

Mobile Broadband Prices in Europe 2019

FINAL REPORT and **EXECUTIVE SUMMARY**

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DG Communications Networks, Content & Technology
by:



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Abstract

0.1 English

The current study provides comprehensive data on 2019 retail prices of mobile broadband offers for consumers in the **EU28, Iceland, Norway, Turkey, Japan, South Korea, and the USA**. The **largest Mobile Network Operators (MNOs)** in each country were included. In **February 2019**, data was collected from provider websites.

Offers were analysed to determine the least expensive offer in each country for each of the standard mobile internet usage baskets defined by the OECD.

To support valid cross-national comparison of retail prices of mobile broadband offers in respect of a usage basket, consistent **price normalisation procedures were applied**. These take full account of contractual features affecting usage costs such as one-off fees, discounts, contract duration, and limits for telephony call time, numbers of SMS, and data volumes.

Due to a change in OECD baskets, data from 2018 was recalculated to sustain comparability.

Comparing normalised prices in Euro, the **inexpensive countries** for mobile broadband in the EU are **Estonia, Romania, Poland, Italy, Sweden, Luxembourg, Slovenia, Austria, and the United Kingdom**. **Prices differ considerably** between the least and most expensive countries **in the EU**. The four **most high-priced countries** are **Cyprus, the Czech Republic, Greece, and Slovakia**.

Since 2018, **prices** for broadband mobile internet usage **in Europe have fallen significantly** in all but one basket.

Comparison of EU28 prices with prices in **selected non-EU countries** (Iceland, Norway, Turkey, Japan, South Korea, and the USA) in 2019 showed that, on average, mobile broadband in the EU28 is about as expensive as or less expensive than in the non-European countries, for most of the OECD usage baskets. Iceland is the least expensive country in this comparison and has prices below the EU28 on average in all but one basket.

0.2 Français

Cette étude vise à analyser le coût du débit mobile à large bande pour les pays de **l'UE28, l'Islande, la Norvège, la Turquie, le Japon, la Corée du Sud, et les Etats-Unis d'Amérique**. Pour obtenir des résultats représentatifs, les **plus grands opérateurs de réseau mobile (ORM)** étaient inclus dans l'échantillon. La collecte de données était effectuée en ligne directement sur les sites web des ORM en **Février 2018**.

Les offres ont été analysées pour déterminer l'offre la moins coûteuse par pays et paquet d'utilisation de l'OCDE.

Afin d'analyser systématiquement les données recueillies et de permettre une comparaison transnationale sur le coût du débit mobile à large bande, des **procédures de normalisation ont été appliquées**. Donc, des détails des forfaits différents, telles que des redevances unique, des réductions, des durées contractuelles différentes ou des différences de téléphonie, messagerie, etc. pouvant être pris en compte.

De nouveaux paniers de l'OCDE, basés sur la publication de l'OCDE de 2017, ont été introduits. **Les données de 2018 ont donc été recalculées** pour assurer la comparabilité.

L'analyse de données a révélé les résultats suivants: En moyenne, les **pays le moins cher de l'UE28** concernant le débit mobile à large bande, ce sont **L'Estonie, la Roumanie, la Pologne, l'Italie, la Suède, le Luxembourg, la Slovénie, l'Autriche et le Royaume-Uni**. Les **prix varient considérablement**, indiquant ainsi un large éventail de valeurs. Les quatre **pays le plus cher**, ce sont **la Chypre, la République tchèque, la Grèce et la Slovaquie**.

En outre, en comparaison avec le jeu de données de 2018, **les prix ont baissé de manière significative**.

Enfin, **comparé aux pays non-UE**, le coût de débit mobile à large bande est, en moyenne dans l'UE, aussi cher ou moins cher que dans les pays non européens, pour la plupart des paniers de consommation OCDE.

L'Islande est le pays le moins cher de cette comparaison et ses prix sont en moyenne inférieurs à ceux de l'UE28 dans tous les paniers sauf un.

1. Executive Summary

1.1 English

1.1.1 Introduction

The current study provides comprehensive data on 2019 retail prices of mobile broadband offers for consumers in the **EU28, Iceland, Norway, Turkey, Japan, South Korea, and the USA**. The two or three **largest Mobile Network Operators (MNOs)** in each country were included. In **February 2019**, data was collected from provider websites.

These offers were analysed to determine the least expensive offer per country and OECD usage basket.

To support valid cross-national comparison of retail prices of mobile broadband offers in each usage basket, consistent **price normalisation procedures were applied**. These take full account of contractual features varying between offers which impact on consumer usage costs, such as one-off fees, discounts, contract duration and limits for telephony call time, numbers of SMS and data volumes uploaded or downloaded.

Due to a change in OECD baskets, data from 2018 was recalculated to sustain comparability.

1.1.2 Results: Average and least expensive price per OECD usage basket and development of prices

Figure 1 shows the average across EU28 Member States of the lowest price found in each Member State, and the lowest price overall, for each of the handset-based OECD usage baskets. Figure 2 displays the EU28 averages and lowest EU28 prices for data-only baskets. In this report, these EU average figures are used in international comparison and as reference when describing the market in an EU Member State.

Figure 1 – EU28 average and least expensive prices for handset-based baskets, VAT included

Basket	Least expensive [EUR/PPP]	EU28 average 2019 [EUR/PPP]	EU28 average 2018 [EUR/PPP]	Variation 2018/19
100 MB, 30 calls	4.09	8.82	10.20	-13.6%
500 MB, 100 calls	4.36	14.01	14.29	-1.9%
1 GB, 300 calls	6.69	17.39	18.04	-3.6%
2 GB, 900 calls	7.86	22.68	23.02	-1.5%
5 GB, unlimited calls	9.19	30.41	28.39	+7.1%
500 MB, 30 calls	4.09	10.76	11.58	-7.0%
2 GB, 100 calls	4.36	16.56	17.81	-7.0%
5 GB, 300 calls	6.69	23.29	25.96	-10.3%
10 GB, 900 calls	9.19	31.66	41.44	-23.6%
20 GB, unlimited calls	10.13	44.51	100.18	-55.6%

Figure 2 - EU28 average and least expensive prices for data-only baskets, VAT included

Basket	Least expensive [EUR/PPP]	EU28 average 2019 [EUR/PPP]	EU28 average 2018 [EUR/PPP]	Variation 2018/19
500 MB	1.99	7.11	7.75	-8.3%
1 GB	1.99	8.06	9.20	-12.4%
2 GB	2.05	9.96	11.15	-10.7%
5 GB	3.88	13.87	16.02	-14.0%
10 GB	3.88	17.52	20.56	-14.8%
20 GB	3.88	23.81	27.76	-14.2%
50 GB	3.88	46.27	53.36	-13.3%

Mobile broadband was significantly cheaper in 2019 than in 2018 in all but one OECD usage basket.

1.1.3 Analysis of the results: Least expensive countries in Europe

Applying the normalised prices in Euro, measured in PPP, it was discovered that the least expensive countries for mobile broadband in the EU in 2019 were Estonia, Romania, Poland, Italy, Sweden,

Luxembourg, Slovenia, Austria, and the United Kingdom. Prices differ considerably between the least and most expensive countries in the EU.

In the following table (Figure 3), green symbols indicate the cluster¹ of countries with the least expensive offers for the usage basket in question and red the cluster with the most expensive offers. Blue and orange are used for the cluster of countries with relatively inexpensive and relatively expensive offers, respectively. When looking at the cluster ratio², some general observations can be made.

¹ k-means clustering was used with k=4; observations (offer categories) are assigned to clusters so as to minimise the average squared Euclidean distance of observations to each cluster centroid

² The *cluster ratio* represents the average of a country's membership in a cluster over all OECD usage baskets. The minimum value is 1, which means that the country is in the cheapest cluster each time; the maximum value is 4, which means that the country is in the most expensive country cluster for each bundle of use.

Figure 3 - Clusters of countries by price level over all usage baskets

	Data - 500MB	Data - 1GB	Data - 2GB	Data - 5GB	Data - 10GB	Data - 20GB	Data - 50GB	Handset - 100MB, 30 calls, 20 SMS	Handset - 500 MB, 100 calls, 40 SMS	Handset - 1GB, 300 calls, 80 SMS	Handset - 2GB, 900 calls, 160 SMS	Handset - 5GB, unlimited calls and SMS	Handset - 500 MB, 100 calls, 40 SMS	Handset - 2 GB, 100 calls, 20 SMS	Handset - 5 GB, 300 calls, 40 SMS	Handset - 10 GB, 900 calls, 80 SMS	Handset - 20 GB, unlimited calls and SMS
EE	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1
RO	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
PL	1	1	1	1	1	1	2	3	1	1	1	1	2	2	1	1	1
IT	1	2	1	1	1	1	1	3	2	1	1	1	2	2	1	1	1
SE	1	2	2	2	2	2	2	2	1	1	1	1	2	1	1	1	1
LU	2	3	2	1	2	2	3	1	1	1	1	1	2	2	1	1	1
SI	2	3	2	1	2	2	2	1	1	1	2	1	2	2	1	1	1
AT	1	2	2	1	2	2	3	3	1	1	2	1	2	2	1	1	1
UK	2	3	3	2	2	2	2	1	1	1	1	1	2	2	1	1	1
LT	2	3	2	1	1	1	2	1	2	1	2	2	2	2	1	2	2
FR	2	3	2	2	2	2	2	1	3	1	2	1	3	3	1	1	1
LV	2	3	2	1	1	2	2	2	2	2	2	2	3	3	1	2	2
HR	1	2	2	2	3	2	3	2	2	2	3		2	2	1	2	
DE	1	3	3	3	3	3	3	2	1	1	2	2	1	2	2	2	2
FI	1	3	4	2	2	2	2	2	3	2	2	2	2	3	1	2	1
NL	2	3	4	2	3	3	2	3	2	1	2	1	2	3	1	1	2
DK	3	4	3	2	2	2	2	4	3	1	2	1	3	3	1	1	1
BE	1	3	2	2	4	3	4	2	3	2	2	2	2	3	1	2	2
MT	2	3	3	2	1	3	3	2	3	2	3	2	3	3	2	3	3
BG	2	3	2	2	2	3	3	4	3	2	3		3	3	2	3	
IE	4	4	4	2	2	2	2	4	3	2	3	2	4	3	2	2	2
ES	2	3	3	3	4	4	3	4	4	3	3	2	3	3	2	2	2
HU	1	2	3	3	4	4	3	3	4	4	3	3	2	4	4	3	3
PT	4	4	4	3	4	3	2	4	3	2	3	3	4	3	2	3	3
CY	3	4	4	3	4	4	4	3	3	3	3	3	2	3	3	4	4
CZ	1	4	3	4	4	4	4	4	4	3	3	3	3	4	3	3	3
EL	3	3	4	4	4	4	4	3	2	3	4	4	2	3	2	4	4
SK	2	3	3	3	4	4	4	4	4	4	3	3	4	4	3	3	3

Cluster Centres [EUR]																	
1	4.08	2.28	3.71	7.2	7.69	7.19	6.5	4.61	7.92	10.24	9.93	13.35	5.59	6.41	15.21	14.69	17.74
2	7.79	4.4	8.22	13.77	14.09	16.78	19.67	6.62	11.22	19.72	16.13	25.08	9.26	10.29	30.48	28.39	33.6
3	11.29	8.5	10.94	19.22	19.55	29.67	50.41	9.75	16.7	29.81	33.73	49.43	13.38	18.46	43.99	50.24	74.53
4	15.2	13.39	15.67	27.13	29.61	43.05	124.67	14.27	25.85	33.3	66.96	182.46	17.28	37.23	47.87	90.76	160.28

Number of cases in each cluster																	
1	12	2	4	9	7	4	2	7	9	14	7	12	3	3	17	12	11
2	11	6	10	11	10	12	13	7	6	8	10	8	15	9	7	8	8
3	3	15	8	6	3	6	8	7	9	4	10	5	7	13	3	6	5
4	2	5	6	2	8	6	5	7	4	2	1	1	3	3	1	2	2

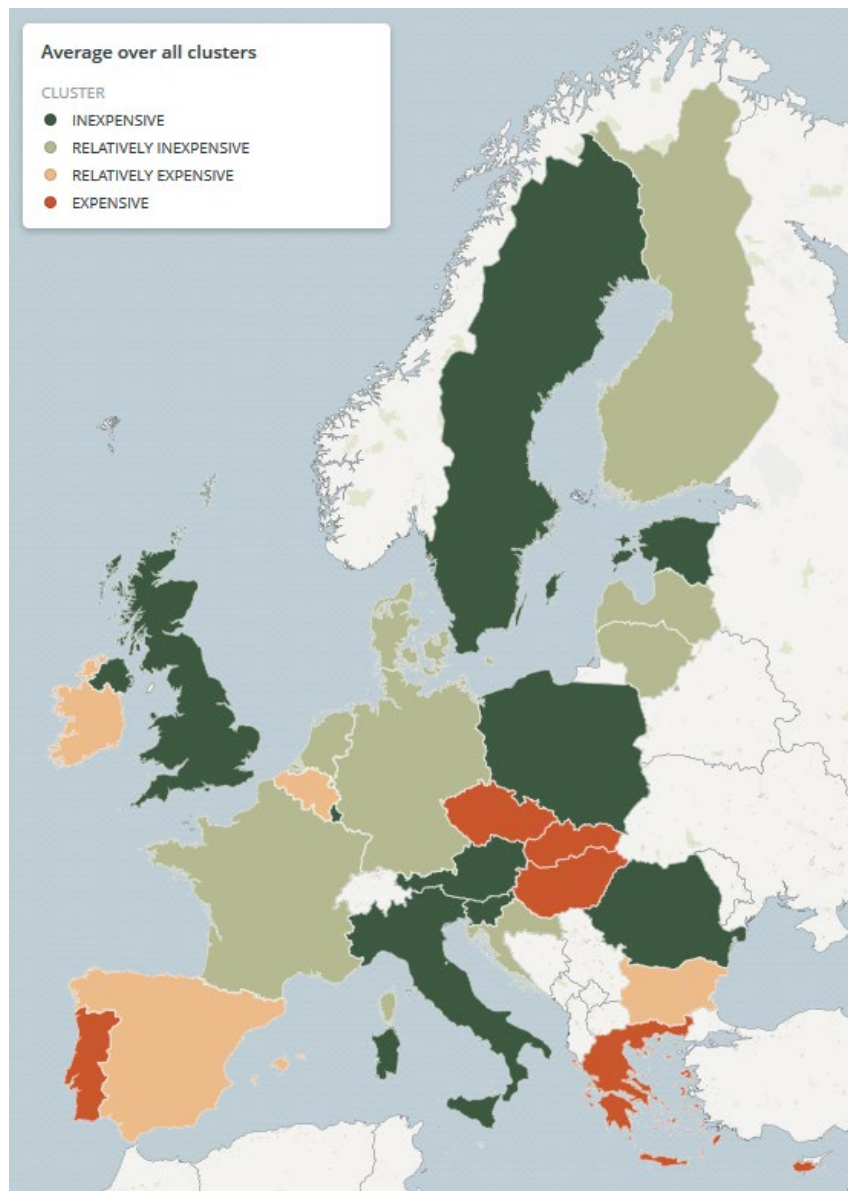
- Estonia, Romania, Poland, Italy, Sweden, Luxembourg, Slovenia, Austria, and the United Kingdom have the most attractive prices overall, with a cluster ratio of 1.67 or less.
- Lithuania, France, Latvia, Croatia, Germany, Finland, the Netherlands, and Denmark follow with a cluster ratio of 2.33 or less. Apart from Croatia, these countries have at least three offers belonging to the cheapest cluster.
- The next group has very heterogeneous members, with a ratio of 3 or less. It includes Belgium, Malta, Bulgaria, Ireland, and Spain.
- Slovakia, Greece, Cyprus, Portugal, Spain, Ireland, and Bulgaria have no offer belonging to the inexpensive cluster.

- No country has only offers in the inexpensive and/or expensive cluster for all the OECD usage-baskets.
- Each country has at least one offer belonging to the two less expensive clusters.

Averaging across all OECD usage baskets and distinguishing the four major clusters reveals the pattern shown in the map (Figure 4) below.

- The **inexpensive** countries are: Estonia, Romania, Poland, Italy, Sweden, Luxembourg, Slovenia, Austria, and the United Kingdom.
- The **relatively inexpensive** countries are: Lithuania, France, Latvia, Croatia, Germany, Finland, the Netherlands, and Denmark.
- The **relatively expensive** countries are: Belgium, Malta, Bulgaria, Ireland, and Spain.
- The **expensive** countries are: Hungary, Portugal, Cyprus, the Czech Republic, Greece, and Slovakia.

Figure 4 – Map of country clusters



1.1.4 **Results: The EU compared with selected non-EU countries**

Comparison of EU28 prices with prices in selected non-EU countries (Iceland, Norway, Turkey, Japan, South Korea, and the USA) in 2019 showed that, on average, mobile broadband in the EU28 is about as expensive as or less expensive than in the non-European countries, for most of the OECD usage baskets.

Iceland is the least expensive country in this comparison and has prices below the EU28 on average in all but one basket.

1.2 **Français**

Cette étude vise à analyser le coût du débit mobile à large bande pour les pays de l'UE28, l'Islande, la Norvège, la Turquie, le Japon, la Corée du Sud, et les Etats-Unis d'Amérique. Pour obtenir des résultats représentatifs, les deux ou trois plus grands opérateurs de réseau mobile (ORM) étaient incluses dans l'échantillon. La collecte de données était effectuée en ligne directement sur les sites web des ORM en Février 2019.

Les offres ont été analysées pour déterminer l'offre la moins coûteuse par pays et paquet d'utilisation de l'OCDE.

Afin d'analyser systématiquement les données recueillies et de permettre une comparaison transnationale sur le coût du débit mobile à large bande, des procédures de normalisation ont été appliquées. Donc, des détails des forfaits différents, telles que des redevances unique, des réductions, des durées contractuelles différentes ou des différences de téléphonie, messagerie, etc. pouvant être pris en compte.

De nouveaux paniers de l'OCDE, basés sur la publication de l'OCDE de 2017, ont été introduits. Les données de 2018 ont donc été recalculées pour assurer la comparabilité.

1.2.1 **Résultats: Prix moyen et prix le moins cher par paquet d'usage de l'OCDE et tendance des prix**

La Figure 5 montre les prix moyennes dans l'UE28 et les prix les plus bas observés dans un État membre pour chacun des forfaits combinés ; la Figure 6 montre le même pour les forfaits de données. Ces chiffres moyens de l'UE28 fournissent un point de référence pour la comparaison internationale et, dans une certaine mesure, pour la comparaison des caractéristiques du marché national au sein de l'UE.

Figure 5 – Prix moyens UE28 et les moins chers pour les paniers de combinés, TVA incluse

Paquet	Forfait moins cher [EUR/PPP]	Moyenne UE28 2019 [EUR/PPP]	Moyenne UE28 2018 [EUR/PPP]	Variation 2018/19
100 Mo, 30 appels	4.09	8.82	10.20	-13.6%
500 Mo, 100 appels	4.36	14.01	14.29	-1.9%
1 Go, 300 appels	6.69	17.39	18.04	-3.6%
2 Go, 900 appels	7.86	22.68	23.02	-1.5%
5 Go, appels illimités	9.19	30.41	28.39	+7.1%
500 Mo, 30 appels	4.09	10.76	11.58	-7.0%
2 Go, 100 appels	4.36	16.56	17.81	-7.0%
5 Go, 300 appels	6.69	23.29	25.96	-10.3%
10 Go, 900 appels	9.19	31.66	41.44	-23.6%
20 Go, appels illimités	10.13	44.51	100.18	-55.6%

Figure 6 - EU28 Prix moyens UE28 et les moins chers pour les paniers de données, TVA incluse

Paquet	Forfait moins cher [EUR/PPP]	Moyenne UE28 2019 [EUR/PPP]	Moyenne UE28 2018 [EUR/PPP]	Variation 2018/19
500 Mo	1.99	7.11	7.75	-8.3%
1 Go	1.99	8.06	9.20	-12.4%
2 Go	2.05	9.96	11.15	-10.7%
5 Go	3.88	13.87	16.02	-14.0%
10 Go	3.88	17.52	20.56	-14.8%
20 Go	3.88	23.81	27.76	-14.2%
50 Go	3.88	46.27	53.36	-13.3%

Le haut débit mobile était significativement moins cher en 2019 qu’au temps de la dernière exécution de l’étude dans tous les paquets d’utilisation de l’OCDE, sauf le paquet de 5 Go et appels illimités.

1.2.2 Analyse de résultats: Pays les moins chers de l'UE28

Après la normalisation des prix en euros, mesurés en PPP, il a été conclu que les pays les moins chers pour le haut débit mobile dans l'UE en 2019 étaient l'Italie, la Pologne, l'Autriche, le Royaume-Uni, la Finlande, la France et le Luxembourg. Les prix varient considérablement d'un pays de l'UE à l'autre.

Pour présenter un tableau plus complet, 4 clusters³ de pays ont été identifiés dans chaque paquet d'utilisation, en se basant sur les prix de l'offre la moins chère du paquet d'utilisation OCDE dans chaque pays.

La Figure 7 montre les résultats. Une balle verte dans un paquet d'utilisation indique les pays du cluster avec les offres les moins chères pour cette catégorie, une balle rouge les pays du groupe d'offres le plus cher dans un paquet. Des balles bleues et oranges ont été utilisées pour les groupes de niveaux de prix intermédiaires.

³ L'agrégation k-means a été utilisée avec k=4; les observations (paquets d'utilisation) sont attribuées aux clusters afin de minimiser la distance Euclidienne moyenne quadratique des observations à chaque centroïde de cluster.

