, in order to gain an accurate picture of the quality parameters of Hungarian broadband internet access services in practice, and thereby facilitate the performance of its regulatory tasks. The objectives of the measurement system have expanded over time. For example, the project now aims to help end-users make informed choices between both service providers and services, helping to boost competition in the market for electronic communications services and ensure that end-users have access to better quality services.

Since its establishment, the NMHH has continuously sought to further expand and improve its systems in order to achieve regulatory objectives, meet user needs and increase the accuracy of measurements (e.g. by paying particular attention to the options for testing those parameters which reflect the characteristics of connections across the long term, such as the possibility of measuring networks with two-way delay and almost full capacity).

The Broadband Measurement System already provides a number of metrics describing the actual quality of service for each measurement (including not only up- and download speed data, but also packet loss, latency, and latency measured on a high-load network).

In the current reporting period, the Authority has focused on developing the fastest and most efficient ways to incorporate quality of service data from bundled tariff plans into the measurement system. In addition to measuring various internet parameters, the Measurement System can also support the evaluation of the results: by matching the data of the individual service provider tariff plans to the measured values, and displaying the degree of compliance as a percentage. This feature is based on data from the service providers' general terms and conditions. The format and content of these documents varies by service provider and even by time period, so the focus has been on processing them, extracting the parameters to be used by the measurement system, and then transferring them to the storage system in a standardized format, in order to increase their speed and efficiency. In the future, the Authority intends to use artificial intelligence for this purpose.

[4] https://szelessav.net/en

5. MARKET CHANGES AND MONITORING USER OPINIONS

Under the TSM Regulation, regulatory authorities should promote the continued availability of non-discriminatory internet access services, provided at a state-of-the-art level of quality.

Through its market research and analysis activities, the Authority acquires information that is indispensable to making well-funded decisions in the course of its work, and the data from this market research and these market reports also provide information on the current state of the market for internet access services in Hungary, in particular on the availability and quality of these services.

5.1. Data from market reports[5]

Mobile internet services[6]

The take-up of mobile internet access services is steadily increasing, with 11.324 million active subscriptions (i.e. SIM cards associated with a subscriber contract) in circulation at the end of 2024, of which 637,000 were large screen subscriptions, which only allow mobile internet use. The number of active subscriptions allowing both calls and mobile internet access (smartphone subscriptions), was 10.686 million.

