**EU Digital Progress Report — 2017**

*Telecoms chapter*

# HUNGARY

## 1. Competitive environment

| **Coverage** | HU-2015 | HU-2016 | EU-2016 |
|---|---|---|---|
| Fixed broadband coverage (total) | 95% | 95% | 98% |
| Fixed broadband coverage (rural) | 86% | 86% | 93% |
| Fixed NGA coverage (total) | 78% | 81% | 76% |
| Fixed NGA coverage (rural) | 37% | 47% | 40% |
| 4G coverage (average of operators) | no data | 92% | 84% |

*Source: Broadband Coverage Study (IHS and Point Topic). Data as of October 2015 and October 2016.*

### Fixed Broadband market

Although fixed broadband coverage remained at 95% of homes, fast broadband coverage went up to 81% from 78% in 2015, while rural NGA coverage grew considerably by 10 percentage points to 47% (EU average: 40%). In the Hungarian fixed market, there is strong platform competition between xDSL and cable broadband. About two thirds of homes are covered by cable technology providing at least 30 Mbps in most cases. There was significant progress in 2016 on take-up of fixed broadband, and Hungary is now slightly above the EU average.

According to information published by Magyar Telekom, in 2016, 565,000 households were connected or upgraded to a service exceeding 30 Mbit, and by the end of 2016, Magyar Telekom had reached 2,800,000 households with at least 30Mbit connections and could provide a gigabit connection to 700,000 households.

For 2017, Magyar Telekom is planning to reach an additional 170,000 households with 30+ Mbit connections, relying partly on EU funds to achieve this. Both Magyar Telekom and Invitel plan to deploy vectoring in the near future. UPC plans to roll out a fibre-to-the-home (FTTH) network throughout the territory of the numbering area 29, while gradually phasing out the former xDSL technology.

| **Fixed broadband market shares** | HU-2015 | HU-2016 | EU-2016 |
|---|---|---|---|
| Incumbent market share in fixed broadband | 41.9% | 41.3% | 40.7% |
| Technology market shares | | | |
| DSL | 31.1% | 29.2% | 66.8% |
| Cable | 48.0% | 48.8% | 19.1% |
| FTTH/B | 15.5% | 17.3% | 10.7% |
| Other | 5.4% | 4.8% | 3.4% |

*Source: Communications Committee. Data as of July 2015 and July 2016*

The Hungarian fixed telephony market is characterised by the presence of local telephony operators originally created through a geographical division of the former state monopoly area. There are now three companies that remain leading operators in their area, where they are each designated as a significant market power (SMP): Magyar Telekom covers about two thirds of the area formerly covered by the state monopoly, while Invitel covers the remaining third, and UPC covers the area of one city(numbering area 29).

At the same time, the three incumbents' market shares have continued to decrease over the past few years as they face increasing competitive pressure from cable operators, while cable operators are also increasingly competing against each other in urban areas. This increased competition among cable operators contributed to the fact that by 2016, the national regulatory authority (NRA) was reporting changes in market share among cable operators while the total of the incumbents' market shares had not decreased. The five major cable operators (including the incumbents outside their SMP geographical areas) account for the vast majority of cable subscribers, and are further consolidating smaller providers. At the same time, organisations such as the National Broadcasters' Cluster offer services for about 50 smaller cable operators (covering over 140,000 households), enabling them to benefit from economies of scale without giving up their legal independence.

As in previous years, television offers continue to be a major driver of competition, while also driving the incumbents to develop their fibre networks and improve their bundle offers. Television continues to play an important role in the Hungarian telecommunication market. According to the NRA, nearly 90% of all households have a pay TV service and about half of them subscribe to it via a bundled offer. In contrast, two thirds of fixed phone and three quarters of fixed broadband subscriptions are part of a bundle. The reason for this difference between the share of bundles in broadband and those in television is that some technologies cannot be bundled with other services (e.g. digital terrestrial services). When the bundle is available, pay TV is considered a main factor behind the bundling[1].

