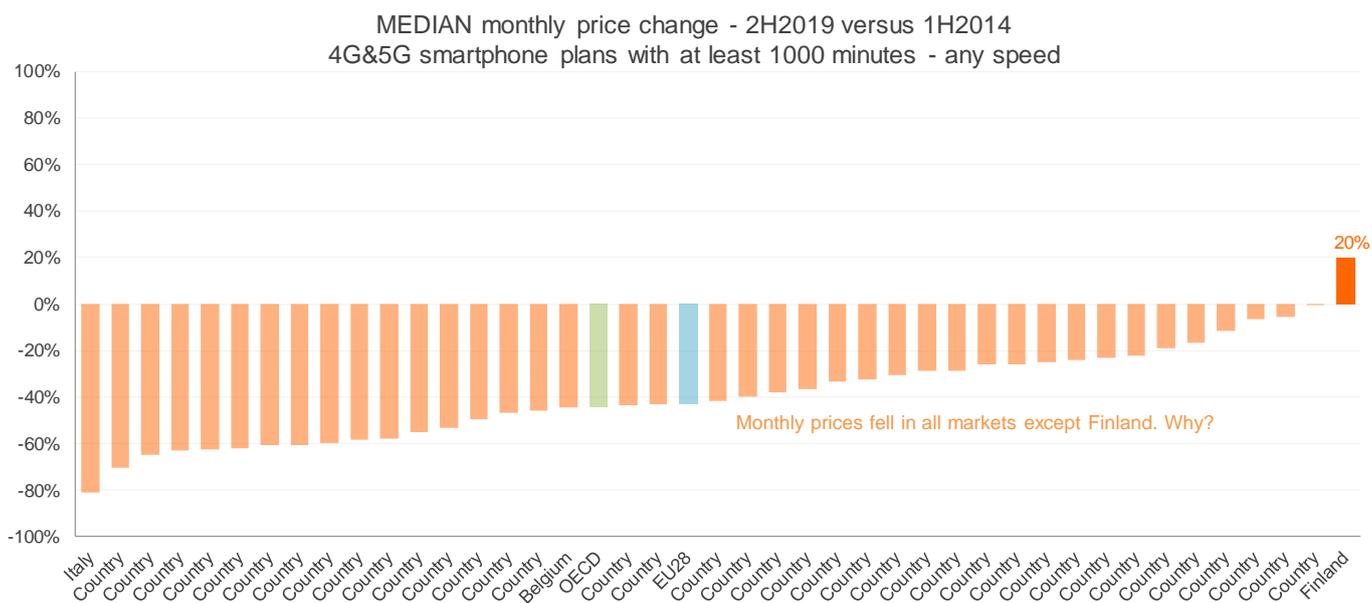


Unlimited mobile data – Why Finland is different and why operators in other markets can't easily replicate the Finnish model