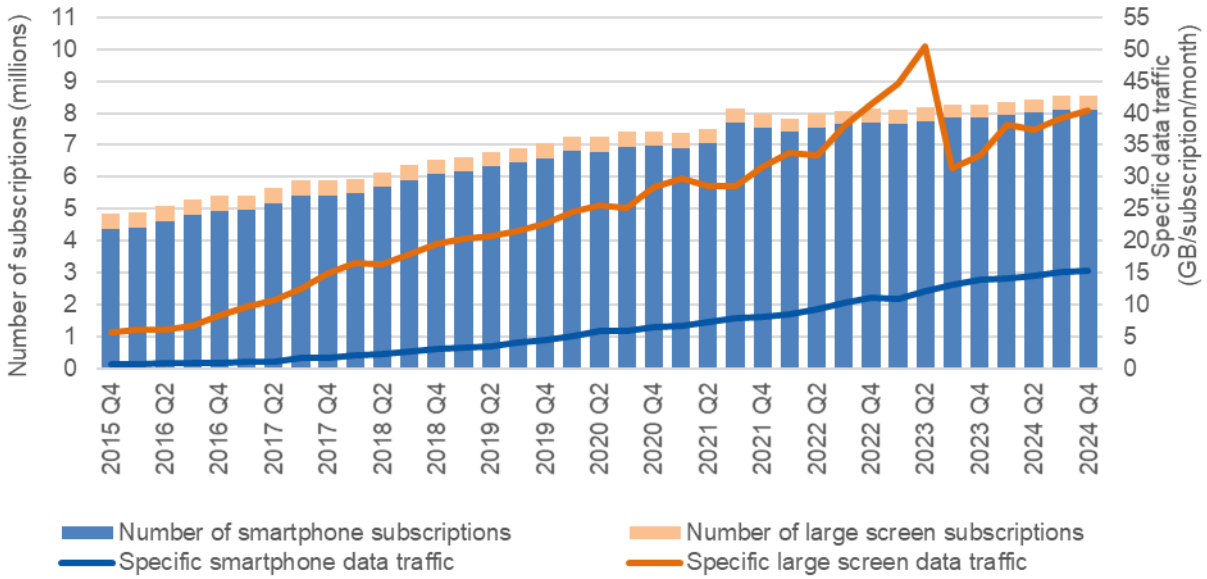


Figure 1: Number of mobile internet subscriptions and specific monthly data traffic
Source: NMHH Mobile Market Report

[5] The NMHH regularly monitors changes on the supply side of communication markets, publishing data on a quarterly basis every six months: https://nmhh.hu/szakmai-erdekeltek/hirkozles-szabalyozas/piaci-jelentesek
[6] The mobile internet section of the annual report is based on data from preliminary market reports. The final Mobile Market Report will be available at the above link.

The number of subscriptions actually carrying mobile internet traffic was 8.530 million at the end of 2024. Of these, 421,000 belonged to the large screen segment, and 8.109 million to the smartphone segment. [Figure 1]

At the end of 2024, the monthly data traffic per subscriber was 40 Gbyte for large-screen subscriptions and 15 Gbyte for smartphone subscriptions. (The reason for the significant decrease in the data traffic of large-screen mobile internet in the third quarter of 2023 is that from that date onwards, the Authority no longer considered those subscriptions which typically generate high traffic but are only available on a territorially limited basis to be mobile internet subscriptions.)

Looking at the data over time, the smartphone segment has grown significantly over the past 9 years, while the large screen segment has remained virtually unchanged. Data traffic grew in both segments.

Fixed internet service

The number of premises served by fixed internet service has been growing by 2-3 percent annually in recent years, with the exception of 2023, when the number of premises remained virtually unchanged. Service providers representing 96 percent of the market had 3.4 million presmises served by fixed internet service at the end of 2024, meaning that the total size of the market was approximately 3.6 million.

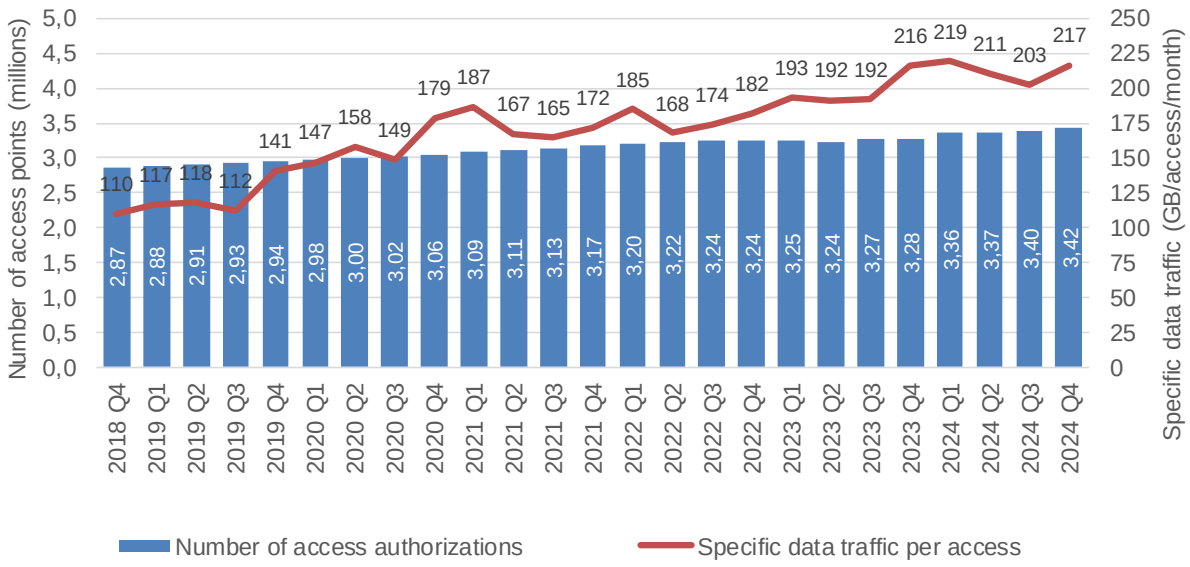


Figure 2: Evolution of fixed internet subscriptions (in units) and specific monthly data traffic (Gbyte/month)
Source: NMHH Fixed Market Report

The data traffic per subscriber almost doubled over the period under review.