Figure 7 - Variations de prix par catégorie d'offre dans l'UE, clusters pays

	Data - 500 Mo	Data - 1 Go	Data - 2 Go	Data - 5 Go	Data - 10 Go	Data - 20 Go	Data - 50 Go	Mobile - 100 Mo, 30 appels, 20 SMS	Mobile - 500 Mo, 100 appels, 40 SMS	Mobile - 1 Go, 300 appels, 80 SMS	Mobile - 2 Go, 900 appels, 160 SMS	Mobile - 5 Go, appels et SMS illimités	Mobile - 500 Mo, 30 appels, 10 SMS	Mobile - 2 Go, 100 appels, 20 SMS	Mobile - 5 Go, 300 appels, 40 SMS	Mobile - 10 Go, 900 appels, 80 SMS	Mobile - 20 Go, appels et SMS illimités
EE	1	1	1	1	1	2	2	1	1	1	1	1	1	1	1	1	1
RO	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
PL	1	1	1	1	1	1	2	3	1	1	1	1	2	2	1	1	1
IT	1	2	1	1	1	1	1	3	2	1	1	1	2	2	1	1	1
SE	1	2	2	2	2	2	2	2	1	1	1	1	2	1	1	1	1
LU	2	3	2	1	2	2	3	1	1	1	1	1	2	2	1	1	1
SI	2	3	2	1	2	2	2	1	1	1	2	1	2	2	1	1	1
AT	1	2	2	1	2	2	3	3	1	1	2	1	2	2	1	1	1
UK	2	3	3	2	2	2	2	1	1	1	1	1	2	2	1	1	1
LT	2	3	2	1	1	1	2	1	2	1	2	2	2	2	1	2	2
FR	2	3	2	2	2	2	2	1	3	1	2	1	3	3	1	1	1
LV	2	3	2	1	1	2	2	2	2	2	2	2	3	3	1	2	2
HR	1	2	2	2	3	2	3	2	2	2	3		2	2	1	2	
DE	1	3	3	3	3	3	3	2	1	1	2	2	1	2	2	2	2
FI	1	3	4	2	2	2	2	2	3	2	2	2	2	3	1	2	1
NL	2	3	4	2	3	3	2	3	2	1	2	1	2	3	1	1	2
DK	3	4	3	2	2	2	2	4	3	1	2	1	3	3	1	1	1
BE	1	3	2	2	4	3	4	2	3	2	2	2	2	3	1	2	2
MT	2	3	3	2	1	3	3	2	3	2	3	2	3	3	2	3	3
BG	2	3	2	2	2	3	3	4	3	2	3		3	3	2	3	
IE	4	4	4	2	2	2	2	4	3	2	3	2	4	3	2	2	2
ES	2	3	3	3	4	4	3	4	4	3	3	2	3	3	2	2	2
HU	1	2	3	3	4	4	3	3	4	4	3	3	2	4	4	3	3
PT	4	4	4	3	4	3	2	4	3	2	3	3	4	3	2	3	3
CY	3	4	4	3	4	4	4	3	3	3	3	3	2	3	3	4	4
CZ	1	4	3	4	4	4	4	4	4	3	3	3	3	4	3	3	3
EL	3	3	4	4	4	4	4	3	2	3	4	4	2	3	2	4	4
SK	2	3	3	3	4	4	4	4	4	4	3	3	4	4	3	3	3

Centroides de cluster [EUR]																	
1	4.08	2.28	3.71	7.2	7.69	7.19	6.5	4.61	7.92	10.24	9.93	13.35	5.59	6.41	15.21	14.69	17.74
2	7.79	4.4	8.22	13.77	14.09	16.78	19.67	6.62	11.22	19.72	16.13	25.08	9.26	10.29	30.48	28.39	33.6
3	11.29	8.5	10.94	19.22	19.55	29.67	50.41	9.75	16.7	29.81	33.73	49.43	13.38	18.46	43.99	50.24	74.53
4	15.2	13.39	15.67	27.13	29.61	43.05	124.67	14.27	25.85	33.3	66.96	182.46	17.28	37.23	47.87	90.76	160.28

Quantité d'offres dans chaque cluster																	
1	12	2	4	9	7	4	2	7	9	14	7	12	3	3	17	12	11
2	11	6	10	11	10	12	13	7	6	8	10	8	15	9	7	8	8
3	3	15	8	6	3	6	8	7	9	4	10	5	7	13	3	6	5
4	2	5	6	2	8	6	5	7	4	2	1	1	3	3	1	2	2

Les groupes de pays suivants peuvent être observés:

- L'Estonie, la Roumanie, la Pologne, l'Italie, la Suède, le Luxembourg, la Slovaquie, l'Autriche et le Royaume-Uni ont les prix les plus attractifs dans l'ensemble, avec un ratio cluster⁴ de 1,67 ou moins.

⁴ Le ratio cluster représente la moyenne de l'appartenance d'un pays à un cluster sur tous les paquets d'utilisation de l'OCDE. La valeur minimale est de 1, ce qui signifie que le pays est dans le cluster le moins

- La Lituanie, la France, la Lettonie, la Croatie, l'Allemagne, la Finlande, les Pays-Bas et le Danemark suivent avec un ratio de 2,33 ou moins. Hormis la Croatie, ces pays ont au moins trois offres appartenant au cluster le moins cher.
- Le groupe suivant a des membres très hétérogènes, avec un ratio de 3 ou moins. Il comprend Belgique, Malte, la Bulgarie, l'Irlande et l'Espagne.
- Aucun pays n'a seulement des offres dans le cluster bon marché et/ou cher pour tous les paniers d'utilisation de l'OCDE.
- Chaque pays a au moins une offre appartenant aux deux clusters les moins chers.

Moyenner de tous les paniers d'utilisation de l'OCDE et distinguer les quatre clusters révèle la tendance illustrée sur la carte (Figure 8) ci-dessous.

- Les **pays peu chers** sont: L'Estonie, la Roumanie, la Pologne, l'Italie, la Suède, le Luxembourg, la Slovénie, l'Autriche et le Royaume-Uni.
- Les **pays relativement peu chers** sont: La Lituanie, la France, la Lettonie, la Croatie, l'Allemagne, la Finlande, les Pays-Bas et le Danemark.
- Les **pays relativement chers** sont: La Belgique, Malte, la Bulgarie, l'Irlande et l'Espagne.
- Les **pays chers** sont: La Hongrie, le Portugal, Chypre, la République tchèque, la Grèce et la Slovaquie.

cher chaque fois; la valeur maximale est de 4, ce qui signifie que le pays est dans le cluster des pays les plus chers pour chaque bundle d'utilisation.

Figure 8 - Carte des clusters de pays



1.2.3 Résultats: L'UE28 en comparaison avec des pays non-européens

La comparaison des prix de l'UE28 avec les prix dans des pays non-UE sélectionnés (Islande, Norvège, Turquie, Japon, Corée du Sud et États-Unis) en 2019 a montré qu'en moyenne, le haut débit mobile dans l'UE28 est aussi cher ou moins cher que dans les pays non européens, pour la plupart des paniers de consommation OCDE.

L'Islande est le pays le moins cher de cette comparaison et ses prix sont en moyenne inférieurs à ceux de l'UE28 dans tous les paniers sauf un.

A note on limitations of the study

Readers are advised to note some limitations of the information presented in this report:

- Only the two or three largest Mobile Network Operators (MNO) in a country have been included. Although those MNOs combined have a market share of at least 70%, it remains possible that a smaller MNO or Mobile Virtual Network Operator (MVNO) has a less expensive offer for one or more OECD usage baskets.
- The data represents a snapshot of prices at one point in the field-work phase - two weeks in February 2019.
- The usage baskets defined by the OECD may or may not be a good reflection of the actual usage patterns in a country.
- While the number of SMS has been reduced in every basket, there still are markets, where even sophisticated offers do not include unlimited SMS.
- Up to three add-ons/top-ups were included for each tariff. In some markets, like Greece, consumers willing to research an optimal, larger number of add-ons/top-ups may be able to save a little more.
- This study does not include aspects of quality of service.
- This study only reflects European spectrum prices to the extent that these affect the prices of offers on a national market.
- To match the standard contract duration of 36 months, it is assumed that contracts of 24 months will be extended. To calculate the price of the extension, no discount is applied, as it is not clear today what discount might be offered at that time.

2. Introduction

2.1 Overall study objectives

The overall objective of the study was to investigate the level of pricing for standardised offers of mobile broadband services in Europe, Norway and Iceland, Turkey, South Korea and Japan, as well as three states of the United States of America (USA) - California, Colorado and New York.

The price of mobile broadband services in any country represents an informative indicator of key developments in electronic communications in the retail market. As such, mobile broadband prices are part of European Commission monitoring exercise in the context of the Digital Single Market strategy, launched in 2015. The monitoring activity is of great relevance to steering policy in this area, providing key resources for an evidence-based approach to policy-making.

The methods applied to investigate mobile broadband prices are aligned to rules set by the OECD, in order to maximise comparability with other sources also following OECD methodology. The OECD approach is based on a defined set of mobile broadband pricing baskets. The method of application of the OECD methodology is detailed in the sections below.

2.2 Methodological approach

This chapter describes the methods applied for the data collection and analysis of retail mobile broadband prices.

The applied methods in this study in order to investigate and compare mobile broadband prices are closely aligned to rules set by the OECD. The OECD approach is based on a defined set of price baskets with a distinct usage pattern of mobile broadband and telephony.

The key methodological reference for collecting, validating and also presenting the data is a 2012 publication by the OECD on constructing wireless broadband price baskets. Also, for calculations, the 2017 revision of OECD baskets is also of some importance, as described in the following sections.

Though the OECD methodology has been carefully followed, methods, definitions and criteria have been augmented in part to better reflect certain market developments. Methodology additions and adjustments are documented in the section "study methodology" below.

2.3 OECD price baskets for wireless broadband, voice and messaging services, 2017 revision

2.3.1 Introduction

The approach taken in this study applies a complementary set of price comparison methodologies published by the OECD.

Each of these methodologies is based on a price basket approach, such that each OECD basket relates to a distinct consumption pattern or type of user. Given a consumption or usage pattern, the prices of corresponding services from a provider can be used to calculate the resulting cost for that type of user. The OECD baskets are reviewed and revised periodically, e.g. in 2000, 2002, 2005, and 2014 prior to the most recent revision, which was published in December 2017.

The consumption patterns set for baskets are based on traffic and consumption data collected by the OECD from operators and regulators. The OECD had analysis performed on this data by trusted third parties.

In 2012, the OECD first published a methodology, key to the approach taken in this study, for the price monitoring of wireless broadband across countries and across operators within a country. The approach defines a number of service price baskets for mobile broadband.

Such an approach had been recommended by the Working Party on Communication Infrastructures and Services Policy (CISP)⁵. Previously, the OECD had published a revised methodology for telecommunication price baskets, which introduced a new set of baskets for fixed broadband services. CISP then recommended that a wireless/mobile version of the broadband baskets be developed to compare wireless broadband prices across countries.

For the telephony component of wireless broadband offers, the 2017 OECD paper referred back to previous work on telephony pricing. In 2010, the OECD published a revision of a set of methodologies designed to compare retail prices of "telecommunication services"⁶. These services included "mobile services", i.e. mobile telephony and messaging. Similar to the internet methodologies, the comparison should reflect the views of consumers and companies in OECD member countries with their different patterns of use.

Along with detailed data on timing, destination and duration of calls in telephony baskets, the paper includes:

- an approach to normalisation of billing units greater than one second and
- a detailed approach to the effect of discounts applying to customer-selected numbers, "selective discounts".

2.3.2 Methodology components

The OECD methodology for monitoring and comparing retail mobile broadband prices comprises inclusion criteria for building samples of Mobile Network Operators (MNOs) and their products, for the sources of data to be considered, a set of typical usage patterns defining 17 price baskets and calculation rules for normalising prices across different tariff structures.

In respect of sampling MNOs, the OECD (2017) inclusion criteria are that at least the two largest MNOs be included for each country. Operator size is based on the number of mobile broadband subscriptions an operator reports. If the combined market share of the two largest operators is less than 70%, the third largest operator is also to be included. In 2010, the OECD set slightly different rules for determining the lowest mobile telephony prices in a market, in that the set of two operators should be extended if these have less than 50% of the market share between them.

2.3.3 Product inclusion criteria

For product selection, the OECD 2017 inclusion criteria are the following:

⁵ OECD (2012), "Methodology for Constructing Wireless Broadband Price Baskets", OECD Digital Economy Papers, No. 205, OECD Publishing. <http://dx.doi.org/10.1787/5k92wd5kw0nw-en>

⁶ DSTI/ICCP/CISP(2009)14/FINAL

The OECD provides clear criteria for the inclusion or exclusion of offers on the market, summarised as follows:

- Each offer, whatever it may be bundled with, is to include mobile wireless broadband services based on 3G or 4G mobile networks. Neither wireless access for fixed use (e.g. LTE at home) nor Wi-Fi hotspot access are considered to be mobile wireless broadband.
- An offer, to fit basket requirements, must provide access to the greater Internet via HTTP. Offers are excluded which are a "walled garden", provide email-only services or where access to websites, content, and applications is limited to those "offered directly by the mobile Operator and customised for that operator's network and devices".

The OECD further require

- that only offers advertised on the operator's website are included.
- that any discount brands offered by network operators are only included when the network operator's website contains a clear link to the discount brand.
- that packages which degrade or stop internet access when the usage allowance is exceeded are included only in baskets whose average user requires a volume/time covered by the allowance. Packages which allow extension with a new price or overage charge are to be included for baskets whose average user requirements exceed the allowance.
- that both prepaid and post-paid tariffs are included.
- to only include residential tariffs in published basket results.
- to not include offers which in the price for the service include the provision of a laptop, netbook, notebook or tablet device.
- to not include discounts for long-term payments.
- to include offers which in the price for the service include an up-front or integrated charge for a modem, e.g. as stick or dongle.
- to include no offer which limits time of use in any way: "The methodology will exclude those offers with time-based limitations, for example by the number of monthly hours of use, or daily or weekly offers. Only those offers where the allowance can be freely used over a whole month will be considered. Therefore, the number of hours or days of use per month are not parameters in the methodology."

In terms of the sample of operators and the pricing information to use, the OECD require

- that only prices clearly presented as currently available on the operator website to a new customer are to be considered.
- that, for mobile voice and data baskets, the two largest network operators are included. Their combined market share should be at least 50%.
- that, for mobile broadband baskets, the three largest network operators are included. Their combined market share should be at least 70%.

The OECD proposes that offers are neglected which impose any kind of usage time limit. This will be followed. Offers are not included if there is any time-based limitation to use.

Combinations of basic tariff packages and add-on packages are allowed (e.g. for additional data on mobile voice tariffs).

2.3.4 Price baskets

The OECD methodology (OECD 2017) contains the parameters for defining 17 price baskets.

All baskets are defined first and foremost by a monthly volume of uploaded or downloaded data considered typical for users. Reflecting usage patterns of the time, handset-based baskets have an allowance of a half to one fifth of the corresponding laptop-based basket.

The OECD makes it clear that, unlike for fixed broadband internet, advertised speed should not be used in the definition of mobile broadband baskets. Instead, the methodology includes simple flagging of offers providing LTE or advertised speeds greater than 20 Mbps.

2.3.5 Normalisation of prices for telephony services (OECD 2010)

Introduction

The following sections deal with normalisation of the prices developed for mobile telephony services, subsequently applied where telephony is bundled with mobile broadband data in the "handset-based" price baskets of the mobile broadband methodology.

The OECD provides for normalisation due to variations in plans providing telephony:

- with minute interval billing e.g. a call of 110 seconds costs the same as 115 seconds but 125 seconds costs more;
- offering one or two user-selected numbers which are cheap or free to "family and friends", i.e. user-selected numbers or "selective discounts";
- charge differently at different times of day or week;
- charge differently between calls remaining on the provider's network - on-net - or not - off-net;
- charge differently for calls to voice box compared to on-net charges;
- charge by the number of SMS sent or restrict the number of SMS sent.

The OECD provided the data per user profile basket to weight each of the offer price components, enabling an analysis to arrive consistently at the expected monthly charge for the typical consumer in each handset-based basket.

The calculation of a normalised offer price in mobile telephony baskets, as defined in OECD (2010), proceeds by deducting the value of call and message allowances included in the package from the usage element of the basket, up to the value of actual usage.

Allowances are to be deducted in the following order:

- selective discounts
- most restricted minute allowance
- least restricted minute allowance
- message allowance
- value allowance.

Finally, specific volume discounts are deducted.

Telephony usage statistics

The data required to normalise offers are provided in the following tables, respectively:

- Voice call destination distribution

- Message (SMS) time and destination distributions
- Voice call destination distribution
- Voice call timing distribution

Figure 9 – Voice call destination distribution per basket

Basket No.	Calls / month	Fixed	On-net	Off-net	Voicemail
1	30	15%	55%	28%	2%
2	100	15%	55%	28%	2%
3	300	15%	55%	28%	2%
4	900	15%	55%	28%	2%
5	Unlimited	-	-	-	-

Figure 10 – Voice call timing distribution for each basket

Basket No.	Day	Evening	Weekend
1	46%	29%	25%
2	51%	26%	23%
3	49%	32%	19%
4	49%	32%	19%
5	-	-	-

Figure 11 – Message (SMS) volume, time and destination distributions for each basket

Basket No.	SMS / Month	Peak	Off-peak	On-net	Off-net
1/HD1	20/10	66%	34%	53%	47%
2/HD2	40/20	66%	34%	53%	47%
3/HD3	80/40	66%	34%	53%	47%
4/HD4	160/80	66%	34%	53%	47%
5/HD5	Unlimited	-	-	-	-

Figure 12 – Voice call duration by destination network / service in minutes per call

Basket No.	Fixed	On-net	Off-net	Voicemail
1	2.0	1.6	1.7	0.9
2	2.1	1.9	1.8	1.0
3	2.0	2.0	1.8	1.0
4	1.9	2.1	1.9	1.1
5	-	-	-	-

Correcting for long billing units

In the 2010 OECD paper revising the methodology for comparing retail prices of telecommunication services, a new method of accounting was introduced for different call billing units (e.g. seconds or minutes) for both PSTN services and calls in mobile baskets.

Previous to the 2009 / 2010 revision, calls of various durations were simply rounded up to the next billing increment. An average call duration of 75 seconds was costed at 2 units (120 seconds) for tariffs with per-minute billing and as 75 units (75 seconds) only for tariffs with per-second billing.

This previous approach introduced distortions in comparisons. A basket defined with an average call duration just over the billing increment of a tariff would incur a larger rounding up to reach the next increment, while a call just under the billing increment of a particular tariff would attract a correspondingly small addition to call cost. As the OECD authors note, "the effect was somewhat arbitrary".

The improved accounting introduced in 2009 provided a method to calculate the average overcharge over all customers with the same average duration.

In this new method, a price per second is the basis of the calculation in all cases, regardless of the billing increments (billing unit duration). For a tariff with 60 second billing increments the price per second is simply the price per unit divided by 60. Given a flat distribution of call duration, the average overrun is half the billing increment less one second, that is for a 1 minute increment, (60-1)/2 seconds.

This means that an average call duration of 75 seconds in a tariff with 60 second billing is costed at 75 + (60-1)/2 seconds times the fictitious per-second price - unit price/60.

The general rule for costing a call basket is:

$(\text{average basket call duration} + (\text{billing increment} - 1) / 2) * \text{unit price} / \text{billing increment}$

Call duration and billing increment (N in OECD notation) are measured in seconds; unit price is the price for exceeding the next billing increment.

Thus the 2009 revision changes the calculation to use the average duration defined by the basket, and then add an element related to the billing method and distribution.

Measuring the cost impact of selective discounts

In the 2010 OECD paper, a new method was also introduced to account for the impact of selective discount plans on consumer costs.

Selective discounts allow users to specify a certain number of destination telephone numbers to which calls and/or messages will be free or discounted. There are many brand names for the plans the OECD refers to as selective discounts, such as "Friends and Family" or simply "Preferred numbers".

The OECD, working with operators, developed an empirical function for estimating the impact of selective discount plans, based on data on the distribution of calls between numbers in some consumer populations.

The increase in traffic to such numbers that selective discounts trigger is not taken into account in basket calculations.

The empirical function is presented here in two parts. The first provides a proportion, A, "that resembles the amount of calls going to nominated numbers in the data received from operators" in the 2009 OECD basket review, and the second delivers V_2 , the number of minutes going to the nominated numbers, that is, the amount that will be deducted because of the selective discount:

$$A = \text{Log}(10 \times N^{1.5}) / \text{Log}(10 \times V)$$

$$V_2 = V_1 \times A \times D$$

Where

V is the total number of minutes for all calls in the basket

N is the number of target telephone numbers the discount applies to

D (0...100%) is the discount D in percent applying to a call to a discounted target number with D=100% being a free call

V_1 is the total number of minutes defined by the basket

2.4 The study methodology

2.4.1 Introduction

The methods applied in the study closely follow the methods proposed by OECD (2012). MNO sampling and product inclusion criteria were applied to generate a full database of mobile broadband service offers for each of the countries covered. The price-basket approach and price normalisation rules, including telephony price normalisation OECD (2010), were then applied to making offer prices comparable within and across countries. Some extensions and modifications to the OECD proposals were made, as documented in the following sections.

2.4.2 Provider (MNO) and product sampling

In line with the OECD specification, at least the two largest MNOs were included for each country, based on the number of mobile broadband subscriptions. As specified in OECD (2017), if the combined

market share of the two largest operators was less than 70%, the third largest operator was also included.

A list of MNOs following these rules was drawn up by the European Commission, and National Regulatory Authorities (NRAs) were given the opportunity to verify the entries for their Member State.

For each of the MNOs selected, data on all relevant mobile broadband products offered to residential consumers was collected. Relevant products are those meeting the (modified) OECD inclusion criteria included both stand-alone broadband and offers also permitting mobile voice telephony and mobile messaging.

2.4.3 Data collection and product inclusion

Data was gathered and collected online in a period of two weeks in February 2019. Only offers advertised and purchasable on the websites of the respective MNOs were included in the sample. Also and more specifically, only prices clearly presented as current on the Operator web pages were considered.

The OECD product inclusion criteria were applied.

The following extensions or modifications were made to the OECD methodology for product inclusion:

- Multiple SIM cards were included only if no extra charge is made.
- A charge for the extension of a contract from 24 to 36 months was not taken into account, whether or not new devices were included.

For each mobile broadband product, information was collected on all the data items required to apply the adapted OECD rules, in particular to be able to allocate each such offer to the correct mobile broadband basket and to carry out calculation of the normalised monthly price.

The data was collected from the websites of the MNOs.

Electronic copies of the web pages (screenshots) were kept from which tariff information is collected.

Discounts or other commercial advantages visible on the MNO websites were taken into account both

- in determining the way to calculate the normalised monthly price and
- to apply OECD rules (as detailed / modified above) whether to include an offer in the comparison.

The table below lists the items which were documented for every offer.

Table 13 – List of data items captured for each offer

Characteristic of offered service	Categories, units and remarks
Country	Data set comprising: Country abbreviation; EU, non-EU; currency; (integer) Euro exchange rate; VAT rate (integer) percent.

Characteristic of offered service	Categories, units and remarks
MNO	Data set comprising: Name (free text); incumbent (yes/no)
Name	Name on web presentation (free text)
Geographical coverage	Categories: national, regional, some cities, one city, other
Bundled devices	Categories: Handset, 2 or more SIMs, modem as USB stick or dongle, other
Handset name	<p>Manufacturer and model of bundled handset, selected from a set list of 3-5 advanced or 3-5 basic models.</p> <p>Advanced: Samsung Galaxy S9, Huawei Mate 20, HTC U12, other.</p> <p>Basic: Samsung Galaxy A3, Huawei P20 lite, other.</p>
Handset price bracket	Categories: basic and advanced
Technology	Categories: UMTS, LTE, LTE Advanced
Speed	Speed of offer (up to 12, 12 - 50, more than 50 Mbps).
Top speed available	Speed of highest speed offer otherwise identical to the offer recorded (price is not recorded).
Volume cap	Volume in GB (integer).
Extension offered	Whether the cap can be exceeded at full speed with a surcharge or not (yes/no).
Unavoidable degradation	"Fair use" policy such that exceeding the volume cap leads to unavoidable service quality degradation (yes/no). If yes, baskets of higher volume than the cap are not eligible offers.
Price of volume over cap	Price in local currency per GB over cap volume (overage) at normal service quality (integer).
Maximum volume surcharge	The maximum charge levied through the price of volume over cap, if applicable, local currency (integer).
Contract duration	Duration in months (integer).