Rewheel research PRO study, February 2020

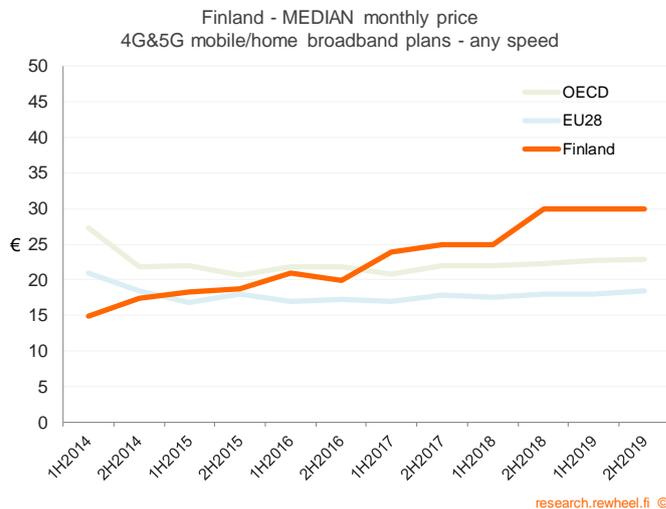
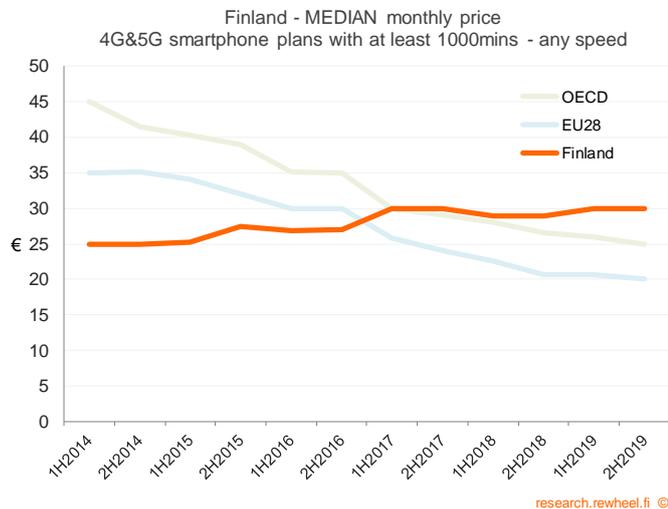
- Monthly prices of smartphone plans fell in all EU28 & OECD markets the last 5 years, except in Finland.
- The median monthly price of 4G&5G smartphone plans in Finland was 20% higher in 2H2019 than in 1H2014.
- The median monthly price of 4G&5G mobile broadband plans in Finland was 100% higher in 2H2019 than in 1H2014.
- Mobile service revenue grew every year the last 5 years in Finland. In 2019 it was 16% higher than in 2014.
- The Finnish commercial model is a *win-win*, for consumers and operators.
- Why is the Finnish commercial model so resilient to price erosion pressures?
- In which markets operators might be able to successfully replicate the Finnish model?



Monthly price: tariff retail monthly price (incl. VAT where applicable).
Median price among all eligible plans logged in the database for country or group of countries. 5G plans 2019 only.
Bulgaria (1H16), Cyprus (1H15), Israel (2H14) Turkey (1H16) versus 2H19 because no 4G plans were available at 1H14.

research.rewheel.fi ©

- The median monthly price of 4G&5G smartphone plans in OECD markets fell from 45 EUR in 1H2014 to 25 EUR in 2H2019.
- The median monthly price of 4G&5G smartphone plans in EU markets fell from 35 EUR in 1H2014 to 20 EUR in 2H2019.
- In Finland the median monthly price of 4G&5G smartphone plans increased from 25 EUR to 30 EUR and the median monthly price of 4G&5G mobile/home broadband plans increased from 15 EUR to 30 EUR. Why?



Operators: Elisa-FI, Telia-FI, DNA-FI, Sunrise-CH, Swisscom-CH, Salt-CH, UPC-CH, O2-DE, 1&1Drillisch-DE, Deutsche Telekom-DE, Vodafone-DE, O2-UK, 3-UK, Vodafone-UK, Iliad-FR, Orange-FR, SFR-FR, Bouygues_Telecom-FR, Iliad-IT, 3-IT, TIM-IT, Vodafone-IT, Base-BE, Proximus-BE, Orange-BE

Context

Rewheel's Digital Fuel Monitor (DFMonitor) bi-annual releases have been tracking mobile data prices in the EU28 & OECD mobile markets since 2014. In DFMonitor's 12th release¹ we tracked and analysed the state of 4G and 5G pricing during the second half of 2019 (October 2019 prices).

The focus of the 12th release was the introduction of 5G plans – most of which packed truly unlimited data volume – and the unabated spread of speed-tiered plans that packed unlimited mobile data volume. The very successful *speed-tiered unlimited data volume* model was pioneered by Elisa during the 3G era and was later adopted by all Finnish mobile operators.

Herein, we take a closer look at the development of key metrics such as the median monthly price and present what we consider to be both the main difference between Finland and all other mobile markets and the main driver behind Finland's uninterrupted 5-year mobile service revenue growth.

The median monthly price – median among all eligible 4G&5G smartphone or mobile/home broadband plans included in the DFMonitor database for a country or a group of countries such as EU28 & OECD – is a robust proxy of the general retail price level in mobile markets and a fairly good indicator of changes in the average spend per customer (operator average revenue per user ARPU) which drives mobile service revenue.

A fall or an increase in the market median monthly price is a precursor of a fall or an increase (typically of smaller magnitude) of mobile service revenue in that market.

