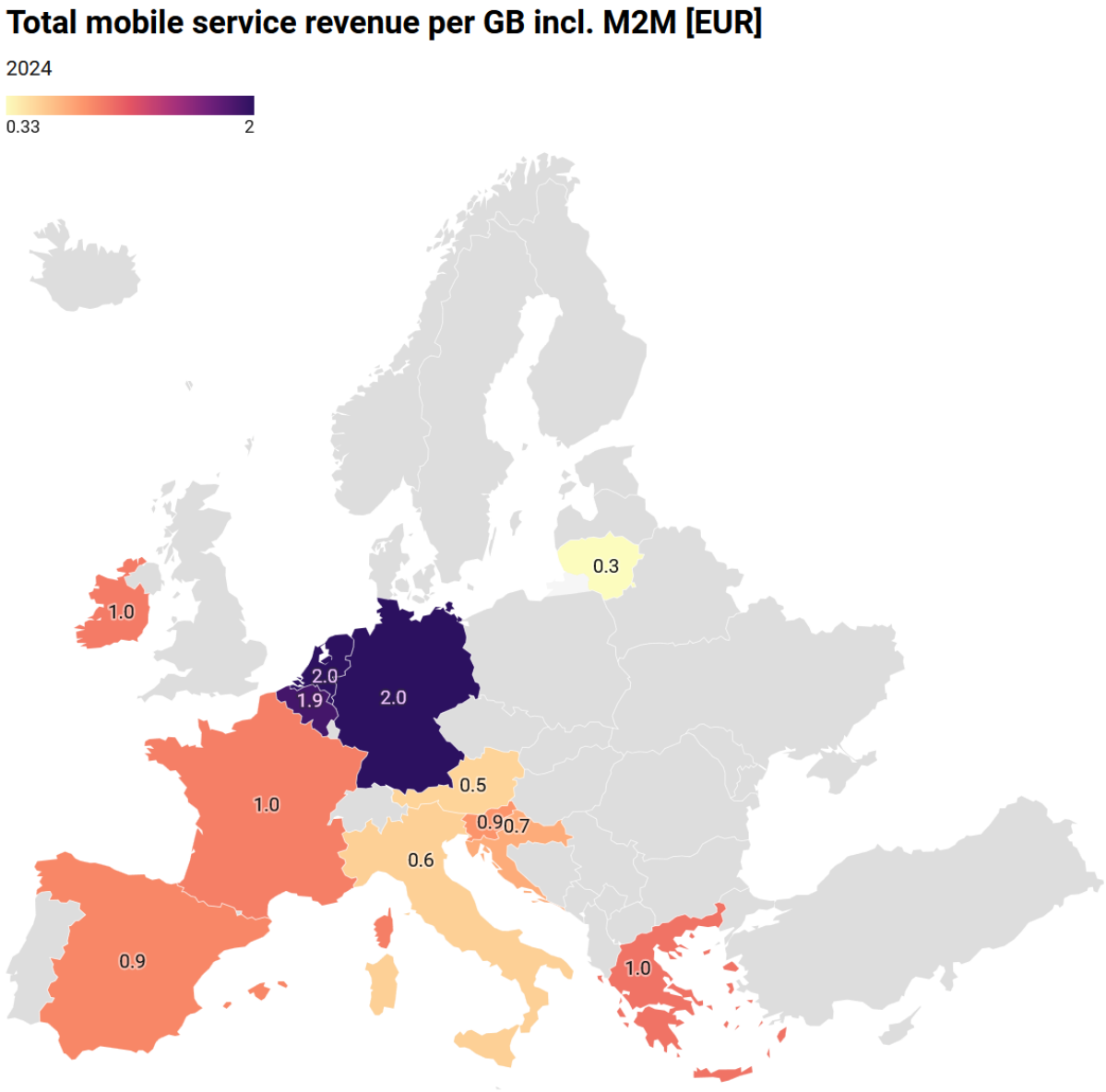
tefficient

Analysis prepared for EETT, Hellenic Telecommunications & Post Commission

Assessment of Greece's mobile usage and revenue in an EU context – 2024



tefficient

Contents

1 Executive summary

This comprehensive analysis, commissioned by the Hellenic Telecommunications & Post Commission (EETT), presents the second edition of a pioneering analysis comparing key mobile industry metrics – focussing on mobile revenues and data usage – across twelve Eurozone markets within the EU, covering the period from 2019 to 2024. The analysis draws upon official statistical reports from the respective national regulatory authorities (NRAs), including EETT and its counterparts.

Unlike studies that emphasise advertised offers or theoretical service baskets, this analysis is grounded in actual usage patterns and revenue data. The selection of peer countries was conducted with care to ensure meaningful comparisons and to minimise potential distortions, such as those arising from currency fluctuations.

Revenue comparisons are carried out both with and without adjustments for comparative price levels. Additionally, to account for the influence of Machine-to-Machine (M2M) communications, relevant metrics are presented both including and excluding M2M data.

Key findings for the Greek mobile market include:

- Mobile Average Revenue Per User (ARPU): Approximately on par with peers, but with a notable upward trend.
- Mobile data usage: Below the median but demonstrating the most significant growth among the group.
- Voice usage: Highest among the peer group, with the fastest growth.
- Total mobile revenue per gigabyte of mobile data: Above the median but showing the steepest decline.
- Voice revenue per mobile voice minute: Close to the peer group median, with the fastest erosion rate.
- Value for money: Greece offers relatively weaker data value compared to some peers, though its position has improved since the first edition. In contrast, Greece performs more strongly in voice services.

In conclusion, Greek mobile subscribers tend to pay a standard monthly fee while consuming relatively less data and significantly more voice minutes. Given that voice minutes are typically offered on a flat-rate basis in today's market, the assessment of value for money should increasingly focus on mobile data, which continues to be monetised primarily on a per-gigabyte basis.

Greece's value-for-money position is no longer among the weakest in the peer group. It has moved away from lower-performing countries such as Belgium, Germany, and the Netherlands, and now aligns more closely with Spain and France. Greece's trajectory remains promising, driven by the fastest growth in both data and voice usage across the peer group.

2 Background

This analysis is commissioned by the Hellenic Telecommunications & Post Commission, EETT, and is the second of its kind with focus on Greece. The pioneering analysis was published by the EETT in March 2024.

There are mobile price benchmarks available globally but the drawback of these is that they compare the currently best available mobile plans sold to consumers online. Due to binding contracts and inertia, most mobile customers are however not on these mobile plans – but on older plans that typically are more expensive. Mobile customers may also pay extra for things like overage data, top-ups, special services and roaming – extras that are not included in the benchmarked monthly prices.

To add to it, such price benchmarks can effectively only assess the pricing on the online *consumer* market. What mobile *business* customers pay is often not public but negotiated directly between the mobile provider and the business in question. Within the consumer market, mobile providers might also have different propositions online than what they e.g. have in their stores or at retailers.

Another weak spot is that the *actual* usage of e.g. mobile data can't be benchmarked – the focus in instead on the maximum usage possible, i.e. the monthly data allowance. Mobile providers today sometimes inflate the monthly allowance to give a sense of better value for money.

To address this, this analysis is instead based on the actual usage of mobile subscribers and the actual revenues that mobile providers make.

The table below compares this analysis to a typical price benchmark.

	This analysis	Price benchmarks
Revenue/pricing	Actual retail revenues derived from mobile users	Best prices of mobile plans or baskets
Extras like top-ups and roaming	Included in actual retail revenues	Typically not included in captured prices
Segments	Consumer and business	Consumer
Channels	All	Typically online
Mobile data usage/allowance	Actual usage	Maximum monthly data allowance

Figure 1. Comparison of this analysis and price benchmarks [source: Tefficient]

As input, this analysis relies on officially reported data from twelve European national regulatory authorities (NRAs) and BEREC members:

- RTR, Austria
- BIPT, Belgium
- HAKOM, Croatia
- ARCEP, France
- Bundesnetzagentur (BNetzA), Germany
- EETT, Greece
- ComReg, Ireland
- AGCOM, Italy
- RRT, Lithuania
- ACM, the Netherlands
- AKOS, Slovenia
- CNMC, Spain

3 Peer group and methodology

Twelve EU countries, all today in the Eurozone, have been selected as the peer group for this analysis:

- Austria (AT)
- Belgium (BE)
- Croatia (HR)
- France (FR)
- Germany (DE)
- Greece (GR)
- Ireland (IE)
- Italy (IT)
- Lithuania (LT)
- Netherlands (NL)
- Slovenia (SI)
- Spain (ES)

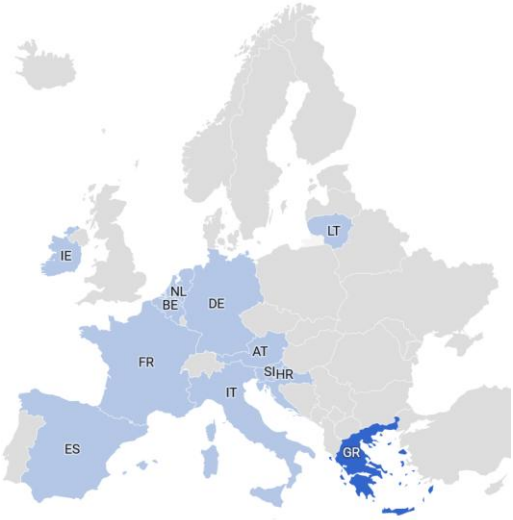


Figure 2. Peer group countries

The rationality for selecting these are:

- They are all EU countries, subject to a harmonised regulatory framework.
- They are all today[1] having the Euro as currency which eliminates the risk that currency fluctuations distort trends.
- The NRAs in these countries report the necessary statistics[2] on e.g. mobile data traffic and mobile service revenues.

[1] Croatia joined the Euro in 2023. For the 2019-2022 period, this analysis uses the average of the daily HRK-EUR exchange rate for each period as reported by ECB. Fluctuation was limited, in part because Croatia, to prepare, joined the ERM II arrangement of multilateral fixed, but adjustable, exchange rates in July 2020 [source]. During the Q1 2019-Q4 2022 non-Euro period in this analysis, the HRK-EUR fluctuation extremes were -1.9% (Q3 2019) and +0.6% (Q2 2020) [source] vs. the official conversion rate of 7.53450 EUR per HRK [source] set in July 2022 when the Council of the European Union approved Croatia's accession to the Eurozone.

The table below compares a few basic competitive and maturity indicators for our twelve peer group markets.

	Number of mobile network operators (MNOs)	Active mobile network sharing	MVNO share of mobile subscription base[3], December 2024	Share of households with 5G coverage from at least one MNO, 2024[4] (of which in 3.4-3.8 GHz band)
Austria (AT)	3	Magenta and 3 in <400 locations	n/a	100% (84%)
Belgium (BE)	**4**	**Yes**: Proximus and Orange	6%	97% (49%)
Croatia (HR)	3	No	n/a	94% (**45%**)
France (FR)	**4**	In some rural areas	n/a	94% (74%)
Germany (DE)	**4**	In some rural areas	[5]**21%**	99% (50%)
Greece (GR)	3	**Yes**: Vodafone and Nova	0%	100% (73%)
Ireland (IE)	3	No	4%	90% (59%)
Italy (IT)	**4**	**Yes**: TIM and Vodafone, WindTre and Iliad (27% of population)	**13%**	99% (93%)
Lithuania (LT)	3	No	2%	100% (75%)
Netherlands (NL)	3	No	**20%**	100% (**99%**)
Slovenia (SI)	**4**	No	6%	97% (93%)
Spain (ES)	**4**	In cities with population <175k: Vodafone and Orange	3%	96% (74%)

Figure 3. Comparison of a few competitive and maturity indicators [source: DESI for 5G coverage, NRAs for MVNO base, Tefficient]

Greece has three mobile network operators (MNOs): Cosmote, Vodafone, and Nova. However, unlike other peer group markets that have three MNOs and little or no network sharing, Greece stands out because Vodafone and Nova extensively share both active and passive network infrastructure, particularly in rural areas.

[2] On a few occasions, NRA data with sufficient breakdown isn't available, or not available for the whole time period. If so, the graphs will leave that country out for the metric or period.
[3] Excluding M2M/IoT.
[4] Source European Commission DESI 2025 (data for 2024), rounded.
[5] Includes service providers.

By the end of 2024, there wasn't any active mobile virtual network operator (**MVNO**) in Greece. In March 2025, the MVNO Orizon however launched its services using Vodafone as host network. In some of the peer group markets – Germany, Italy, and the Netherlands – MVNOs hold a 10% or higher market share of mobile subscriptions which suggest that competition stretches well beyond the facilities-based MNOs.

The final indicator in the table is the **5G household coverage**. Apart from Belgium and, to some extent, Slovenia, the EU reported DESI numbers are generally high with Greece positioned just below the median value of the peer group when it comes to coverage of the speed-defining 3.4-3.8 GHz band.

The table below shows why the remaining eight Eurozone countries in EU27 weren't selected for the peer group this time.

	NRA doesn't report the necessary statistics	Other
Cyprus	× mobile service revenue	
Estonia	× mobile service revenue	
Finland		Considered outlier: Extremely high mobile data usage[6]
Latvia		Considered outlier: Extremely high mobile data usage[7]
Luxembourg		Considered outlier: Low population, small land area
Malta		Considered outlier: Low population, small land area
Portugal	× total mobile service revenue[8]	
Slovakia	× mobile data traffic	

Figure 4. Reason to why other Euroland countries in EU27[9] weren't selected for the peer group this time [source: Tefficient]

By selecting only Eurozone countries among our peer group, we avoided the problem of currency fluctuations that have been vivid in the rest of Europe in the past three years. But although the currency, the Euro (EUR), is the same in all our twelve peer group markets, it does not mean that the purchasing power parity and **price levels** are comparable.

When we in this analysis compare revenues, we will hence make two comparisons:

- In EUR *without* compensation for the general comparative price level
- In EUR *with* compensation for the general comparative price level

The general comparative price levels are defined by Eurostat as:

[6] 45.4 GB per non-M2M subscription per month in 2024, 3.6 times that of Greece.
[7] 48.5 GB per non-M2M subscription per month in 2024, 3.9 times that of Greece.
[8] The mobile share of fixed-mobile converged revenue isn't reported.
[9] The remaining EU27 countries Bulgaria, Czechia, Denmark, Hungary, Poland, Romania, and Sweden are excluded for not being in the Eurozone.

Comparative price levels are the ratio between Purchasing power parities (PPPs) and market exchange rate for each country. PPPs are currency conversion rates that convert economic indicators expressed in national currencies to a common currency, called Purchasing Power Standard (PPS), which equalises the purchasing power of different national currencies and thus allows meaningful comparison. The ratio is shown in relation to the EU average (EU27_2020 = 100). If the index of the comparative price levels shown for a country is higher/lower than 100, the country concerned is relatively expensive/cheap as compared with the EU average.

The compensation in this analysis is done using Eurostat's values, reported per annum.

Figure 5 compares the latest available, 2024, comparative price levels. The values shown are a ratio in relation to the EU27 average – a value of 100 would mean a comparative price level exactly as the EU27 average.

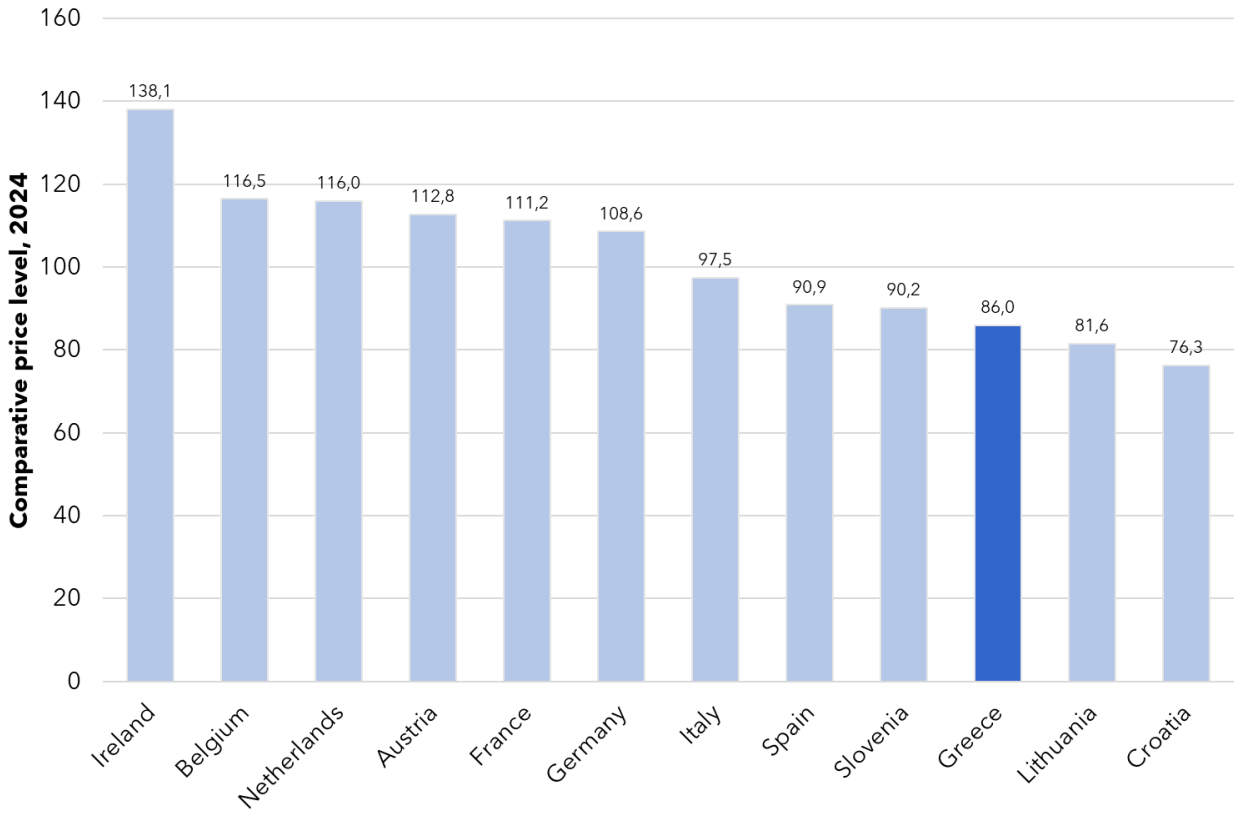


Figure 5. Comparison of the comparative price levels in 2024 for the peer group countries [source: Eurostat, 10 July 2025]

Greece had a comparative price level of 86.0 in 2024, meaning that Greek general prices are lower than the EU27 average of 100. Ireland had the highest comparative price level, 138.1. Two peer group countries had a lower comparative price level than Greece: Lithuania and Croatia.