Characteristic of offered service	Categories, units and remarks
Recurring charges (time-dependent charges)	Charge in local currency per month ⁷ (integer).
Non-recurring charges (up-front charges)	Charge in local currency including all one-off charges imposed at the outset of a contract, if any, e.g. for a modem device or SIM (integer).
Time-based discounts	Discount in local currency per month (integer). Only discounts are recorded which apply to all customers on the first day of the fieldwork.
Up-front discounts	Discount in local currency applicable to all customers on the first day of the fieldwork (integer).
Bundled web / cloud space	Web or cloud space provided without additional charge in GB (integer).
Mobile telephony	Data set comprising for each price category the number of free call minutes and SMS, the charge per additional minute/second and SMS, and the call billing unit in seconds. Tariff price categories are destination (on-net, off-net, fixed), time (day, evening, weekend, voicemail) for calls and for SMS peak hours (peak/ off-peak).
Hotspot (wifi) access	Hotspot provision at any scale (yes/no)
VOIP permitted/supported	(yes/no)
Zero rated services	Audio/video streaming, social media
EU roaming included	(yes/no)
Roaming limitations	Countries (yes/no), volume (yes/no), days (yes/no)
Selective discounts	Data set comprising for each price category in the mobile phone plan the number of numbers to which calls are discounted and the discount applied.

⁷ These include any charge which the service customer necessarily incurs to receive the offered service, which increases in proportion to the time period the offered service is provided (not one-off charges), and is paid at regular intervals, including in particular rental charges for required equipment, if any and any repeated base ISP charge. The most easily and publicly accessible, time-dependent price for the service is applied, regardless of which payment or billing method is linked to this price. Charges for periods other than a month are converted proportionately to the charge for one month. Irregular charges are treated as a mixture of regular recurring charge and non-recurring charge.

Characteristic of offered service	Categories, units and remarks
Other items included which are of significant value to consumers	(free text)

2.4.4 Complete set of price baskets

There have been several changes in the 2017 OECD paper that directly affect the composition of baskets compared with prior studies.

- The number of SMS was drastically reduced in each basket
- Two new baskets including unlimited telephony and messaging were introduced
- A set of five baskets with higher data usage (HD1-5) was created including only half the number of SMS than the standard baskets (H1-H5).

In line with the OECD, advertised download speeds were not taken into account. In many cases there is no advertised speed or users experience different, typically lower, actual speeds. As recommended, the use of LTE and offers advertising speeds greater than 20 Mbps are flagged.

The volume requirements for the resulting 21 baskets are given in the following table.

Figure 14 – Volume requirements of the 21 mobile broadband baskets

Basket numbers	Required volume
L1	0.5 GB
L2	1 GB
L3	2 GB
L4	5 GB
L5	10 GB
L6	20 GB
L7	50 GB

In respect of handset baskets, baskets are additionally specified in terms of numbers of mobile calls and use of SMS. The following table shows the number of calls in the user profile for each basket for handset use. Newly added or changed items compared to the 2018 study are shown in bold.

Figure 15 – Number of mobile calls and messages in handset-based baskets

Basket numbers	Handset volume	Handset calls	Handset messages
H1	0.1 GB	30 calls	20 SMS
H2	0.5 GB	100 calls	40 SMS
H3	1 GB	300 calls	60 SMS
H4	2 GB	900 calls	80 SMS
H5	5 GB	unlimited calls	unlimited SMS
HD1	0.5 GB	30 calls	10 SMS
HD2	2 GB	100 calls	40 SMS
HD3	5 GB	300 calls	60 SMS
HD4	10 GB	900 calls	80 SMS
HD5	20 GB	unlimited calls	unlimited SMS

2.4.5 Price normalisation

Overall approach

To arrive at comparable prices despite complex and varying tariffs, the OECD (2012) requirements were followed, in particular:

- inclusion of a number of charge elements, specifically "connection (one-off) charge, monthly rental charge, usage allowance (time or volume) and overage charges (i.e. charges above the subscriber's monthly limit)" and
- depreciation of non-recurring price elements over three years.

On completion of the data collection, the dataset was analysed to adjust or normalise the prices calculated, following these and further rules, and according to the detail of offer conditions. This allowed a standard monthly price to be determined for each offer which takes fully into account both non-recurring and recurring / monthly charges, and usage charges, adjusted or normalised for mode of capping, contract duration, pre-paid model, billing unit duration, discounts and other commercial characteristics. Non-recurring charges include initial cost elements, such as activation, installation, sending costs, buying or renting of material (smartphone, modem, software), etc.

For offers with the option to either buy or rent the required equipment, the cheaper of the two options was used.

To make offers with a shorter contract duration comparable, the calculation was carried out based on the customer keeping the broadband service for a duration of at least 36 months. Any charge levied

for the extension of a contract, e.g. from 24 to 36 months, was not taken into account, whether or not a new device are provided on contract renewal.

Offers which are limited in volume for internet access or time for telephony or both must be normalised to reflect the additional costs to consumers of regularly exceeding the threshold. A surcharge on the monthly charge was calculated. For broadband services, overage costs cover additional volume and for telephony services, the surcharge was for the additional costs charged for exceeding call time thresholds.

In some cases, a maximal charge was advertised for additional time or download volume, or the total invoice was limited to some maximum. If this maximum charge was lower than the normalised charge, the maximum charge was taken.

The calculation of a normalised offer price in mobile telephony baskets closely follows OECD (2010). Allowances were deducted in the prescribed order:

- selective discounts
- most restricted minute allowance
- least restricted minute allowance
- message allowance
- value allowance
- specific volume discounts.

Selective discounts were calculated as described above. Compensation for longer billing unit lengths was applied, using OECD data on call distributions. Off-net mobile-to-mobile charges were weighted according to subscriber numbers for each country, where relevant for the pricing of calls.

Further details of price normalisation are provided in the following section.

Long billing units

The OECD (2010) approach to normalising tariffs with long billing units is a considerable improvement over previous work. The assumption of a flat distribution of call durations diverges from the real distribution, however, compared to the previous method, this technique certainly comes closer to what groups of consumers are actually charged and was applied for tariffs with a fixed billing unit longer than one second.

An additional rule applied for adjusted call durations shorter than the billing unit, where the full price of one billing unit was considered as the cost of the call.

Any call set up charge was also added to the cost per call.

Minimum call length

A new normalisation technique was developed for the now-common pricing practice of setting a long first billing unit or minimum call length, typically one minute. These tariffs have a cost impact on bundles of calls, as some of these will be shorter than the minimum length charged.

The method applies an exponential distribution of call lengths. For a minimum billed call length of 1 minute, followed by one-second increments, the proportionate increase in billed duration compared to per-second billing is then given by

$$\frac{1}{\mu} - \left(1 - e^{-\frac{1}{\mu}} \right)$$

where μ is the average duration of calls in a basket.

Selective discounts

The method to compensate for selective discounts designed by the OECD was applied. Using the formula $V_2 = V_1 \times A \times D$ described above, mapping information was used to indicate which call types were affected by the discount. V_2 was then used to calculate the number of minutes to be deducted from the basket minutes according to the call type mapping. V_2 was distributed to the specific call types according to the selective discount mapping, so that each call type had between zero and V_2 minutes to be deducted. The cost of remaining minutes was then calculated as usual. The selective discount was taken before any minute, message and value allowances included in the package.

Where discounted SMS were offered as part of the discount they were deducted using the same value A from the formula, and the relevant discount applicable to the SMS.

Bundled handsets and other equipment

For each service available with a bundled handset, where possible, the offer prices were captured for both a basic handset and a high-price handset. For this purpose, a list of manufacturers' models assigned to the basic and high-price handset categories was generated in advance of fieldwork. Where the same service was available without a handset ("SIM only"), this price was captured in the database.

Volume capping and fair use policies

Excess usage beyond the data allowance of an offer may result in disconnection, throttling of speed and/or overage charges. The OECD methodology considers excess usage, i.e. beyond data allowances included in the offer, in one of two ways:

- "If throttling is used the tariff is excluded from the results if the basket volume exceeds the allowance. This will also apply if both throttling and overage charges are applied to a given offer. In this regard, throttling practices specified by acceptable use policies (AUPs) will also be considered.
- If excess usage results in overage charges the additional cost is added to the total as a usage element to pick the level of usage specified in a basket."

Following this, packages which degrade or stop internet access when the usage allowance is exceeded were included only in baskets whose average user requires a volume/time covered by the allowance.

Packages which allow extension with a new price or overage charge were included for baskets whose average user requirements exceed the allowance, with normalisation of the price to include the additional price. Where an offer provided the option of extending use at the original speed with an overage charge, overage charges were added to the price, to properly reflect the cost of using the basket data volume under the tariff rules of the offer.

Non-recurring charges

Non-recurring (one-off) charges include initial cost elements, such as activation, packaging and postal costs, buying or renting of material (modem, handset, software), etc.

The stipulation of a standard contract duration (SCD) enables the consistent translation of one-off costs into monthly amounts and vice versa.

Using the SCD and the discount rate, non-recurring charges were converted to a "spread charge", a constant monthly amount over the SCD, such that the net present value of the spread charge equals the total of non-recurring charges incurred at the beginning of the contract.

Given the expected economic climate of 2018, and following previous practice, a discount rate of zero was applied. This is also in line with the OECD distribution rule, which is implicitly zero percent discounting - distributing fixed costs proportionately over 36 months.

Contract duration

Based on the previous study and the guidance provided by the OECD, the standard contract duration (SCD) for 2019 was set at 36 months. Thus, normalisation was required for contracts being longer or shorter than SCD.

Short contracts: For offers with a shorter contract duration than 36 months, normalisation was carried out based on the precondition that a customer would renew the contract to maintain the service for at least 36 months. The normalised price for contracts of duration shorter than 36 months was calculated in the same way in principle as for a contract of 36 months. Finally, any non-recurring charges made on extension of a short contract were discounted back to the beginning of the first contract before being added to the non-recurring charges and spread over the full 36 months.

Long contracts: If a contract could only be extended for a fixed period, then exceeding SCD, charges for the period after SCD were discounted back to the start of the first contract.

Other discounts and charges

Discounts are given by providers on up-front (non-recurring) charges, e.g. equipment, activation and/or installation charges, and / or on the recurring charges, monthly fee or other time-based charge. All types were taken into account. The rules for taking discounts into account are intended to provide an unbiased estimate of the tariff prices an average new customer would have agreed to, when purchasing a mobile broadband service in the fieldwork period. The rules applied were:

- For promotional discounts, that is, only valid for a limited period, the full value of a discount was applied regardless of any opinion as to whether the discount was one-off or likely to be repeated.
- Discounts for ordering online were applied in full.
- Where discounts were offered or extra charges applied for billing and payment method (e-invoicing, electronic payment, direct debit, paper billing, cash, credit card, cheque, etc.), the most easily publicly accessible price for the service was recorded and applied, regardless of which payment or billing method was linked to this price.
- All charges a customer cannot avoid, including contributions to Universal Service provision or TV contributions for settling author rights and local taxes or fees, etc. were taken fully into account as part of the tariff for the mobile broadband service.
- Where options were given to either buy or rent required equipment, the less expensive variant was taken into account. Usually, due to the extrapolation on the SCD of 36 months, buying the required equipment was less expensive than renting it.
- Targeted discounts applicable only to certain types of customers such as students or disabled people, and discounts for grouped subscriptions were not included.
- All commercial advantages (e.g. with promotional intent) which directly affected the price or the basket classification, including but not limited to free call minutes, increased download limits, or increased download speeds, were taken into account.

Commercial advantages which had no effect on price or basket classification, such as access to Wi-Fi hotspots, were recorded, but not included in price normalisation.

- Finally, discounts only applicable in the first period after contract conclusion, e.g. in the first month of a contract, were taken into account but averaged over the SCD of 36 months.

2.4.6 Data collected and cheapest offer

The cheapest offer per price basket and country was determined based on the normalised price for each offer in all the baskets for which it was eligible.

The least expensive offer recorded for a price basket in a country was allowed to be an offer providing a greater data volume, call number and/or SMS volume than that specified in the basket, if such an offer was cheaper than all offers providing only the basket amounts.

2.4.7 Quality assurance

In order to obtain solid results, the gathered data was thoroughly checked and subsequently prepared for the statistical analysis, beginning with normalisation procedures.

The following table summarises techniques applied to ensure high quality of all statistical data:

Figure 16 – Summary of automated and manual checks on statistical data

	Across data sets (EU-wide)	Within one data set (Member State)
Automated	<ul style="list-style-type: none"> • Outlier analysis <ul style="list-style-type: none"> ○ Highlighting if certain values differ significantly from expected values 	<ul style="list-style-type: none"> • Checks on plausibility of data within one Member State data set <ul style="list-style-type: none"> ○ Highlighting of duplicates ○ Highlighting of non-numeric values ○ Highlighting of higher volumes at lower prices at same MNO
Manual	<ul style="list-style-type: none"> • Checking data completeness <ul style="list-style-type: none"> ○ Coverage of all Member States ○ Coverage of necessary MNOs ○ Coverage of market share 	<ul style="list-style-type: none"> • Cross check of collected 2019 products with data from last collection (Mobile Broadband Prices 2018) <ul style="list-style-type: none"> ○ for each Member State ○ for each MNO

3. Key findings

3.1 Mobile prices at a glance

In the following table, green symbols indicate the cluster⁸ of countries with the least expensive offers for the usage basket in question and red the cluster with the most expensive offers. Blue and orange are used for the cluster of countries with relatively inexpensive and relatively expensive offers, respectively.

Figure 17 - Major clusters of countries by price level in each usage basket

	Data - 250MB	Data - 512MB	Data - 1GB	Data - 2GB	Data - 5GB	Data - 10GB	Data - 20GB	Handset - 100MB, 30 calls, 100 SMS	Handset - 512MB, 100 calls, 140 SMS	Handset - 1GB, 300 calls, 225 SMS	Handset - 2GB, 900 calls, 350 SMS	Handset - 2GB, 100 calls, 140 SMS	Handset - 5GB, 100 calls, 140 SMS
IT	1	1	1	1	1	1	1	2	1	1	1	1	1
PL	1	2	1	1	1	1	1	3	2	1	1	1	1
AT	2	2	1	2	1	1	2	3	1	1	1	1	1
FR	3	3	2	2	1	1	1	1	1	1	1	1	1
UK	2	2	2	2	1	2	1	1	1	1	1	1	2
LU	1	2	2	2	1	2	2	2	1	1	1	2	1
FI	1	1	1	2	1	2	1	3	3	2	1	3	2
SI	3	3	3	2	1	1	2	2	1	1	1	1	1
LV	3	3	3	2	1	1	1	2	2	2	1	2	2
EE	3	3	3	2	1	2	2	3	1	1	1	2	1
LT	3	3	3	2	1	2	2	1	1	2	1	2	2
RO	3	4	3	2	1	2	2	3	2	1	1	1	1
SE	3	3	2	2	1	2	1	4	3	2	1	3	2
DK	4	4	3	2	1	1	1	4	3	2	1	2	2
BG	2	2	2	1	2	2	2	4	4	4	4	4	4
DE	2	3	3	3	2	3	3	2	2	2	1	3	3
ES	2	2	2	3	3	3	4	2	2	2	2	2	4
BE	3	3	3	2	3	3	3	2	2	2	2	2	3
NL	3	3	3	3	2	3	3	3	2	2	1	3	2
IE	4	4	4	3	2	2	2	4	3	2	2	3	3
HR	4	4	4	3	2	3	2	4	3	3	2	2	2
MT	4	4	4	3	1	1	3	4	4	3	2	4	4
PT	2	3	4	4	2	3	3	4	3	3	2	3	3
HU	2	2	2	4	3	3	3	4	4	4	3	4	4
EL	2	3	3	3	3	4	3	3	3	4	4	3	4
SK	2	3	2	2	3	4	4	4	4	4	3	4	4
CZ	2	2	3	4	3	3	4	4	4	4	3	4	4
CY	3	3	4	4	4	4	4	2	3	3	4	4	4

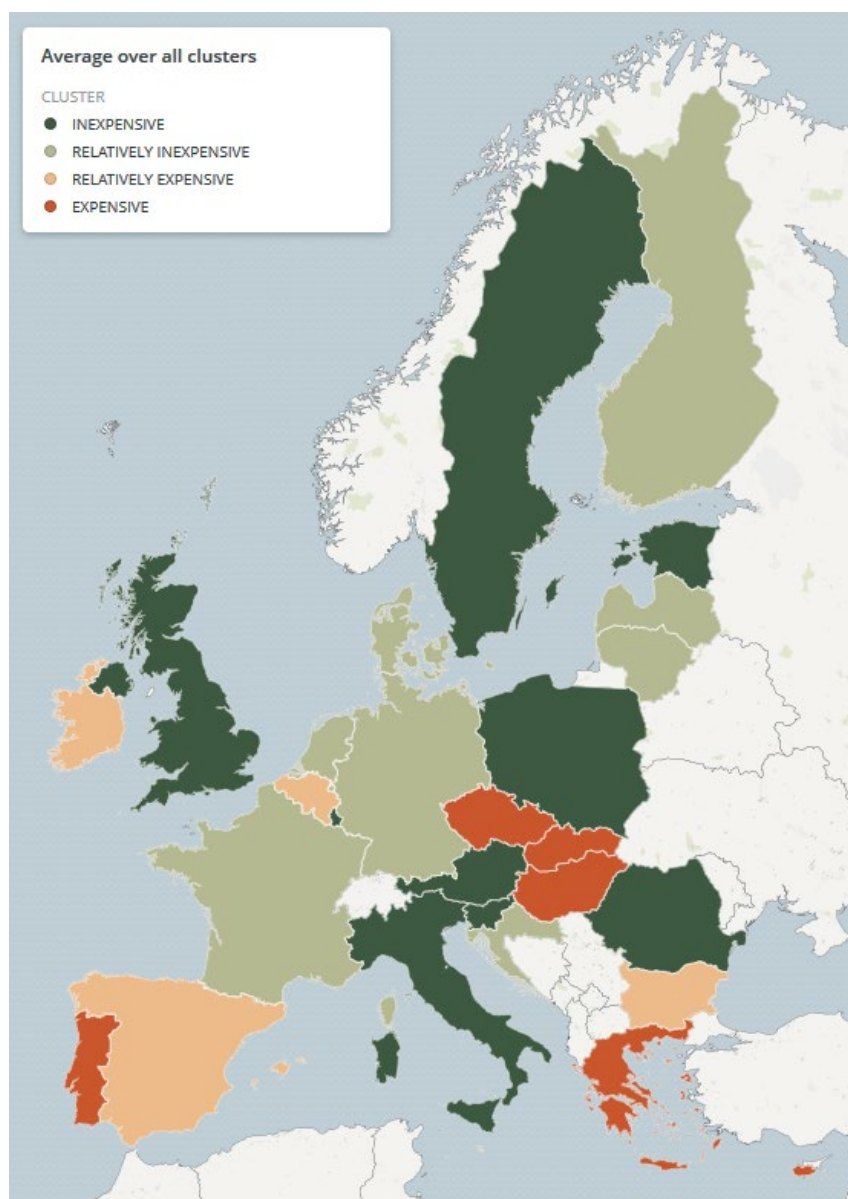
Cluster Centres [EUR]													
1	3.03	2.51	4.35	4.33	9.35	8.95	13.59	4.83	8.69	9.95	15.15	9.57	10.74
2	5.93	5.75	7.67	9.21	18.52	16.33	22.69	7.75	11.97	17.92	32.11	15.18	19.1
3	8.84	8.46	10.09	13.75	25.44	26.59	36.21	10.02	17.7	28.03	54.16	21.66	25.99
4	12.51	12.08	14.55	20.06	44.09	46.5	58.79	20.15	35.55	51.38	100.32	38.95	48.18

Number of cases in each cluster													
1	4	2	4	3	14	8	9	3	7	9	16	7	8
2	10	8	8	14	7	9	8	8	8	10	6	8	8
3	10	13	11	7	6	8	7	7	8	4	4	7	4
4	4	5	5	4	1	3	4	10	5	5	2	6	8

⁸ k-means clustering was used with k=4; observations (offer categories) are assigned to clusters so as to minimise the average squared Euclidean distance of observations to each cluster centroid

- Estonia, Romania, Poland, Italy, Sweden, Luxembourg, Slovenia, Austria, and the United Kingdom have the most attractive prices overall, with a cluster ratio of 1.67 or less.
- Lithuania, France, Latvia, Croatia, Germany, Finland, the Netherlands, and Denmark follow with a cluster ratio of 2.33 or less. Apart from Croatia, these countries have at least three offers belonging to the cheapest cluster.
- The next group has very heterogeneous members, with a ratio of 3 or less. It includes Belgium, Malta, Bulgaria, Ireland, and Spain.
- Slovakia, Greece, Cyprus, Portugal, Spain, Ireland, and Bulgaria have no offer belonging to the inexpensive cluster.
- No country has only offers in the inexpensive and/or expensive cluster for all the OECD usage-baskets.
- Each country has at least one offer belonging to the two less expensive clusters.

Figure 18 - Major clusters of countries by price level over all usage baskets



Averaging across all OECD usage baskets and distinguishing the four major clusters reveals the pattern shown in the map (Figure 19) above.

- The **inexpensive** countries are: Estonia, Romania, Poland, Italy, Sweden, Luxembourg, Slovenia, Austria, and the United Kingdom.
- The **relatively inexpensive** countries are: Lithuania, France, Latvia, Croatia, Germany, Finland, the Netherlands, and Denmark.
- The **relatively expensive** countries are: Belgium, Malta, Bulgaria, Ireland, and Spain.
- The **expensive** countries are: Hungary, Portugal, Cyprus, the Czech Republic, Greece, and Slovakia.

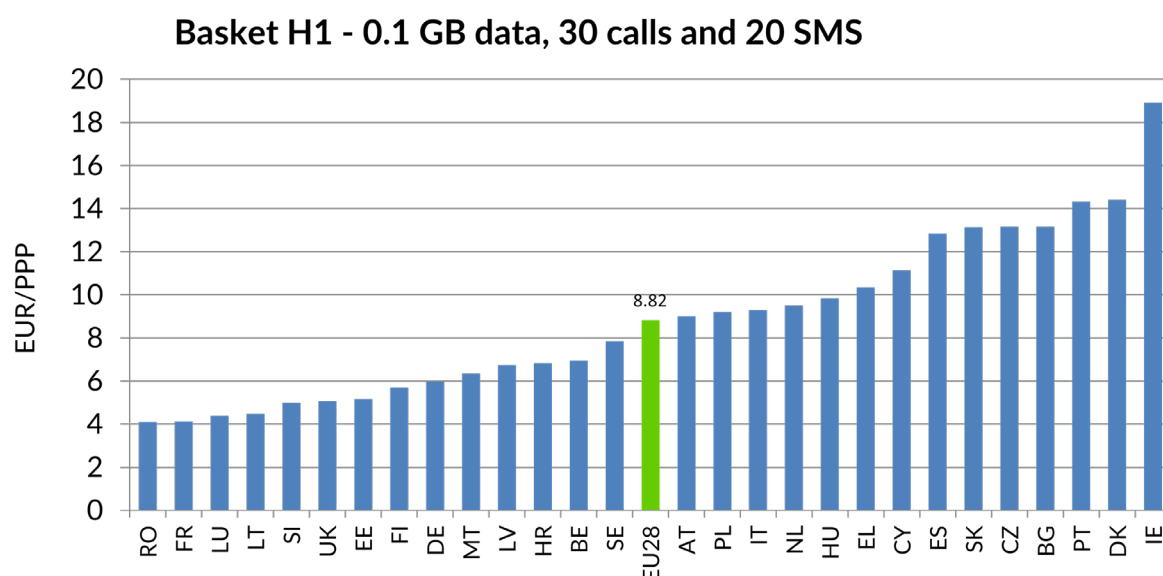
The averaging technique applied here may be seen as giving prices for low-end usage baskets too great a weight. If, in contrast, only the higher-end usage baskets are taken into account, some countries change position. In particular, Ireland and Finland move up the table. Here, MNOs offer reasonably-priced tariffs for unlimited data, messaging and telephony, but do not offer lower tariffs for capped usage, as do MNOs in many countries.