Regarding nominal (maximum) bandwidth offered for fixed internet access, significant progress has been made over the last 6 years. While at the beginning of the period, 41 percent of premises was served with bandwidths below 100 Mbps, by the end of the period the

proportion of such premises had fallen below 10 percent. Meanwhile, the share of premises with bandwidths above 500 Mbps increased from 21 percent at the beginning of the period to 62 percent.

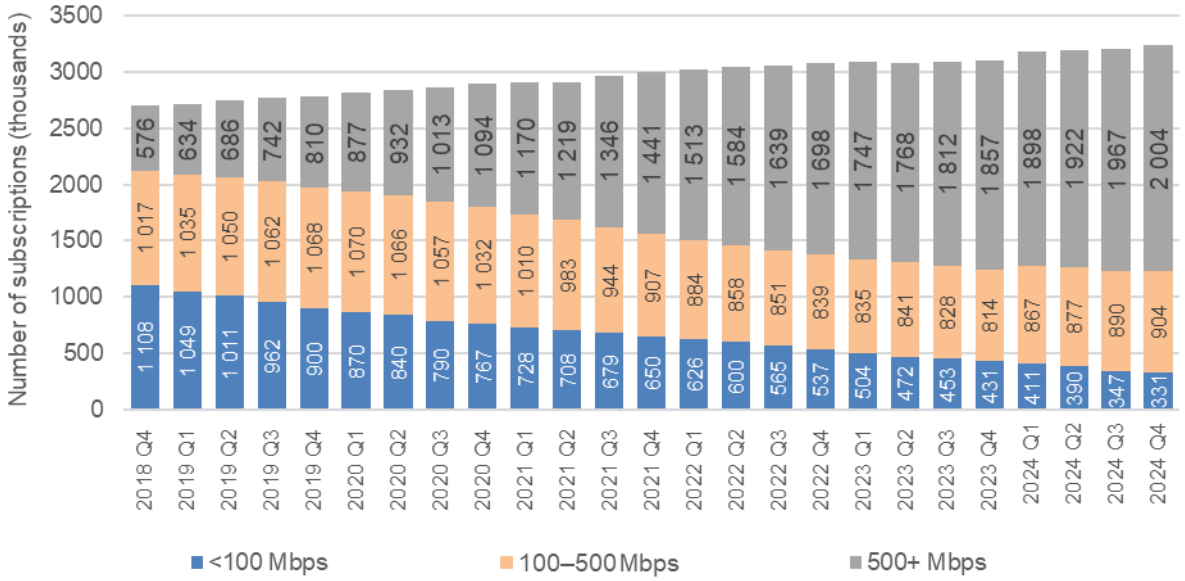


Figure 3: Trend for the number of fixed internet accesses by nominal (maximum) bandwidth
Source: NMHH Fixed Market Report

5.2. Results of the NMHH's annual market research

The NMHH continuously monitors the electronic communications market through large sample size, nationally representative annual surveys, in order to understand consumer usage patterns, attitudes and concerns.[7] In the course of their household market survey, interviewers visited 3,005 households in person to ask questions about their use of communications devices and services, as well as their opinions about them.

Based on the results of the household market survey, the previous growth in household internet penetration appears to have stalled in 2024. Essentially, 84% of households have internet access (fixed or mobile internet, with 66% having both). The prevalence of mobile internet used with smartphones has already caught up with that of home (fixed) internet. 75 percent of households use fixed services, and also 75 percent use mobile internet on mobile phones [Figure 4].