The logic of compensating for the general comparative price level is to take purchasing power parities into account. In a country with high comparative price level, like Ireland, it could logically be expected

that the mobile revenues would be high – since the purchasing power parity, and hence the general comparative price level, are high.

In contrast, in a country with low comparative price level, like Croatia, it could logically be expected that the mobile revenues would be low – since the purchasing power parity, and hence the comparative price level, are low.

The comparative price level is calculated on a generic basket of goods and services in a harmonised way across EU countries – but should still be regarded as indicative. Since we in this analysis always make comparisons both with and without compensation for the comparative price level, the reader can easily see what impact the adjustment has.

When interpreting Greece's outcome, the analysis most often refers to the median value among the peer group. Alternatively, averages could have been calculated, but since country outliers with very high or very low values would impact an average value significantly, we have selected the median as the baseline of this analysis.

Finally, a specific note on M2M (Machine-to-Machine) subscriptions, sometimes referred to as IoT (Internet of Things) subscriptions. The global proliferation of M2M has led to rapid growth in the subscription base, with some mobile operators now having their number of M2M subscriptions exceeding their number of 'human' subscriptions[10], while others have very few.

A complicating factor is that M2M subscriptions are often registered in one country but used elsewhere – for example, on a shipping container or a freight wagon travelling internationally.

As a result, including M2M subscriptions in metrics such as average data usage or average revenue per user (ARPU) can be misleading, since M2M subscriptions typically have much lower data consumption and ARPU compared to human subscriptions.

To address this, our analysis presents both scenarios: One that includes M2M subscriptions and one that excludes them, allowing readers to make their own comparisons based on their analytical needs.

[10] Subscriptions with voice and without voice, so-called data-only, are both included as 'human' (excluding-M2M) subscriptions in this analysis. A usage analysis of data-only is done in Figure 16.

4 Observed data issues and assumptions

4.1 Reporting of different NRAs has different frequency

In an ideal world, the reporting of official telecommunication statistics would be synchronised, but the reality is that the reporting frequency is different. The table below shows how frequently reporting happens – once a year (1), twice a year (2) or every quarter (4).

	Reporting frequency per year, subscriptions and traffic (usage)	Reporting frequency per year, revenue
Austria (AT)	4	4
Belgium (BE)	1	1
Croatia (HR)	4	4
France (FR)	4	4
Germany (DE)	1	1
Greece (GR)	2	2
Ireland (IE)	4	4
Italy (IT)	[11]4	1
Lithuania (LT)	4	4
Netherlands (NL)	4	4
Slovenia (SI)	4	1
Spain (ES)	4	4

Figure 6. Comparison of the reporting frequency of NRA statistics for the peer group countries [source: Tefficient]

This second edition of the analysis has been timed so that for all countries values for **full years** (2019 to 2024) have been possible to use.

[11] Voice traffic is only reported annually, though.

4.2 Conversion between megabyte, gigabyte, terabyte, and petabyte

When reporting mobile data traffic, regulators use different magnitudes of byte. Greece's EETT e.g. states the total mobile data traffic in megabyte (MB) whereas Ireland's Comreg uses gigabyte (GB), France's Arcep terabyte (TB), and Lithuania's RRT petabyte (PB). In a report like this, there is a need to convert traffic volumes into a common unit, but the issue is that e.g. a gigabyte might not be defined in the same way by all regulators.

There are also cases like Germany's BnetzA who reports mobile data traffic in "million gigabyte" (as opposed to petabyte).

Originally, since byte has a binary base, the conversion between e.g. megabyte and gigabyte wasn't 1000 (10^3) like the prefix suggests but 1024 (2^{10}). To distinguish between these two cases, the International Electrotechnical Commission (IEC) in 1998 published a standard stating that a gigabyte equals 1000^3 bytes and that 1024^3 bytes would be called a *gibibyte*. This definition has since been adopted by the IEEE, EU, NIST, and ISO.

As the use of 1000 is a standard, we have, when necessary, used the 1000 conversion between e.g. megabyte and gigabyte. There is a risk that not every regulator (and operator) follows this definition. Even if so, we believe that this is an acceptable error as there is anyhow a need to make assumptions about the M2M data traffic, see section 4.3 below, and a need to approximate the average number of subscriptions, see footnote 14.

4.3 M2M data traffic can't be excluded from the total mobile data traffic in all countries

Among our peer group, only two national regulatory authorities (NRAs) report the M2M (sometimes referred to as IoT) data traffic: Greece and Austria[12]. Belgium did it previously but stopped it from 2021. At present, the reported Belgian data traffic excludes M2M data traffic.

The remaining nine countries – Croatia, Germany, France, Ireland, Italy, Lithuania, the Netherlands, Slovenia, and Spain – are not reporting M2M data traffic but it is included in the reported total. For these countries, the M2M data traffic could obviously not be excluded, and the calculated average mobile data usage per non-M2M subscription might hence be slightly overstated.

The error is likely small, though. If using Greece's figures for 2024, the average mobile data usage per non-M2M subscription was 12.46 GB per month when excluding the M2M data traffic. If not excluding it, it would be 12.49 GB per month, an exaggeration of just 0.3%. The other country among the peer group that reports M2M traffic is Austria. With its high mobile data usage, the exaggeration there would be even less: 0.03% in 2024.

This is not an issue when calculating the mobile data usage per any subscription, including M2M.

[12] Since the second half of 2022.

4.4 M2M revenue can't be excluded from the total mobile revenue in all countries

Among our peer group, five NRAs report the M2M revenue: Greece, Belgium, France, Ireland, and Lithuania.

The remaining seven countries – Austria, Croatia, Germany, Italy, the Netherlands, Slovenia, and Spain – are not reporting M2M revenue. For these countries, the M2M revenue could obviously not be excluded, and the calculated revenue per non-M2M subscription might hence be slightly overstated.

The error is likely small, though. If using Greece's figures for 2024, the average revenue per non-M2M subscription was 12.67 EUR per month when excluding the M2M revenue. If not excluding it, it would be 12.79 EUR per month, an exaggeration of 0.9%. The exaggeration in Belgium would be 1.9%, for France 1.1%, for Ireland 1.8% and for Lithuania 1.1%.

This is not an issue when calculating the revenue per any subscription, including M2M.

4.5 Mobile voice revenue not reported for all countries – and is it comparable?

Among our peer group, six NRAs report mobile voice revenue on top of the voice traffic in minutes: Greece, Croatia, Ireland, Italy, Lithuania, and Spain.

Five NRAs report the voice traffic only: Austria, Belgium, Germany, France, and the Netherlands. Slovenia does not report either of the two.

This analysis contains two voice related metrics: The average voice usage per voice subscription and the voice revenue per minute. The latter will only have values from the mentioned six countries. That is already a limited peer group, but in addition we'd like to warn about reading too much into it.

Here's why: Most mobile subscriptions – at least in the postpaid domain – are in Europe today sold with an unlimited number of voice minutes (and SMSs[13]). Most often, the price-determining parameter is instead **how much mobile data** a subscription includes. Due to this, no mobile provider can today with certainty say how much of the total mobile revenue that originates from voice. The end-user most often pays a given amount per month regardless of the number of voice minutes consumed. Mobile providers can at best *estimate* what share of the total mobile revenue that comes from voice. Since the NRA statistics are dependent on the data quality of the reporting mobile providers, it's a risk that the mobile voice revenue is not reported in a comparable way between countries.

Another factor that can disturb the comparability of the voice revenue per minute metric is that much voice usage today takes place in various communication apps like e.g. WhatsApp, Messenger, and Teams. In some European markets, the usage is believed to be significant, but it's not part of the voice minutes reported by NRAs. High usage of voice apps – rather than traditional telephony – could lead to that the calculated voice revenue per minute becomes artificially high.

[13] For similar reasons as with voice, i.e. most often not monetised per unit (SMS/MMS), difficulty for providers to say how much of the revenue originates from SMS/MMS, and a very high use of messaging apps rather than SMS/MMS in certain countries, this analysis does not contain a comparison of SMS/MMS usage or revenue.

5 Mobile ARPU

5.1 Unadjusted

5.1.1 Excluding M2M

This analysis uses reported official data from the respective NRAs to calculate the average service revenue per mobile subscription[14] per month – normally referred to as **ARPU** within the industry. Figure 7 below shows the ARPU in EUR including all 'human' mobile subscriptions – regular and data-only (mbb) – but excluding M2M subscriptions.

Both postpaid and prepaid subscriptions are included from both consumer and business segments. Only active prepaid subscriptions are included when reported. In Greece's case, an active prepaid subscription has generated retail or wholesale revenue in the last quarter. Other NRAs could have slightly different definitions.

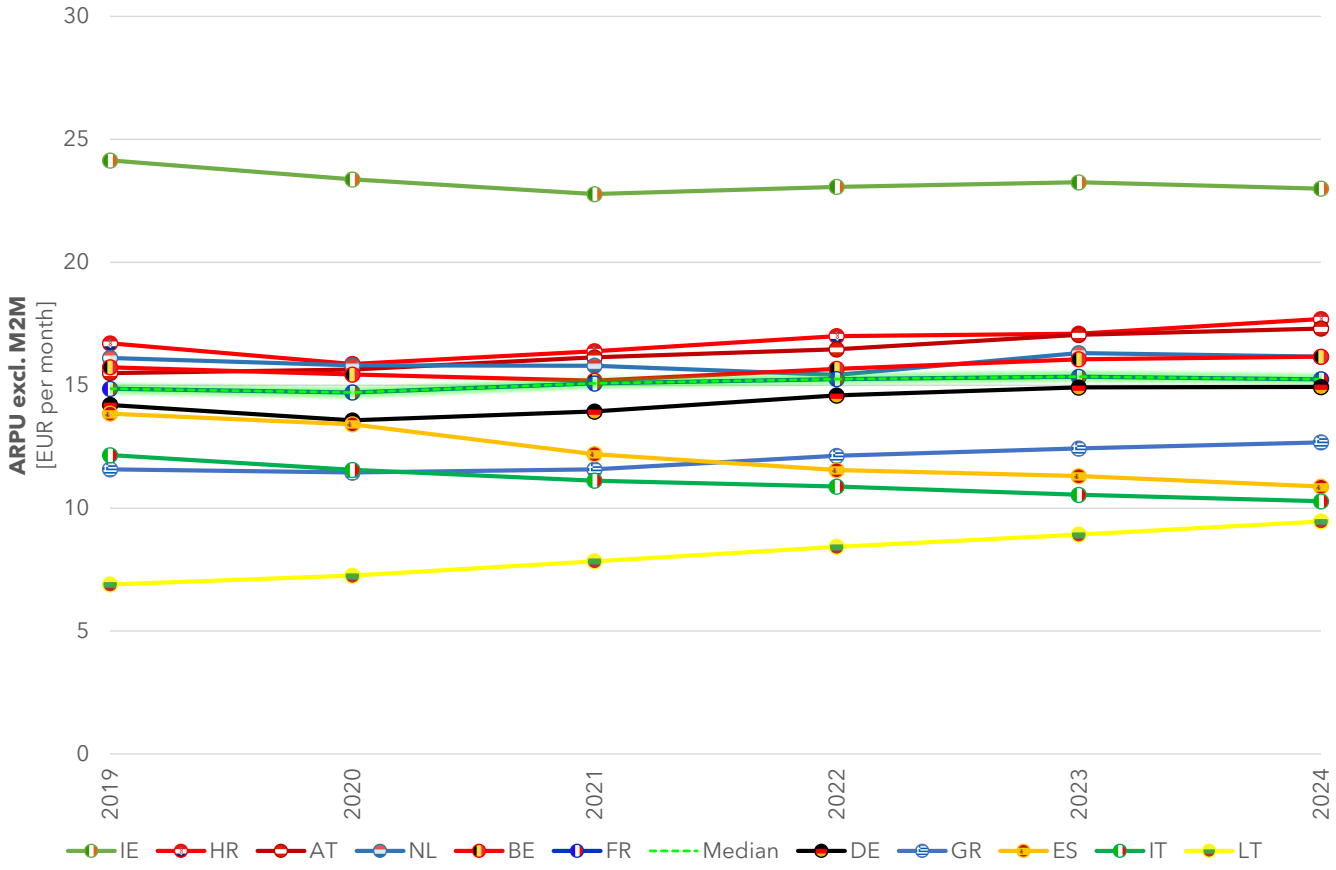


Figure 7. Comparison of mobile ARPU excl. M2M [source data: respective NRA, compiled by Tefficient]

[14] Average number of subscriptions in the period calculated as AVERAGE(number of subscriptions at the start of the period; number of subscriptions at the end of the period).

We have yet to compare the ARPU to the usage levels – see section 10 and 11 – but first point to that **Ireland** always have had the highest ARPU, 23.0 EUR in 2024, when excluding M2M. Since Ireland has the highest comparative price level, see Figure 5, that position is perhaps not surprising. But that it is Croatia that features the second highest ARPU, 17.7 EUR, is much more of a surprise as Croatia has the lowest comparative price level in Figure 5. When we later adjust for that, it will elevate Croatia.

The ARPU of **Greece** was 12.7 EUR in 2024 which is below the median value of 15.2 EUR.

To compare the long-term trends, we have selected to calculate the compound annual growth rate (CAGR) from 2019 to 2024.

Mobile ARPU excl. M2M	AT	BE	HR	FR	DE	GR	IE	IT	LT	NL	SI	ES	Me-dian
CAGR 2019-2024	+2%	+1%	+1%	+1%	+1%	+2%	-1%	-3%	+7%	0%	n/a	-5%	+1%

Figure 8. Comparison of the CAGR for mobile ARPU excl. M2M 2019-2024 [source data: respective NRA, compiled by Tefficient]

Since Slovenia does not report its M2M subscription base, it's not possible to calculate metrics excluding M2M.

Greece is among the 7 countries (of 11) that had a positive 2019-2024 CAGR in its ARPU. **Lithuania** has had the best ARPU development, +7%, whereas **Spain** has had the worst, -5%.

Greece's revenue per mobile subscription excluding M2M is, before compensation for the comparative price level, below the median.

Greece had a positive CAGR in the ARPU – only Austria and Lithuania had as fast or faster growth.

5.1.2 Including M2M

Does the picture change when we include also M2M subscriptions? In some countries, the M2M base grows very quickly, and an associated problem is that M2M subscriptions might well be registered in one country but used somewhere else in the world, e.g. sitting on a shipping container or a cargo wagon.

Figure 9 below shows the ARPU in EUR including *all* mobile subscriptions – regular, data-only (mbb) and M2M subscriptions. It looks quite different compared to Figure 7.

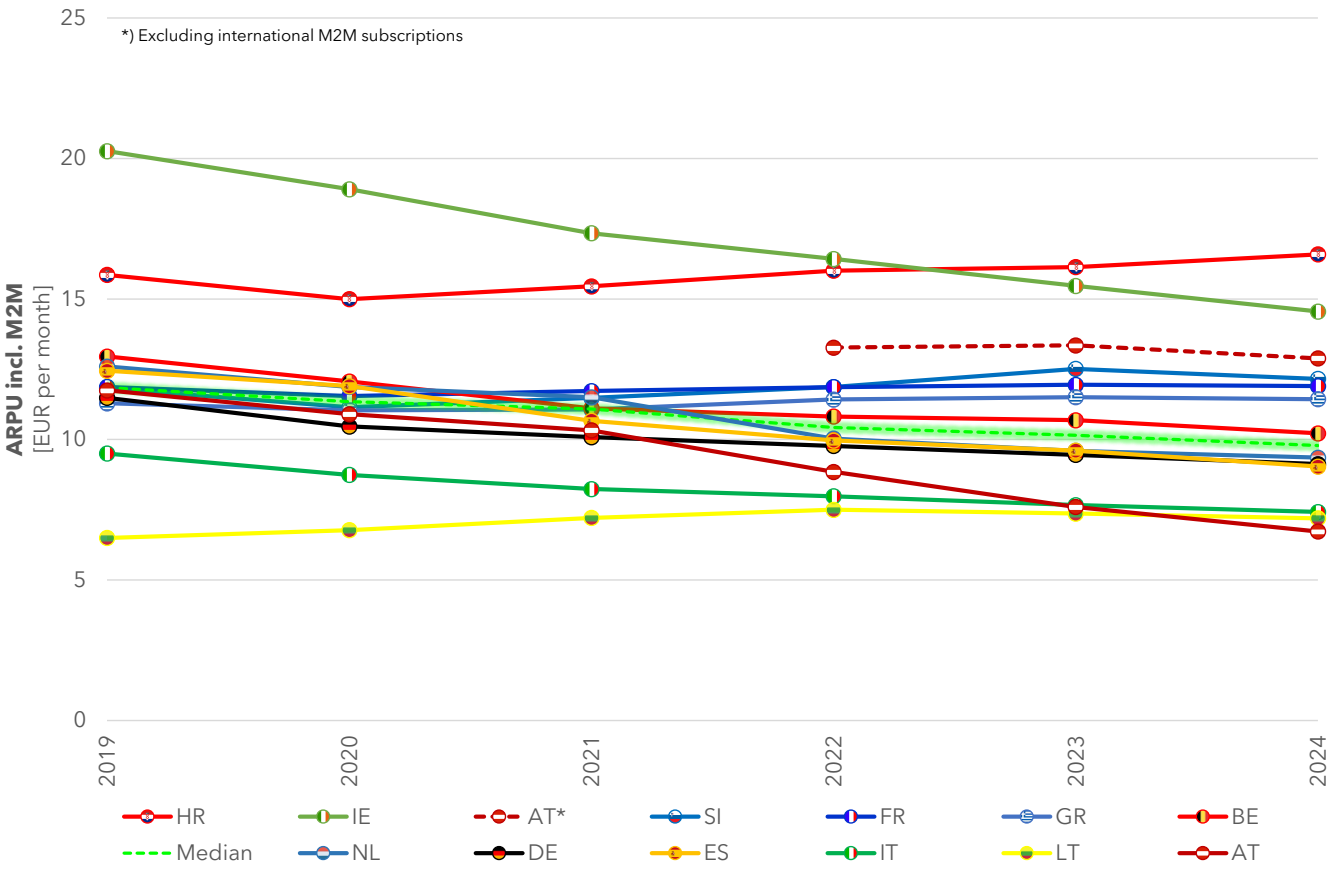


Figure 9. Comparison of mobile ARPU incl. M2M [source data: respective NRA, compiled by Tefficient]

When including M2M, it's **Croatia** that leads in ARPU with 16.6 EUR in 2024. This is surprising, especially given that its Croatia that has the lowest overall comparative price level, see Figure 5. When we later adjust for that, it will elevate Croatia further.