3.1.1 Who is best in class?

The subsequent sections show graphs comparing the prices of least expensive offers in each country found for each OECD price / usage basket.

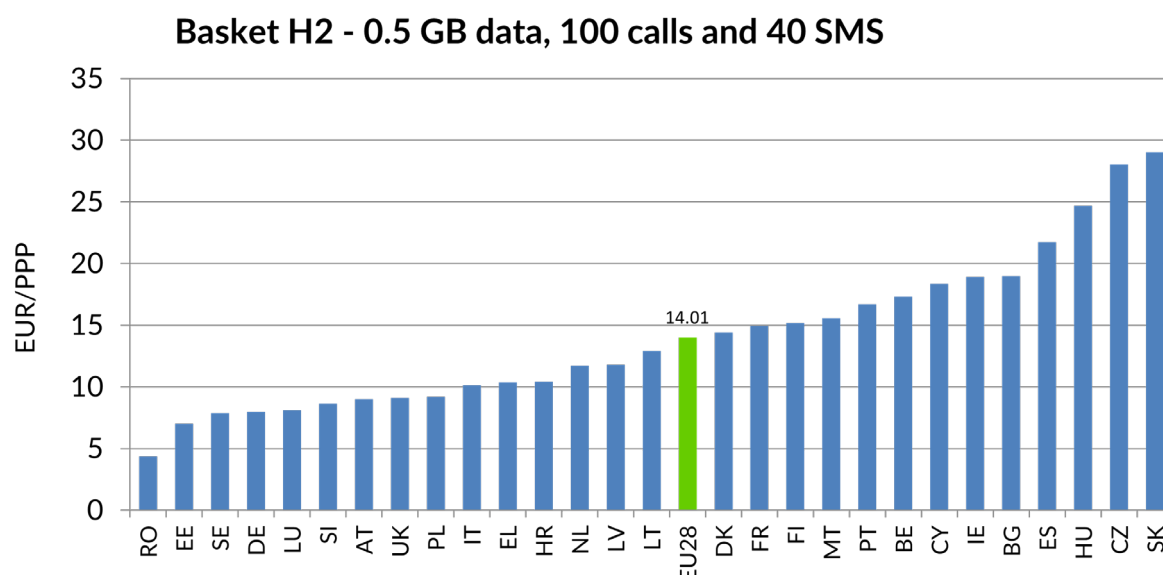
3.1.2 Basket H1 - 100 MB data, 30 calls, 20 SMS

Prices of least expensive offers by country for the usage basket containing 0.1 GB data, 30 calls, and 20 SMS, shown in the chart below, range between 4.09 EUR/PPP in Romania and 18.91 EUR/PPP in Ireland. The EU average is 8.82 EUR/PPP. Prices in 19 of the countries are below 10 EUR/PPP. Three of the five largest Member States (France, Germany, and the United Kingdom) are below the EU average for this usage basket.



3.1.3 Basket H2 - 500 MB data, 100 calls, 40 SMS

The price distribution chart for the usage basket with 0.5 GB data, 100 calls, and 40 SMS displays the EU average at 14.01 EUR/PPP.⁹ The prices for the least expensive offers in this basket range from 4.36 EUR/PPP in Romania to 29.01 EUR/PPP – almost seven times as much – in Slovakia. The distribution shows a steady incremental increase in prices from the lowest price found up to and including Bulgaria at 18.97 EUR/PPP. The remaining four countries, with notably higher prices in this basket, start with Spain (21.72 EUR/PPP) and Hungary (24.67 EUR/PPP). These countries are cheaper only in comparison with the Czech Republic and Slovakia at 28.01 EUR/PPP and 29.01 EUR/PPP respectively. The prices found for this usage basket are below the EU average in three of the five largest Member States (Germany, the United Kingdom, and Italy).

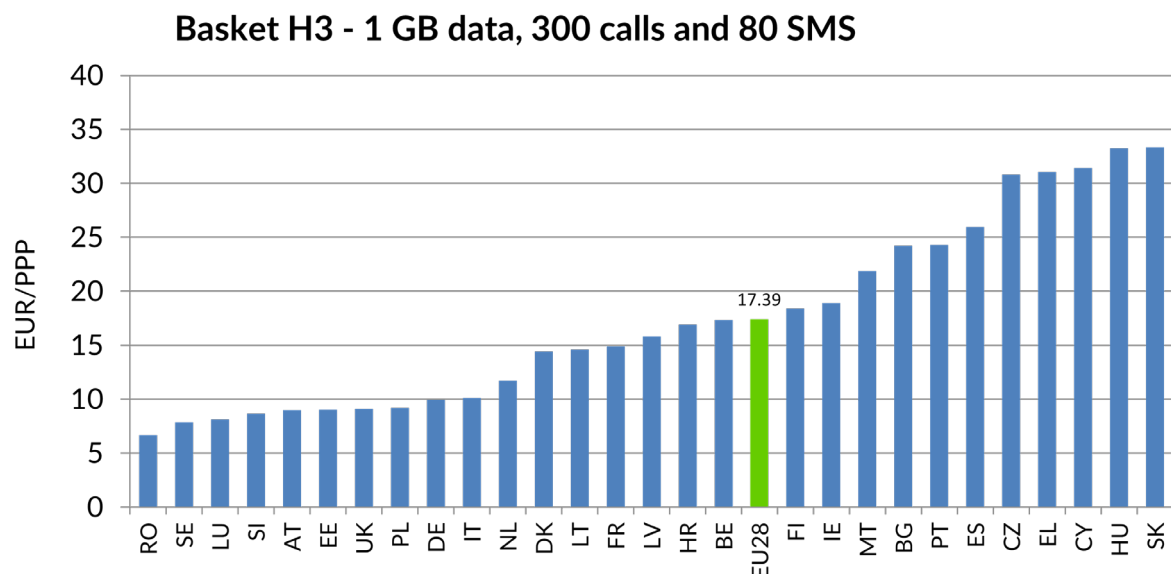


3.1.4 Basket H3 - 1 GB data, 300 calls, 80 SMS

The chart for the least expensive offers in the usage basket containing 1.0 GB data, 300 calls, and 80 SMS, below, illustrates the EU average at 17.39 EUR/PPP. Starting at the lower price end, nine countries have prices below 10 EUR/PPP, led by Romania at 6.69 EUR/PPP. 10 countries show prices between 10 EUR/PPP and 20 EUR/PPP. At the high-end section of the chart, five countries (the Czech Republic, Greece¹⁰, Cyprus, Hungary, and Slovakia) have prices between above 30 EUR/PPP. Prices in four of the five largest Member States (France, Germany, Italy, and the United Kingdom) are below the EU average.

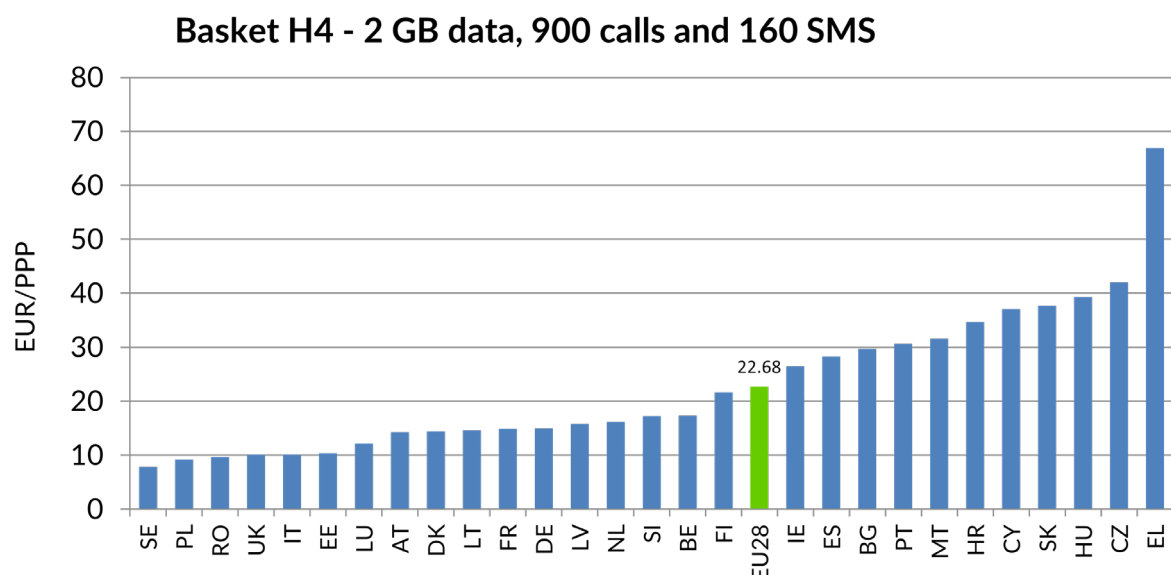
⁹ The offer from Greece is quite complex in the sense that it requires the combination of several packages/add-ons

¹⁰ See above



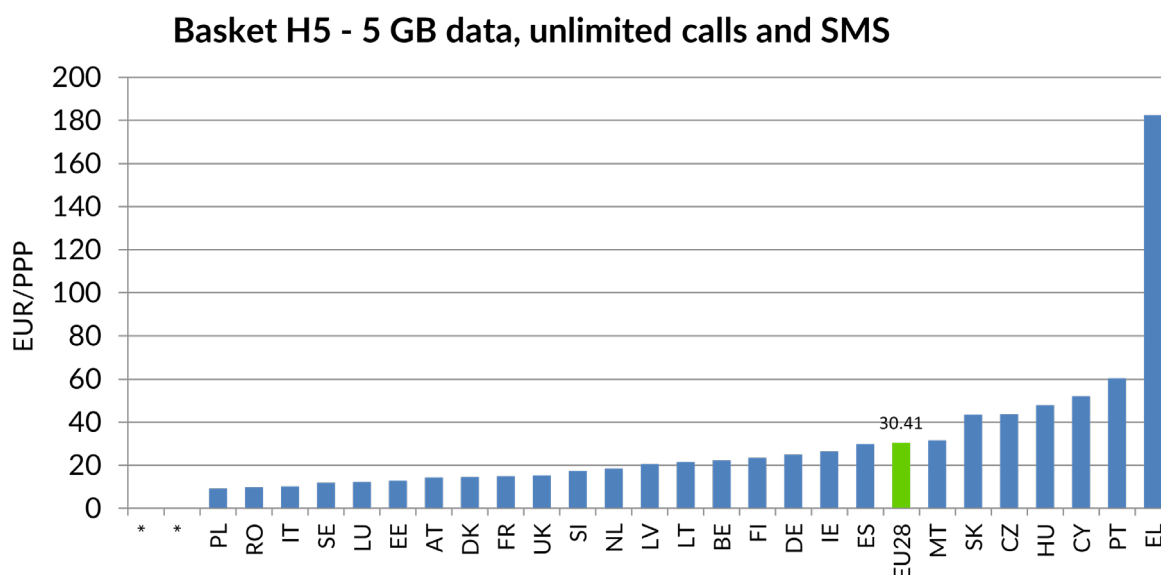
3.1.5 Basket H4 - 2 GB data, 900 calls, 160 SMS

The chart for the usage basket with 2.0 GB data, 900 calls, and 160 SMS shows the EU average at 22.68 EUR/PPP. Three countries (Romania, Sweden, and Poland) exhibit prices below 10 EUR/PPP, ranging from 7.89 EUR/PPP in Romania to 9.69 EUR/PPP in Poland. More than half of the EU Member States (16/28) have least expensive offers below 20 EUR/PPP.



3.1.6 Basket H5 – 5 GB data, unlimited calls, unlimited SMS¹¹

The prices for the least expensive offers in the usage basket containing 5.0 GB data, unlimited calls, and unlimited SMS are between 9.19 EUR/PPP in Poland and 182.46 EUR/PPP in Greece¹². The EU average is at 30.41 EUR/PPP. 12 Member States have least expensive offers between 9 EUR/PPP and 20 EUR/PPP. The five largest EU Member States (France, Germany, Italy, and the United Kingdom) are situated below the EU28 average.

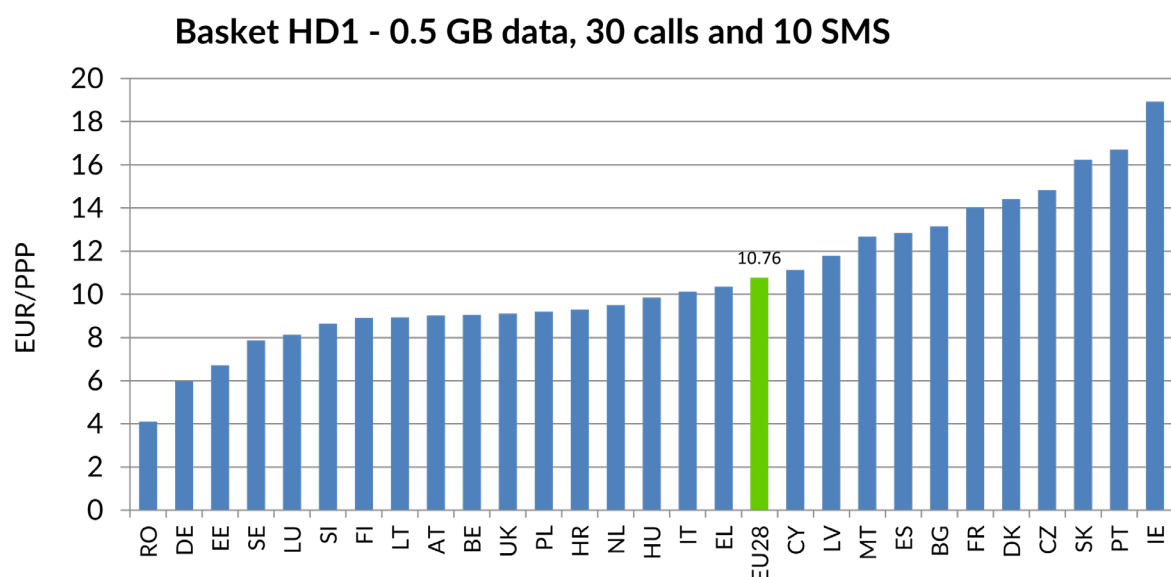


3.1.7 Basket HD1 – 0.5 GB data, 30 calls, 10 SMS

The lowest price in the usage basket with 0.5 GB data, 30 calls, and 10 SMS can be found in Romania: 4.09 EUR/PPP. The most expensive price is in Ireland at 18.91 EUR/PPP. More than half of the Member States offer options below 10 EUR/PPP. The EU average in this basket is 10.76 EUR/PPP.

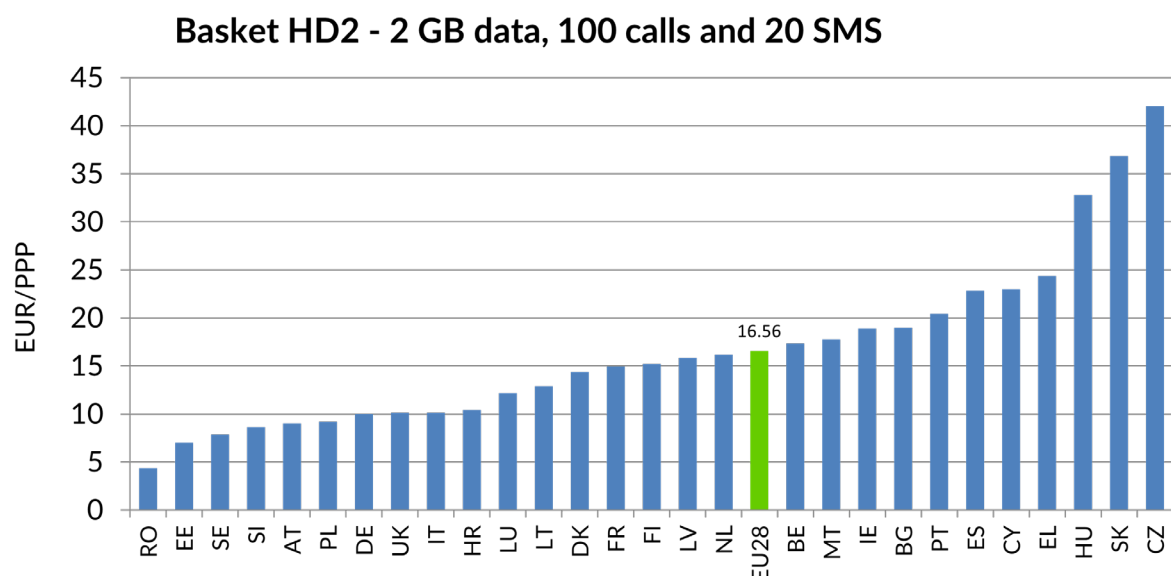
¹¹ * No offers including unlimited SMS were found in Croatia and Bulgaria.

¹² The offer from Greece is a top-of-the-range offer including 20GB of data, as no other tariff including unlimited SMS and minutes was available at the time of data collection. In April 2019, Cosmote launched their MOBILE XL tariff at 97.26 EUR/PPP.



3.1.8 Basket HD2 - 2 GB data, 100 calls, 20 SMS

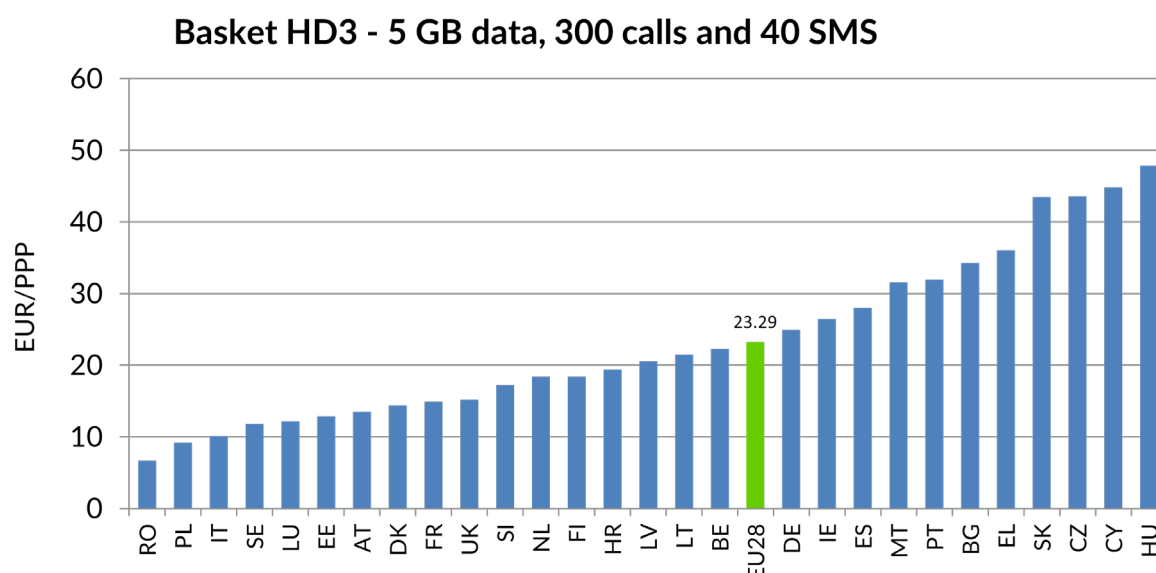
The chart for the usage basket with 2 GB data, 100 calls, and 20 SMS shows the EU average at 16.56 EUR/PPP¹³. Seven countries exhibit prices below 10 EUR/PPP, starting with Romania at 4.36 EUR/PPP up to Germany at 9.98 EUR/PPP. Three countries (Hungary, Slovakia, and the Czech Republic) show prices above 30 EUR/PPP.



¹³ The offer from Greece is quite complex in the sense that it requires the combination of several packages/add-ons

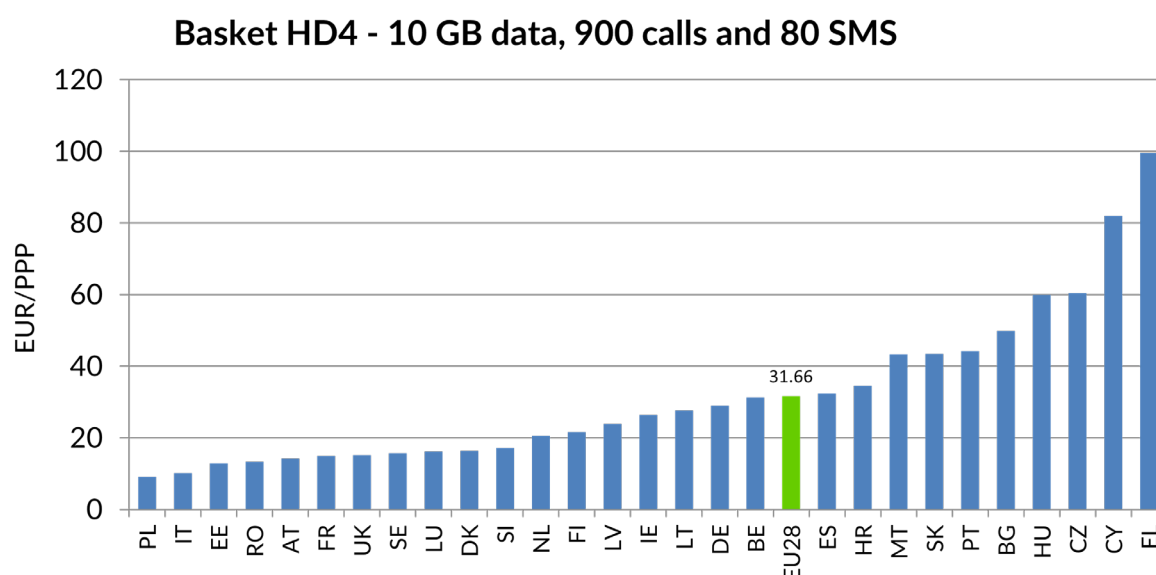
3.1.9 Basket HD3 – 5 GB data, 300 calls, 40 SMS

Two countries in this in this basket with 5 GB data, 300 calls, and 40 SMS exhibit prices below 10 EUR/PPP (6.69 EUR/PPP in Romania and 9.19 EUR/PPP in Poland). Another twelve countries show prices below 20 EUR/PPP. The EU28 average is at 23.29 EUR/PPP. The four most expensive countries have prices that are nearly twice as high as the EU28 average.