To illustrate this point, let us look at what happened in the Italian mobile market after Iliad's 4th MNO entry. In April 2016, before the European Commission decided to approve the Wind/Hutchison 4 to 3 merger by mandating Iliad as the new 4th MNO, the Italian MNOs and MVNOs (TIM, Vodafone, Wind, 3, Fastweb and Postemobile) sold 4G smartphone plans that included unlimited minutes/SMS and data allowances ranging from 1 to 20 gigabytes (median 5 gigabytes) at monthly prices ranging from 20 to 75 EUR (median 39 EUR).

In October 2019, roughly one and half year after Iliad's 4th MNO entry the Italian MNOs and MVNOs (TIM, Vodafone, 3, Iliad, Fastweb and Postemobile) sold 4G smartphone plans that included unlimited minutes/SMS and data allowances ranging from 10 to unlimited gigabytes (median 50 gigabytes) at monthly prices ranging from 5.99 to 49.99 EUR (median 11.99 EUR).

Following Iliad's entry, monthly prices of smartphone plans fell off a cliff in Italy. The median price fell by 70% compared to 1H2016 while the included gigabyte allowances increased ten-fold. Consequently, mobile service revenue fell in Italy the last 5 years, not by 70% but by a sizable ~20%, because like in almost any other consumer-centric market most customers purchase low-end priced mobile plans where monthly prices fell less steep compared to the median.

¹http://research.rewheel.fi/downloads/The_state_of_4G_pricing_DFMonitor_12th_release_2H2019_PUBLIC.pdf

Table of Contents

1	Why the Finnish mobile market is different.....	6
1.1	Monthly prices fell in all EU28 & OECD markets the last 5 years, except in Finland	7
1.2	The Finnish mobile market is different from all other EU28 & OECD markets in one very important aspect	10
1.3	Finnish operator commercial edge – Mobile service revenue grew in Finland every year the last 5 years.....	12
1.4	The resilience of the Finnish commercial model.....	14
1.4.1	Resilience to supply originated price erosion pressures	16
1.4.1.1	MVNO price pressures	16
1.4.1.2	New MNO entrant risk	17
1.4.1.3	Price erosion pressures from other MNO competitors – Telia’s failed attempts to break ranks	18
1.4.2	Resilience to demand originated price erosion pressures	21
2	Why operators in other markets can’t easily replicate the successful Finnish commercial model?	25
2.1	Inertia, an operator tendency to remain unchanged	25
2.2	Competitor alignment.....	27
2.3	Established market price level.....	28
2.4	The median monthly price of mobile broadband plans doubled in Finland the last 5 years	32
2.5	Markets where operators might be able to successfully replicate the Finnish model.....	35

Get the full report

The full 38-pages report is available for purchase. Please contact us at research@rewheel.fi or +358 44 203 2339

About Rewheel

*New radio spectrum bands, 4.5G and 5G technology, unlimited mobile data plans and the Internet of Things radically change mobile network operators' cost, revenue and profitability dynamics. **Rewheel's mission is to help operators prepare for the paradigm shift in network and spectrum strategy, spectrum valuation, network sharing, M&A, MVNO economics and mobile data pricing.***

Founded in 2009, Rewheel is a Finland based boutique management consultancy. Our clients are mainly European mobile network operators, telco groups, MVNO groups, sector regulators, competition authorities, governments, global internet firms, mobile data-centric start-ups, PE and VC investors.

We delivered management consultancy work for clients in the United Kingdom, United States, Ireland, Switzerland, Finland, Sweden, Belgium, Greece, Poland, Slovenia, Hungary, Russia, Romania.

The following authorities have acquired access to our research: The European Commission Directorate for Competition, the United States Department of Justice, the New York, California and many other US State Attorney General Offices, the national competition authorities of Canada, Australia and the Netherlands, the Ministry of Economic Affairs of the Netherlands, the Ministry of Industry and Trade of Czechia, the Korean Electronics and Telecommunication Research Institute, the sector regulators of the United Kingdom, Germany, the Netherlands, Finland, etc.

Rewheel's mobile data technology, network-economics, spectrum, profitability and competitiveness focused reports have been cited by OECD Economic Surveys, The Economist, The Financial Times, The New York Times, Reuters, Bloomberg, WSJ and publicly referenced by the UK telecoms regulator Ofcom, BIPT, Vodafone, Telefonica, Tele2, Elisa, DNA, GSMA, VPs of the EU Commission responsible for Competition, MEPs, IEEE, ITU.

