### Tight oligopoly mobile markets in EU28 in 2015

Comprehensive analysis of factors that give rise to unilateral anti-competitive effects leading to non-competitive outcomes and consumer harm in tight mobile oligopolies

- Half of EU28 mobile markets are tight oligopolies with non-competitive outcomes
- What are the factors that give rise to unilateral (non-coordinated) effects and lead to high or excessive mobile internet access prices and very restrictive gigabyte caps in tight oligopolies?

**Rewheel / Digital Fuel Monitor comprehensive report, 4th January 2016**

The cabinet of Competition Commissioner Margrethe Vestager and DG Competition have obtained access to the full report.

<table>
<thead>
<tr>
<th>Index rank</th>
<th>Country</th>
<th>Index</th>
<th>Competition outcome</th>
<th>Oligopoly classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>100% (max)</td>
<td></td>
<td></td>
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<tr>
<td>28</td>
<td>Germany</td>
<td>90%</td>
<td>Non-competitive</td>
<td>Tight oligopoly</td>
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<tr>
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<td></td>
<td></td>
<td>Threshold</td>
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<td>14</td>
<td>France</td>
<td>56%</td>
<td>Sub-competitive</td>
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<td>Sub-competitive oligopoly</td>
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<td></td>
<td>Threshold</td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td>Denmark</td>
<td>41%</td>
<td>Effective competition</td>
<td>Competitive oligopoly</td>
</tr>
<tr>
<td>6</td>
<td>Poland</td>
<td>41%</td>
<td>Effective competition</td>
<td>Competitive oligopoly</td>
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<tr>
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<td>28%</td>
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<td>Competitive oligopoly</td>
</tr>
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</tr>
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<tr>
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<td>Effective competition</td>
<td>Competitive oligopoly</td>
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<tr>
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**Key questions answered**

- Do market concentration and the number (3, 4 or 5) of mobile network operators affect mobile internet access prices?
- Does the presence of a no.4 challenger network operator (important competitive force) affect prices/caps?
- Do operator group level fixed-line broadband interests (convergence/bundling) affect prices and gigabyte caps?
- Do operator group level price discrimination (zero-rating) practices affect prices and gigabyte caps?
- Does E5 operator ownership (Vodafone, Deutsche Telekom, Orange, Telefonica and Telecom Italia that collectively control 62% of the market) affect prices/caps?
- Does network-layer consolidation (active infrastructure and/or spectrum sharing) affect prices/caps?
- Does MVNO presence (on commercial or merger mandated basis) affect prices/caps?
- Do other endogenous (ARPU, ARPC) or exogenous (GDP, AIC, PLI) factors affect prices?
- Does 4 to 3 mobile network consolidation increase the risk for non-competitive outcomes?
- What are the factors that give rise to non-coordinated effects and lead to high or excessive mobile internet access prices and restrictive or very restrictive gigabyte caps in tight oligopolies?
- What would turn the German mobile market to a perfect tight oligopoly (from 90% to 100% tight oligopoly index)?
- Are mobile internet access prices affordable and is mobile broadband penetration/usage lower in tight oligopolies?
- Have 4 to 3 mobile mergers led to higher prices and consumer harm?
- Will the planned 4 to 3 mergers turn the UK, Italian and French markets into non-competitive tight oligopolies?
- Will 4 to 3 consolidation in Sweden and Poland or the rumoured acquisition of Play in Poland by Liberty Global turn the Swedish and Polish markets to tight oligopolies with non-competitive outcomes?
- Will the planned Cellcom and Golan Telecom merger turn the Israeli 5-MNO competitive market to a tight oligopoly?
- Is BEREC right to be concerned and is ex ante regulation needed to remedy the competitive harm in tight oligopolies?
- What are the recommended ex ante measures and merger control remedies for tight oligopolies?
BEREC’s report on oligopoly analysis and regulation