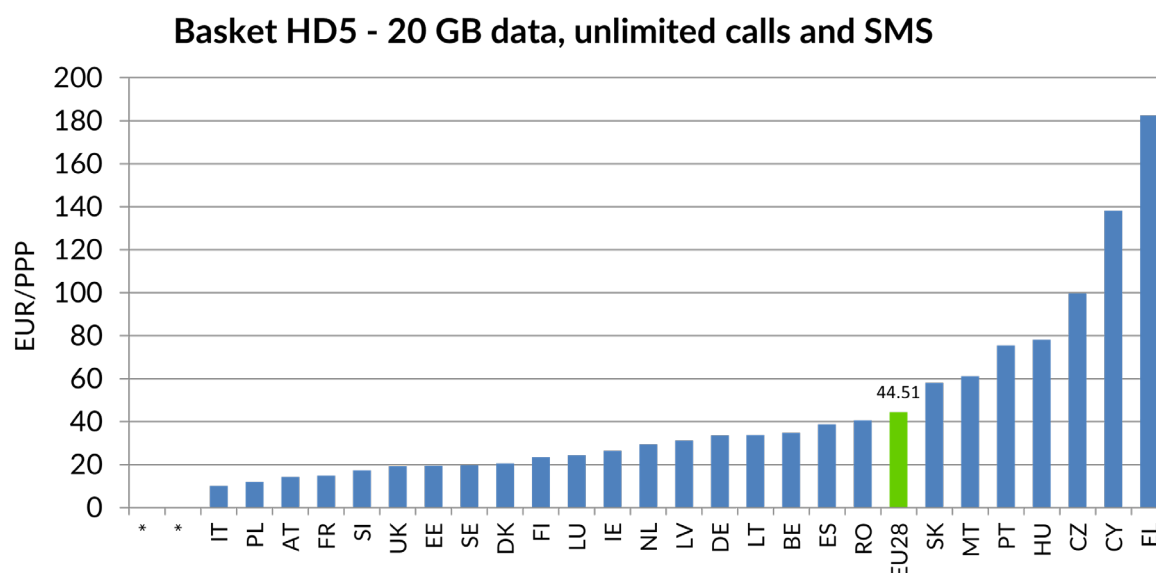
3.1.10 Basket HD4 – 10 GB data, 900 calls, 80 SMS

In this basket with 10 GB data, 900 calls, and 80 SMS Poland exhibits prices below 10 EUR/PPP, another ten countries show prices below 20 EUR/PPP. The EU28 average is at 31.66 EUR/PPP. The four most expensive countries have prices that are nearly twice as high as the EU28 average.



3.1.11 Basket HD5 – 20 GB data, unlimited calls, unlimited SMS

There is a steady increase in prices from the least expensive (Italy, 10.13 EUR/PPP) to the most expensive countries (the Czech Republic, Cyprus, and Greece¹⁴, all above 100 EUR/PPP). Nine countries in this in this basket with 20 GB data, unlimited calls, and unlimited SMS exhibit prices of less than 50% of the EU28 average¹⁵, which is at 44.51 EUR/PPP.



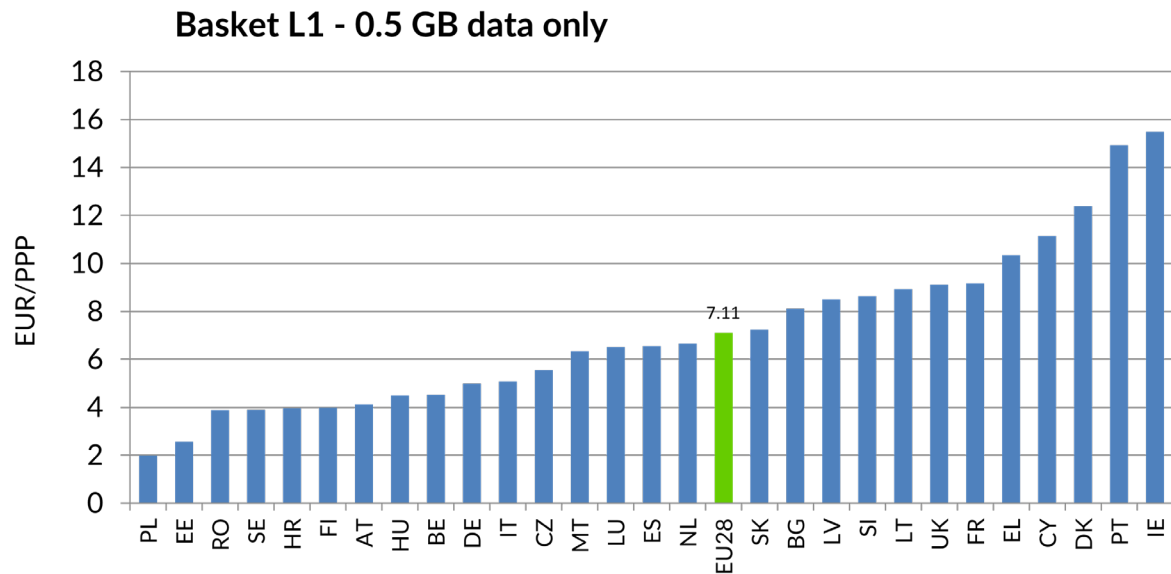
3.1.12 Basket L1, 0.5 GB¹⁶

In the smallest data-only usage basket, the least expensive offer comes from Poland at 1.99 EUR/PPP, followed by Estonia (2.57 EUR/PPP), Romania (3.88 EUR/PPP), and Sweden (3.89 EUR/PPP). The EU28 average is 7.11 EUR. Denmark (12.39 EUR/PPP), Portugal (14.92 EUR/PPP), and Ireland (15.48 EUR/PPP) are the countries with the most expensive offers in this basket. However, offers adapted to such small data volumes are not offered by the largest MNOs in certain countries, so that customers with this low usage profile must accept the price of offers providing more data volume.

¹⁴ In April 2019, Greek MNO Cosmote launched its MOBILE XL tariff at 97.26 EUR/PPP, which is around 50% less expensive than the offer recorded in February.

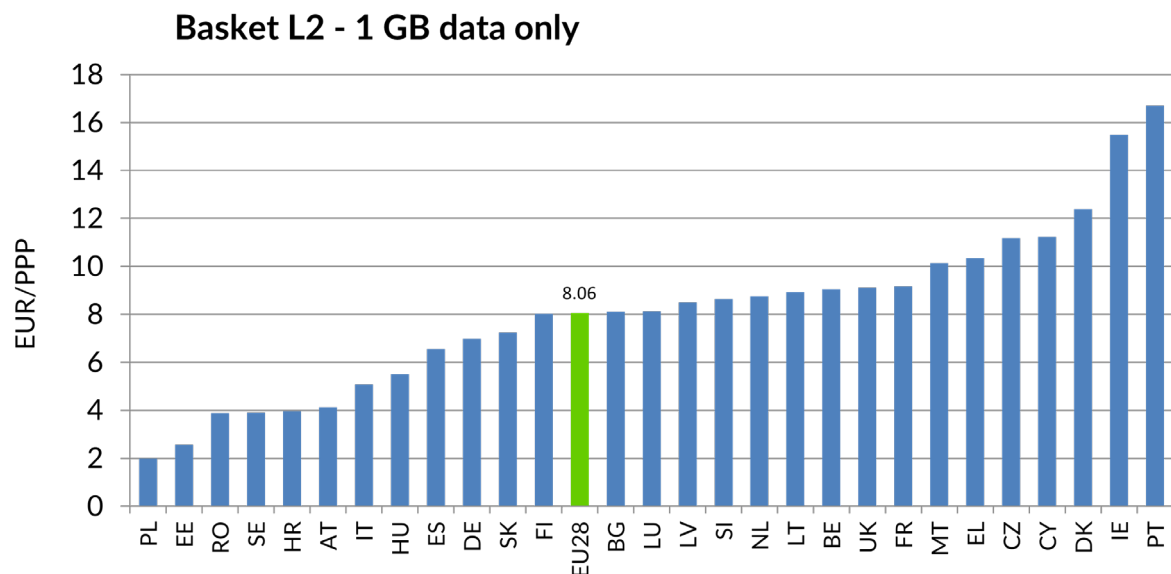
¹⁵ * No offers including unlimited SMS were found in Croatia and Bulgaria.

¹⁶ In 2018, the smallest data-only basket included only 256 MB. This basket was dropped from this year's study.



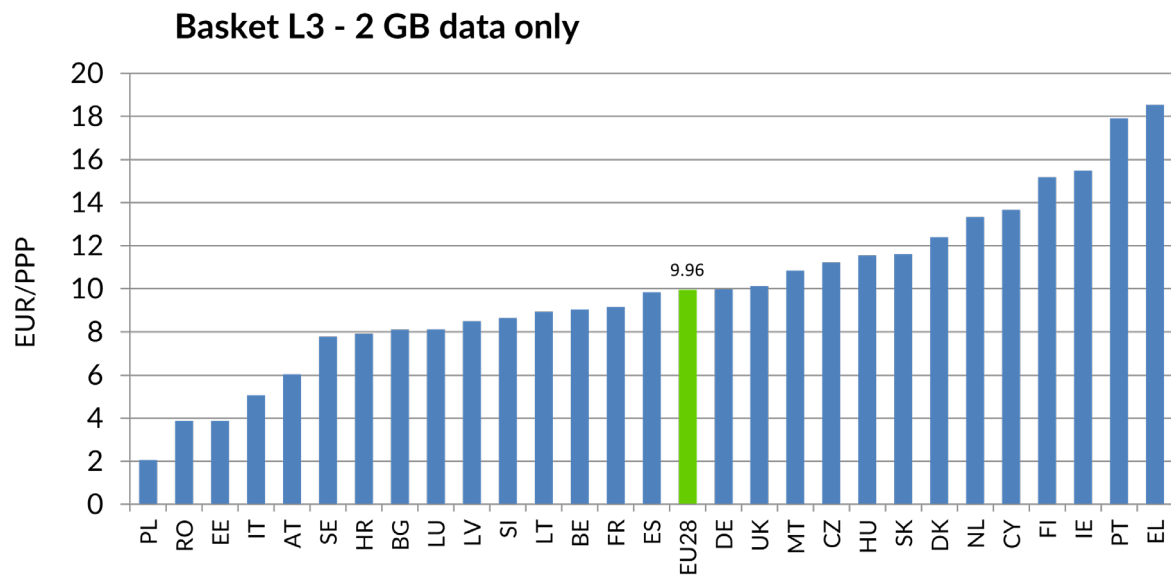
3.1.13 Basket L2, 1GB

Again, the least expensive offer comes from Poland (1.99 EUR/PPP) followed by Estonia (2.57 EUR/PPP), Romania (3.88 EUR/PPP), and Sweden (3.89 EUR/PPP). These tariffs are the same as in Basket L1 above. The EU28 average is 8.06 EUR.



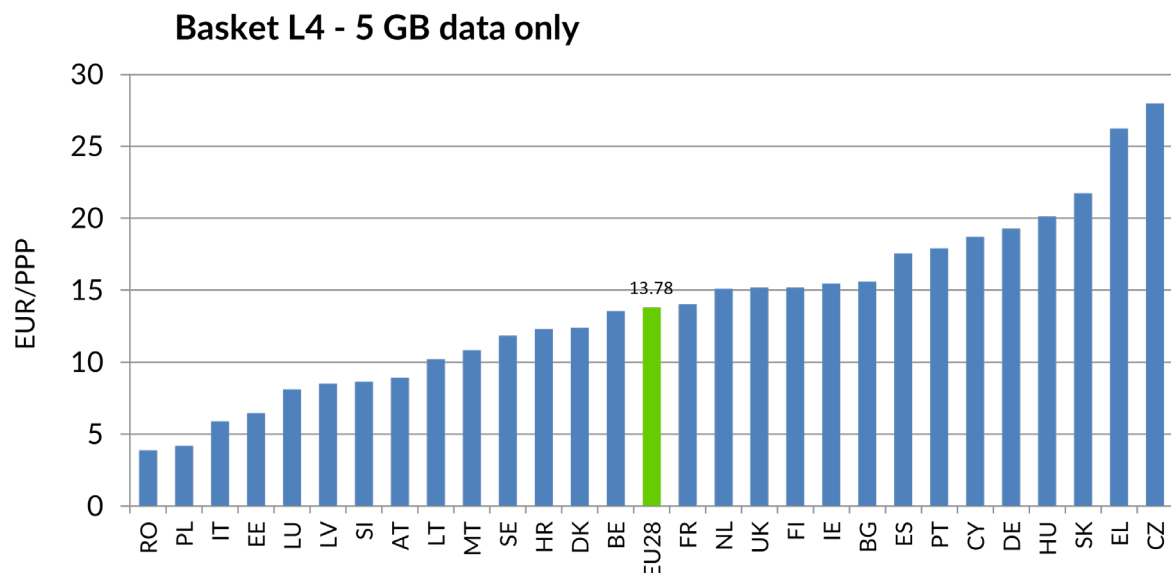
3.1.14 Basket L3, 2 GB

Poland leads this basket with 2.05 EUR/PPP, followed by Romania and Estonia (both 3.88 EUR/PPP). Prices for the least expensive offer from the next twelve countries are very close, ranging from 5.07 EUR/PPP in Italy to 9.98 EUR/PPP in Germany. The EU28 average is 9.96 EUR, the premium for doubling data from 1 GB to 2 GB is less than two EUR.



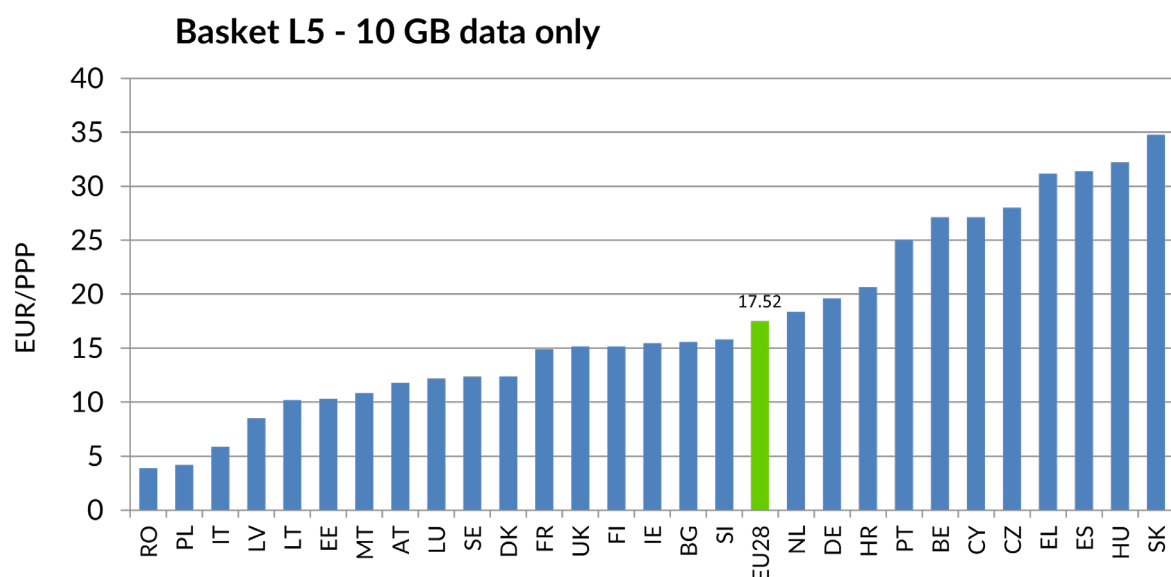
3.1.15 **Basket L4, 5 GB**

The lowest-price lead in this usage basket is Romania (3.88 EUR/PPP), followed by Poland (4.20 EUR/PPP) and Italy (5.91 EUR/PPP). Four more countries (Estonia, Latvia, Slovenia, and Austria) have prices below 10 EUR/PPP. The EU28 average is 13.78EUR/PPP. All countries exhibit prices under 30 EUR/PPP.



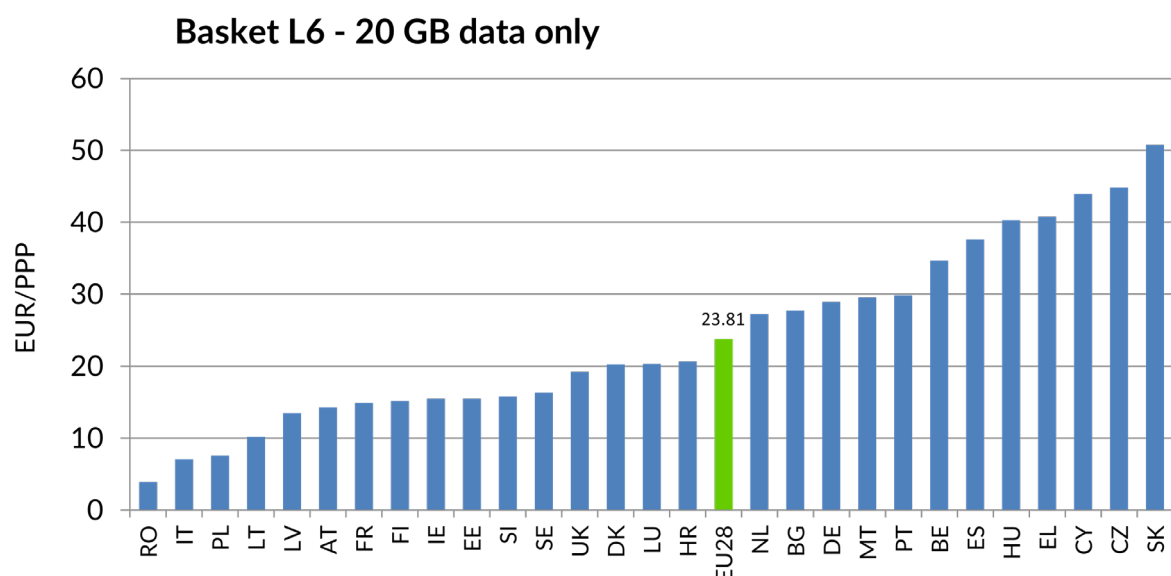
3.1.16 **Basket L5, 10 GB**

Romania is the cheapest country in this basket, with an MNO offering 10 GB mobile data for 3.88 EUR/PPP. Romania is followed by Poland (4.20 EUR/PPP), Italy (5.91 EUR/PPP), and Latvia (8.50 EUR/PPP). The EU28 average is 17.52 EUR/PPP, the most expensive market here is Slovakia (34.80 EUR/PPP).



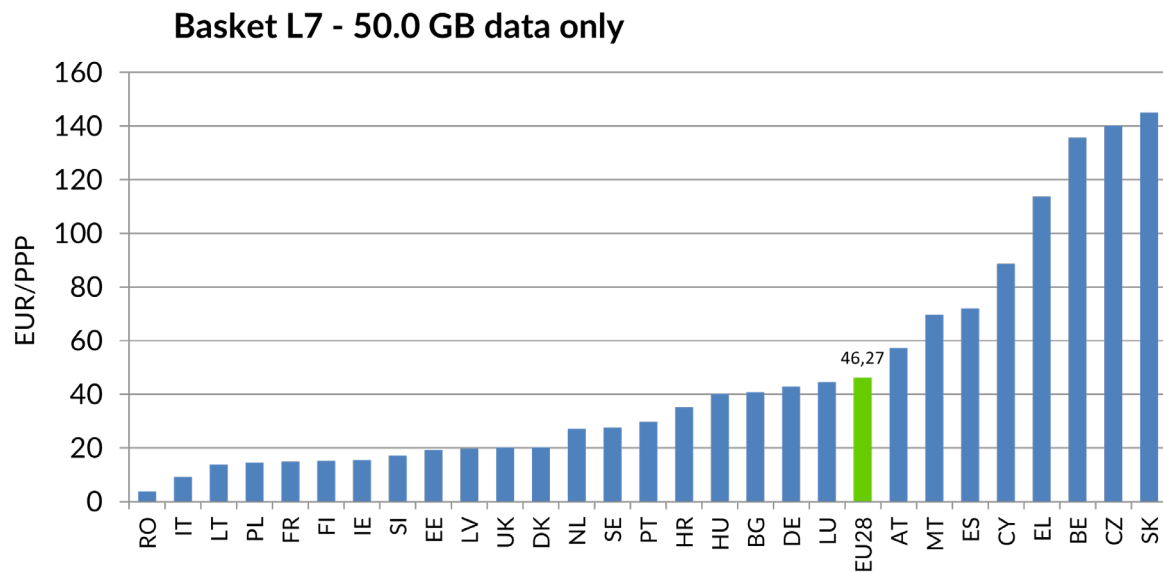
3.1.17 Basket L6, 20 GB

Cyprus, the Czech Republic, and Slovakia are more than five times more expensive than Romania, Italy, and Poland, which offer 20 GB mobile data for 7.5 EUR/PPP or less. The EU28 average is 23.81 EUR/PPP. Prices may include surcharges for exceeding the data limit of an offer providing less than 20GB.



3.1.18 Basket 7, 50 GB

At 3.88 EUR/PPP, Romania is the least expensive country in this new basket with 50 GB data. In no basket is the range of prices greater than in this basket. Some offers may contain less than 50GB; for these offers additional data volume has to be purchased. The EU average is 34 EUR/PPP.



3.2 Are performances similar between handset-only and data-only usage baskets?

The figure below indicates the relationship between a Member State's average rank-order in the EU28 regarding the least expensive offer in handset-based baskets on the one hand, and on the other hand, data-only baskets.

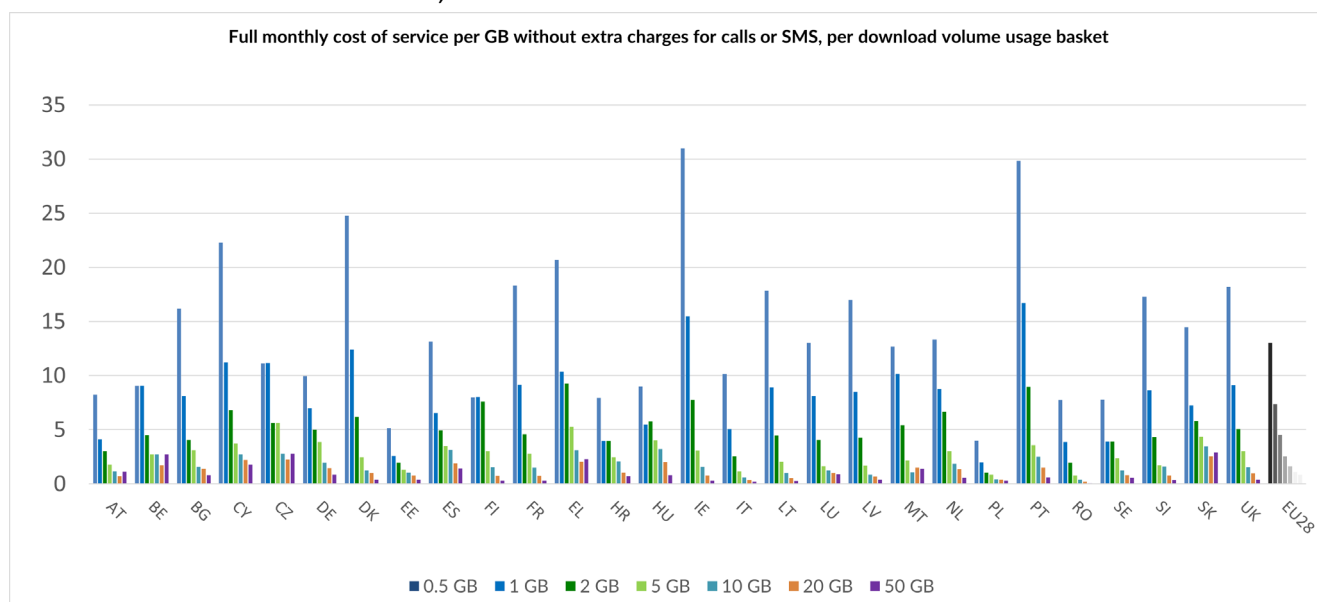
The overall correlation between the rank-order in terms of handset-based and data-only prices is relatively moderate, yet lower than in 2018. No country has exactly the same rank-order position in both handset and data-only based offers. For most of the countries, however, the position does not change significantly. Still, there are some notable exceptions:

- **Luxembourg** (3|12), **the United Kingdom** (5|14), **Germany** (10|19), and **the Netherlands** (13|20), have much less expensive offers for handset-based baskets, but are ranked nine or seven positions behind for data-only baskets, respectively.
- **Latvia** (18|7), **Italy** (9|1), **Lithuania** (12|5), and **Bulgaria** (22|15) have less expensive offers for data-only baskets, but are ranked eleven, eight and seven positions behind for handset-based baskets.