Since 2010 we have been supporting a number of European challenger mobile operators in multiband (700, 700 SDL, 800, 900, 1400 SDL, 1800, 2600, 3.5 GHz) auctions with spectrum valuation and strategic advisory services.

Network economics metrics

For comprehensive data usage, spectrum usage and capacity utilisation metrics in EU28 and OECD markets visit

⇒ <http://research.rewheel.fi/networkeconomics/>

Recent Rewheel research PRO-reports

3.6 GHz 5G spectrum valuation in Poland

⇒ http://research.rewheel.fi/downloads/3.6GHz_5G_spectrum_valuation_Poland_PUBLIC.pdf

The state of 4G & 5G pricing, 2H2019: more-for-less

⇒ http://research.rewheel.fi/downloads/The_state_of_4G_pricing_DFMonitor_12th_release_2H2019_PUBLIC.pdf

2018 capacity utilization and 5G capacity potential of mobile operator existing macro cell site grids

⇒ http://research.rewheel.fi/downloads/2018_capacity_utilization_potential_macro_site_grids_PUBLIC.pdf

Root cause of weak competition in the Canadian wireless market

⇒ http://research.rewheel.fi/downloads/Root_cause_weak_competition_Canada_wireless_market_PUBLIC.pdf

4G era – Who got the most out of it?

⇒ http://research.rewheel.fi/insights/2019_may_pro_4G_who_got_most_of_it_revenue_growth/

The state of 4G pricing – 1H2019 – Digital Fuel Monitor 11th release

⇒ http://research.rewheel.fi/insights/2019_apr_pro_1h2019_release/

4G prices as a function market concentration, no. of MNOs, subscriber share, position, group affiliation and country general price level

⇒ http://research.rewheel.fi/insights/2019_jan_pro_4G_prices_as_a_function_of/

Iliad's 4th MNO venture into Italy – Will it pay off?

⇒ http://research.rewheel.fi/insights/2019_jan_pro_iliad_italy/

T-Mobile and Tele2 4 to 3 mobile merger in the Netherlands – Competition concerns, efficiencies and effective remedies

⇒ http://research.rewheel.fi/insights/2018_nov_pro_tele2_t-mobile_nl/

The state of 4G pricing – 2H2018 – Digital Fuel Monitor 10th release

⇒ http://research.rewheel.fi/insights/2018_oct_pro_2h2018_release/

Capacity utilization and fixed-to-mobile broadband substitution potential with existing macro site grids – 2017

⇒ http://research.rewheel.fi/insights/2018_sep_pro_capacity/

The 4 to 3 consolidation effect – Ahead of the Commission's merger ruling Tele2 increased prices in the Netherlands

⇒ http://research.rewheel.fi/insights/2018_july_pro_T-mobile-Tele2_Netherlands/

The state of 4G pricing – 1H2018 – Digital Fuel Monitor 9th release

⇒ http://research.rewheel.fi/insights/2018_may_pro_1h2018_release/

Gigabyte price development in 4 to 3 consolidated versus 4-MNO European markets – September 2013 to March 2018

⇒ http://research.rewheel.fi/insights/2018_apr_pro_4to3_consolidation_vs_4MNO/

The state of 4G pricing – 2H2017 – Digital Fuel Monitor 8th release

⇒ http://research.rewheel.fi/insights/2017_nov_pro_2h2017_release/

Unlimited mobile data and near zero marginal cost – a paradigm shift in telco business models

⇒ http://research.rewheel.fi/insights/2017_sep_pro_near_zero_marginal_cost/

O2 – Ready to disrupt the German tight oligopoly market

⇒ http://research.rewheel.fi/insights/2017_apr_pro_o2_germany_turnaround/

Capacity utilization and fixed-to-mobile broadband substitution potential – A study of 64 European operators

⇒ http://research.rewheel.fi/insights/2017_mar_pro_network_utilisation_mimo/

Effective structural remedies for Hutchison-WIND 4 to 3 Italian mobile merger

⇒ http://research.rewheel.fi/insights/2016_sept_premium_italy_hutch_wind_merger/

Telenor Denmark – Turnaround strategy

⇒ http://research.rewheel.fi/insights/2016_apr_premium_telenor_denmark_turnaround/

For further research reports visit research.rewheel.fi To learn more about our consultancy's profile visit www.rewheel.fi or please contact us at research@rewheel.fi or [+358442032339](tel:+358442032339).