Ireland has high ARPU level too, but its fast growth in M2M subscriptions means that the Irish ARPU has fallen quickly. Also **Austria** has experienced fast growth in its M2M subscriptions base and if including all M2M subscriptions, Austria's ARPU was the lowest in 2024, just 6.7 EUR. Since many international M2M SIMs are homebased in Austria, the local NRA, RTR, has since 2022 started to break out how many of these that were used in Austria. The upper, AT*, dotted line starting in 2022 shows the ARPU if excluding those international M2M SIMs. Calculated that way, the Austrian ARPU was 12.9 EUR in 2024.

The ARPU of **Greece** was 11.4 EUR in 2024 which is higher than the median[15].

The growth in M2M subscription bases makes the CAGR look worse compared to when excluding M2M.

[15] For Austria, the value excluding international M2M subscriptions (AT*) is used in the median from 2022 throughout this analysis. In 2019 to 2022, since the AT* values aren't available, the AT values (including international M2M subscriptions) have to be used as input to the median. This applies only to the graphs including M2M.

Mobile ARPU incl. M2M	AT	BE	HR	FR	DE	GR	IE	IT	LT	NL	SI	ES	Median
CAGR 2019-2024	-11%	-5%	+1%	0%	-4%	0%	-6%	-5%	+2%	-6%	+1%	-6%	-5%

Figure 10. Comparison of the CAGR for mobile ARPU incl. M2M 2019-2024 [source data: respective NRA, compiled by Tefficient]

Of the twelve countries, only three – **Lithuania, Croatia and Slovenia** – had growth in the ARPU when including M2M. **Greece** had 0%, still higher than the median.

Greece's revenue per mobile subscription including M2M is, before compensation for the comparative price level, above the median.

Greece had 0% in CAGR in the ARPU during 2019 to 2024 – only Croatia, France, Lithuania, and Slovenia had as fast or faster growth.

5.2 Adjusted to the comparative price level of Greece

5.2.1 Excluding M2M

Let's now adjust for the comparative overall price level as described in section 3. But before looking at the outcome, let's show how the adjustments have been made:

How the price level adjustments were calculated

Figure 5 shows that the comparative price level in Austria, relative to EU27's 100, was 112.8 in 2024. The comparative price level in Greece was 86.0. When we adjust Austria to the comparative price level of Greece, we first divide 112.8 with 86.0 and get a quota of 1.31. In other words, the comparative price level of Austria is 1.31 times that of Greece. To adjust an Austrian mobile revenue value to the overall comparative price level of Greece, we then divide with 1.31.

	AT	BE	HR	FR	DE	GR	IE	IT	LT	NL	SI	ES
Divider to Greek price level	1.31	1.35	0.89	1.29	1.26	1.00	1.61	1.13	0.95	1.35	1.05	1.06

Figure 11. Divider to Greek comparative price level, 2024 [source data: Eurostat, compiled by Tefficient]

The table shows the dividers for 2024. Previous years have slightly different values based on Eurostat's annual revision.

Figure 12 below shows the outcome when differences in the comparative price levels – relative to Greece's level – have been applied to Figure 7.

The lines of the countries with a divider smaller than 1, i.e. Croatia and Lithuania, will move upwards after the adjustment whereas the countries with a divider larger than 1 will move downwards. Greece's line will not move at all as we are adjusting the other countries to the level of Greece.

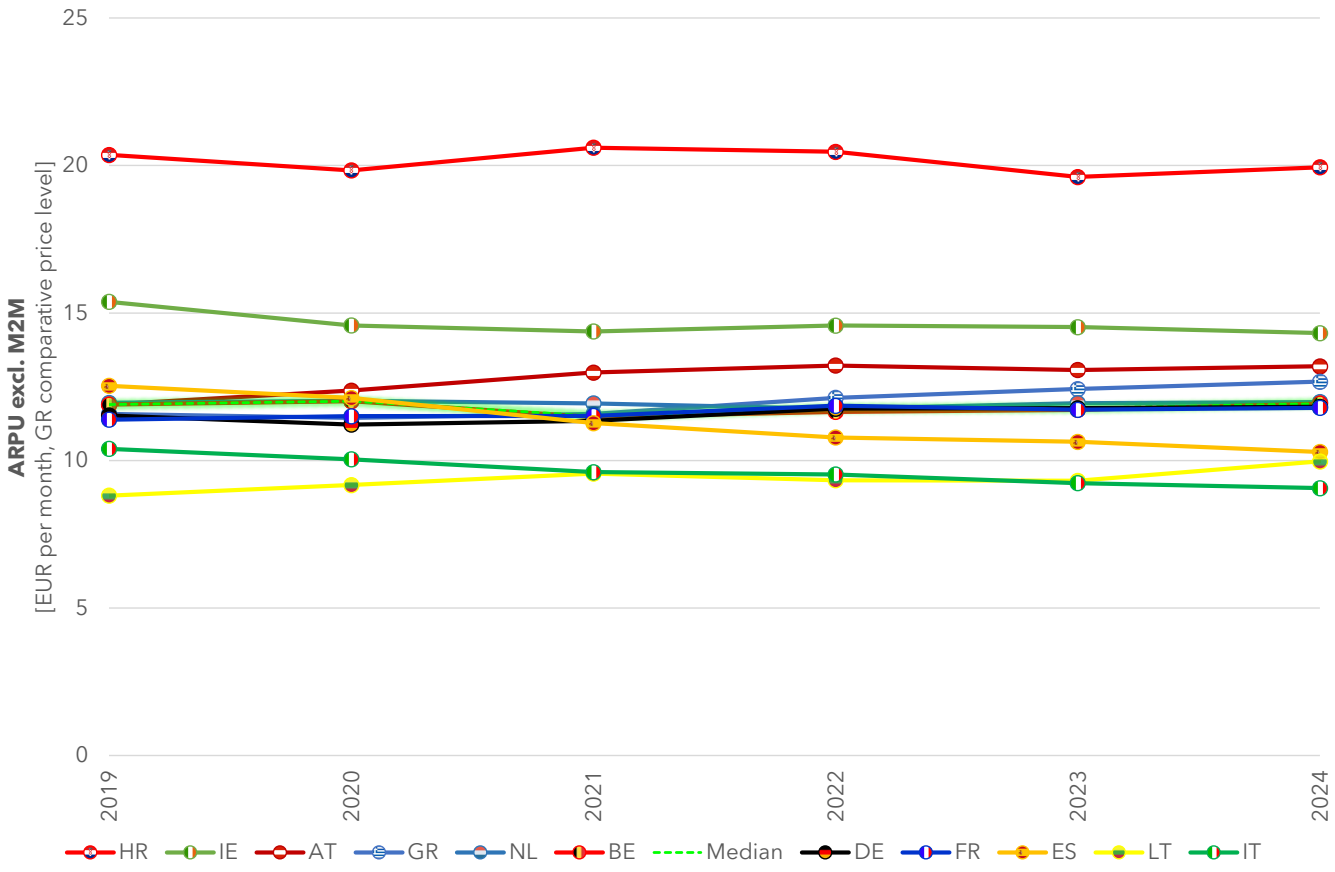


Figure 12. Comparison of mobile ARPU excl. M2M, adjusted for comparative price level [source data: respective NRA, Eurostat, compiled by Tefficient].

After adjustment to the comparative price level of Greece, **Croatia** got the highest ARPU whereas **Ireland**, with its high comparative price level, fell significantly compared to Figure 7.

The ARPU of **Greece** was 12.7 EUR in 2024 which is slightly higher than the median of 11.9 EUR.

We do not repeat the CAGR calculations for the adjusted case as it would be affected by Eurostat's annually revised figures on comparative price level. We hence repeat the conclusion on CAGR from the unadjusted case.

Greece's revenue per mobile subscription excluding M2M is, after compensation for the comparative price level, slightly higher than the median.

Greece had a positive CAGR in the ARPU – only Austria and Lithuania had as fast or faster growth.

5.2.2 Including M2M

Figure 13 below shows the outcome when differences in the comparative price levels – relative to Greece's level – have been applied to Figure 9.

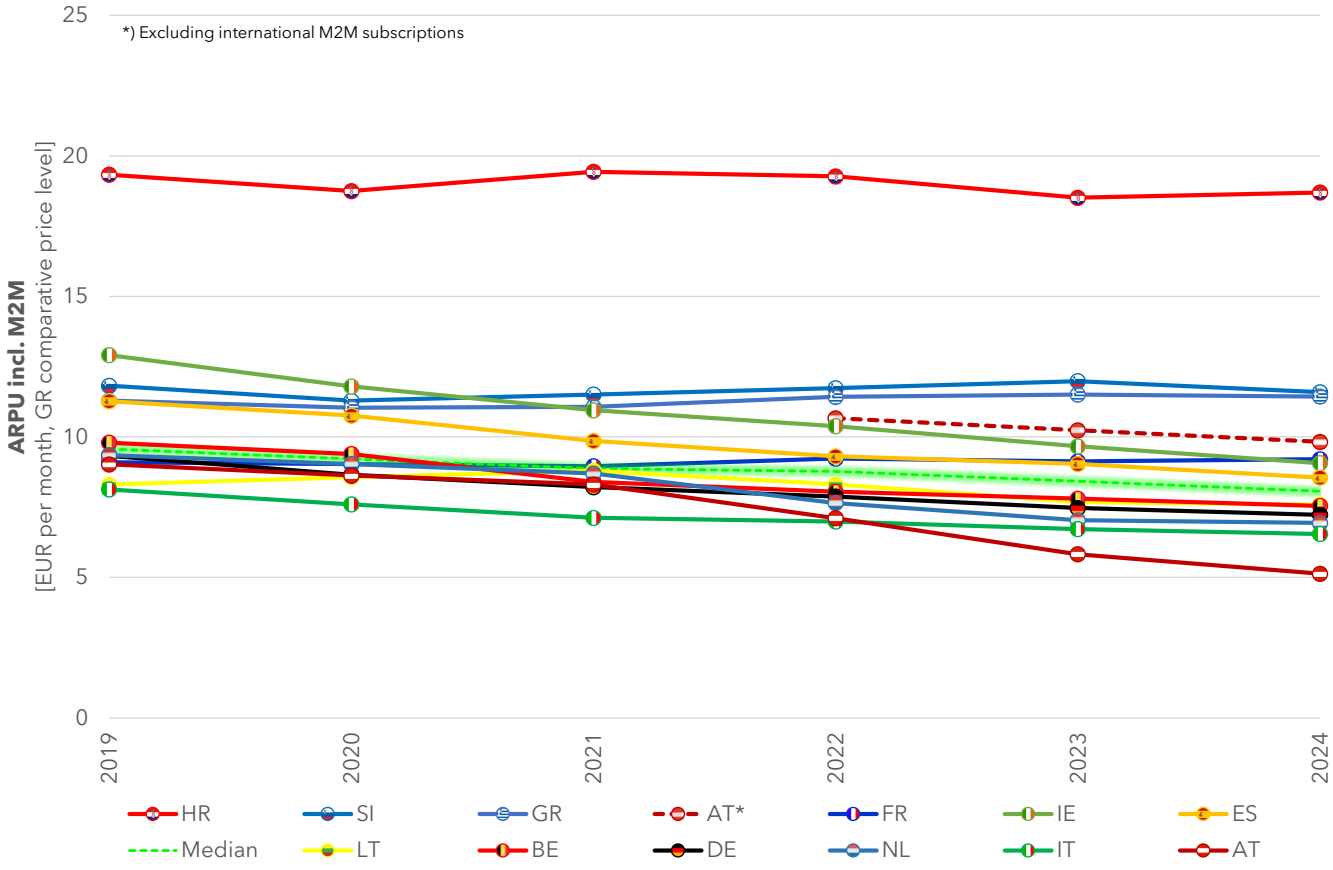


Figure 13. Comparison of mobile ARPU incl. M2M, adjusted for comparative price level [source data: respective NRA, Eurostat, compiled by Tefficient]

As predicted, the adjustment elevated **Croatia**'s line significantly and its lead in ARPU is now much higher than in Figure 9.

The ARPU of **Greece** was 11.4 EUR in 2024 which is higher than the median.

Also here, we do not repeat the CAGR calculations for the adjusted case as it would be affected by Eurostat's annually revised figures on comparative price level. We hence repeat the conclusion on CAGR from the unadjusted case.

Greece's revenue per mobile subscription including M2M is, after compensation for the comparative price level, above the median.

Greece had 0% in CAGR in the ARPU during 2019 to 2024 – only Croatia, France, Lithuania, and Slovenia had as fast or faster growth.

6 Mobile data usage per subscription

6.1 Excluding M2M

We have just concluded our comparison of mobile ARPU and seen significant differences between our peer group countries. Let's now start assessing what mobile users consume for that ARPU by comparing the **average mobile data usage per subscription per month**. As mentioned in section 4.5, the price of most mobile contracts in Europe are today essentially defined by the amount of inclusive data.

The differences in mobile data usage are substantial, see Figure 14.

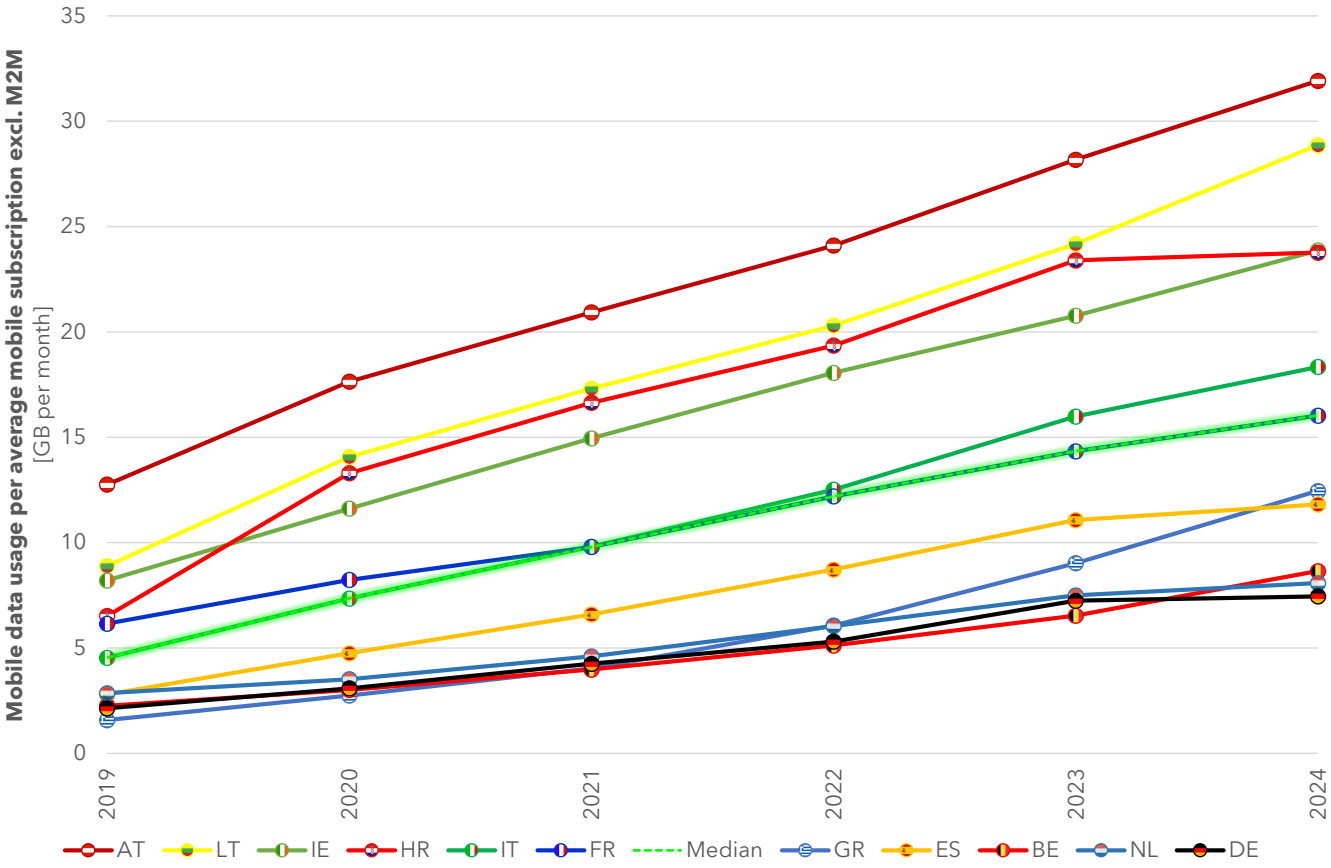


Figure 14. Comparison of the average monthly mobile data usage per subscription excl. M2M [source data: respective NRA, compiled by Tefficient]

Throughout the comparison period, **Austria** had the highest mobile data usage among the peer group. In 2024, it was 31.9 GB per non-M2M subscription per month. **Lithuania** had the second highest usage, 28.9 GB per month, followed by **Ireland** and **Croatia** with 23.9 GB and 23.8 GB respectively.

The usage level of **Greece** is lower, 12.5 GB per month in 2024 which is below the median. Until 2020, Greece had the lowest usage among the peer group, but has since overtaken Belgium, Germany, the Netherlands, and Spain.

Is this growth reflected in the compound annual growth rate (CAGR) from 2019 to 2024?

Mobile data usage excl. M2M	AT	BE	HR	FR	DE	GR	IE	IT	LT	NL	SI	ES	Me-dian
CAGR 2019-2024	+20%	+31%	+30%	+21%	+28%	+51%	+24%	+32%	+27%	+23%	n/a	+33%	+28%

Figure 15. Comparison of the CAGR for mobile data usage excl. M2M 2019-2024 [source data: respective NRA, compiled by Tefficient]

All countries[16] have experienced strong growth in the mobile data usage during 2019-2024, but it is **Greece** that had the fastest growth, **51%**. Albeit from the peer group's lowest level in 2019, but still.

Greece's mobile data usage per subscription excluding M2M is below the median.

Greece had the fastest CAGR in the mobile data usage.

One driver for high average mobile data usage is **data-only** (or mbb) subscriptions. These SIMs are typically sitting in e.g. routers, mobile hotspots, PCs, or tablets. Since they might serve a whole household with Internet – or data-hungry large screen devices as PCs and tablets – the average mobile data usage of these data-only subscriptions is typically much higher than for the voice-also subscriptions mostly used in smartphones.

Six of our peer group markets separate out the data-only traffic and the data-only subscriptions in their reporting: Austria, Belgium[17], France, Greece, Ireland, and Lithuania. For these, we can calculate the average mobile data usage per data-only subscription, see Figure 16.