3.2.1 Is more mobile data more expensive?

Comparing the prices of cheapest offers per country and usage basket for different data volumes, the answer is a clear yes: there is a steady rise in prices towards higher data allowances.

As might be expected, in most markets, the rise in gross price is not proportional to the increase in data allowance, so that the price per GB falls as the package selected gets larger. Thus there is a clear and continuous fall of the EUR/PPP per GB ratio of the EU28 average, from 13.01 in the 500 MB basket (2018: 14.47) to 2.52 in the 5GB basket (2018: 2.99) to 1.08 in the 20GB basket (2018: 1.30). The ratio is smallest in the 50 GB basket with just 0.84 EUR/PPP per GB. However, this is not the case in all markets. In Austria, the Czech Republic, Greece, Luxembourg and Slovakia the price per GB is found to be smallest in the 20 GB basket, while in Malta the ratio is lowest in the 10 GB basket.



The spread of prices per GB across Europe in the different usage baskets is immense, reaching from 0.08 EUR/PPP per GB in Romania to 2.54 EUR/PPP per GB in Slovakia.

3.2.2 How do prices on different devices compare?

As in 2018, when comparing laptop-based offers with tablet-based offers, there were no apparent differences in the least expensive prices. The least expensive offer in every country can be used with both tablet and notebook.

3.2.3 What is the impact of equipment on prices?

As described in chapter 2.3, only the least expensive way of adding a smartphone was included in the database, i.e. if monthly instalments were more expensive than a one-off payment, the one-off payment was included, and vice versa.

Adding an advanced smartphone (in most cases a Samsung Galaxy S9) costs between 24.28€ in the frequent caller, high data usage basket (10 GB, 900 calls, 80 SMS) and 18.59€ in the 20 GB, unlimited calls, unlimited SMS basket, averaging at 21.85€. The premium tends to be smaller in baskets including unlimited telephony and SMS.

Adding a basic smartphone is least expensive in the 5GB, unlimited calls, unlimited SMS basket at 8.04€, averaging at 10.87€.

Basket	Advanced Smartphone ¹⁷ Premium [EUR(PPP)/month]	Basic Smartphone ¹⁸ Premium [EUR(PPP)/month]
100 MB, 30 calls, 20 SMS	22.70	11.39
500 MB, 100 calls, 40 SMS	22.27	10.95
1 GB, 300 calls, 80 SMS	22.84	10.97
2 GB, 900 calls, 160 SMS	22.16	10.41
5 GB, unlimited calls, unlimited SMS	19.20	8.04
0.5 GB, 30 calls, 10 SMS	22.32	11.03
2 GB, 100 calls, 20 SMS	22.93	12.15
5 GB, 300 calls, 40 SMS	21.25	9.51
10 GB, 900 calls, 80 SMS	24.28	14.23
20 GB, unlimited calls, unlimited SMS	18.59	10.05

¹⁷ E.g. Samsung Galaxy S9, Sony Xperia XZ3, Huawei Mate 20 pro, HTC U12.

¹⁸ E.g. Samsung Galaxy A6, Huawei P20 lite

3.3 Price trends

Using mobile data on smartphones in the EU is now less expensive than last year. Baskets with data allowances of 20 GB per month saw the most significant decrease in prices.

3.3.1 Has mobile broadband got cheaper since last year?

Mobile broadband was found to be significantly cheaper than a year ago, in all usage baskets.

Basket	Least expensive [EUR/PPP]	EU28 average 2019 [EUR/PPP]	EU28 average 2018 [EUR/PPP]	Variation 2018/19
500 MB	1.99	7.11	7.75	-8.3%
1 GB	1.99	8.06	9.20	-12.4%
2 GB	2.05	9.96	11.15	-10.7%
5 GB	3.88	13.87	16.02	-14.0%
10 GB	3.88	17.52	20.56	-14.8%
20 GB	3.88	23.81	27.76	-14.2%
50 GB	3.88	46.27	53.36	-13.3%

Comparing the EU28 average in the handset baskets reveals a similar trend. Especially prices for higher-end baskets decreased considerably by up to 23.6%.

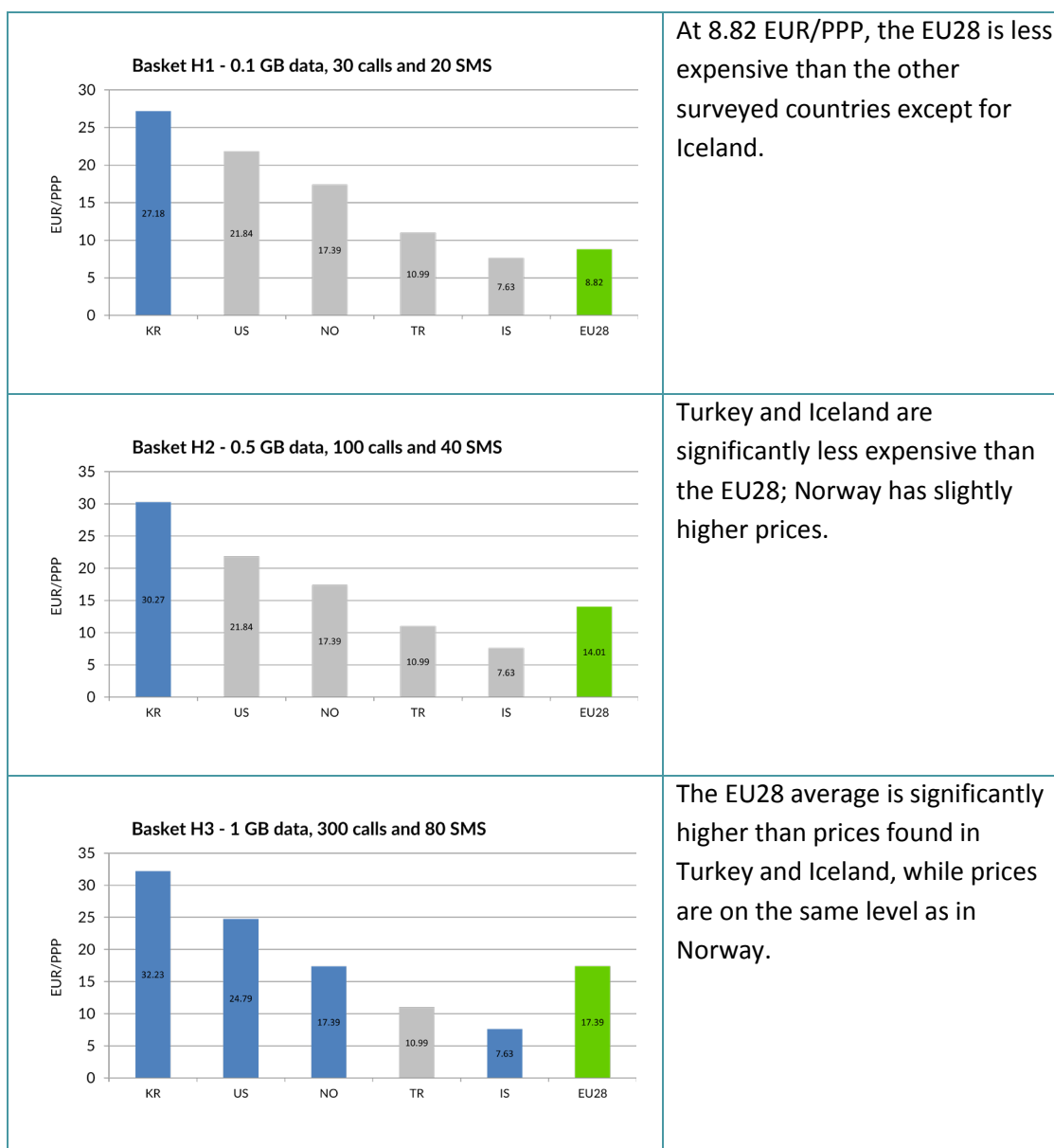
Basket	Least expensive [EUR/PPP]	EU28 average 2019 [EUR/PPP]	EU28 average 2018 [EUR/PPP]	Variation 2018/19
100 MB, 30 calls	4.09	8.82	10.20	-13.6%
500 MB, 100 calls	4.36	14.01	14.29	-1.9%
1 GB, 300 calls	6.69	17.39	18.04	-3.6%
2 GB, 900 calls	7.86	22.68	23.02	-1.5%
5 GB, unlimited calls	9.19	30.41	28.39	+7.1%
500 MB, 30 calls	4.09	10.76	11.58	-7.0%
2 GB, 100 calls	4.36	16.56	17.81	-7.0%
5 GB, 300 calls	6.69	23.29	25.96	-10.3%

10 GB, 900 calls	9.19	31.66	41.44	-23.6%
20 GB, unlimited calls	10.13	44.51	100.18	-55.6%

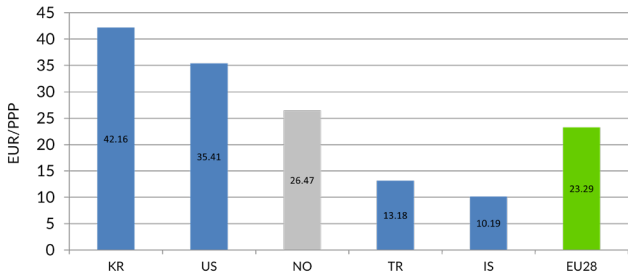
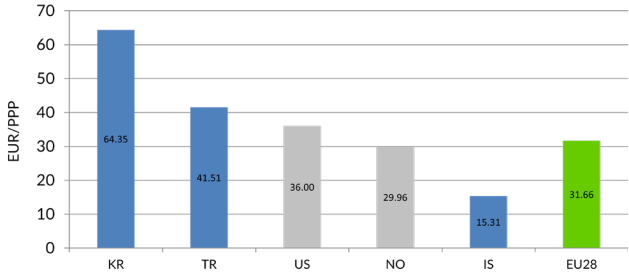
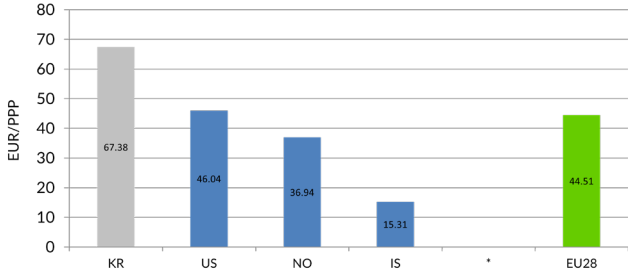
3.4 The bigger picture: the EU in the world

The following charts illustrate how the EU28 compare with South Korea, the United States, Turkey, Iceland, and Norway. A grey column for a country means that no offers adapted to this OECD-basket were on the market, which is why those countries might seem overpriced.

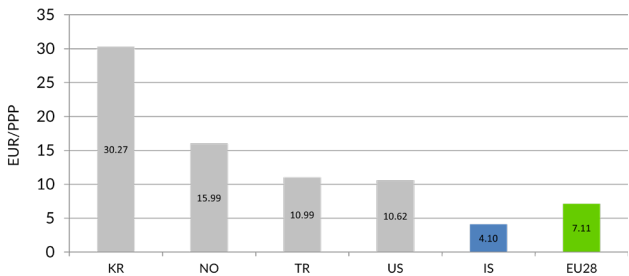
3.4.1 Handset based offers



<p>Basket H4 - 2 GB data, 900 calls and 160 SMS</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>32.23</td> </tr> <tr> <td>US</td> <td>28.92</td> </tr> <tr> <td>TR</td> <td>24.17</td> </tr> <tr> <td>NO</td> <td>17.39</td> </tr> <tr> <td>IS</td> <td>10.19</td> </tr> <tr> <td>EU28</td> <td>22.68</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	32.23	US	28.92	TR	24.17	NO	17.39	IS	10.19	EU28	22.68	<p>This frequent caller basket is significantly less expensive in Iceland and Norway compared to the EU28 average.</p>
Country	EUR/PPP														
KR	32.23														
US	28.92														
TR	24.17														
NO	17.39														
IS	10.19														
EU28	22.68														
<p>Basket H5 - 5 GB data, unlimited calls and SMS</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>45.90</td> </tr> <tr> <td>US</td> <td>35.41</td> </tr> <tr> <td>NO</td> <td>26.47</td> </tr> <tr> <td>IS</td> <td>10.19</td> </tr> <tr> <td>*</td> <td>No data</td> </tr> <tr> <td>EU28</td> <td>30.41</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	45.90	US	35.41	NO	26.47	IS	10.19	*	No data	EU28	30.41	<p>This basket is most expensive in South Korea. The EU28 average - over Member States' lowest prices - is significantly more expensive than the lowest prices found in Iceland and Norway. *No data was available for unlimited SMS in Turkey.</p>
Country	EUR/PPP														
KR	45.90														
US	35.41														
NO	26.47														
IS	10.19														
*	No data														
EU28	30.41														
<p>Basket HD1 - 0.5 GB data, 30 calls and 10 SMS</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>30.27</td> </tr> <tr> <td>US</td> <td>21.84</td> </tr> <tr> <td>NO</td> <td>17.39</td> </tr> <tr> <td>TR</td> <td>10.99</td> </tr> <tr> <td>IS</td> <td>7.63</td> </tr> <tr> <td>EU28</td> <td>10.76</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	30.27	US	21.84	NO	17.39	TR	10.99	IS	7.63	EU28	10.76	<p>The most expensive country for this basket is South Korea, followed by the US and Norway. The EU28 (10.76 EUR/PPP) can be found in mid-field, and Iceland has the cheapest offer (7.63 EUR/PPP).</p>
Country	EUR/PPP														
KR	30.27														
US	21.84														
NO	17.39														
TR	10.99														
IS	7.63														
EU28	10.76														
<p>Basket HD2 - 2 GB data, 100 calls and 20 SMS</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>32.23</td> </tr> <tr> <td>US</td> <td>28.92</td> </tr> <tr> <td>NO</td> <td>17.39</td> </tr> <tr> <td>TR</td> <td>10.99</td> </tr> <tr> <td>IS</td> <td>10.19</td> </tr> <tr> <td>EU28</td> <td>16.56</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	32.23	US	28.92	NO	17.39	TR	10.99	IS	10.19	EU28	16.56	<p>Turkey and Iceland are significantly less expensive than the EU28 (16.56 EUR/PPP) in this basket, while the same basket is almost twice as expensive in South Korea.</p>
Country	EUR/PPP														
KR	32.23														
US	28.92														
NO	17.39														
TR	10.99														
IS	10.19														
EU28	16.56														

<p>Basket HD3 - 5 GB data, 300 calls and 40 SMS</p>  <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>42.16</td> </tr> <tr> <td>US</td> <td>35.41</td> </tr> <tr> <td>NO</td> <td>26.47</td> </tr> <tr> <td>TR</td> <td>13.18</td> </tr> <tr> <td>IS</td> <td>10.19</td> </tr> <tr> <td>EU28</td> <td>23.29</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	42.16	US	35.41	NO	26.47	TR	13.18	IS	10.19	EU28	23.29	<p>Turkey and Iceland are significantly less expensive than the EU28 (23.29 EUR/PPP) in this basket, while Norway is slightly more expensive. The US and South Korea are significantly more expensive.</p>
Country	EUR/PPP														
KR	42.16														
US	35.41														
NO	26.47														
TR	13.18														
IS	10.19														
EU28	23.29														
<p>Basket HD4 - 10 GB data, 900 calls and 80 SMS</p>  <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>64.35</td> </tr> <tr> <td>TR</td> <td>41.51</td> </tr> <tr> <td>US</td> <td>36.00</td> </tr> <tr> <td>NO</td> <td>29.96</td> </tr> <tr> <td>IS</td> <td>15.31</td> </tr> <tr> <td>EU28</td> <td>31.66</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	64.35	TR	41.51	US	36.00	NO	29.96	IS	15.31	EU28	31.66	<p>The EU28 (31.66 EUR/PPP) and Norway show similar prices, while Iceland is significantly less expensive.</p>
Country	EUR/PPP														
KR	64.35														
TR	41.51														
US	36.00														
NO	29.96														
IS	15.31														
EU28	31.66														
<p>Basket HD5 - 20 GB data, unlimited calls and SMS</p>  <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>67.38</td> </tr> <tr> <td>US</td> <td>46.04</td> </tr> <tr> <td>NO</td> <td>36.94</td> </tr> <tr> <td>IS</td> <td>15.31</td> </tr> <tr> <td>TR</td> <td>*</td> </tr> <tr> <td>EU28</td> <td>44.51</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	67.38	US	46.04	NO	36.94	IS	15.31	TR	*	EU28	44.51	<p>The EU28 at 44.51 EUR/PPP is significantly more expensive than Iceland and slightly more expensive than Norway in this heavy-user basket. The offer from South Korea includes 100 GB data.</p> <p>*No data was available in Turkey regarding unlimited SMS.</p>
Country	EUR/PPP														
KR	67.38														
US	46.04														
NO	36.94														
IS	15.31														
TR	*														
EU28	44.51														

3.4.2 Data only offers

<p>Basket L1 - 0.5 GB data only</p>  <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>30.27</td> </tr> <tr> <td>NO</td> <td>15.99</td> </tr> <tr> <td>TR</td> <td>10.99</td> </tr> <tr> <td>US</td> <td>10.62</td> </tr> <tr> <td>IS</td> <td>4.10</td> </tr> <tr> <td>EU28</td> <td>7.11</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	30.27	NO	15.99	TR	10.99	US	10.62	IS	4.10	EU28	7.11	<p>The EU28 (7.11 EUR/PPP) is more expensive than Iceland in this 500 MB data-only basket; however, it is less expensive than South Korea, Norway, Turkey and the United States.</p> <p>It should be considered though that all offers –excluding Iceland - include a data volume of more than 0.5 GB, meaning that no less expensive offer was found in</p>
Country	EUR/PPP														
KR	30.27														
NO	15.99														
TR	10.99														
US	10.62														
IS	4.10														
EU28	7.11														

	these countries including only 0.5 GB.														
<p>Basket L2 - 1 GB data only</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>32.23</td> </tr> <tr> <td>NO</td> <td>15.99</td> </tr> <tr> <td>TR</td> <td>10.99</td> </tr> <tr> <td>US</td> <td>10.62</td> </tr> <tr> <td>IS</td> <td>7.63</td> </tr> <tr> <td>EU28</td> <td>8.06</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	32.23	NO	15.99	TR	10.99	US	10.62	IS	7.63	EU28	8.06	<p>In this basket, the EU28 (8.06 EUR/PPP) is less expensive than the US, South Korea, and Norway. However, prices are higher than in Iceland and Turkey.</p> <p>It should be considered though that some offers include a data volume of more than 1 GB, meaning that no less expensive offer was found in these countries including only 1 GB.</p>
Country	EUR/PPP														
KR	32.23														
NO	15.99														
TR	10.99														
US	10.62														
IS	7.63														
EU28	8.06														
<p>Basket L3 - 2 GB data only</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>32.23</td> </tr> <tr> <td>US</td> <td>17.70</td> </tr> <tr> <td>NO</td> <td>15.99</td> </tr> <tr> <td>TR</td> <td>10.99</td> </tr> <tr> <td>IS</td> <td>10.19</td> </tr> <tr> <td>EU28</td> <td>9.96</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	32.23	US	17.70	NO	15.99	TR	10.99	IS	10.19	EU28	9.96	<p>The EU28 on average has the least expensive offers in this 2GB data-only basket (9.06 EUR/PPP).</p>
Country	EUR/PPP														
KR	32.23														
US	17.70														
NO	15.99														
TR	10.99														
IS	10.19														
EU28	9.96														
<p>Basket L4 - 5 GB data only</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>42.16</td> </tr> <tr> <td>US</td> <td>21.24</td> </tr> <tr> <td>NO</td> <td>15.99</td> </tr> <tr> <td>TR</td> <td>13.18</td> </tr> <tr> <td>IS</td> <td>10.19</td> </tr> <tr> <td>EU28</td> <td>13.78</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	42.16	US	21.24	NO	15.99	TR	13.18	IS	10.19	EU28	13.78	<p>While the EU28 (13.78 EUR/PPP) and Turkey display similar prices for this basket, they are more expensive than Iceland. However, the EU28 is cheaper than Norway, the US and South Korea.</p>
Country	EUR/PPP														
KR	42.16														
US	21.24														
NO	15.99														
TR	13.18														
IS	10.19														
EU28	13.78														

<p>Basket L5 - 10 GB data only</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>64.35</td> </tr> <tr> <td>TR</td> <td>32.96</td> </tr> <tr> <td>NO</td> <td>24.37</td> </tr> <tr> <td>US</td> <td>21.24</td> </tr> <tr> <td>IS</td> <td>15.31</td> </tr> <tr> <td>EU28</td> <td>17.52</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	64.35	TR	32.96	NO	24.37	US	21.24	IS	15.31	EU28	17.52	<p>Compared to the EU28 average, only in Iceland is the 10 GB data-only basket less expensive. The EU28 average price (17.52 EUR/PPP) is lower than the lowest prices in Korea, Turkey, Norway, and the US.</p>
Country	EUR/PPP														
KR	64.35														
TR	32.96														
NO	24.37														
US	21.24														
IS	15.31														
EU28	17.52														
<p>Basket L6 - 20 GB data only</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>67.38</td> </tr> <tr> <td>TR</td> <td>39.55</td> </tr> <tr> <td>NO</td> <td>31.36</td> </tr> <tr> <td>US</td> <td>21.24</td> </tr> <tr> <td>IS</td> <td>15.31</td> </tr> <tr> <td>EU28</td> <td>23.81</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	67.38	TR	39.55	NO	31.36	US	21.24	IS	15.31	EU28	23.81	<p>The EU28 average price (23.81 EUR/PPP) is higher than prices for this 20 GB data-only basket in Iceland and the US. Norway, Turkey, and South Korea show higher prices.</p>
Country	EUR/PPP														
KR	67.38														
TR	39.55														
NO	31.36														
US	21.24														
IS	15.31														
EU28	23.81														
<p>Basket L7 - 50.0 GB data only</p> <table border="1"> <thead> <tr> <th>Country</th> <th>EUR/PPP</th> </tr> </thead> <tbody> <tr> <td>KR</td> <td>67.38</td> </tr> <tr> <td>TR</td> <td>39.55</td> </tr> <tr> <td>NO</td> <td>38.34</td> </tr> <tr> <td>IS</td> <td>25.55</td> </tr> <tr> <td>US</td> <td>21.24</td> </tr> <tr> <td>EU28</td> <td>46.27</td> </tr> </tbody> </table>	Country	EUR/PPP	KR	67.38	TR	39.55	NO	38.34	IS	25.55	US	21.24	EU28	46.27	<p>The EU28 (46.27 EUR/PPP) has lower prices for this 50 GB basket only in comparison with South Korea. However, the South Korean offer includes 100GB of data volume.</p>
Country	EUR/PPP														
KR	67.38														
TR	39.55														
NO	38.34														
IS	25.55														
US	21.24														
EU28	46.27														

4. ANNEX II – Country Reports



Austria

MNOs in sample

A1 Telekom Austria AG

T-Mobile Austria GmbH

Hutchison 3 Austria

Development of prices

Prices for mobile broadband and telephony in Austria show no clear trend compared to the previous year (2018). Customers seeking 20 GB data and unlimited calls and SMS find prices fell to much less than half.