[7] https://nmhh.hu/piackutatasok/lakossagi-felmeres

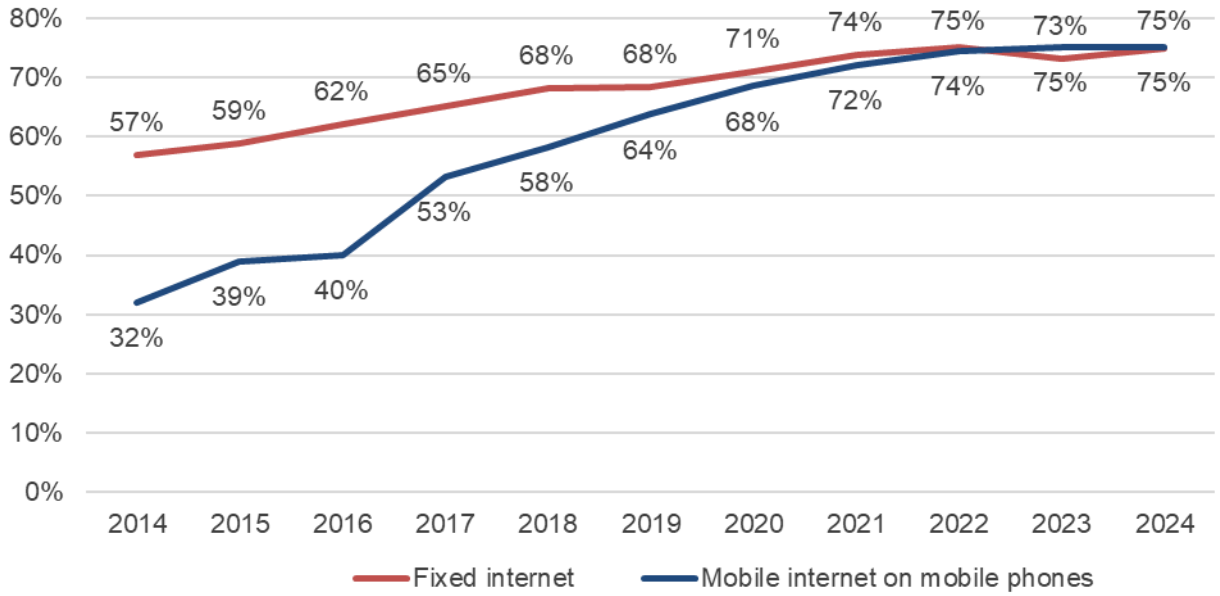


Figure 4: Household internet coverage

Base: Hungarian households, Source: NMHH Household Survey, 2024

As in previous years, the survey found that consumer satisfaction for both services ranged between 4 and 5 on a scale of 1 to 5 (with 5 being the most satisfied). Nearly half of subscribers of internet access services were completely satisfied with their home and mobile internet, while the proportion of the least satisfied subscribers giving 1 or 2 points was below 1%. The results show that nine-tenths of subscribers are satisfied with the quality of service indicators, i.e. the availability of service and the speed of data traffic, for both services [Figure 5].