[16] Since Slovenia does not report its M2M subscription base, it's not possible to calculate metrics excluding M2M.

[17] The Belgian NRA stopped reporting data-only subscriptions in 2024.

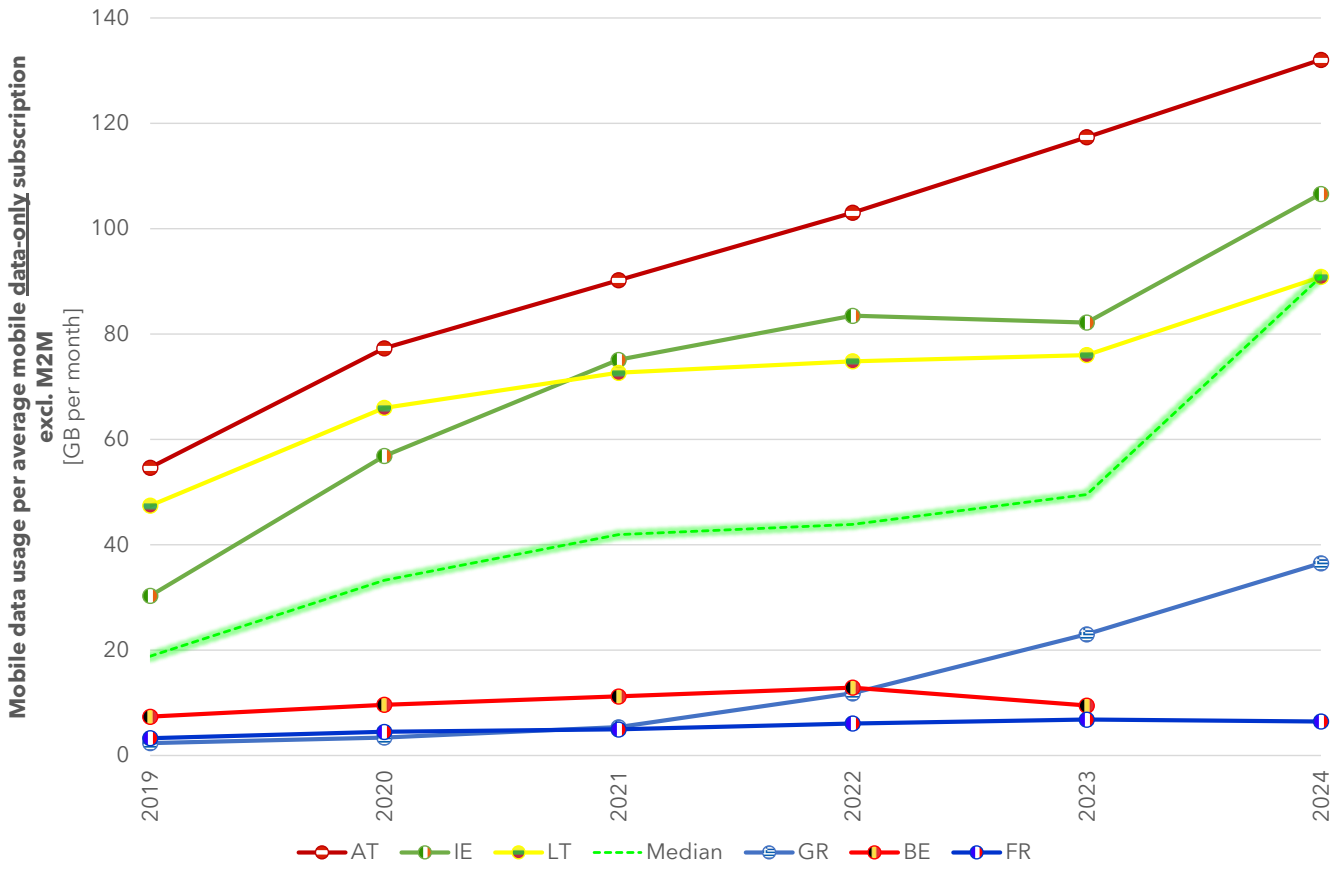


Figure 16. Comparison of the average monthly mobile data usage per data-only subscription excl. M2M [source data: respective NRA, compiled by Tefficient]

Austria's average data-only subscription consumed **132.1 GB** per month in 2024. The overall usage per any subscription, see Figure 14, was 31.9 GB. Although data-only subscriptions only represented 17% of the non-M2M subscriptions in Austria in December 2024, these data-only subscriptions have a major impact on the overall usage.

Lithuania and **Ireland** also have high average usage per data-only subscription. When it comes to overall usage, see Figure 14, Lithuania is ranked as number 2 and Ireland as number 3.

In comparison, **Greece**'s average data-only usage of **36.5 GB** per month in 2024 is lower but has increased much since 2021. Data-only subscriptions only represent 4% of the total non-M2M subscriptions in Greece. Data-only's 36.5 GB per month is still much higher than the overall usage of 12.5 GB, though. It also grew faster than the overall usage from 2023 to 2024 – 59% vs. 38% overall.

For the six peer group markets[18] that separate out the data-only traffic and the data-only subscriptions in their reporting we could also calculate the usage per *non*-data-only subscription, i.e. per handset user. See Figure 17 below.

[18] The Belgian NRA stopped reporting data-only subscriptions in 2024.

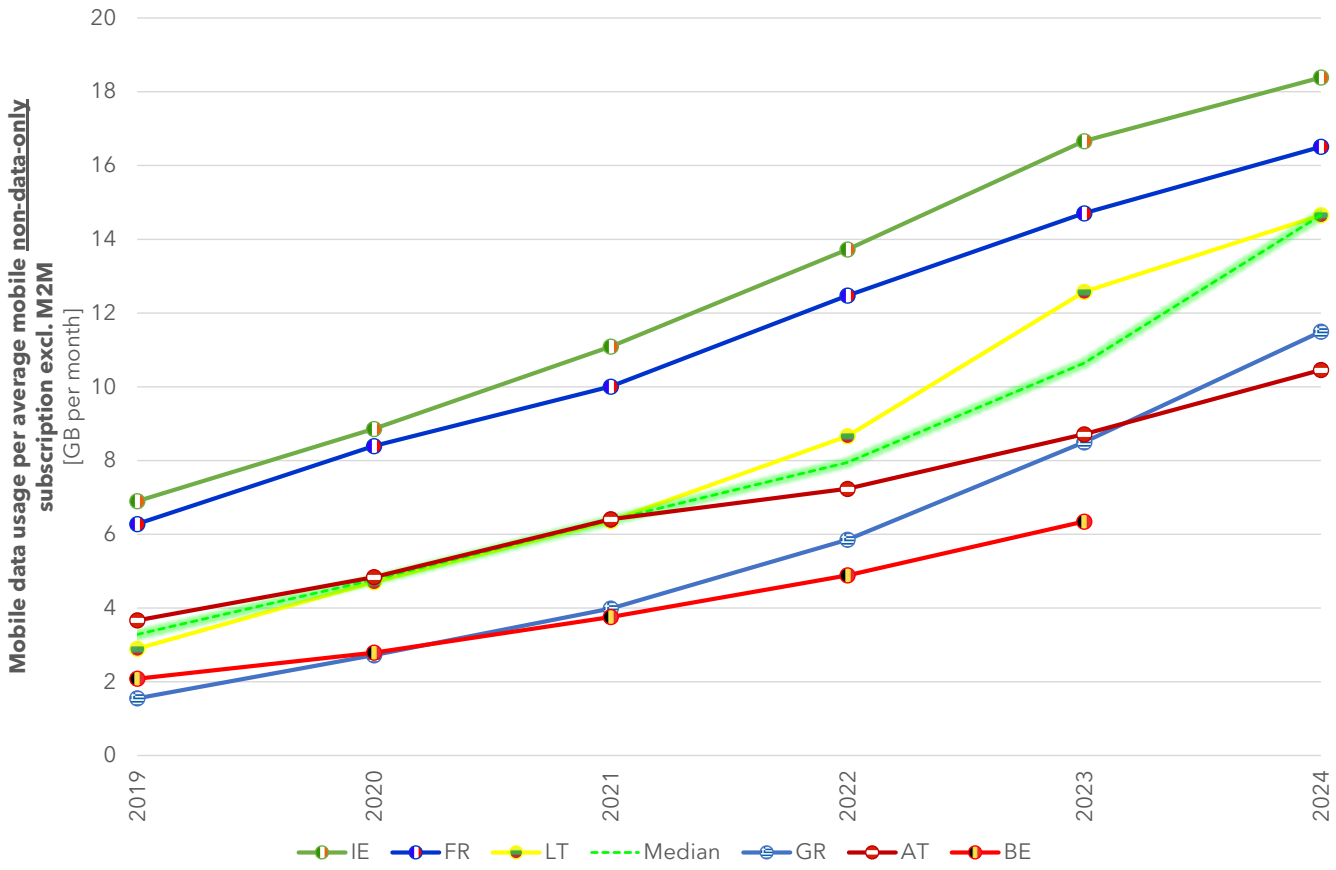


Figure 17. Comparison of the average monthly mobile data usage per *non*-data-only subscription excl. M2M [source data: respective NRA, compiled by Tefficient]

The usage levels per handset user are often much lower than per data-only user. Among our peer group, Ireland leads with **18.4 GB** per month in 2024. **Greece**'s average non-data-only usage is lower: **11.5 GB** per month.

6.2 Including M2M

When including M2M subscriptions into the calculation of average mobile data usage, it will obviously lower the figures; the data usage per M2M subscription is much lower than per 'human' subscription. To exemplify this, Greece's average M2M subscription only consumed **0.3 GB** per month in 2024. The average mobile subscription, including M2M, consumed **11.2 GB**.

Also when including M2M, the differences in data usage are substantial, see Figure 18.

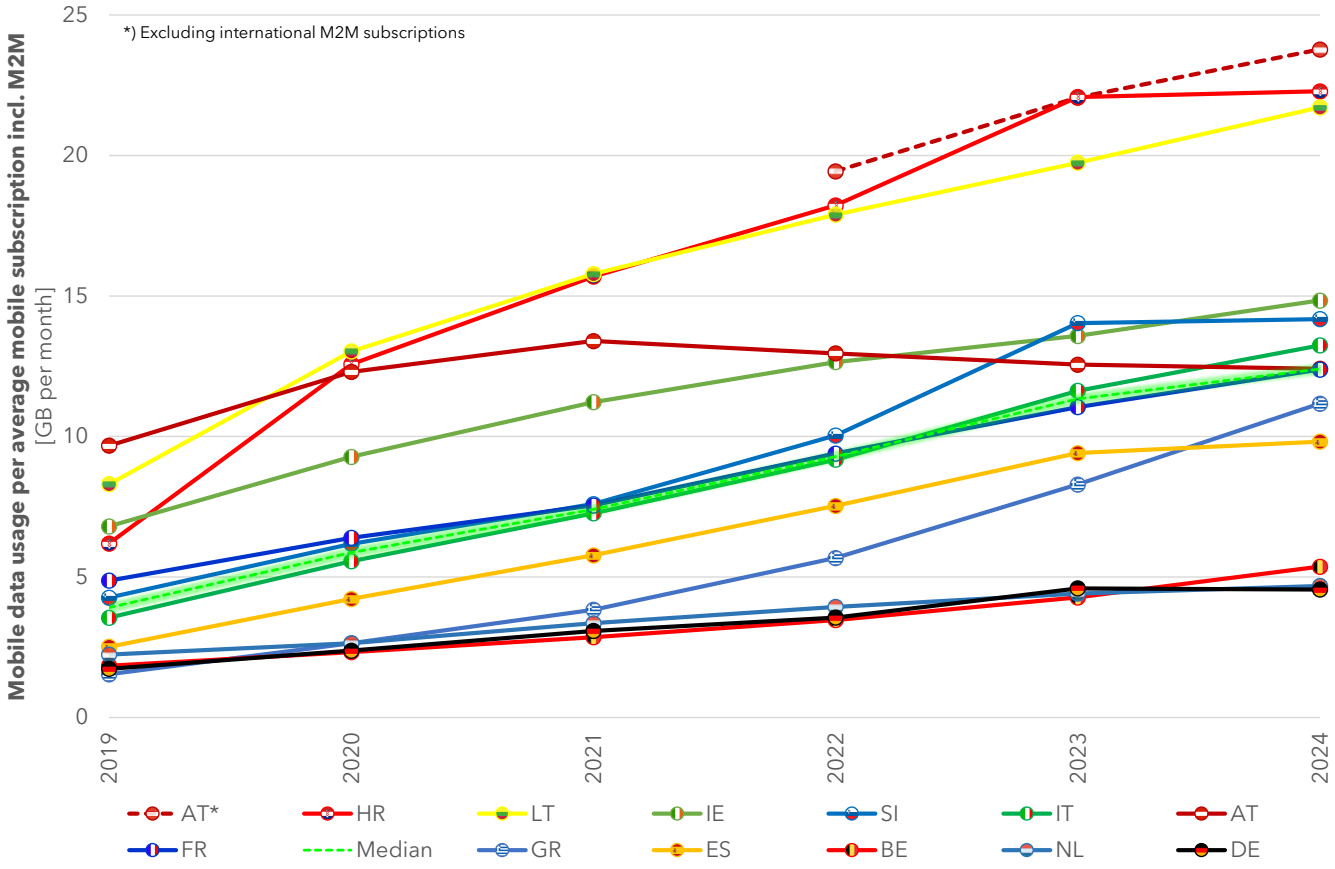


Figure 18. Comparison of the average monthly mobile data usage per subscription incl. M2M [source data: respective NRA, compiled by Tefficient]

When excluding international M2M subscriptions not active in the country, **Austria** has the highest usage: **23.8 GB** per month in 2024. But when including these international M2M subscriptions, Austria's average usage becomes much lower – and has even declined since 2021 since large bases of international M2M subscriptions, officially categorised as Austrian, have been added to the subscription base. It is hence misleading to include the international M2M subscriptions.

Croatia is second-ranked with 22.3 GB with **Lithuania** close behind with its average usage of 21.7 GB per month.

The usage level of **Greece** is lower, 11.2 GB per month in 2024 which is below the median. Until 2019, Greece had the lowest usage among the peer group, but has since overtaken Belgium, Germany, the Netherlands, and Spain.

Is this growth reflected in the compound annual growth rate (CAGR)?

Mobile data usage incl. M2M	AT	BE	HR	FR	DE	GR	IE	IT	LT	NL	SI	ES	Median
CAGR 2019-2024	+5%	+24%	+29%	+21%	+21%	+49%	+17%	+30%	+21%	+16%	+27%	+31%	+23%

Figure 19. Comparison of the CAGR for mobile data usage incl. M2M 2019-2024 [source data: respective NRA, compiled by Tefficient]

All countries have experienced strong growth in the mobile data usage during these years, but it is **Greece** that had the fastest growth, **49%** during 2019-2024. Albeit from the peer group's lowest level in 2019, but still.

Greece's mobile data usage per subscription including M2M is below the median.

Greece had the fastest CAGR in the mobile data usage.

7 Mobile voice usage per voice subscription

In section 4.5 we explained that most mobile contracts in Europe today come with unlimited voice but that much voice usage – unclear how much – today takes place in communication and social apps that are excluded from the official statistics on mobile voice minutes.

The demand for traditional mobile voice is still quite good, though, see Figure 20 below. The COVID-19 pandemic with its associated lockdowns and restrictions led to a large lift in the average voice usage per mobile voice subscription in 2020 – across all markets. The voice usage has since declined – with one distinct exception, Greece.

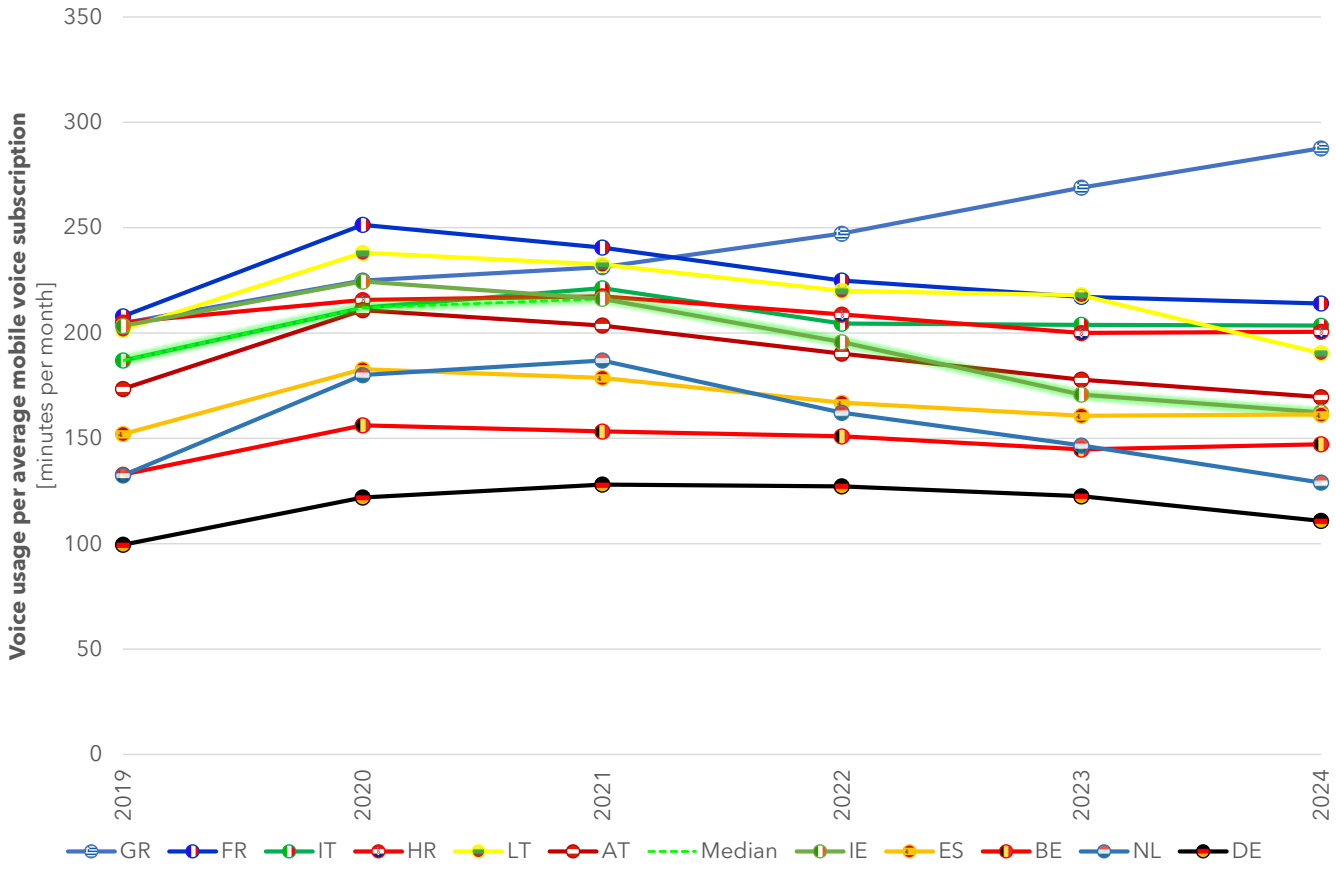


Figure 20. Comparison of the average monthly mobile voice usage per voice subscription[19] [source data: respective NRA, compiled by Tefficient]

Greece broke that trend when it continued to see an increase in the average mobile voice usage also in 2021, 2022, 2023, and 2024. Since 2022, Greece has the highest average mobile voice usage among all peer group countries. The value for 2024 is **288 minutes** per mobile voice subscription per month.