Prices in Austria compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Austria are, across the offers studied, less expensive than on EU average. However, the lowest price of offers for consumers requiring 50 GB data is somewhat more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Hutchison 3 Austria Talk M	9.01	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Hutchison 3 Austria Talk M	9.01	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Hutchison 3 Austria Talk M	9.01	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Hutchison 3 Austria Optimal SIM M	14.26	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Hutchison 3 Austria Optimal SIM M	14.26	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Hutchison 3 Austria Talk M	9.01	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Hutchison 3 Austria Talk M	9.01	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Hutchison 3 Austria Talk L	13.51	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Hutchison 3 Austria Optimal SIM M	14.26	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Hutchison 3 Austria My Life SIM L	14.26	44.51
Basket L1 - 0.5 GB data only	T-Mobile Austria GmbH My KLAX Basic + 1GB	4.11	7.11
Basket L2 - 1.0 GB data only	T-Mobile Austria GmbH My KLAX Basic + 1GB	4.11	8.06
Basket L3 - 2.0 GB data only	T-Mobile Austria GmbH My KLAX Basic + 3GB	6.04	9.96
Basket L4 - 5.0 GB data only	T-Mobile Austria GmbH My KLAX Basic + 5GB	8.94	13.78
Basket L5 - 10.0 GB data only	A1 Telekom Austria AG Mobil-Internet Large	11.79	17.52
Basket L6 - 20.0 GB data only	Hutchison 3 Austria My Life SIM L	14.26	23.81
Basket L7 - 50.0 GB data only	Hutchison 3 Austria Optimal XXL	57.37	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



Belgium

MNOs in sample

Proximus

Telenet

Orange

Development of prices

Prices for mobile broadband and telephony in Belgium show no clear trend compared to the previous year (2018). Customers seeking 50 GB data find prices rose very strongly.

Prices in Belgium compared with the EU

Prices for mobile broadband and telephony in Belgium show a different pattern compared to EU28 countries overall. Whereas consumers requiring 50 GB data find offers more than three times as expensive as on EU average, those seeking 0.5 GB data find prices less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Orange Colibri	6.93	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Telenet 15 Based on you + 5€ appels illimités	17.33	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Telenet 15 Based on you + 5€ appels illimités	17.33	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Telenet 15 Based on you + 5€ appels illimités	17.33	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Telenet Kong	22.31	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Orange Tempo Touch promo	9.04	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Telenet 15 Based on you + 5€ appels illimités	17.33	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Telenet Kong	22.31	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Telenet Kong + 4GB	31.35	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Orange Aigle	34.67	44.51
Basket L1 - 0.5 GB data only	Telenet King surf	4.52	7.11
Basket L2 - 1.0 GB data only	Telenet Kong surf	9.04	8.06
Basket L3 - 2.0 GB data only	Telenet Kong surf	9.04	9.96
Basket L4 - 5.0 GB data only	Telenet Carte prepayée 15	13.57	13.78
Basket L5 - 10.0 GB data only	Telenet Carte prepayée 15	27.13	17.52
Basket L6 - 20.0 GB data only	Orange Aigle	34.67	23.81
Basket L7 - 50.0 GB data only	Telenet Carte prepayée 15	135.66	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



Bulgaria

MNOs in sample

Vivacom

Telenor

A1 Bulgaria

Development of prices

Prices for mobile broadband and telephony in Bulgaria show no clear trend compared to the previous year (2018). Customers seeking 5 GB data and unlimited calls and SMS find prices fell to much less than half.

Prices in Bulgaria compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Bulgaria are, across the offers studied, somewhat more expensive than on EU average. However, the lowest price of offers for consumers requiring 2 GB data is slightly less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	A1 Bulgaria EAD Prepaid A1	13.16	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	A1 Bulgaria EAD Prepaid A1	18.97	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	A1 Bulgaria EAD A1 ONE XL + 80 SMS	24.21	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	A1 Bulgaria EAD A1 ONE XL + 80 SMS + 300 on-net SMS	29.66	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	- -		30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	A1 Bulgaria EAD Prepaid A1	13.16	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	A1 Bulgaria EAD Prepaid A1	18.97	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	A1 Bulgaria EAD A1 ONE XL + 80 SMS	34.32	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	A1 Bulgaria EAD A1 ONE XL + 80 SMS + 300 on-net SMS	49.89	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	- -		44.51
Basket L1 - 0.5 GB data only	A1 Bulgaria EAD Prepaid A1	8.10	7.11
Basket L2 - 1.0 GB data only	A1 Bulgaria EAD Prepaid A1	8.10	8.06
Basket L3 - 2.0 GB data only	A1 Bulgaria EAD Prepaid A1	8.10	9.96
Basket L4 - 5.0 GB data only	Vivacom Prepaid Easy Traffic	15.61	13.78
Basket L5 - 10.0 GB data only	Vivacom Prepaid Easy Traffic	15.61	17.52
Basket L6 - 20.0 GB data only	Vivacom iTraffic XL+	27.74	23.81
Basket L7 - 50.0 GB data only	Vivacom iTraffic XXL+	40.90	46.27

February 2019 data

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MNOs in sample

Cyta

MTN

Development of prices

Prices for mobile broadband and telephony in Cyprus show no clear trend compared to the previous year (2018). Customers seeking 0.1 GB data and 30 calls with 20 SMS find prices rose strongly.

Prices in Cyprus compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Cyprus are, across the offers studied, nearly twice as expensive as on EU average. No offers were found to be less expensive than the EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Cyta soeasy 500MB	11.13	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	MTN MTN Medium	18.34	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Cyta RED plus 1GB	31.44	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Cyta RED plus 1GB	37.05	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	MTN MTN Unlimited 6	51.95	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Cyta soeasy 500MB	11.13	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Cyta soeasy 500MB	22.99	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Cyta soeasy 2GB	44.86	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Cyta RED plus 1GB	81.96	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Cyta RED plus 1GB	138.10	44.51
Basket L1 - 0.5 GB data only	Cyta soeasy 500MB	11.13	7.11
Basket L2 - 1.0 GB data only	Cyta soeasy MI Monthly	11.23	8.06
Basket L3 - 2.0 GB data only	Cyta soeasy 500MB	13.66	9.96
Basket L4 - 5.0 GB data only	Cyta soeasy 500MB	18.71	13.78
Basket L5 - 10.0 GB data only	Cyta soeasy 500MB	27.13	17.52
Basket L6 - 20.0 GB data only	Cyta soeasy 500MB	43.98	23.81
Basket L7 - 50.0 GB data only	Cyta VMB 60GB	88.70	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



Czech Republic

MNOs in sample

o2

T-Mobile

Vodafone

Development of prices

Prices for mobile broadband and telephony in the Czech Republic show no clear trend compared to the previous year (2018). Customers seeking 2 GB data find prices fell strongly.

Prices in the Czech Republic compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in the Czech Republic are, across the offers studied, more than twice as expensive as on EU average. However, the lowest price of offers for consumers requiring 0.5 GB data is slightly less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Vodafone Předplacená karta zdarma	13.15	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	o2 Free Modrý	28.01	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Vodafone Start neomezeně	30.81	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	o2 Free Bronzový	42.04	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Vodafone Red Naplno 5GB	43.61	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Vodafone Předplacená karta 500 MB dat a SMS v síti neomezeně	14.83	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	o2 Free Bronzový	42.04	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Vodafone Red Naplno 5GB	43.61	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Vodafone Red Naplno 10GB	60.45	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Vodafone Red Naplno 20GB	99.74	44.51
Basket L1 - 0.5 GB data only	Vodafone Předplacená karta 500 MB dat a SMS v síti neomezeně	5.56	7.11
Basket L2 - 1.0 GB data only	Vodafone Předplacená karta 1,2GB dat a SMS v síti neomezeně	11.17	8.06
Basket L3 - 2.0 GB data only	T-Mobile Twist S + vánoční limitka 2 GB dat	11.23	9.96
Basket L4 - 5.0 GB data only	T-Mobile Tarif Datař+	28.01	13.78
Basket L5 - 10.0 GB data only	T-Mobile Tarif Datař+	28.01	17.52
Basket L6 - 20.0 GB data only	o2 Zlatá O2 Data	44.85	23.81
Basket L7 - 50.0 GB data only	T-Mobile Mobil XXL	140.27	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

o2

T-Mobile

Vodafone

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Germany fell noticeably. In contrast, for consumers requiring 5 GB data, prices rose strongly (by 22%).

Prices in Germany compared with the EU

Prices for mobile broadband and telephony in Germany show a different pattern compared to EU28 countries overall. Whereas consumers requiring 0.5 GB data, 30 calls and 10 SMS find offers less expensive than on EU average, those seeking 5 GB data find prices much more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Vodafone Flex 0,5GB 150Min	5.98	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Vodafone Flex 0,5GB 400Min	7.98	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Telefónica (o2) myPrepaid S	9.95	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Telefónica (o2) myPrepaid M	14.94	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Telefónica (o2) myPrepaid L	24.93	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Vodafone Flex 0,5GB 150Min	5.98	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Vodafone Smartphone Special	9.98	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Telefónica (o2) myPrepaid L	24.93	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Telefónica (o2) Free M	28.99	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Telefónica (o2) Free M Boost	33.65	44.51
Basket L1 - 0.5 GB data only	Vodafone CallYa Talk&SMS 800MB	4.98	7.11
Basket L2 - 1.0 GB data only	Vodafone Flex 1GB 50Min	6.98	8.06
Basket L3 - 2.0 GB data only	Vodafone Smartphone Special	9.98	9.96
Basket L4 - 5.0 GB data only	Vodafone Flex 2,25GB 50Min	19.28	13.78
Basket L5 - 10.0 GB data only	Telefónica (o2) my Data M	19.64	17.52
Basket L6 - 20.0 GB data only	Telefónica (o2) my Data L	28.96	23.81
Basket L7 - 50.0 GB data only	Telefónica (o2) Free L Boost	42.97	46.27

February 2019 data

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MNOs in sample

TDC
Telenor
Teliasonera

Development of prices

Prices for mobile broadband and telephony in Denmark show no clear trend compared to the previous year (2018). Customers seeking 20 GB data find prices rose strongly.

Prices in Denmark compared with the EU

Prices for mobile broadband and telephony in Denmark show a different pattern compared to EU28 countries overall. Whereas consumers requiring 50 GB data find offers half as expensive as on EU average, those seeking 0.5 GB data find prices nearly twice as expensive as on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	TeliaSonera Smart 6	14.40	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	TeliaSonera Smart 6	14.40	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	TeliaSonera Smart 6	14.40	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	TeliaSonera Smart 6	14.40	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	TeliaSonera Smart 6	14.40	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	TeliaSonera Smart 6	14.40	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	TeliaSonera Smart 6	14.40	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	TeliaSonera Smart 6	14.40	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	TeliaSonera Smart 15	16.44	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	TDC Fri + 20GB	20.53	44.51
Basket L1 - 0.5 GB data only	TDC 15GB	12.39	7.11
Basket L2 - 1.0 GB data only	TDC 15GB	12.39	8.06
Basket L3 - 2.0 GB data only	TDC 15GB	12.39	9.96
Basket L4 - 5.0 GB data only	TDC 15GB	12.39	13.78
Basket L5 - 10.0 GB data only	TDC 15GB	12.39	17.52
Basket L6 - 20.0 GB data only	TDC 50GB	20.25	23.81
Basket L7 - 50.0 GB data only	TDC 50GB	20.25	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



Estonia

MNOs in sample

Telia (EMT)

Tele2

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Estonia fell strongly. In contrast, for consumers requiring 5 GB data and unlimited calls and SMS, prices rose noticeably (by 11%).

Prices in Estonia compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Estonia are, across the offers studied, much less expensive than on EU average. No offers were found to be more expensive than the EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Tele2 Vabadus Vestelda	5.17	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Tele2 Tele2 kõnekaart 495	7.02	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Tele2 SMART 699	9.04	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Tele2 Vabadus 2	10.34	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Tele2 Tele2 kõnekaart 995	12.86	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Tele2 Tele2 kõnekaart 495	6.71	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Tele2 Tele2 kõnekaart 495	7.02	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Tele2 Tele2 kõnekaart 995	12.86	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Tele2 SMART 999	12.91	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Tele2 Vabadus 100	19.39	44.51
Basket L1 - 0.5 GB data only	Tele2 Smart Internet 1GB	2.57	7.11
Basket L2 - 1.0 GB data only	Tele2 Smart Internet 1GB	2.57	8.06
Basket L3 - 2.0 GB data only	Telia (EMT) Telia Internet 3GB	3.88	9.96
Basket L4 - 5.0 GB data only	Tele2 Smart Internet 5GB	6.45	13.78
Basket L5 - 10.0 GB data only	Tele2 Smart Internet 10GB	10.33	17.52
Basket L6 - 20.0 GB data only	Telia (EMT) Prepaid Data 20GB	15.51	23.81
Basket L7 - 50.0 GB data only	Tele2 Vabadus 100	19.39	46.27

February 2019 data

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Greece

MNOs in sample

Cosmote
Vodafone

Development of prices

Prices for mobile broadband and telephony in Greece show no clear trend compared to the previous year (2018). Customers seeking 2 GB data and 900 calls with 160 SMS find prices rose somewhat.

Prices in Greece compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Greece are, across the offers studied, more than twice as expensive as on EU average. However, the lowest price of offers for consumers requiring 0.5 GB data and 100 calls with 40 SMS is slightly less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Vodafone Kartokinito 300' + 500 on-net + 500MB	10.35	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Vodafone Kartokinito 300' + 500 on-net + 500MB	10.35	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Vodafone CU Combo 600 + 1GB + Open Voice & Social 15	31.04	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Vodafone RED Plus	66.95	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Cosmote Mobile Platinum	182.46	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Vodafone Kartokinito 300' + 500 on-net + 500MB	10.35	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Cosmote 2What's up & 2reload it & Combo call them all plusi	24.34	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Vodafone Kartokinito 300' + 500MB + 3GB Data Week + 100SMS	36.08	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Cosmote Mobile L + 8GB MBB	99.57	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Cosmote Mobile Platinum	182.46	44.51
Basket L1 - 0.5 GB data only	Vodafone Kartokinito 300' + 500 on-net + 500MB	10.35	7.11
Basket L2 - 1.0 GB data only	Vodafone Kartokinito Surf&Mail 1,2GB	10.35	8.06
Basket L3 - 2.0 GB data only	Cosmote Mobile Internet 4GB	18.54	9.96
Basket L4 - 5.0 GB data only	Cosmote Mobile Internet 8GB	26.25	13.78
Basket L5 - 10.0 GB data only	Vodafone Kartokinito 300' + 500MB + 3GB Data Week	31.21	17.52
Basket L6 - 20.0 GB data only	Vodafone Mobile Broadband 20GB	40.78	23.81
Basket L7 - 50.0 GB data only	Cosmote Mobile Internet 40GB	113.69	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

Movistar
Orange
Vodafone

Development of prices

Prices for mobile broadband and telephony in Spain show no clear trend compared to the previous year (2018). Customers seeking 5 GB data find prices fell strongly.

Prices in Spain compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Spain are, across the offers studied, somewhat more expensive than on EU average. However, the lowest price of offers for consumers requiring 1 GB data is slightly less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Movistar Tuenti + Bono 50min	12.83	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Movistar Tuenti + Bono illimitado	21.72	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Movistar Tuenti + Bono illimitado	25.96	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Orange Habla + SMS flat	28.28	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Vodafone RedS	29.88	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Movistar Tuenti + Bono 50min	12.83	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Vodafone Mi país	22.82	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Vodafone Mi país	28.06	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Orange Go On + SMS flat	32.47	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Orange Go Up + SMS flat	38.76	44.51
Basket L1 - 0.5 GB data only	Movistar Tuenti	6.56	7.11
Basket L2 - 1.0 GB data only	Movistar Tuenti	6.56	8.06
Basket L3 - 2.0 GB data only	Movistar Tuenti	9.84	9.96
Basket L4 - 5.0 GB data only	Vodafone Mi país	17.57	13.78
Basket L5 - 10.0 GB data only	Orange Go On	31.38	17.52
Basket L6 - 20.0 GB data only	Orange Go Up	37.66	23.81
Basket L7 - 50.0 GB data only	Orange Go Top + FlexiGB 10	72.05	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



Finland

MNOs in sample

Elisa

Telia

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Finland rose noticeably. In contrast, for consumers requiring 2 GB data and 100 calls with 20 SMS, prices fell strongly (by 21%).

Prices in Finland compared with the EU

Prices for mobile broadband and telephony in Finland show a different pattern compared to EU28 countries overall. Whereas consumers requiring 50 GB data find offers very much less expensive than on EU average, those seeking 2 GB data find prices much more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Telia Prepaid	5.68	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Elisa Reilu 3G (300min/100SMS)	15.17	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Elisa Reilu 3G (1000min/100SMS)	18.40	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Elisa Reilu 3G (2500min/300SMS)	21.63	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Elisa Saunalahti Huoleton 50M	23.43	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Telia Prepaid	8.91	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Elisa Reilu 3G (300min/100SMS)	15.17	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Elisa Reilu 3G (1000min/100SMS)	18.40	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Elisa Reilu 3G (2500min/300SMS)	21.63	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Elisa Saunalahti Huoleton 50M	23.43	44.51
Basket L1 - 0.5 GB data only	Telia Prepaid	3.99	7.11
Basket L2 - 1.0 GB data only	Telia Prepaid	8.02	8.06
Basket L3 - 2.0 GB data only	Elisa Reilu 3G (300min/100SMS)	15.17	9.96
Basket L4 - 5.0 GB data only	Elisa Reilu 3G (300min/100SMS)	15.17	13.78
Basket L5 - 10.0 GB data only	Elisa Reilu 3G (300min/100SMS)	15.17	17.52
Basket L6 - 20.0 GB data only	Elisa Reilu 3G (300min/100SMS)	15.17	23.81
Basket L7 - 50.0 GB data only	Elisa Reilu 3G (300min/100SMS)	15.17	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

Orange

SFR

Free

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in France rose strongly. In contrast, for consumers requiring 50 GB data, prices fell noticeably (by 18%).

Prices in France compared with the EU

Prices for mobile broadband in France show a different pattern compared to EU28 countries overall. Whereas consumers requiring 50 GB data find offers very much less expensive than on EU average, those seeking 0.5 GB data, 30 calls and 10 SMS find prices somewhat more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Free Le Forfait 2€	4.11	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Free Série Free 50Go	14.92	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Free Série Free 50Go	14.92	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Free Série Free 50Go	14.92	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Free Série Free 50Go	14.92	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Orange 2h 5Go	14.03	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Free Série Free 50Go	14.92	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Free Série Free 50Go	14.92	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Free Série Free 50Go	14.92	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Free Série Free 50Go	14.92	44.51
Basket L1 - 0.5 GB data only	Orange Let's go 2	9.16	7.11
Basket L2 - 1.0 GB data only	Orange Let's go 2	9.16	8.06
Basket L3 - 2.0 GB data only	Orange Let's go 2	9.16	9.96
Basket L4 - 5.0 GB data only	Orange 2h 5Go	14.03	13.78
Basket L5 - 10.0 GB data only	Free Série Free 50Go	14.92	17.52
Basket L6 - 20.0 GB data only	Free Série Free 50Go	14.92	23.81
Basket L7 - 50.0 GB data only	Free Série Free 50Go	14.92	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

HT

A1

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Croatia fell strongly. In contrast, for consumers requiring 50 GB data, prices remained nearly unchanged.

Prices in Croatia compared with the EU

Prices for mobile broadband and telephony in Croatia show a different pattern compared to EU28 countries overall. Whereas consumers requiring 1 GB data find offers much less expensive than on EU average, those seeking 2 GB data and 900 calls with 160 SMS find prices much more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	HT Najmani Glanc	6.82	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	A1 Za cool	10.43	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	HT Mali Glanc bez uspostave + 200 minute	16.90	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	HT Najbolja L promo	34.64	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	- -	0.00	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	HT Na bonove 1GB+ SIMPA + 200 minute	9.28	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	A1 Za cool	10.43	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	HT Veliki Glanc bez uspostave	19.40	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	HT Najbolja L promo	34.64	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	- -	0.00	44.51
Basket L1 - 0.5 GB data only	HT Na bonove 1GB+ SIMPA	3.96	7.11
Basket L2 - 1.0 GB data only	HT Na bonove 1GB+ SIMPA	3.96	8.06
Basket L3 - 2.0 GB data only	HT Na bonove 1GB+ SIMPA	7.93	9.96
Basket L4 - 5.0 GB data only	A1 Mobilni Net S	12.31	13.78
Basket L5 - 10.0 GB data only	HT Najbolja Net M	20.66	17.52
Basket L6 - 20.0 GB data only	A1 Mobilni Net M	20.66	23.81
Basket L7 - 50.0 GB data only	HT Najbolja Net L	35.26	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

Magyar Telekom

Telenor

Development of prices

Prices for mobile broadband and telephony in Hungary show no clear trend compared to the previous year (2018). Customers seeking 5 GB data and unlimited calls and SMS find prices fell strongly.

Prices in Hungary compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Hungary are, across the offers studied, much more expensive than on EU average. However, the lowest price of offers for consumers requiring 0.5 GB data is less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Telenor Kártyás 2in1 S	9.84	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Telenor Blue+ XS	24.67	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Magyar Telekom Mobil XXL + 1GB	33.24	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Magyar Telekom Mobil XXL + 3GB	39.29	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Magyar Telekom Mobil XXL + 6GB	47.87	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Telenor Kártyás 2in1 S	9.84	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Telenor Kártyás 2in1 L	32.81	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Magyar Telekom Mobil XXL + 6GB	47.87	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Magyar Telekom Mobil XXL + 15GB	59.97	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Magyar Telekom Mobil XXL + Korlátlan GB	78.18	44.51
Basket L1 - 0.5 GB data only	Magyar Telekom Domino Fix + 500MB	4.48	7.11
Basket L2 - 1.0 GB data only	Magyar Telekom 1GB data	5.50	8.06
Basket L3 - 2.0 GB data only	Magyar Telekom 3GB data	11.55	9.96
Basket L4 - 5.0 GB data only	Magyar Telekom 0 perc + 6GB	20.13	13.78
Basket L5 - 10.0 GB data only	Magyar Telekom 0 perc + 15GB	32.23	17.52
Basket L6 - 20.0 GB data only	Telenor Blue+ XS + 100GB	40.30	23.81
Basket L7 - 50.0 GB data only	Telenor Blue+ XS + 100GB	40.30	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

Vodafone
Three

Development of prices

Prices for mobile broadband and telephony in Ireland show no clear trend compared to the previous year (2018). Customers seeking 0.5 GB data find prices rose noticeably.

