Mobile Broadband Prices in Europe 2019

EXECUTIVE SUMMARY

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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.

2. Results

2.1 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.
Mobile broadband was significantly cheaper in 2019 than in 2018 in all but one OECD usage basket.
2.2 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 cluster\(^1\) 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 ratio\(^2\), some general observations can be made.

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\(^1\) 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

- 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**

2.2.1 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.
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