Let's now compare the compound annual growth rate (CAGR) in the mobile voice usage.

[19] Excluding mobile data-only subscriptions.

Mobile voice usage	AT	BE	HR	FR	DE	GR	IE	IT	LT	NL	SI	ES	Median
CAGR 2019-2024	0%	+2%	0%	+1%	+2%	+7%	-4%	+2%	-1%	-1%	n/a	+1%	+1%

Figure 21. Comparison of the CAGR for mobile voice usage 2019-2024 [source data: respective NRA, compiled by Tefficient]

Most countries[20], except Ireland, Lithuania, and the Netherlands, experienced flat or some growth in the mobile voice usage during these time periods. **Greece** had the fastest growth, 7%.

Greece's mobile voice usage per voice subscription is the highest among the peer group.

Greece had the fastest CAGR in the mobile voice usage from 2019 to 2024.

[20] Slovenia does not report its number of voice minutes.

8 Total mobile revenue per GB of mobile data

8.1 Unadjusted

8.1.1 Excluding M2M

As pointed out several times by now, mobile contracts in Europe are today essentially priced after how many GB of mobile data a user can at maximum consume during a month. In this section, we will therefore compare the total mobile retail service revenue to the number of gigabytes consumed by calculating the revenue per GB.

Like in the ARPU section, we start with the unadjusted, excluding M2M, case.

Figure 22 below shows the revenue per GB in EUR including all 'human' mobile subscriptions – regular and data-only (mbb) – but excluding M2M subscriptions.

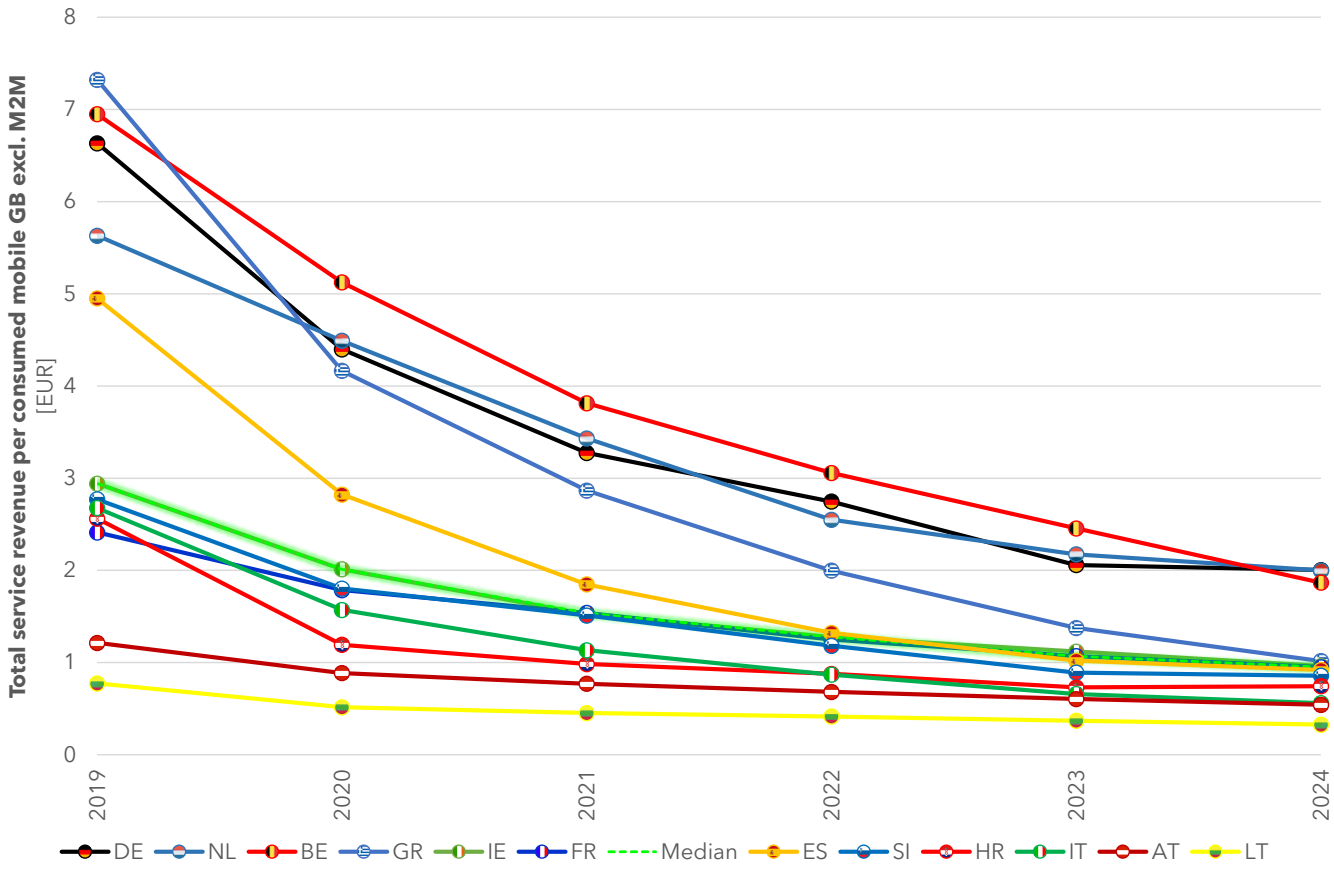


Figure 22. Comparison of total mobile service revenue per GB excl. M2M [source data: respective NRA, compiled by Tefficient]

It is obvious that the revenue per GB has come down a lot since 2019. This is primarily due to the fast increase in the mobile data usage, Figure 8 shows that the ARPU generally has not decreased. But one

could establish that mobile users today can consume much more mobile data without paying more per month.

The revenue per GB is now the highest in **Germany**, 2.0 EUR in 2024. The **Netherlands** had the second highest revenue per GB, marginally lower just below 2.0 EUR. **Belgium** stood at 1.9 EUR whereas **Greece** is a distant number four with 1.0 EUR – just above the median. In 2019, Greece had the highest revenue per GB, but Greece has fallen below Belgium, Germany, and the Netherlands since.

At the other end of the spectrum, we find **Lithuania** with just 0.3 EUR per GB in 2024.

Just by looking at Figure 22 it becomes clear that the compound annual growth rate (CAGR) will be negative for all countries.

Total mobile revenue per GB excl. M2M	AT	BE	HR	FR	DE	GR	IE	IT	LT	NL	SI	ES	Me-dian
CAGR 2019-2024	-15%	-23%	-22%	-17%	-21%	-33%	-20%	-27%	-16%	-19%	-21%	-29%	-21%

Figure 23. Comparison of the CAGR for total mobile service revenue per GB excl. M2M 2019-2024 [source data: respective NRA, compiled by Tefficient]

During 2019-2024, the erosion in the revenue per GB was the fastest in **Greece**, 33%.

Greece's total mobile revenue per GB excluding M2M is, before compensation for the comparative price level, just above the median.

Greece had the fastest erosion in the revenue per GB from 2019 to 2024.

8.1.2 Including M2M

With few countries breaking out the M2M data traffic and the M2M revenues, see sections 4.2 and 4.4, Figure 24 will resemble Figure 22 a lot. The conclusions are identical and are thus not repeated.

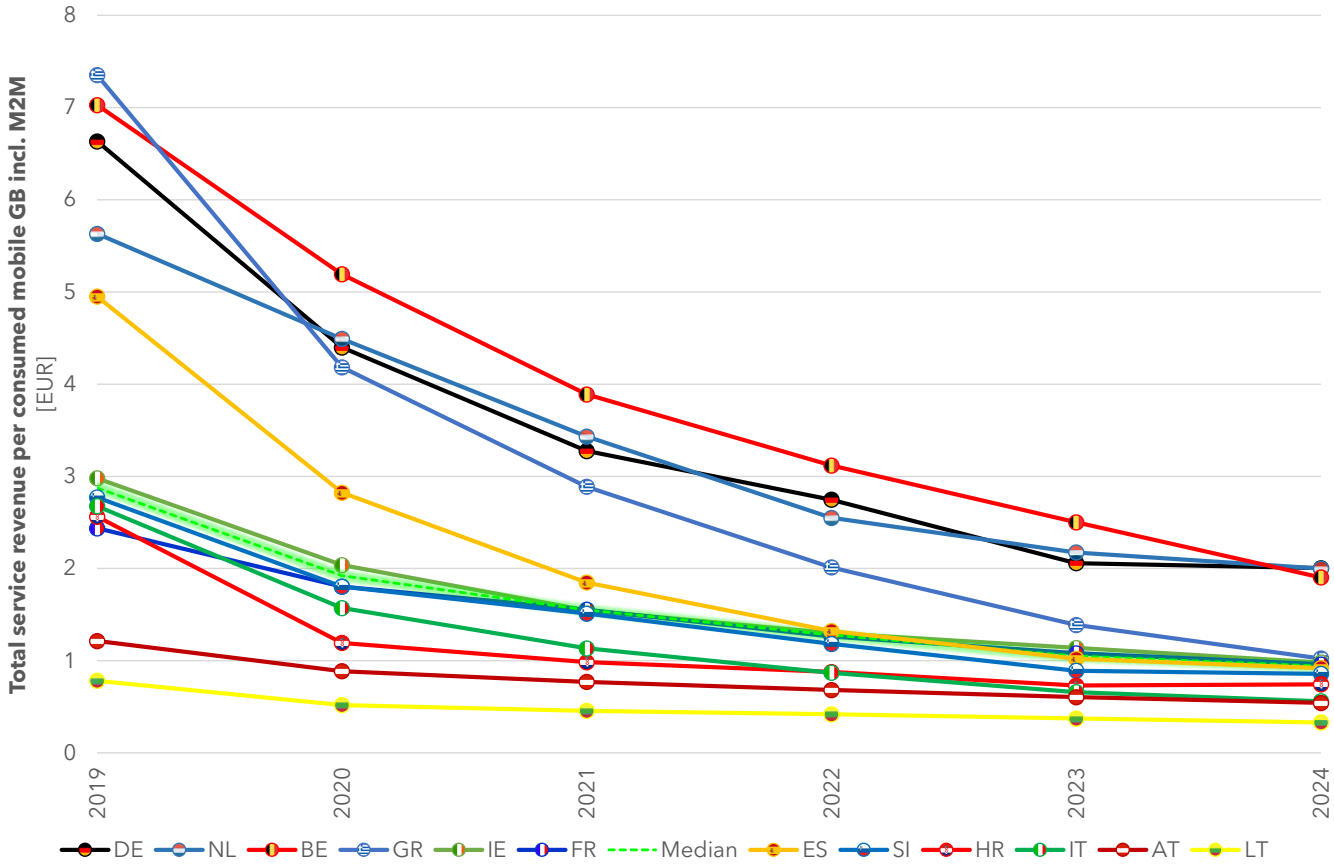


Figure 24. Comparison of total mobile service revenue per GB incl. M2M [source data: respective NRA, compiled by Tefficient].

8.2 Adjusted to the comparative price level of Greece

8.2.1 Excluding M2M

It's time to again adjust for the comparative overall price level as described in section 3.

Figure 25 below shows the outcome when differences in the comparative price levels – relative to Greece's level – have been applied to Figure 22.

The lines of the countries with a divider smaller than 1, i.e. Croatia and Lithuania, will move upwards after the adjustment whereas the countries with a divider larger than 1 will move downwards. Greece's line will not move at all as we are adjusting the other countries to the level of Greece.

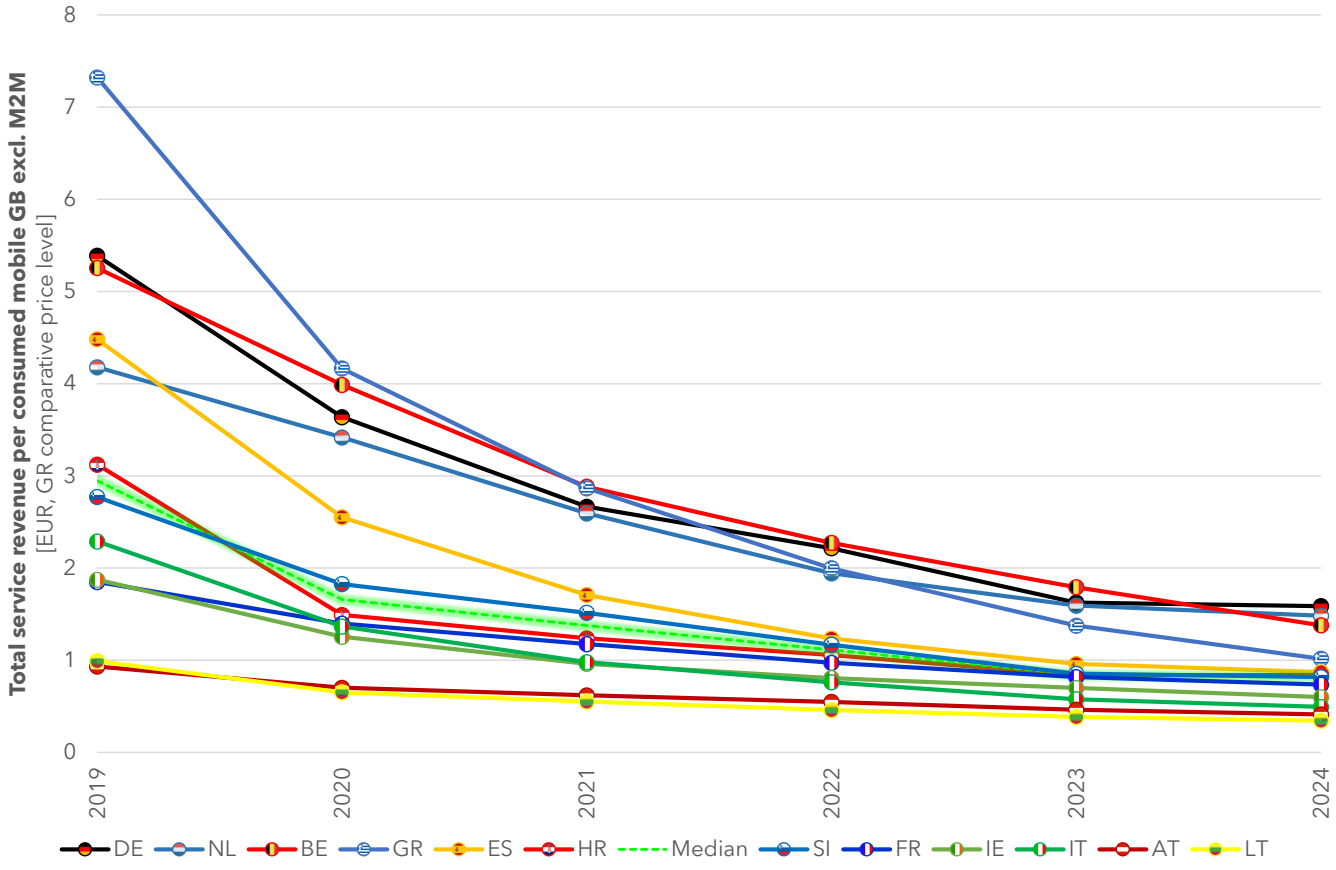


Figure 25. Comparison of total mobile service revenue per GB excl. M2M, adjusted for comparative price level [source data: respective NRA, Eurostat, compiled by Tefficient]

After adjustment to the comparative price level of Greece, **Germany** still got the highest revenue per GB, and the **Netherlands** is still second highest. Belgium is still third in Figure 25, with **Greece** fourth-ranked and above the median.

We do not repeat the CAGR calculations for the adjusted case as it would be affected by Eurostat's annually revised figures on comparative price level. We hence repeat the conclusion on CAGR from the unadjusted case.

Greece's total mobile revenue per GB excluding M2M is, after compensation for the comparative price level, above the median.

Greece had the fastest erosion in the revenue per GB from 2019 to 2024.

8.2.2 Including M2M

With few countries breaking out the M2M data traffic and the M2M revenues, see sections 4.2 and 4.4, Figure 26 will resemble Figure 25 a lot. The conclusions are identical and are thus not repeated.