In recent years, MVM Net, a subsidiary of the Hungarian Electricity Company MVM, has been intensifying its efforts on various segments of the telecommunication market. In 2015, MVM launched wholesale services on the 450 MHz band, with particular focus on M2M communication. In 2016, MVM Net was the first applicant for the new numbering ranges allocated for M2M use, and in 2016 MVM was commissioned to operate parking toll systems.

| **New entrants' DSL subscriptions by type of access (VDSL excluded)** | HU-2015 | HU-2016 | EU-2016 |
|---|---|---|---|
| Own network | - | - | 0.7% |
| Full LLU | 15.5% | 14.7% | 75.3% |
| Shared access | 0.3% | 0.1% | 4.1% |
| Bitstream | 84.3% | 85.2% | 13.4% |
| Resale | - | - | 6.6% |

*Source: Communications Committee. Data as of July 2015 and July 2016*

In 2016, the vast majority (85.2%) of new entrant DSL subscriptions were bitstream lines, while the 14.7% market share of full LLU is clearly below the EU average of 75.3%.

| **Charges of Local Loop Unbundling (monthly average total cost in €)** | HU-2015 | HU-2016 | EU-2016 |
|---|---|---|---|
| Full LLU | 6.6 | 6.6 | 9.2 |
| Shared Access | 2.7 | 2.7 | 2.4 |

[1] http://nmhh.hu/dokumentum/173422/lakossagi_tavkozles_2016_teljes_vegleges.pdf

## Mobile market

In December 2016 there were over 11.8 million mobile subscriptions in Hungary, with a penetration rate reaching 120%[2]. Mobile broadband coverage is above average (4G coverage is 92%, well above the EU average of 84%). By contrast, take-up is the lowest in Europe (43% versus the EU average of 84%). This may be because prices for mobile phone users are considerably higher than in the rest of the EU. While the lowest fixed broadband price (12-30 Mbps or above) is 15.77 EUR/PPP, compared to 21.33 EUR/PPP at EU level[3], other countries in the region often have better prices.

| **Mobile broadband prices** | HU-2015 | HU-2016 | EU-2016 |
|---|---|---|---|
| Least expensive offer for handset (1 GB + 300 calls basket) | 73 | 79 | 30 |
| Least expensive offer for tablet and laptop (5 GB basket) | 23 | 24 | 18 |

*Source: Mobile Broadband Price Study (Van Dijk). Prices expressed in EUR/PPP, VAT included. Data as of February 2015 and February 2016.*

| **Mobile market** | HU-2015 | HU-2016 | EU-2016 |
|---|---|---|---|
| Market share of market leader | - | - | 34% |
| Market share of second largest operator | - | - | 28% |
| Number of MNOs | 3 | 3 | - |
| Number of MVNOs | 1 | 4 | - |
| Market share of MVNO (SIM cards) | - | - | - |

The Hungarian mobile market has a rather stable market structure with three mobile network operators: the incumbent Magyar Telekom's subsidiary, and its competitors, Telenor and Vodafone. Cable operator DIGI, a potential new entrant on the mobile market, acquired further spectrum in 2016 but has not started to offer mobile services so far. Two new mobile virtual network operators (MVNOs) (UPC and Netfone) entered the mobile market in 2015, whereas Tesco Mobile left the market in April 2016.

A major driver behind growing M2M take-up has been the mandatory introduction of online cash registers, which rely on a permanent roaming solution provided by mobile operators.

## 2. Supporting measures for deployment and investment in high-speed networks

### a. Spectrum

| Harmonised band | MHz spectrum assigned[4] | % of the harmonised band assigned |
|---|---|---|
| 700 MHz | 0 | 0% |
| 800 MHz | 60 | 100% |
| 900 MHz | 70 | 100% |

[2] For data provided by the Hungarian Central Statistical Office, please see: http://www.ksh.hu/docs/hun/xftp/gyor/tav/tav1612.pdf

[3] Source: Fixed broadband prices in Europe in 2016 (Empirica). Prices expressed in EUR/PPP, VAT included. Data as of autumn 2016.

[4] Including guard bands.

| | | |
|---|---|---|
| 1500 MHz | 0 | 0% |
| 1800 MHz | 150 | 100% |
| 2000 MHz paired | 90.0 | 75% |
| 2600 MHz | 175 | 92,1% |
| 3400-3600 MHz | 100 | 50% |
| 3600-3800 MHz | 20 | 10% |

Hungary has assigned 65[5]% of the spectrum harmonised at EU level for wireless broadband, slightly below the EU average of 68%. Spectrum is more intensively used in the higher frequency bands.