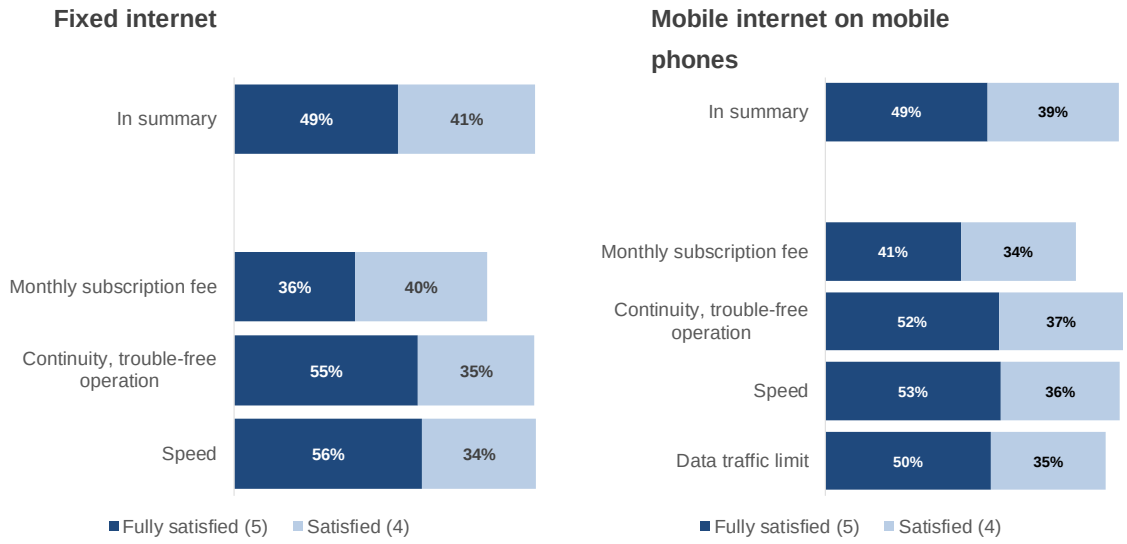


Figure 5: Satisfaction with the internet service

Base: households using the service, Source: NMHH Household Survey, 2024

Only one-fifth of decision-makers in households with fixed internet subscriptions have measured the speed of their home internet connection, and only one-tenth have measured

their mobile internet speed. Subscribers mostly engage in activities requiring higher data traffic at home (e.g. watching movies, moving large files), so it is important for them to have the bandwidth promised by their service provider at home. This is probably why home internet speeds are checked more often than mobile speeds [Figure 6].

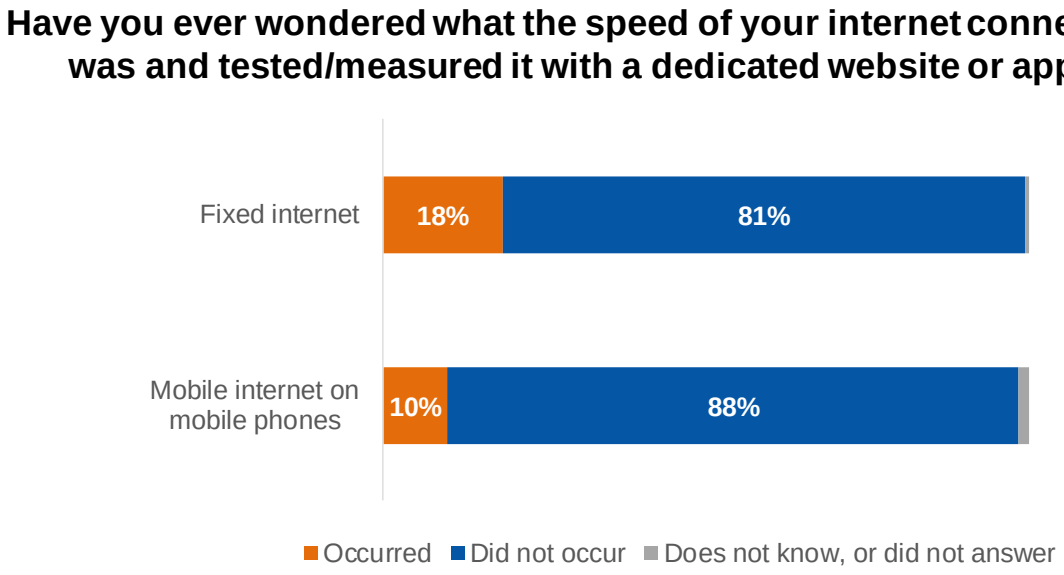


Figure 6: Percentage of users monitoring their internet speed
Base: households using the service, Source: NMHH Household Survey, 2024

Nine-tenths of fixed internet subscribers say that their service providers always or mostly provide the download speeds promised in the subscription [Figure 7]. As very few people check this with a speed meter, we can only say that the vast majority of subscribers feel that the service meets their expectations.