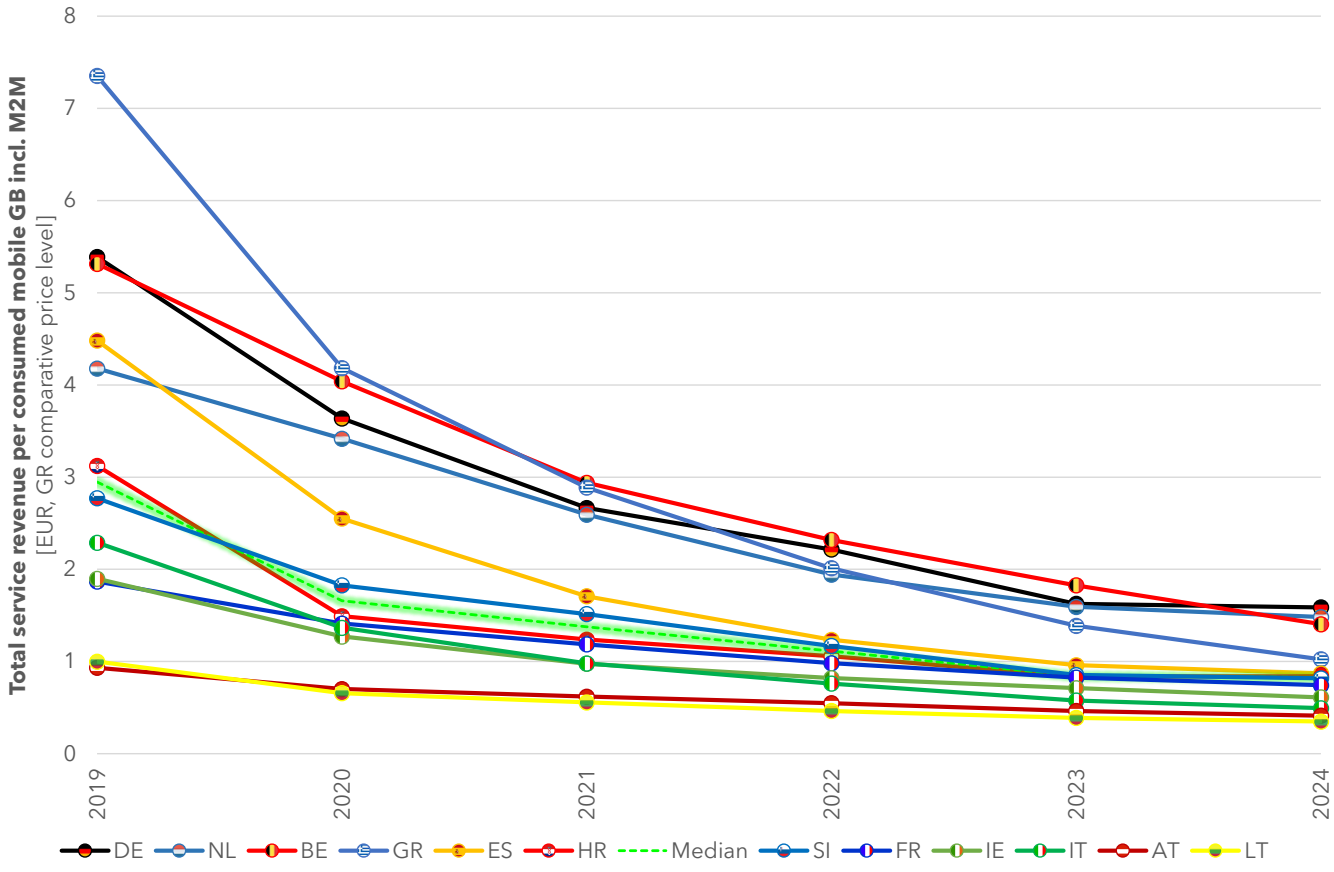


Figure 26. Comparison of total mobile service revenue per GB incl. M2M, adjusted for comparative price level [source data: respective NRA, Eurostat, compiled by Tefficient].

9 Voice revenue per minute of mobile voice

9.1 Unadjusted

We remind that mobile contracts in Europe today essentially are priced after how many GB of mobile data a user can at maximum consume during a month – whereas voice and messaging most often is unlimited. As laid out in section 4.5, we therefore have doubts about the comparability of mobile voice revenue between countries. Furthermore, mobile voice revenue isn't reported by all countries in our peer group.

In this section, we will anyhow compare the retail voice retail service revenue to the number of voice minutes consumed by calculating the voice revenue per minute.

Like in the previous section, we start with the unadjusted case.

Figure 27 below shows the voice revenue per voice minute in EUR. Data is only available for six of the peer group countries.

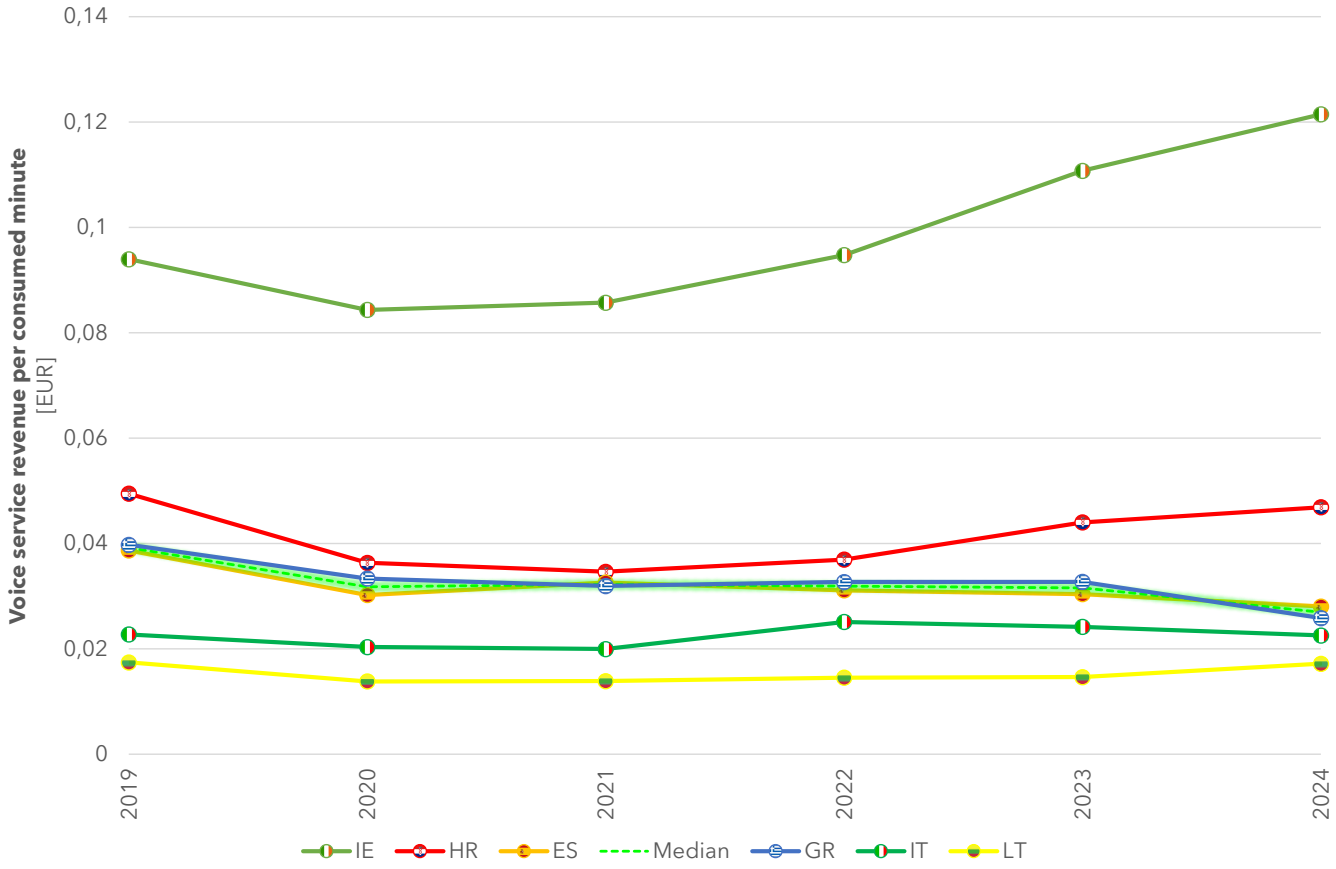


Figure 27. Comparison of voice service revenue per voice minute [source data: respective NRA, compiled by Tefficient]

Mobile voice is an older service than mobile data and it has not experienced the same erosion in unit revenue. With all the provisions we have done with regards to voice revenue comparability in mind, it's **Ireland** that holds the position with the highest voice revenue per minute.

Greece is close to the median among this limited peer group. **Lithuania** has the lowest voice revenue per minute, a position the country also has when it came to the total revenue per GB.

Calculating the compound annual growth rate (CAGR) for the reporting countries will give us Figure 28.

Voice revenue per minute	AT	BE	HR	FR	DE	GR	IE	IT	LT	NL	SI	ES	Me-dian
CAGR 2019-2024	n/a	n/a	-1%	n/a	n/a	-8%	+5%	0%	0%	n/a	n/a	-6%	-1%

Figure 28. Comparison of the CAGR for voice service revenue per voice minute 2019-2024 [source data: respective NRA, compiled by Tefficient]

During 2019-2024 of the six available peer group countries, the erosion in the voice revenue per minute was the fastest in **Greece**, 8%. **Spain** had an erosion of 6%. Only **Ireland** experienced an increase, 5%.

Greece's voice revenue per voice minute is, before compensation for the comparative price level, close to the median of a limited peer group.

Greece had the peer group's fastest erosion, 8%, in the revenue per minute from 2019 to 2024.

9.2 Adjusted to the comparative price level of Greece

To complete this section, we now adjust for the comparative overall price level as described in section 3.

Figure 29 below shows the outcome when the differences in the comparative price levels – relative to Greece's level – have been applied to Figure 27.

The lines of the countries with a divider smaller than 1, i.e. Croatia and Lithuania, will move upwards after the adjustment whereas the countries with a divider larger than 1 will move downwards. Greece's line will not move at all as we are adjusting the other countries to the level of Greece.

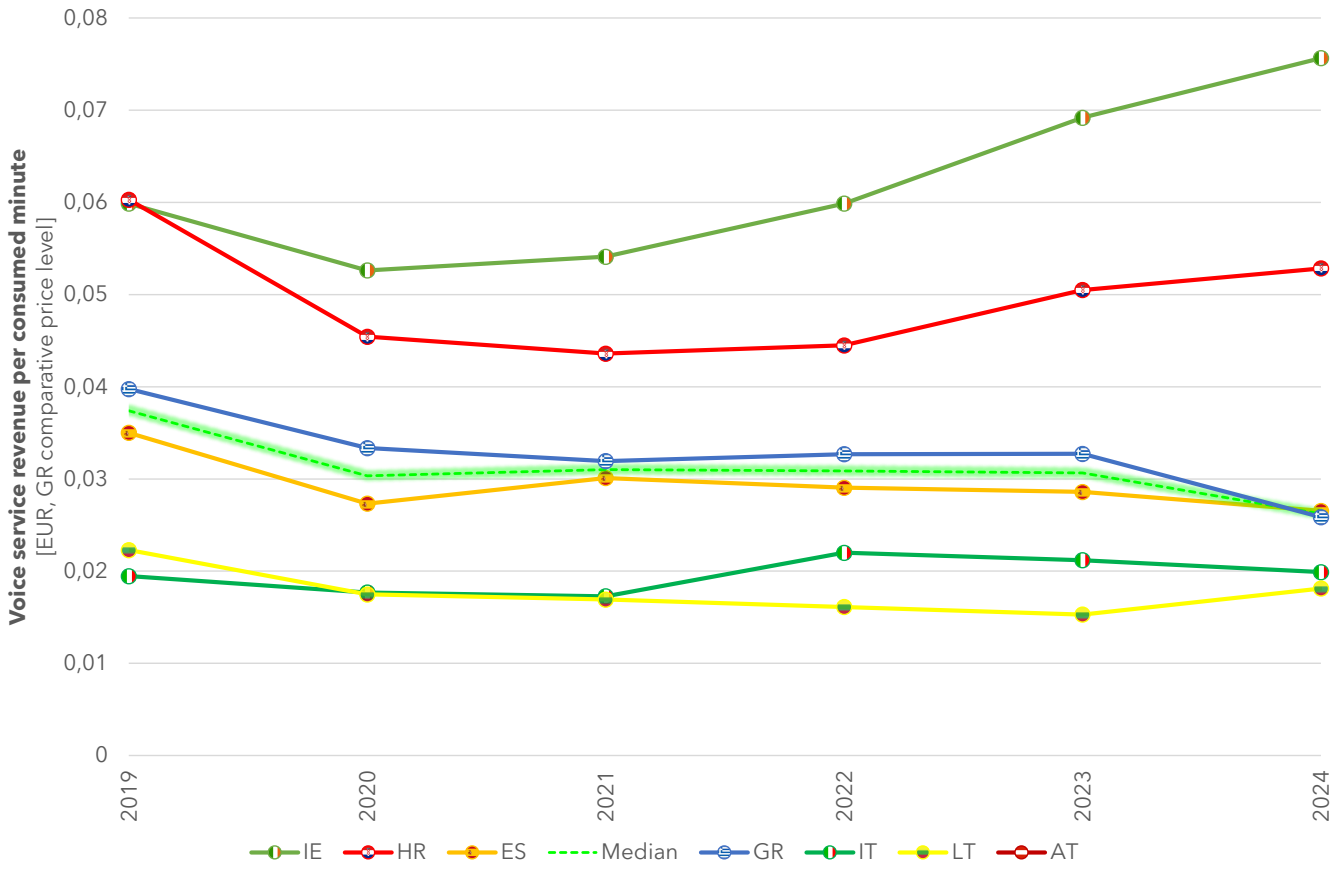


Figure 29. Comparison of voice service revenue per voice minute, adjusted for comparative price level [source data: respective NRA, Eurostat, compiled by Tefficient]

After adjustment to the comparative price level of Greece, **Ireland** still got the highest revenue per minute, and **Croatia** is still second.

Greece is close to the median of this limited peer group. **Lithuania** has the lowest voice revenue per minute, a position the country also has when it came to the total revenue per GB.

We do not repeat the CAGR calculations for the adjusted case as it would be affected by Eurostat's annually revised figures on comparative price level. We hence repeat the conclusion on CAGR from the unadjusted case.

Greece's voice revenue per voice minute is, after compensation for the comparative price level, close to the median of a limited peer group.

Greece had the peer group's fastest erosion, 8%, in the revenue per minute from 2019 to 2024.

10 Correlation between mobile ARPU and mobile data usage

10.1 Unadjusted

10.1.1 Excluding M2M

Value for money will mean different things to different people. A mobile subscription of today typically contains a multitude of services, such as:

- Mobile data, typically capped by gigabytes – or by speed if having unlimited data volume
- SMS/MMS, typically unlimited nationally
- Mobile voice, typically unlimited nationally
- Roaming data, SMS and voice
- Inclusive or discounted subscriptions for family members or data-only devices
- Inclusive or discounted 3rd party services such as streaming services or cyber security

Based on how mobile contracts are priced today in Europe, it seems that the volume of inclusive mobile data is the parameter that mainly sets the monthly price for a mobile package.

Greece is no exception. Mobile data is the only price defining parameter on all postpaid mobile plans offered online by Cosmote, Vodafone, and Nova, see the figure below. Voice is unlimited and SMSs are either unlimited or fixed at maximum 2000 or 6000 per month.

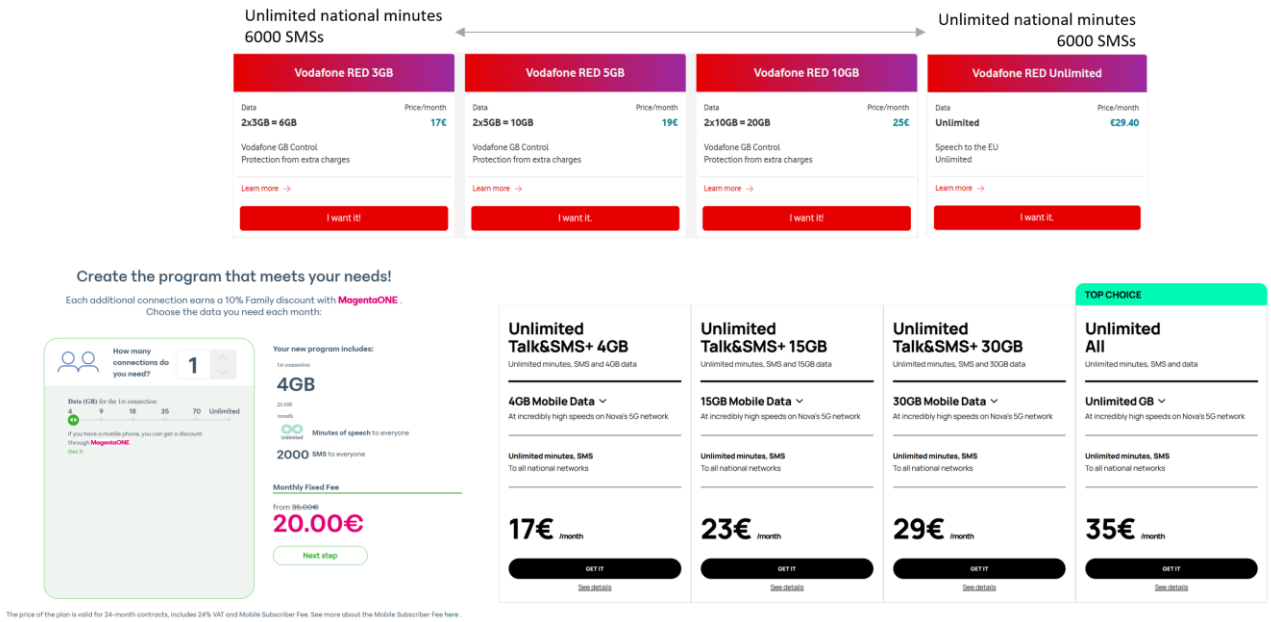


Figure 30. Mobile plans offered by Vodafone (top), Cosmote (bottom left) and Nova (bottom right) 29 July 2025, machine translated from Greek [source: webpages of the respective MNO, compiled by Tefficient]

Prepaid is less straight-forward as top-ups traditionally were done with a certain EUR amount added to a prepaid balance. Consumption of data, voice and SMSs would then be deducted from the balance. But it's today frequent to also offer service packages to prepaid customers. In the case of the latter, mobile data remains the principal price defining parameter, see three such examples from Vodafone, Cosmote, and Nova below.