Prices in Ireland compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Ireland are, across the offers studied, somewhat more expensive than on EU average. However, the lowest price of offers for consumers requiring 50 GB data is very much less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Vodafone RED Chat Extra	18.91	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Vodafone RED Chat Extra	18.91	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Vodafone RED Chat Extra	18.91	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Vodafone RED 30 Day	26.48	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Vodafone RED 30 Day	26.48	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Vodafone RED Chat Extra	18.91	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Vodafone RED Smart Extra	18.91	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Vodafone RED 30 Day	26.48	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Three Bill Pay 3 Unlimited Flex Max SIMO	26.48	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Three Bill Pay 3 Unlimited Flex Max SIMO	26.48	44.51
Basket L1 - 0.5 GB data only	Three 3Pay SIMO	15.48	7.11
Basket L2 - 1.0 GB data only	Three 3Pay SIMO	15.48	8.06
Basket L3 - 2.0 GB data only	Three 3Pay SIMO	15.48	9.96
Basket L4 - 5.0 GB data only	Three 3Pay SIMO	15.48	13.78
Basket L5 - 10.0 GB data only	Three 3Pay SIMO	15.48	17.52
Basket L6 - 20.0 GB data only	Three 3Pay SIMO	15.48	23.81
Basket L7 - 50.0 GB data only	Three 3Pay SIMO	15.48	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

Vodafone

Telecom Italia (TIM)

WindTre

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Italy rose strongly. In contrast, for consumers requiring 50 GB data, prices fell to much less than half (by 67%).

Prices in Italy compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Italy are, across the offers studied, much less expensive than on EU average. However, the lowest price of offers for consumers requiring 0.1 GB data and 30 calls with 20 SMS is slightly more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	WindTre Power29 + 200SMS + Minuti Illimitati	9.29	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	WindTre Smart Online Edition	10.13	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	WindTre Smart Online Edition	10.13	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	WindTre Smart Online Edition	10.13	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	WindTre Smart Online Edition	10.13	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	WindTre Smart Online Edition	10.13	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	WindTre Smart Online Edition	10.13	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	WindTre Smart Online Edition	10.13	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	WindTre Smart Online Edition	10.13	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	WindTre Smart Online Edition	10.13	44.51
Basket L1 - 0.5 GB data only	Telecom Italia (TIM) Base New 2GB	5.07	7.11
Basket L2 - 1.0 GB data only	Telecom Italia (TIM) Base New 2GB	5.07	8.06
Basket L3 - 2.0 GB data only	Telecom Italia (TIM) Base New 2GB	5.07	9.96
Basket L4 - 5.0 GB data only	Telecom Italia (TIM) Internet 10GB	5.91	13.78
Basket L5 - 10.0 GB data only	Telecom Italia (TIM) Internet 10GB	5.91	17.52
Basket L6 - 20.0 GB data only	WindTre SuperWeb + Internet 30GB	7.09	23.81
Basket L7 - 50.0 GB data only	WindTre SuperWeb + Internet 60GB	9.12	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



Lithuania

MNOs in sample

Tele2
Bite Lietuva
Telia Lietuva

Development of prices

Prices for mobile broadband and telephony in Lithuania show no clear trend compared to the previous year (2018). Customers seeking 5 GB data find prices fell strongly.

Prices in Lithuania compared with the EU

Prices for mobile broadband and telephony in Lithuania show a different pattern compared to EU28 countries overall. Whereas consumers requiring 50 GB data find offers very much less expensive than on EU average, those seeking 0.5 GB data find prices somewhat more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Tele2 Planas 100MB 150min	4.49	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Tele2 Planas 2GB 150min	12.91	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Tele2 Planas 2GB	14.60	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Tele2 Planas 2GB	14.60	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Telia Lietuva Premium L	21.51	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Tele2 Planas 2GB 150min	8.93	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Tele2 Planas 2GB 150min	12.91	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Telia Lietuva Premium L	21.51	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Telia Lietuva Premium XL	27.71	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Telia Lietuva Premium XXL	33.90	44.51
Basket L1 - 0.5 GB data only	Tele2 Planas 2GB 150min	8.93	7.11
Basket L2 - 1.0 GB data only	Tele2 Planas 2GB 150min	8.93	8.06
Basket L3 - 2.0 GB data only	Tele2 Planas 2GB 150min	8.93	9.96
Basket L4 - 5.0 GB data only	Telia Lietuva Data 30GB	10.22	13.78
Basket L5 - 10.0 GB data only	Telia Lietuva Data 30GB	10.22	17.52
Basket L6 - 20.0 GB data only	Telia Lietuva Data 30GB	10.22	23.81
Basket L7 - 50.0 GB data only	Telia Lietuva Data 50GB	13.83	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

Post Télécom

Tango

Development of prices

Prices for mobile broadband and telephony in Luxembourg show no clear trend compared to the previous year (2018). Customers seeking 0.1 GB data and 30 calls with 20 SMS find prices fell very strongly.

Prices in Luxembourg compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Luxembourg are, across the offers studied, less expensive than on EU average. However, the lowest price of offers for consumers requiring 1 GB data is slightly more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Post Télécom Basic+	4.38	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Post Télécom Scoubido mini	8.12	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Post Télécom Scoubido mini	8.12	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Tango Smart LU M	12.19	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Tango Smart LU M	12.19	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Post Télécom Scoubido mini	8.12	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Tango Smart LU M	12.19	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Tango Smart LU M	12.19	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Tango Smart LU M + Data Extension	16.25	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Tango Smart LU M	24.37	44.51
Basket L1 - 0.5 GB data only	Post Télécom Scoubido tablette XS	6.50	7.11
Basket L2 - 1.0 GB data only	Post Télécom Scoubido mini	8.12	8.06
Basket L3 - 2.0 GB data only	Post Télécom Scoubido tablette S	8.12	9.96
Basket L4 - 5.0 GB data only	Tango Smart + Data Extension	8.12	13.78
Basket L5 - 10.0 GB data only	Tango Smart + Data Extension	12.19	17.52
Basket L6 - 20.0 GB data only	Tango Smart + Data Extension + Additional Data	20.31	23.81
Basket L7 - 50.0 GB data only	Tango Smart + Data Extension + Additional Data	44.68	46.27

February 2019 data

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MNOs in sample

Tele2

LMT

Bite Latvia

Development of prices

Prices for mobile broadband and telephony in Latvia show no clear trend compared to the previous year (2018). Customers seeking 10 GB data and 900 calls with 80 SMS find prices fell somewhat.

Prices in Latvia compared with the EU

Price for mobile broadband and telephony in Latvia show a different pattern compared to EU28 countries overall. Whereas consumers requiring 50 GB data find offers about half as expensive as on EU average, those seeking 0.5 GB data find prices somewhat more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Bite Latvia Priekšapmaksa 100MB	6.74	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Bite Latvia Priekšapmaksa 600MB	11.79	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Bite Latvia Priekšapmaksa 2GB	15.82	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Bite Latvia Priekšapmaksa 2GB	15.82	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Bite Latvia Bite 5GB	20.57	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Bite Latvia Priekšapmaksa 600MB	11.79	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Bite Latvia Priekšapmaksa 2GB	15.82	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Bite Latvia Bite 5GB	20.57	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Bite Latvia Priekšapmaksa 10GB	23.89	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Tele2 Bezlimits GB	31.19	44.51
Basket L1 - 0.5 GB data only	Tele2 Datu plāns 10GB	8.50	7.11
Basket L2 - 1.0 GB data only	Tele2 Datu plāns 10GB	8.50	8.06
Basket L3 - 2.0 GB data only	Tele2 Datu plāns 10GB	8.50	9.96
Basket L4 - 5.0 GB data only	Tele2 Datu plāns 10GB	8.50	13.78
Basket L5 - 10.0 GB data only	Tele2 Datu plāns 10GB	8.50	17.52
Basket L6 - 20.0 GB data only	Bite Latvia Data only 25GB	13.48	23.81
Basket L7 - 50.0 GB data only	LMT Mini Neatkarība	19.84	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



MNOs in sample

Vodafone

GO Mobile

Melita plc

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Malta fell strongly. In contrast, for consumers requiring 2 GB data and 900 calls with 160 SMS, prices remained nearly unchanged.

Prices in Malta compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Malta are, across the offers studied, somewhat more expensive than on EU average. However, the lowest price of offers for consumers requiring 10 GB data is less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	GO Mobile Smart One	6.34	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Melita plc Flow1 0,5GB	15.57	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Melita plc Flow3 1GB	21.89	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Melita plc Big Blue Unlimited5 Mobile Plan	31.55	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Melita plc Big Blue Unlimited5 Mobile Plan	31.55	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	GO Mobile Smart Two	12.68	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	GO Mobile Smart+	17.75	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Melita plc Big Blue Unlimited5 Mobile Plan	31.55	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Melita plc Big Blue Unlimited10 Mobile Plan	43.39	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Melita plc Big Blue Unlimited30 Mobile Plan	61.14	44.51
Basket L1 - 0.5 GB data only	GO Mobile 500 MB data	6.34	7.11
Basket L2 - 1.0 GB data only	GO Mobile 1GB data	10.14	8.06
Basket L3 - 2.0 GB data only	Melita plc Total Connect SIM only	10.85	9.96
Basket L4 - 5.0 GB data only	Melita plc Total Connect SIM only	10.85	13.78
Basket L5 - 10.0 GB data only	Melita plc Total Connect SIM only	10.85	17.52
Basket L6 - 20.0 GB data only	GO Mobile 20GB Pay monthly	29.58	23.81
Basket L7 - 50.0 GB data only	Vodafone RED SUPER	69.81	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



The Netherlands

MNOs in sample

KPN
Vodafone
T-Mobile

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in the Netherlands fell noticeably. In contrast, for consumers requiring 0.5 GB data and 100 calls with 40 SMS, prices rose somewhat (by 6%).

Prices in the Netherlands compared with the EU

Prices for mobile broadband and telephony in the Netherlands show a different pattern compared to EU28 countries overall. Whereas consumers requiring 50 GB data find offers less expensive than on EU average, those seeking 2 GB data find prices much more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	T-Mobile 1GB + 120min bellen	9.50	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	T-Mobile 1GB + onbeperkt bellen	11.72	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	T-Mobile 1GB + onbeperkt bellen	11.72	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	T-Mobile 2GB + onbeperkt bellen	16.16	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	T-Mobile 5GB + onbeperkt bellen	18.38	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	T-Mobile 1GB + 120min bellen	9.50	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	T-Mobile 2GB + onbeperkt bellen	16.16	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	T-Mobile 5GB + onbeperkt bellen	18.38	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	T-Mobile 10GB + onbeperkt bellen	20.60	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	T-Mobile Onbeperkt GB + bellen	29.48	44.51
Basket L1 - 0.5 GB data only	T-Mobile Prepaid Combi S	6.66	7.11
Basket L2 - 1.0 GB data only	KPN Prepaid 1GB bundel	8.75	8.06
Basket L3 - 2.0 GB data only	Vodafone Prepaid 2GB	13.32	9.96
Basket L4 - 5.0 GB data only	T-Mobile Tablet SIM only 5GB	15.10	13.78
Basket L5 - 10.0 GB data only	T-Mobile 10GB + 120min bellen	18.38	17.52
Basket L6 - 20.0 GB data only	T-Mobile onbeperkt GB + 120min bellen	27.26	23.81
Basket L7 - 50.0 GB data only	T-Mobile onbeperkt GB + 120min bellen	27.26	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



Poland

MNOs in sample

Orange
T-Mobile
Polkomtel

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Poland fell noticeably. In contrast, for consumers requiring 5 GB data, prices rose somewhat (by 5%).

Prices in Poland compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Poland are, across the offers studied, about half as expensive as on EU average. However, the lowest price of offers for consumers requiring 0.1 GB data and 30 calls with 20 SMS is slightly more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Polkomtel Na karte 25	9.19	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Polkomtel Na karte 25	9.19	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Polkomtel Na karte 25	9.19	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Polkomtel Na karte 25	9.19	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Polkomtel Na karte 25	9.19	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Polkomtel Na karte 25	9.19	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Polkomtel Na karte 25	9.19	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Polkomtel Na karte 25	9.19	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Polkomtel Na karte 25	9.19	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Orange na karte 30GB + bonus	11.95	44.51
Basket L1 - 0.5 GB data only	T-Mobile Internet na karte	1.99	7.11
Basket L2 - 1.0 GB data only	T-Mobile Internet na karte	1.99	8.06
Basket L3 - 2.0 GB data only	T-Mobile Internet na karte + 2GB	2.05	9.96
Basket L4 - 5.0 GB data only	Orange Internet Mobilny Podstawowy	4.20	13.78
Basket L5 - 10.0 GB data only	Orange Internet Mobilny Podstawowy	4.20	17.52
Basket L6 - 20.0 GB data only	T-Mobile Internet 20GB (tylko online)	7.57	23.81
Basket L7 - 50.0 GB data only	T-Mobile Flex 50GB	14.61	46.27

February 2019 data

2018 data was recalculated to sustain comparability with updated basket definitions. Figures may thus deviate from previously published data.



Portugal

MNOs in sample

MEO

Vodafone

NOS

Development of prices

Prices for mobile broadband and telephony in Portugal show no clear trend compared to the previous year (2018). Customers seeking 50 GB data find prices fell to much less than half.

Prices in Portugal compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Portugal are, across the offers studied, much more expensive than on EU average. However, the lowest price of offers for consumers requiring 50 GB data is less expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	NOS Tudo 200MB	14.31	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	NOS Tudo 1GB	16.70	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Vodafone You 1GB + 2000min	24.30	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Vodafone You 3GB + 5000min	30.68	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	MEO Unlimited L + 2GB	60.24	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	NOS Tudo 1GB	16.70	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	MEO TOP Total 3GB	20.46	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Vodafone You 5GB + 2000min	31.97	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Vodafone Red 10GB	44.24	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	MEO Unlimited XL	75.57	44.51
Basket L1 - 0.5 GB data only	Vodafone World	14.92	7.11
Basket L2 - 1.0 GB data only	NOS Tudo 1GB	16.70	8.06
Basket L3 - 2.0 GB data only	NOS Kanguru Livre M	17.90	9.96
Basket L4 - 5.0 GB data only	NOS Kanguru Livre M	17.90	13.78
Basket L5 - 10.0 GB data only	Vodafone On 10GB	25.06	17.52
Basket L6 - 20.0 GB data only	NOS Kanguru Livre XL	29.84	23.81
Basket L7 - 50.0 GB data only	NOS Kanguru Livre XL	29.84	46.27

February 2019 data

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Romania

MNOs in sample

Orange

RCS & RDS

Vodafone

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Romania fell very strongly. The most different trend, in the same direction, was for 20 GB data and unlimited calls and SMS, where prices fell noticeably (by 13%).

Prices in Romania compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Romania are, across the offers studied, less than half as expensive as on EU average. However, the lowest price of offers for consumers requiring 20 GB data, unlimited calls and SMS is slightly more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	RCS & RDS Digi Mobil Avantaj 2	4.09	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	RCS & RDS Digi Mobil Avantaj 2	4.36	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	RCS & RDS Digi Mobil Optim 2	6.69	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Orange Prepaid 5€	9.69	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Orange Prepaid 5€	9.69	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	RCS & RDS Digi Mobil Avantaj 2	4.09	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	RCS & RDS Digi Mobil Avantaj 2	4.36	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	RCS & RDS Digi Mobil Optim 2	6.69	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	RCS & RDS Digi Mobil Optim 5	13.41	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Vodafone RED 25 fără telefon	40.70	44.51
Basket L1 - 0.5 GB data only	RCS & RDS Digi Mobil Optim 2	3.88	7.11
Basket L2 - 1.0 GB data only	RCS & RDS Digi Mobil Optim 2	3.88	8.06
Basket L3 - 2.0 GB data only	RCS & RDS Digi Mobil Optim 2	3.88	9.96
Basket L4 - 5.0 GB data only	RCS & RDS Digi Mobil Optim 2	3.88	13.78
Basket L5 - 10.0 GB data only	RCS & RDS Digi Mobil Optim 2	3.88	17.52
Basket L6 - 20.0 GB data only	RCS & RDS Digi Mobil Optim 2	3.88	23.81
Basket L7 - 50.0 GB data only	RCS & RDS Digi Mobil Optim 2	3.88	46.27

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Sweden

MNOs in sample

Telia Company

Tele2

Telenor

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Sweden fell strongly. In contrast, for consumers requiring 50 GB data, prices rose very strongly (by 75%).

Prices in Sweden compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Sweden are, across the offers studied, less expensive than on EU average. No offers were found to be more expensive than the EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Telia Company Kontantkort 0,5GB	7.86	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Telenor Fastpris 2GB	7.86	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Telenor Fastpris 2GB	7.86	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Telenor Fastpris 2GB	7.86	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Telenor Fastpris 5GB	11.83	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Telia Company Kontantkort 0,5GB	7.86	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Telenor Fastpris 2GB	7.86	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Telenor Fastpris 5GB	11.83	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Telenor Fastpris 10GB	15.80	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Telenor Fastpris 20GB	19.77	44.51
Basket L1 - 0.5 GB data only	Telia Company Kontantkort 0,5GB data	3.89	7.11
Basket L2 - 1.0 GB data only	Telenor Surf 1GB	3.89	8.06
Basket L3 - 2.0 GB data only	Telenor Surf 1GB	7.78	9.96
Basket L4 - 5.0 GB data only	Telenor Fastpris 5GB	11.83	13.78
Basket L5 - 10.0 GB data only	Telia Company Mobilt Bredband 10	12.38	17.52
Basket L6 - 20.0 GB data only	Telia Company Mobilt Bredband 20GB	16.35	23.81
Basket L7 - 50.0 GB data only	Tele2 Mobilt Bredband 100GB	27.71	46.27

February 2019 data

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Slovenia

MNOs in sample

Telekom Slovenije

Telemach

A1 Slovenija

Development of prices

Prices for mobile broadband and telephony in Slovenia show no clear trend compared to the previous year (2018). Customers seeking 50 GB data find prices fell very strongly.

Prices in Slovenia compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Slovenia are, across the offers studied, less expensive than on EU average. However, the lowest price of offers for consumers requiring 0.5 GB data is somewhat more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Telemach Free2GO Mini 100MB	4.99	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Telemach Free2GO Revolucija 1GB	8.65	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Telemach Free2GO Revolucija 1GB	8.65	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Telemach ŠE VEČ	17.25	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Telemach ŠE VEČ	17.25	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Telemach Free2GO Revolucija 1GB	8.65	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Telemach Free2GO Revolucija 2GB	8.65	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Telemach ŠE VEČ	17.25	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Telemach ŠE VEČ	17.25	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Telemach ŠE VEČ	17.25	44.51
Basket L1 - 0.5 GB data only	Telekom Slovenije SIM Mobi + 1GB	8.64	7.11
Basket L2 - 1.0 GB data only	Telekom Slovenije SIM Mobi + 1GB	8.64	8.06
Basket L3 - 2.0 GB data only	Telemach Free2GO Revolucija 2GB	8.65	9.96
Basket L4 - 5.0 GB data only	Telemach Free2GO Revolucija 5GB	8.65	13.78
Basket L5 - 10.0 GB data only	Telekom Slovenije Mobilni Net A + 5GB	15.82	17.52
Basket L6 - 20.0 GB data only	Telekom Slovenije Mobilni Net A + 20GB	15.82	23.81
Basket L7 - 50.0 GB data only	Telemach ŠE VEČ	17.25	46.27

February 2019 data

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MNOs in sample

Orange

Slovak Telekom

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in Slovakia fell noticeably. In contrast, for consumers requiring 2 GB data, prices rose strongly (by 36%).

Prices in Slovakia compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in Slovakia are, across the offers studied, nearly twice as expensive as on EU average. No offers were found to be less expensive than the EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Orange Šikovná prima + Prima dáta 0,2GB	13.13	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Orange Go 20€	29.01	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Orange Go 20€	33.36	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Slovak Telekom Áno M + 2GB	37.72	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Slovak Telekom Áno L	43.52	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Orange Go 10€	16.25	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Slovak Telekom Easy 2,5GB + max 15€	36.85	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Slovak Telekom Áno L	43.52	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Slovak Telekom Áno L	43.52	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Orange Go 65€	58.02	44.51
Basket L1 - 0.5 GB data only	Slovak Telekom 1GB Dát	7.24	7.11
Basket L2 - 1.0 GB data only	Slovak Telekom 1GB Dát	7.24	8.06
Basket L3 - 2.0 GB data only	Slovak Telekom Easy 2,5GB	11.60	9.96
Basket L4 - 5.0 GB data only	Slovak Telekom 5GB Dát	21.74	13.78
Basket L5 - 10.0 GB data only	Orange Premium	34.80	17.52
Basket L6 - 20.0 GB data only	Orange Extra	50.76	23.81
Basket L7 - 50.0 GB data only	Orange Go Data 30 + Additional Data	145.06	46.27

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The United Kingdom

MNOs in sample

Orange

Slovak Telekom

Development of prices

Relative to 2018, averaging over the usage baskets shown, prices in the UK rose strongly. In contrast, for consumers requiring 50 GB data, prices fell strongly (by 26%).

Prices in the UK compared with the EU

Compared to all EU28 countries, prices for mobile broadband and telephony in the UK are, across the offers studied, slightly less expensive than on EU average. However, the lowest price of offers for consumers requiring 0.5 GB data is somewhat more expensive than on EU average.

Usage basket	Provider and offer	EUR/PPP	EU28 average
Basket H1 - 0.1 GB, 30 calls, 20 SMS	Vodafone Big Value Bundle 5GBP	5.06	8.82
Basket H2 - 0.5 GB, 100 calls, 40 SMS	Three Three Sim monthly plan 1GB	9.10	14.01
Basket H3 - 1.0 GB, 300 calls, 80 SMS	Three Three Sim monthly plan 1GB	9.10	17.39
Basket H4 - 2.0 GB, 900 calls, 160 SMS	Three SIM only 2GB Add-on	10.12	22.68
Basket H5 - 5.0 GB, unlimited calls and SMS	Three SIM only 5GB Add-on	15.17	30.41
Basket HD1 - 0.5 GB, 30 calls, 10 SMS	Three Three Sim monthly plan 1GB	9.10	10.76
Basket HD2 - 2.0 GB, 100 calls, 20 SMS	Vodafone Big Value Bundle 10GBP	10.12	16.56
Basket HD3 - 5.0 GB, 300 calls, 40 SMS	Three SIM only 5GB Add-on	15.17	23.29
Basket HD4 - 10.0 GB, 900 calls, 80 SMS	Three Three Sim monthly plan 12GB	15.17	31.66
Basket HD5 - 20.0 GB, unlimited calls and SMS	Three Three Sim monthly plan 30GB	19.22	44.51
Basket L1 - 0.5 GB data only	Three Three Sim monthly plan 1GB	9.10	7.11
Basket L2 - 1.0 GB data only	Three Three Sim monthly plan 1GB	9.10	8.06
Basket L3 - 2.0 GB data only	Vodafone Big Value Bundle 10GBP	10.12	9.96
Basket L4 - 5.0 GB data only	Three SIM only 5GB Add-on	15.17	13.78
Basket L5 - 10.0 GB data only	Three Three Sim monthly plan 12GB	15.17	17.52
Basket L6 - 20.0 GB data only	Three Three Sim monthly plan 30GB	19.22	23.81
Basket L7 - 50.0 GB data only	Vodafone Red Extra 100GB	20.23	46.27

February 2019 data

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