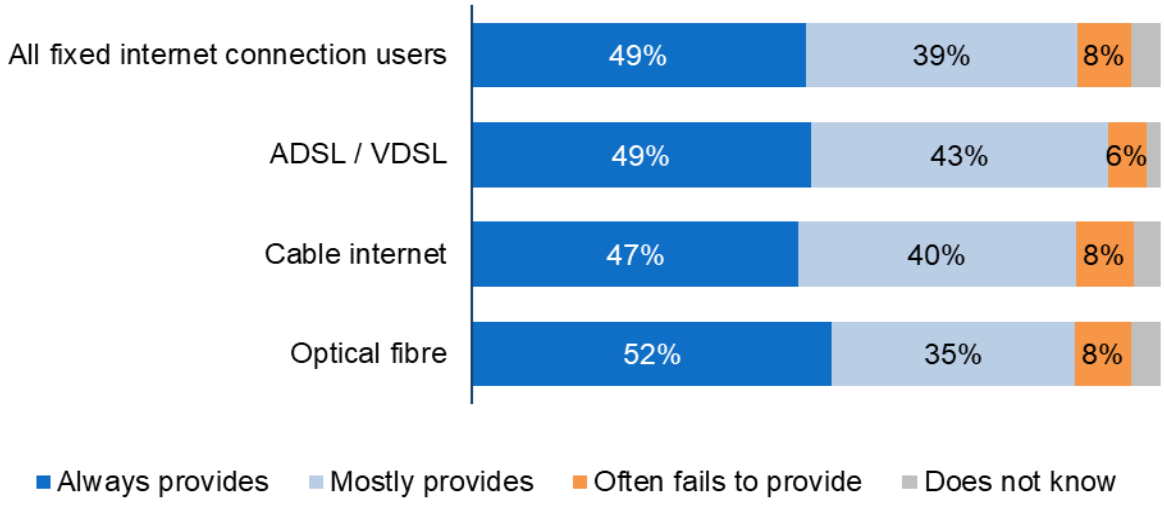


Figure 7: Provision of speed promised by fixed internet service providers
Base: households using the service, Source: NMHH Household Survey, 2024

Despite the above, the survey found that half of subscribers have experienced slow internet speeds when using fixed internet services, and four-tenths of consumers have experienced slow internet speeds when using mobile internet services. One-tenth say that this happens regularly [Figure 8]. Comparing this with the high satisfaction rate for internet speeds, we can conclude that although internet users experience intermittent service interruptions and slowdowns, fortunately this does not reach a level that would lead to a decrease in overall satisfaction.

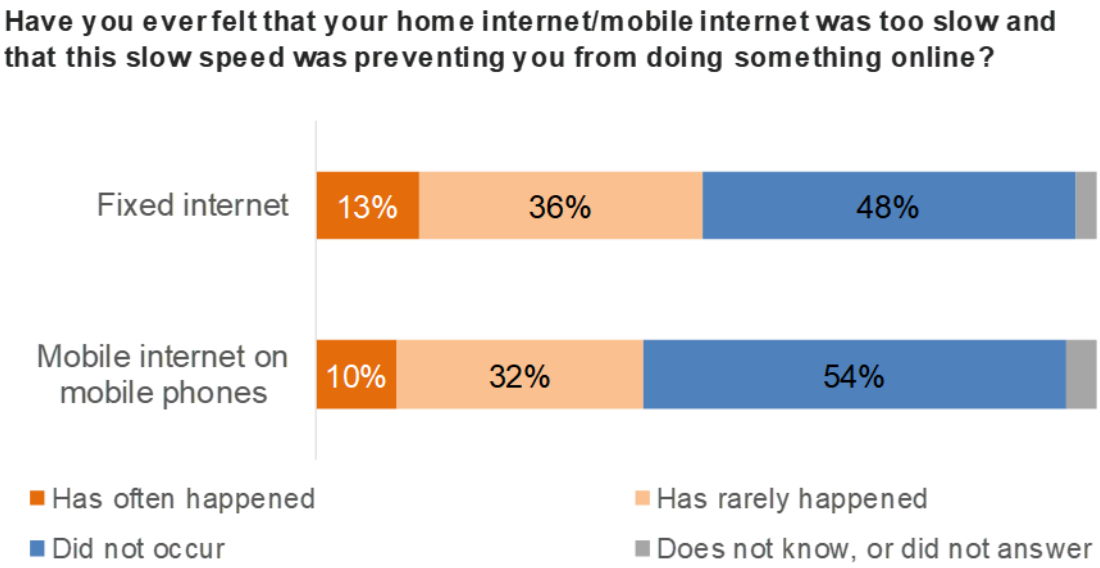
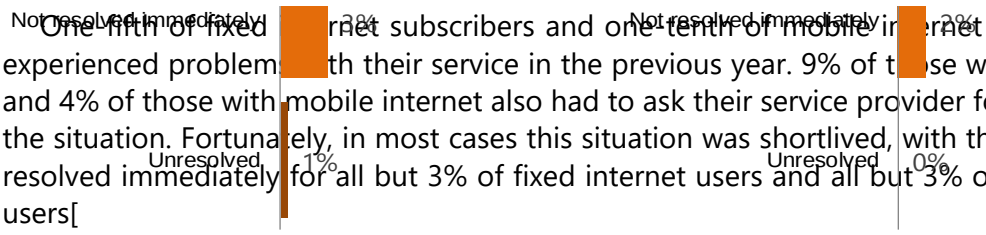