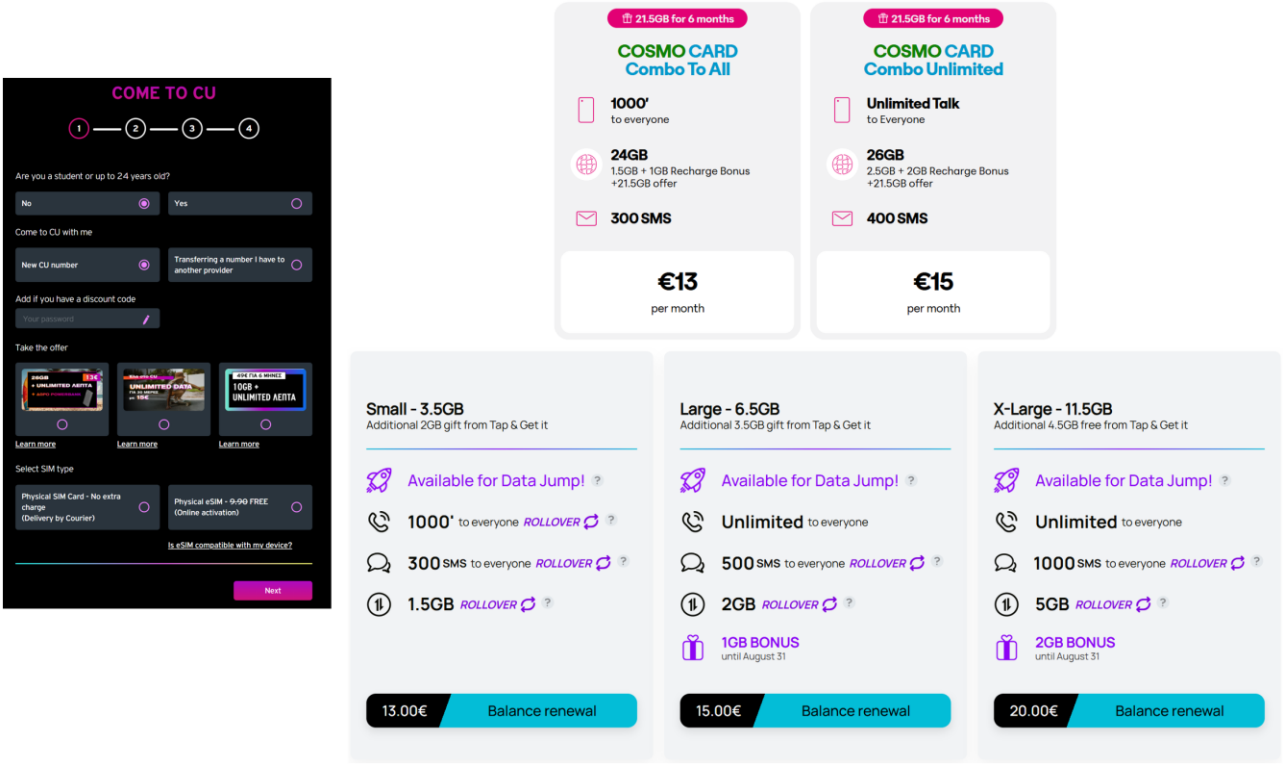


Figure 31. Examples of mobile prepaid packages offered by Vodafone/CU (left), Cosmote (top right) and Nova/FREE2GO (bottom right) 29 July 2025, machine translated from Greek [source: webpages of the respective MNO, compiled by Tefficient]

According to EETT's statistics for 2024, prepaid represented **28%** of the total mobile retail revenue in **Greece**, postpaid the remaining 72%. Only one other peer group country report full prepaid revenue, **France**. Prepaid revenue represented just 3% of the total mobile retail revenue in France in 2024.

The revenue per prepaid subscription is typically lower than for postpaid: In **Greece**, prepaid subscriptions represented **46%** of the total mobile subscription base (excl. M2M) in December 2024 – compare that to 28% of the revenues. The peer group offers a few more comparison points on this metric: Austria's prepaid base was 26% of the total (excl. M2M), Croatia's was 13%, France's 6%, and Italy's a whopping 90%[21].

Although we in the next section (11) – for the sake of completeness – will correlate mobile ARPU also to the voice usage, we think that it is this section – on data – that best compares value for money.

[21] There's a tax (and hence cost) benefit of having a prepaid subscription in Italy.

Figure 32 is the first of several graphs that correlates the mobile ARPU to the mobile data usage. This one is for 2024[22].

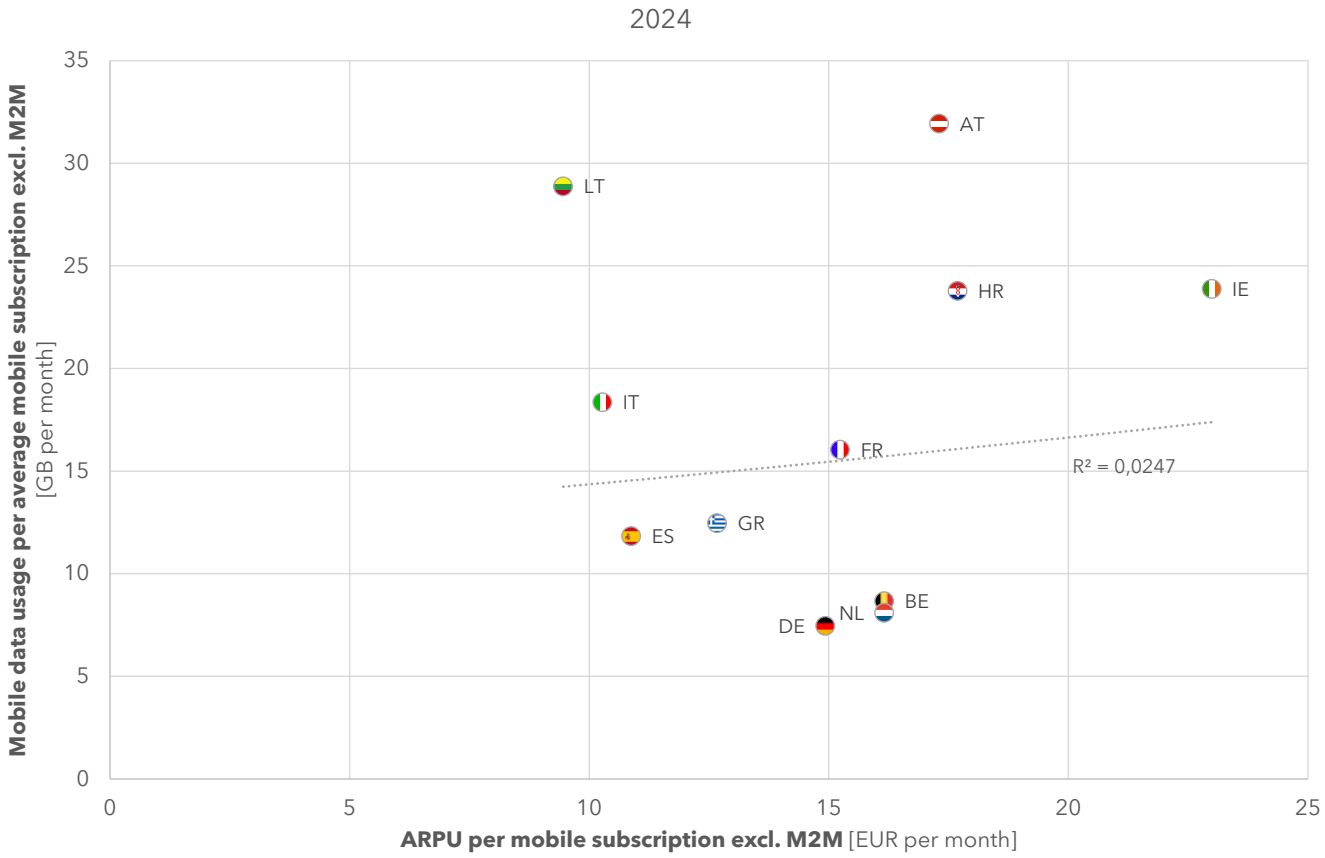


Figure 32. Mobile ARPU vs. mobile data usage, excl. M2M, 2024 [source data: respective NRA, compiled by Tefficient]

The adherence to the regression line is very weak, demonstrated by an R^2 value much below 1. This means that, compared this way, there's not really any correlation between what the average mobile user pays per month (the ARPU) and how much mobile data she or he averagely consumes. **Greece** is below that inexact regression line, hinting that value for money is somewhat lower than what can be expected.

The average mobile subscriber of **Lithuania** gets a lot of mobile data although the ARPU is the lowest. The subscriber of Germany, the Netherlands, and Belgium consumes the least of mobile data but still generates a relatively high ARPU. Defined this way, value for money is best in Lithuania and worst in **Germany/Netherlands/Belgium**.

The position of **Greece** is, with consumer eyes, better than in Belgium, Germany, and the Netherlands where mobile subscribers pay more for less data. It is similar to Spain and France, but worse than in e.g. Italy and Lithuania where mobile subscribers pay less but still use more data.

[22] Since the NRA does not report the M2M subscription base, Slovenia will only appear in the graphs including M2M.

Before compensation for the comparative price level, the average mobile subscription in Greece (excluding M2M) consumes a bit less data than expected given its ARPU.

When excluding M2M, Greece's value for money position is though better than in Belgium, Germany, and the Netherlands and similar to Spain and France.

10.1.2 Including M2M

Now to the graph that includes M2M.

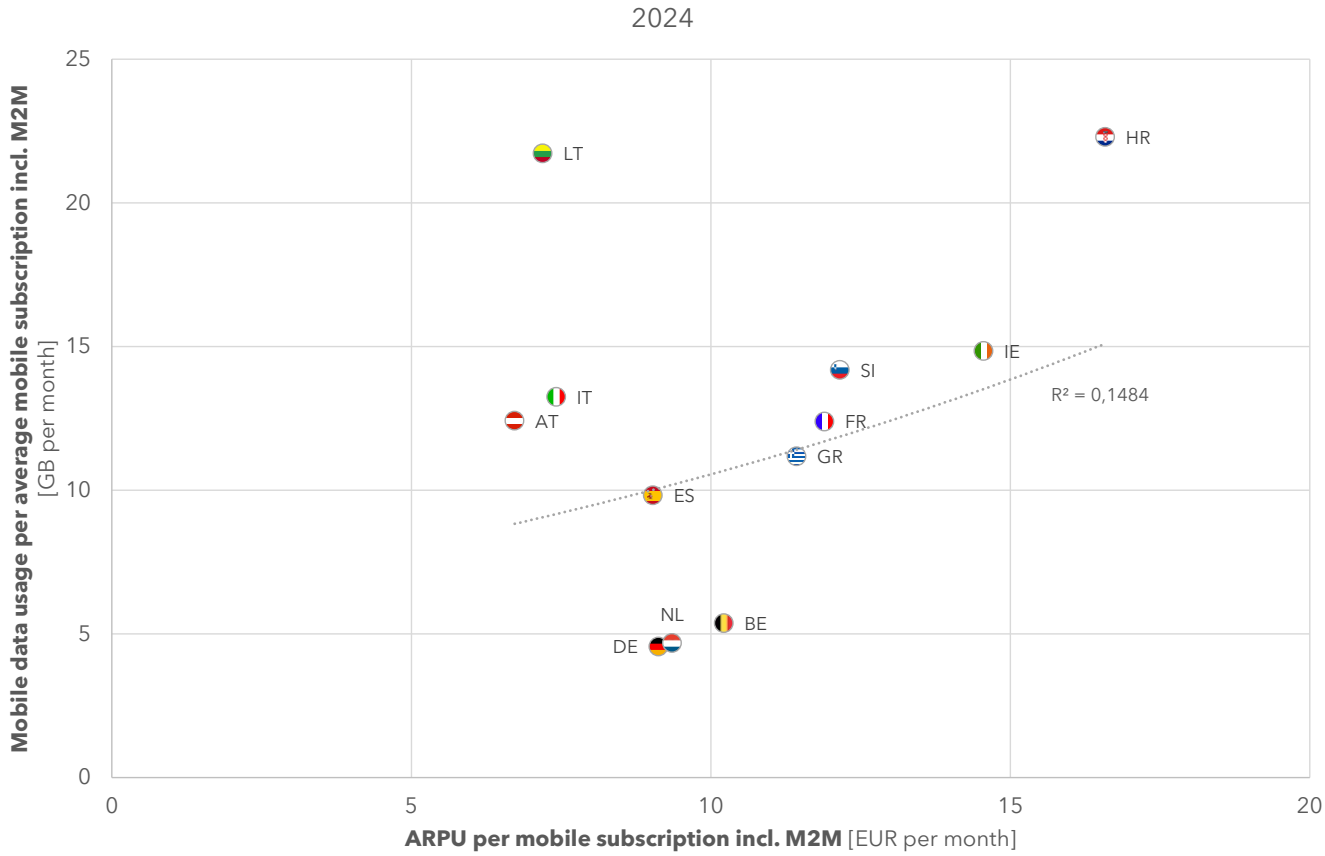


Figure 33. Mobile ARPU vs. mobile data usage, incl. M2M, 2024 [source data: respective NRA, compiled by Tefficient]

The adherence to the regression line is now stronger but still relatively weak.

The average mobile subscriber of **Lithuania** gets a lot of mobile data although ARPU is the second lowest. The subscriber of Germany, the Netherlands, and Belgium consumes the least of mobile data but still generates a relatively high ARPU. Defined this way, value for money is best in Lithuania and worst in **Germany/Netherlands/Belgium**.

The value position of **Greece** with more data for more money is, with consumer eyes, now on the regression line, better than Belgium, Germany, and the Netherlands, on par with Spain and Italy, but worse than Austria[23], Italy, and Lithuania where mobile subscribers pay less but still use more data.

Before compensation for the comparative price level, the average mobile subscription in Greece (including M2M) consumes as much data as expected given its ARPU.

When including M2M, Greece's value for money position is better than in Belgium, Germany, and the Netherlands and similar to Spain and France.

[23] Including international M2M SIMs.

10.2 Adjusted to the comparative price level of Greece

10.2.1 Excluding M2M

There are two more correlation graphs lined up in this section – where the ARPU has been adjusted to the comparative price level of Greece.

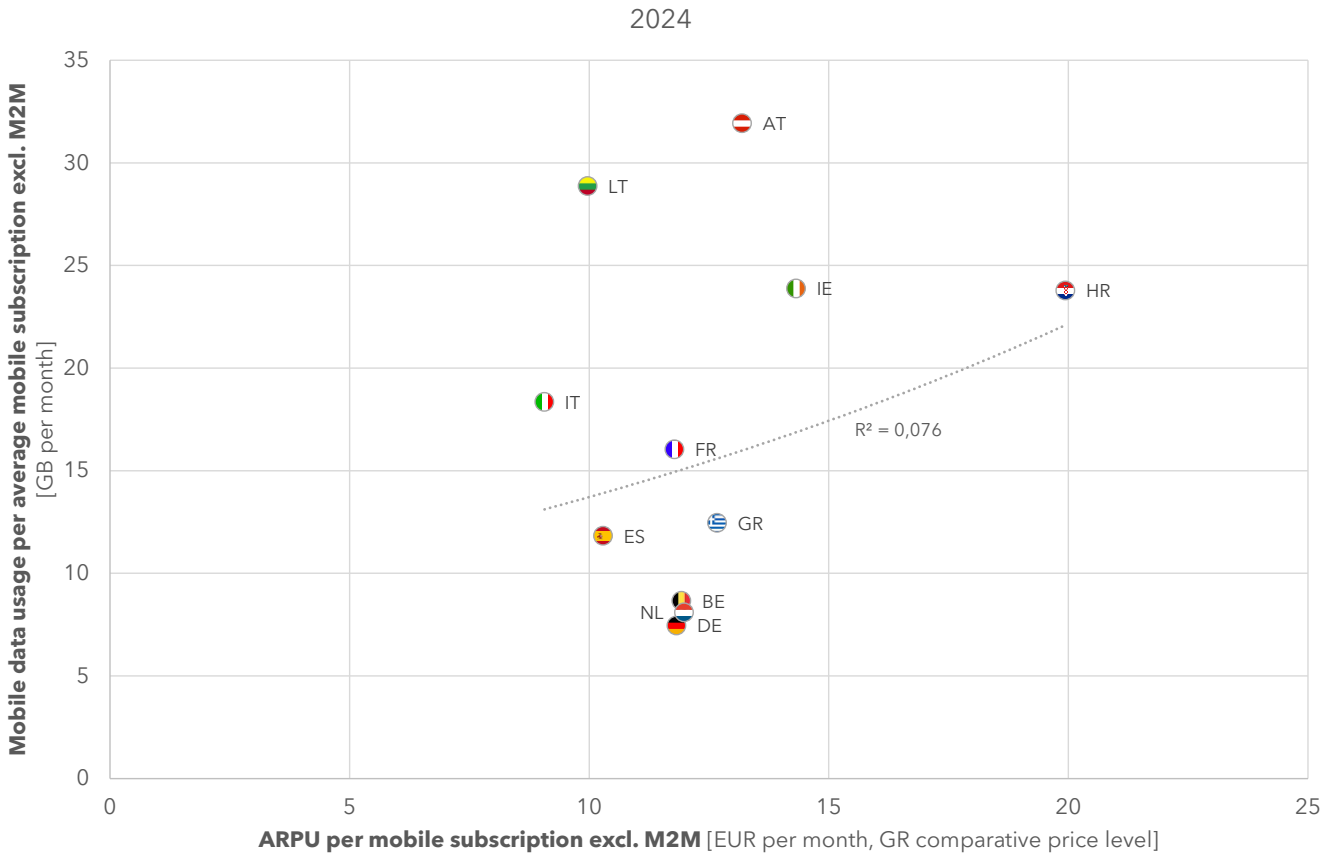


Figure 34. Mobile ARPU adjusted for comparative price level vs. mobile data usage, excl. M2M, 2024 [source data: respective NRA, Eurostat, compiled by Tefficient]

Compared to the unadjusted case, Figure 32, the spread in ARPU is now less. The adherence to the regression line is stronger, but still weak. This means that, compared this way, there's not really any correlation between what the average mobile user pays per month (the ARPU) and how much mobile data he or she averagely consumes. **Greece** is below the regression line, hinting that value for money is somewhat lower than what can be expected.

The average mobile subscriber of **Lithuania** gets a lot of mobile data although the adjusted ARPU is low. The subscriber of Germany, the Netherlands, and Belgium consumes the least of mobile data but still generates an about-average adjusted ARPU. Defined this way, value for money is best in Lithuania and worst in **Germany/Netherlands/Belgium**.

After adjustment, the difference between **Greece** and Germany/Netherlands/Belgium is now less than before adjustment. Spain and France are within reach for Greece.

The position of **Greece** is, with consumer eyes, still better than in Belgium, Germany, and the Netherlands where mobile subscribers pay more for less data. If the trends continue, Greece is soon on par with Spain and France, but worse than in e.g. Italy and Lithuania where mobile subscribers pay less but still use more data.

After compensation for the comparative price level, the average mobile subscription in Greece (excluding M2M) consumes a bit less data than expected given its ARPU.

When excluding M2M, Greece's value for money position is though better than in Belgium, Germany, and the Netherlands and soon similar to Spain and France.

10.2.2 Including M2M

Now, finally, the adjusted graph that include M2M.