In 2016, the national regulatory authority, the National Media and Infocommunications Authority (NMHH), published its radio spectrum strategy for 2016-2020. One key goal is meeting the growing demand for mobile broadband services. This is to be achieved by auctioning up to 160 MHz of spectrum available for mobile data traffic, based on market demand. A tender is planned for the 700 MHz DD2 (694-790 MHz) before the date specified in EU legislation (2022). The strategy also includes the sale of the 1452-1492 MHz band for the supplementary downlink (SDL) application; a decision on the utilisation of the 2100 MHz band; sales of the 2300-2400 MHz and 3400-3800 MHz bands; preparation for the release of 5G bands implementing World Radio Cconference (WRC-19) conclusions; a decision on using the 26 GHz band for 5G; and the preparation for renewal of mobile operator licences given their approaching expiry. The plan is for the award procedures to be carried out preferably by 2019,

To carry out this strategy, the NRA initiated in 2016 award procedures for the 3400-3600 MHz and 3600-3800 MHz frequency bands, given that frequency usage rights for the 3400-3600 MHz frequency band were to expire in July 2016, and the rights allowed the entitled parties to operate fixed systems only. As a result, two service providers, Vodafone (2*30 MHz in 3400-3600 MHz band) and the new entrant DIGI (20 MHz in 3600-3800 MHz band) won frequency usage rights in July 2016, entitling them to operate wireless broadband systems.

In order to ensure continuous spectrum for mobile network operators (MNOs), the service providers agreed on the rearrangement of the 900 MHz frequency band until the end of 2015. By 2016, the rearrangement had been implemented accordingly.

### b. EU and national investments in broadband

The development of digital infrastructure is one of the pillars of Hungary's 2014-2020 national infocommunication strategy. This strategy was updated at the end of 2015 with the adoption of the Digital Success Programme and the launch of the Superfast Internet

[5] This percentage slightly differs from the one used in the EDPR country profile following feedback from the authorities concerned and reflected in the above table.

Programme. The Superfast Internet Programme aims to cover the whole country with NGA networks of at least 30 Mbps by the end of 2018. The programme started in 2016 with a mapping exercise to identify the white areas, where NGA is currently not available. To cover some of the white areas, telecom operators are expected to make the full investment on their own. For areas that are not economically viable a State aid scheme has been developed, which will make around €250 million of State aid available for broadband roll-out. The programme is co-funded from the European Structural Funds and by the Hungarian State, except for Budapest and its suburban area, for which only domestic resources will be used. The vast majority of projects under the Superfast Internet Programme will deploy FTTH technology, enabling speeds in line with the gigabit society targets.

To boost demand, the government has launched two initiatives directly affecting retail prices. First, a preferential VAT rate is applied to broadband subscriptions as of January 2017, with possible further reduction for 2018. Second, a 'digital welfare basic tariff' trademark has been created. This targets non-users by offering them a basic broadband package (fixed or mobile) at a 10-15% price discount.

The telecommunication sector in Hungary has experienced extensive taxation and administrative burdens in recent years (notably the 2012 per minute/text message tax, the 2010 special tax on revenue from telecommunications services and the 2013 tax on public utility services (including telecommunication infrastructures)). While the newly constructed NGA and backhaul optical network sections are exempted from infrastructure tax for 5 years, market players report that the various levies on the telecom sector may limit the capabilities of telecom operators to invest

### c. State of transposition of the Broadband Cost Reduction Directive

Following the expiry of the deadline for transposing the Broadband Cost Reduction Directive, the Commission opened infringement proceedings against Hungary for failure to notify transposition measures in March 2016. Since then Hungary has adopted a series of measures to transpose the Directive. In particular, amendments were made to primary legislation such as Act C of 2003 on electronic communication, Act CXL of 2004 on Administrative Procedures, Act CLXXXV of 2010 (the Media Act), Act XXII of 2013 on the Hungarian Office for Energy and Public Utility regulation, as well as to several ministerial and government decrees.

## 3. Regulatory function

The National Media and Infocommunications Authority (NMHH) is a converged media and telecommunications regulator. In 2016, the government carried out a major restructuring of agencies, leading to the dismantling of the National Consumer Protection Authority from 1 January 2017 and the transfer of its tasks to the Ministry of National Development, specifically the State Secretariat for Infocommunication.