Figure 8: Problem detection for internet access services

Base: households using the service, Source: NMHH Household Survey, 2024



One-fifth of fixed internet subscribers and one-tenth of mobile internet subscribers have experienced problems with their service in the previous year. 9% of those with fixed internet, and 4% of those with mobile internet also had to ask their service provider for help to resolve the situation. Fortunately, in most cases this situation was shortlived, with the problem being resolved immediately for all but 3% of fixed internet users and all but 3% of mobile internet users[

Figure 9].

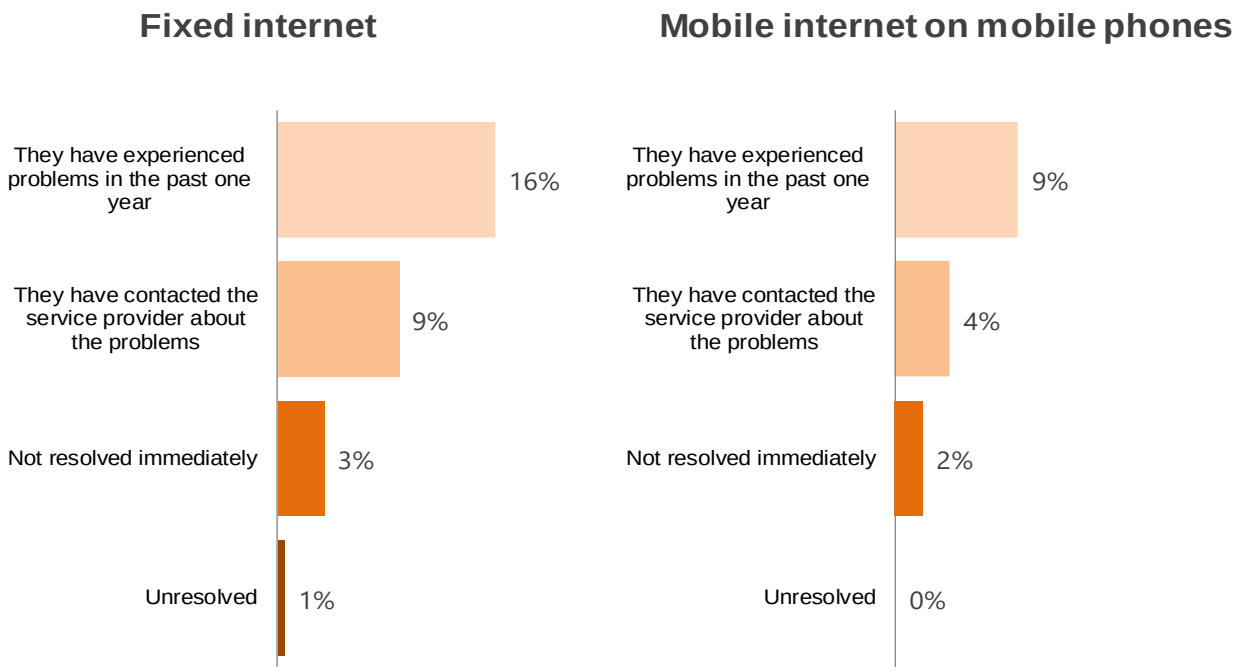


Figure 9: Problems with internet services

Base: households using the service, Source: NMHH Household Survey, 2024