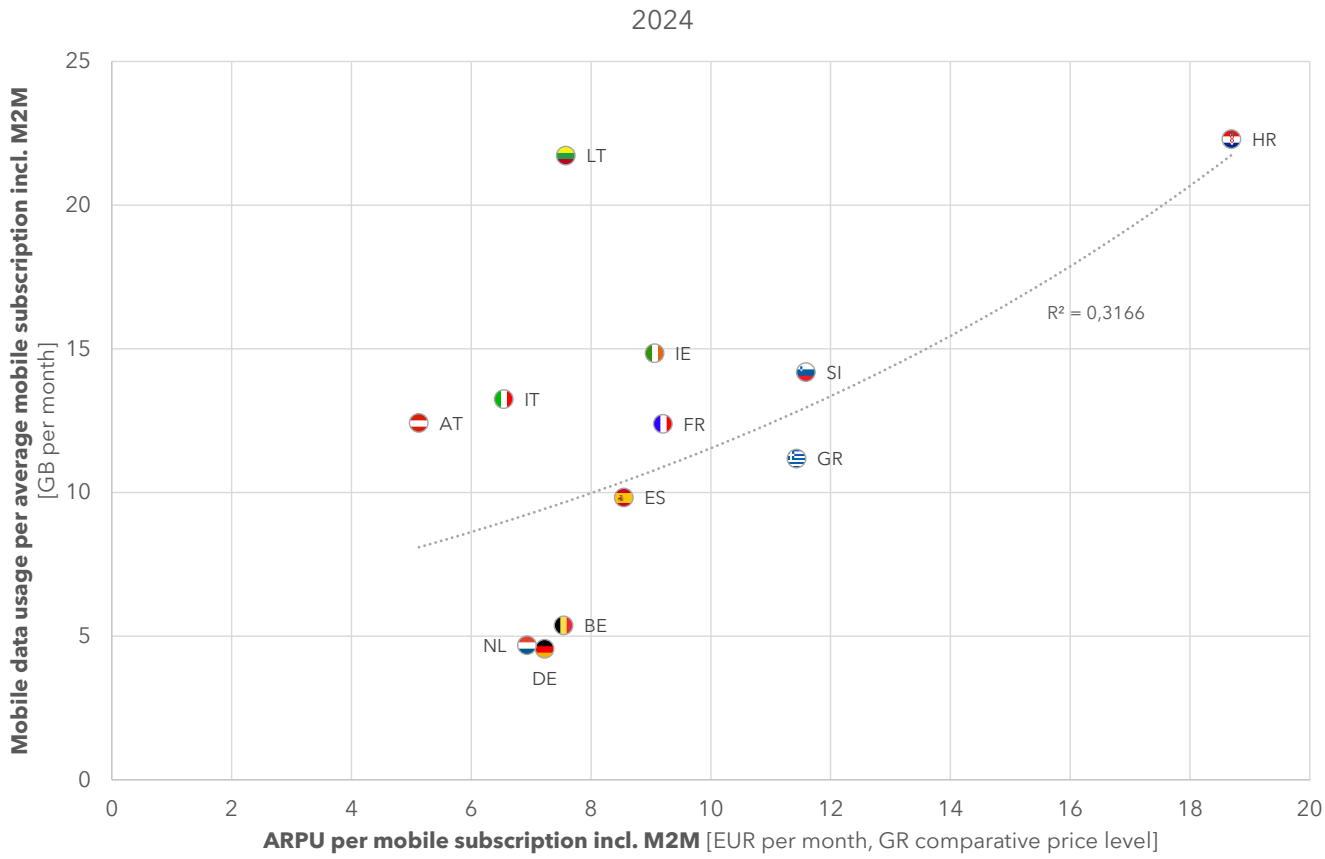


Figure 35. Mobile ARPU adjusted for comparative price level vs. mobile data usage, incl. M2M, 2024 [source data: respective NRA, Eurostat, compiled by Tefficient]

The adherence to the regression line is now stronger than before.

The average mobile subscriber of **Lithuania** gets a lot of mobile data although the adjusted ARPU is low. The subscriber of Germany, the Netherlands, and Belgium consumes the least of mobile data but still generates a relatively high adjusted ARPU. Defined this way, value for money is best in Lithuania and worst in **Germany/Netherlands/Belgium**.

The value position of **Greece** with more data for more money is, with consumer eyes, below the regression line better than Belgium, Germany and the Netherlands, similar to Spain and worse than in Italy, France, Austria[24], Ireland and Lithuania where mobile subscribers pay less but still use more data.

After compensation for the comparative price level, the average mobile subscription in Greece (including M2M) consumes a bit less data than expected given its ARPU.

When including M2M, Greece's value for money position is though better than in Belgium, Germany, and the Netherlands and similar to Spain.

[24] Including international M2M SIMs.

11 Correlation between mobile ARPU and mobile voice usage

11.1 Unadjusted

This section is provided mainly for the sake of completeness since we in the previous section judged that value for money today seldom is linked to the number of mobile voice minutes consumed (but instead to the data consumed).

Figure 36 is the first of two graphs that correlates the mobile ARPU to the mobile voice usage.

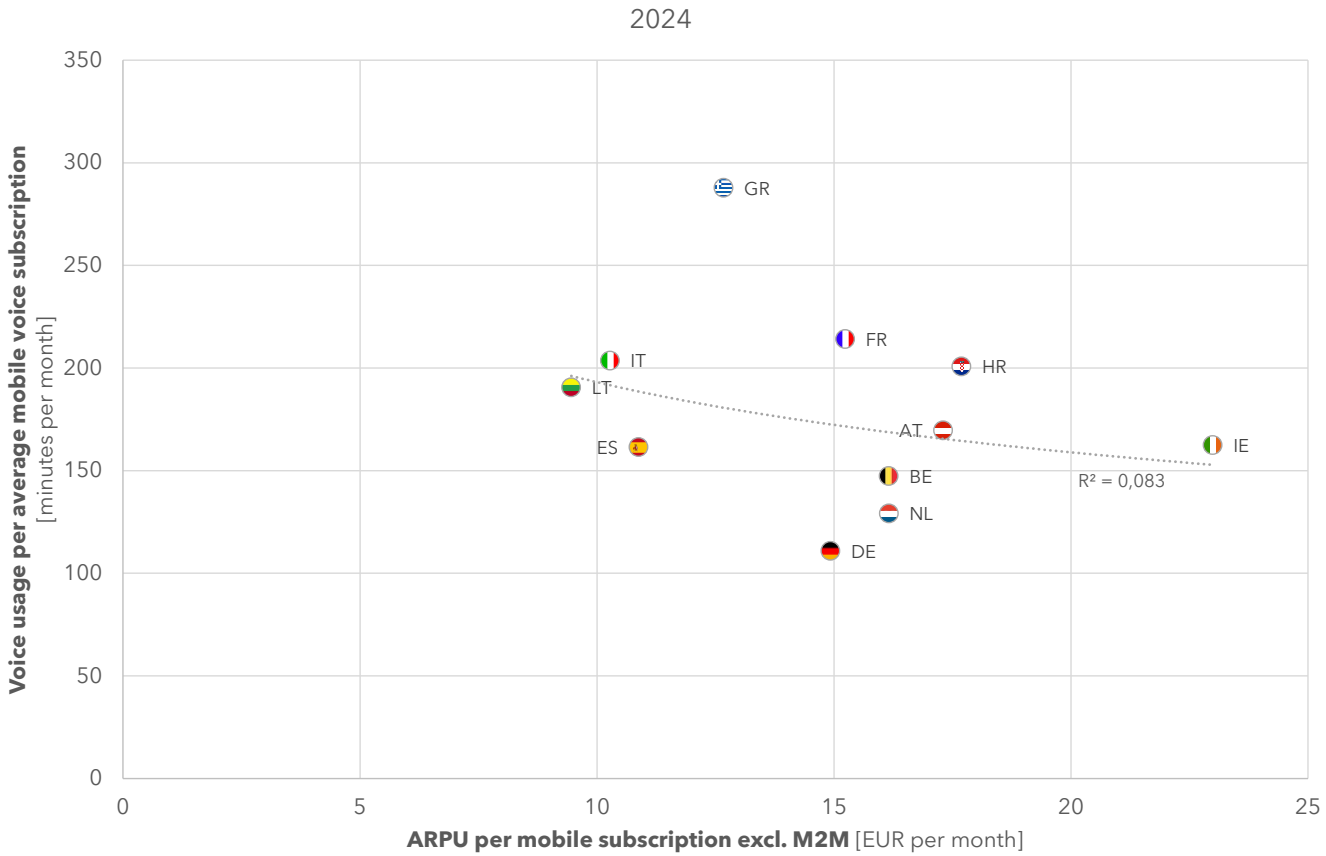


Figure 36. Mobile ARPU vs. mobile voice usage, 2024 [source data: respective NRA, compiled by Tefficient]

The adherence to the regression line is weak, demonstrated by a low R^2 value. It also points in the logically incorrect direction where an increasing ARPU suggests less, not more, voice usage. In short, there's not any correlation between what the average mobile user pays per month (the ARPU) and how much mobile voice he or she consumes.

The average mobile subscriber of **Lithuania** gets an average amount of mobile voice minutes although ARPU is the lowest and holds the best value for money position. **Italy** and **Spain** are close. **Germany** seems to be in a weak value position alongside **Ireland**.

Greece has the highest mobile voice usage and with a relatively low ARPU, Greek mobile subscribers get good voice value for money.

Before compensation for the comparative price level, the average mobile voice subscription in Greece consumes the most voice minutes although ARPU is relatively low.

Greece's voice value for money position is about as good as Lithuania, Italy, and Spain.

11.2 Adjusted to the comparative price level of Greece

To conclude this correlation section on voice, here are finally the last correlation chart in which adjustment has been done to match the comparative price level of Greece.

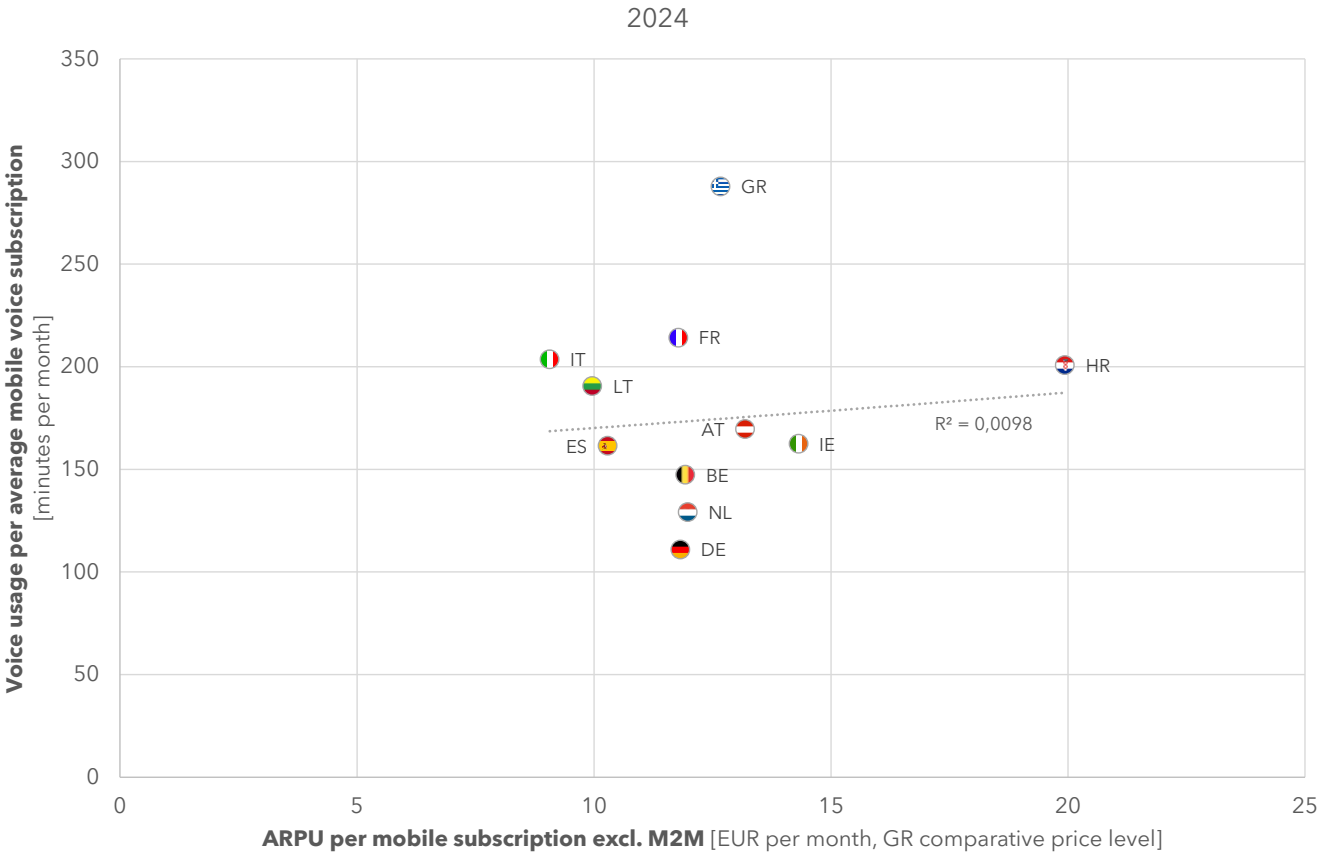


Figure 37. Mobile ARPU adjusted for comparative price level vs. mobile voice usage, 2024 [source data: respective NRA, compiled by Tefficient]

After compensation for the comparative price level, the adherence to the regression line is very weak. There's not any correlation between what the average mobile user pays per month (the ARPU) and how much mobile voice he or she consumes.

The average mobile subscriber of **Lithuania** and **Italy** gets a lot of mobile voice although the adjusted ARPU is low. Spain is close. But **Greece** too, with its highest voice usage and about-average adjusted ARPU, gets good voice value for money. **Germany** seems to be in a weak value position alongside **Croatia**.

After compensation for the comparative price level, the average mobile voice subscription in Greece consumes the most voice minutes although adjusted ARPU is about-average.

Greece's voice value for money position is about as good as Lithuania, Italy, and Spain.

12 Summary and conclusion

This analysis is commissioned by the Hellenic Telecommunications & Post Commission, EETT, and is the second edition of its kind with focus on Greece. It assesses the present and historical mobile data and voice usage and the mobile revenues of Greece in a wider EU context and draws conclusions on value for money based on it.

Unlike studies that emphasise advertised offers or theoretical service baskets, this analysis is grounded in actual usage patterns and revenue data. The selection of peer countries was conducted with care to ensure meaningful comparisons and to minimise potential distortions, such as those arising from currency fluctuations.

Revenue comparisons are carried out both with and without adjustments for comparative price levels. Additionally, to account for the influence of Machine-to-Machine (M2M) communications, relevant metrics are presented both including and excluding M2M data.

When summarising the findings on **Greece** below, we will use a matrix to cover all four cases.

Mobile ARPU – approximately on par with peers, but with a notable upward trend

The mobile ARPU of Greece is on par with the median peer group market – or slightly higher. Greece has shown a more positive compound annual growth rate (CAGR) in ARPU than most other peer group markets.

Mobile ARPU	Before compensation for the comparative price level	After compensation for the comparative price level
Excl. M2M	↓ ARPU below median ↑ CAGR above median	↑ ARPU slightly above median ↑ CAGR above median
Incl. M2M	↑ ARPU above median ↑ CAGR 0%, but above median	↑ ARPU above median ↑ CAGR 0%, but above median

Mobile data usage – below the median but demonstrating the most significant growth

Greece's mobile data usage is below the median of the peer group. Greece has had the most significant growth (CAGR) in data usage of all peer group markets.

Mobile data usage	
Excl. M2M	↓ Usage below median ↑ Fastest CAGR
Incl. M2M	↓ Usage below median ↑ Fastest CAGR

Mobile voice usage – highest among the peer group, with the fastest growth

Greece's mobile voice usage is the highest among the peer group. Greece has had the fastest growth (CAGR) in voice usage of all peer group markets.

Mobile voice usage	
Excl. M2M	↑ Usage highest ↑ Fastest CAGR

Total mobile revenue per GB of mobile data – above the median but showing the steepest decline

The total mobile revenue per GB of mobile data of Greece is higher than the median of the peer group. Greece has had the fastest CAGR decline in revenue per GB of all peer group markets.

Revenue per GB	Before compensation for the comparative price level	After compensation for the comparative price level
Excl. M2M	↑ Revenue just above median ↓ Fastest CAGR decline	↑ Revenue above median ↓ Fastest CAGR decline
Incl. M2M	↑ Revenue just above median ↓ Fastest CAGR decline	↑ Revenue above median ↓ Fastest CAGR decline

Voice revenue per voice minute – close to the peer group median, with the fastest erosion rate

The voice revenue per voice minute of Greece is close to the median of a limited peer group. Greece has had the fastest CAGR decline in voice revenue per minute of all peer group markets for which there is data.

Revenue per minute	Before compensation for the comparative price level	After compensation for the comparative price level
Excl. M2M	○ Close to median ↓ Fastest CAGR decline	○ Close to median ↓ Fastest CAGR decline

Data value for money – weaker than some peers, but position improved since the first edition

The mobile ARPU of Greece is on par with the median peer group market – or slightly higher. The data usage is though below the median, resulting in a weaker value for money position than for some of the peer group markets. Greece has though, compared to the first edition of this analysis, aligned more closely with Spain and France and moved away from the low value-for-money countries Germany, Belgium, and the Netherlands.

Mobile data for ARPU	Before compensation for the comparative price level	After compensation for the comparative price level
Excl. M2M	↓ Usage below median ↓ ARPU below median Better value for money than in BE, DE, and NL – aligned with ES and FR	↓ Usage below median ↑ ARPU slightly above median Better value for money than in BE, DE, and NL – soon aligned with ES and FR
Incl. M2M	↓ Usage below median ↑ ARPU above median Better value for money than in BE, DE, and NL – aligned with ES and FR	↓ Usage below median ↑ ARPU above median Better value for money than in BE, DE, and NL – aligned with ES

Voice value for money – stronger than most peers

The mobile ARPU of Greece is on par with the median peer group market. The voice usage is the highest in the peer group which results in a stronger value for money position than for most of the peer group markets – only Lithuania, Italy, and Spain are as good.

Mobile voice for ARPU	Before compensation for the comparative price level	After compensation for the comparative price level
Excl. M2M	↑ Usage highest ↓ ARPU below median As strong value for money as in LT, IT, and ES	↑ Usage highest ↑ ARPU slightly above median As strong value for money as in LT, IT, and ES

Conclusion

In conclusion, Greek mobile subscribers tend to pay a standard monthly fee while consuming relatively less data and significantly more voice minutes. Given that voice minutes are typically offered on a flat-rate basis in today's market, the assessment of value for money should increasingly focus on mobile data, which continues to be monetised primarily on a per-gigabyte basis.

Greece's value-for-money position is no longer among the weakest in the peer group. It has moved away from lower-performing countries such as Belgium, Germany, and the Netherlands, and now aligns more closely with Spain and France. Greece's trajectory remains promising, driven by the fastest growth in both data and voice usage across the peer group.

tefficient

International telco competitiveness specialist providing operators and suppliers with analysis, benchmarks and go-to-market preparation. Expertise in data monetisation, customer loyalty, Nonstop Retention®, FMC, mobile video, fibre, Wi-Fi, 5G.

www.tefficient.com