The markets included in the 2014 Recommendation on relevant markets are all subject to (at least partial) regulation in Hungary. There is also regulation of two legacy markets from the 2007 recommendations (call origination on fixed network) and of the broadcasting transmission market.

In May 2016, Hungary notified draft measures for markets under the 2007 recommendation**,** i.e. market 1/2007 (access to PSTN for residential and non-residential customers) as well as

markets under the 2003 recommendation, i.e. 3/2003 (local/national call for residential customers); 5/2003 (local/national call for non-residential customers); 4/2003 (international call for residential); and 6/2003 (international call for non-residential). The Commission did not adopt comment on the drafts and NMHH deregulated these markets in its final decisions.

Remedies applicable to NGA and legacy copper networks are similar, with some differences due to network topology and technology. For market 4, the SMP operator has to provide access to ducts or poles or dark fibre in the access network upon request, if access to NGA local loop or terminating segment is not feasible. Obligations are limited to existing network elements and unused capacity. For market 5, local bitstream access and national bitstream access obligations apply to NGA networks, including cable networks. On both markets a backhaul services are available to facilitate the use of the access services.

## 4. Consumer issues

In the first three quarters of 2016, 328 complaints were received by the NRA from subscribers. In other cases the NRA launches proceedings under its own initiative if it detects a systematic problem or unlawful business practice. These proceedings also solve individual complaints and prevent future reoccurrence of the problems that triggered them.

### Number portability

| **Number portability** | | **HU-2015** | **HU-2016** |
|---|---|---|---|
| Fixed | Number of transactions [1] | 23,023 | 72,204 |
| | Transactions as a % of total numbers [1] | 0.8% | 2.4% |
| | Maximum wholesale price [2] | 4 | 4 |
| | Maximum time under regulation (number of working days) [2] | 1 | 1 |
| Mobile | Number of transactions [1] | 86,995 | 74,839 |
| | Transactions as a % of total numbers [1] | 0.8% | 0.7% |
| | Maximum wholesale price [2] | - | - |
| | Maximum time under regulation (number of working days) [2] | 1 | 1 |

*[1] Source: Communications Committee. Data as of January to September 2015 and January to September 2016.*

*[2] Source: Communications Committee. Data as of October 2015 and October 2016*

### Bundles

With bundles playing an increasingly significant role in the Hungarian market, the perception of transparency and clarity of contracts by consumers is increasingly important. The 2015 Eurobarometer survey shows that consumers in Hungary can easily compare bundle offers (73%, above the EU average of 69%). The ratio of positive respondents in Hungary who can easily monitor and keep control of fixed telephone consumption is exactly at the EU average of 71%, while for mobile, the figure of 76% is below the EU average of 78%. On contract information, respondents in Hungary voiced a more positive opinion than the EU average (only 12% were unsatisfied, compared to the EU average of 16%)[6].

[6] Source: Special Eurobarometer 438. October 2015.

**Transparency**

In the light of systematic cases of subscriber identity fraud schemes as well as public security concerns, the Act on Electronic Communication was amended in 2016 to strengthen the requirements on the identification of subscribers to prepaid services.

**Roaming**

From 30 April 2016, the Roaming Regulation (EU) No 531/2012, as amended in 2015, provided for a default reduced transition retail price ('Roam Like At Home+', or 'RLAH+').

In the transitional period running until 14 June 2017, the NRA monitors roaming providers' compliance with EU roaming rules, in accordance with Articles 6e and 6f of Regulation (EU) 2015/2120. Based on the findings of this monitoring, the President or the Office of the NRA may order roaming providers to terminate unlawful conduct or a breach of the official resolution and restore the situation that existed previously, if deemed necessary. According to Sections 48-49 of Act C of 2003, NMHH could impose fines on the operator/managers for breaches of a Laws and Regulations governing electronic communications services

In response to a complaint, the NRA opened administrative proceedings that resulted in an agreement between a roaming provider and a customer after the roaming provider admitted liability for having breached Regulation (EU) 2015/2120. Therefore no penalty was imposed.

On roaming prices, Hungarian consumers are often charged prices above the EEA average. On the basis of price levels from the first quarter of 2016, the average retail Eurotariff price for roaming customers of Hungarian mobile operators was 0.182 EUR/minute for outgoing calls (above the EEA average of 0.112 EUR/minute); 0.049 EUR/minute for incoming calls (nearly double the EEA average 0.026 EUR/minute); and €0.056 per text message (also above the EEA average of €0.047 per text message). The difference is particularly striking in the case of data: in Hungary the price was 0.194 EUR/Mb, the second highest of all Member States and many times higher than the EEA average of 0.047 EUR/Mb.

**Net neutrality**

Article 6 of Regulation (EU) 2015/2120 requires Member States to lay down rules on penalties applicable to infringements of Articles 3, 4 and 5 and take all measures necessary to ensure that they are implemented. Member States have to notify the Commission of their rules and measures by 30 April 2016 and notify the Commission without delay of any subsequent amendment affecting them. In line with Article 6, the Hungarian NRA can impose a wide range of penalties, as provided for in Act C of 2003 on electronic communication. Penalties range from a simple warning to fines of up to 0.5% of the annual revenue of the company concerned.

NMHH Decree 2/2015. (III. 30.) laying down detailed rules for electronic communications subscriber agreements lays down transparency measures to ensure open internet access. The current self-regulatory regime is based on a 2012 NMHH recommendation proposing that major internet service providers commit to producing a unified, comparative service description table setting out the main parameters and traffic management procedures applied in their internet access packages. These transparency tables are available on internet service providers' websites.

In 2016 NMHH carried out investigations of operators practices regarding zero rated services. In the case of some operators' services, NMHH found that not all traffic streams were treated equally and operators discriminated access other services in an unjustified manner. Based on the compliance test's findings, NMHH concluded that end-users' choices were materially reduced, and thus ordered to suspend any offer of zero-rated OTT video services, develop an action plan within 30 days and restore full compliance with the prevailing net neutrality regulations within 150 days, without however imposing penalties. In both cases the decisions have been appealed and the second instance uphold the first instance's decisions.

**Universal service**

An amended decree on universal service was enacted in May 2015 and entered into force by 2016. In Hungary, universal service includes functional internet connection, fixed telephony services, directory enquiry services and directories, as well as public payphones and other public voice telephony access points. A 'functional internet connection' under the universal service is defined as a guaranteed download speed of least 30 kbps and a guaranteed upload speed of at least 8 kbps.

The process to designate a universal service provider was completed in 2014 and the NRA signed a public contract with the single applicant Magyar Telekom to provide a connection to the public telephone network at a fixed location on its previous concession territory. Invitel and UPC Hungary have been designated as universal service providers on the geographical retail markets where they are SMPs. The NRA also signed a public contract with Invitel to provide a telephone directory enquiry service. In the absence of any other offers, Magyar Telekom, Invitel and UPC were designated to provide public pay phones and directory information services in their relevant geographical areas.

**112 including access for disabled end-users to emergency services**

According to the last Communications Committee (COCOM) 112 Implementation Report, calls to the emergency number 112 are answered within 5 seconds in Hungary. At present Hungary is still developing its solution for callers with disabilities. The long awaited new call centres are still able to receive call from users with disabilities, and the Commission is now looking into the legal and factual situation to verify if Hungary has fulfilled its obligation under EU law concerning 112. In addition to Hungarian, the call can be answered in English, German and in some cases in Romanian. In addition to 112, there are three other emergency numbers dedicated to emergency services. According to the latest E-communications household and telecom single market survey, 63% of Hungarians know they can use 112 everywhere in the EU.

## 5. Conclusion

The Hungarian broadband subsidy scheme appears to have ambitious objectives and timing, and its refined structure (involving several calls with varying aid intensity and a focus on backhaul and demand-side measures) should provide a boost for Hungary in meeting the digital agenda for Europe targets. In 2016, Hungary also intensified its policy-making and regulatory efforts to better take account of telecommunication policy considerations, as evidenced by as the national consultation that led to the adoption of the Digital Success Programme. Market players still point to heavy taxation of the sector, which is limiting telecom operators' ability to invest, even though the newly built NGA and backhaul optical network sections are exempt from infrastructure tax for five years.