BEREC published in December 2015 a report on oligopoly analysis and regulation. Fixed-mobile convergence, bundling and consolidation were according to BEREC trends that lead to oligopolistic market settings and may result to sub- or on-competitive market outcomes, high prices and consumer harm. Whereas in monopolies and collusive oligopolies effective competition is impeded due to single or joint dominance in tight oligopolies the non-competitive outcomes are the result of unilateral, non-coordinated effects i.e. the shared economic incentive of the oligopolists to raise prices close to monopoly levels. While European competition law addresses non-coordinated anti-competitive effects (e.g. in the cases of 4 to 3 mobile mergers) the current electronic communication framework does not explicitly address market failure of this kind (sub- or non-competitive outcomes in tight oligopolies). National regulatory authorities and the European Commission have currently no regulatory tools in their hands to remedy effective competition in tight oligopolies. Hence, according to BEREC, the review of the regulatory framework regarding the treatment of oligopolies must take into consideration the case for potential ex ante intervention not only in collusive (joint dominance) but also in tight oligopolies.

Abstract

In this study we examine a number of factors that are identified in the theory of harm and which may trigger non-coordinated effects and could impede effective competition in mobile oligopolies resulting in sub- or non-competitive outcomes and consumer harm. We measure the intensity of the effect of the factors in question in the form of high or excessive mobile internet access prices and restrictive or very restrictive gigabyte caps using a comprehensive international benchmark among EU28 countries. Having observed the effect of the factors and their relative weights we synthesized a country level tight oligopoly index and ranked the EU28 mobile markets. The tight oligopoly index compiled by the factors that were shown to affect mobile internet access prices and gigabyte caps is shown to be a reliable predictor of country average mobile internet access price level. The tight oligopoly index is then used to assess the post-merger competition outcomes in markets that are currently under 4 to 3 consolidation (UK and Italy), markets where 4 to 3 consolidation is contemplated (France, Poland, Sweden) and in Israel where a 5 to 4 mobile merger has been announced. In the final step we propose a set of effective ex ante regulatory and merger control measures to remedy the significant impediment of effective competition in mobile tight oligopolies.

Highlights and key findings

The tight oligopoly index reliably predicts the average price level and size of gigabyte volume caps of mobile internet access in EU28 markets.
In tight oligopolies operators charge mobile internet access prices that are excessive (well above the competitive level).

In tight oligopolies operators severely restrict the supply of mobile internet gigabytes by imposing artificial capacity constraints.

In tight oligopolies operators severely restrict the supply of mobile internet gigabytes by imposing artificial commercial and technical capacity constraints.
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Report prices

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- Operator groups: small €5,000, medium €10,000, large €15,000 to €20,000
- MVNOs: small €5,000, medium €10,000, large €15,000 to €20,000
- Infrastructure vendors: small €5,000, medium €10,000, large €15,000 to €20,000
- Other ICT and internet companies: small €5,000, medium €10,000, large €15,000 to €20,000

About Rewheel

Founded in 2009, Rewheel is a Helsinki-Finland based boutique management consultancy specialising in the appraisal of mobile data-centric business models with emphasis on network economics, regulatory analysis and competition assessments.

Rewheel working for mobile operators and MVNOs carried out unhampered competition analysis, effective remedy design and remedy assessment in very challenging in-market consolidation cases during 2014 and 2015. Our consolidation related research has been included by DG Competition in the file of the German and Danish mobile mergers and our infrastructure centric pro-competitive arguments are echoed by many sector regulators and the antitrust authority of the European Commission. We support our clients with factual assessments and credible economic, technology and merger regulation analysis and market entry business cases. In market consolidation consulting engagements typically we work very closely with top international law firms that are specialists in competition law.

Rewheel, working closely together with leading law firms, has helped European mobile operators to develop network and spectrum sharing strategies and compensation mechanisms that do not raise anti-competitive effects and are likely to be approved by sector regulators and competition authorities.

Since the onset of the mobile internet centric 900, 1800 and 2100 MHz license renewal wave in 2011 in Europe Rewheel has been providing strategy, spectrum valuation and auction theory advice (together with world class CCA/SMRA auction theorist partners) to five European award processes (operator or regulator side depending on country), including new entrants and acquisitions as well as license renewals in multi-band (typically 800,900,1800,2100 and 2600 MHz) auctions. In 2015 Rewheel has helped European mobile operators to assess the strategic risks and opportunities associated with the upcoming 700 MHz spectrum auctions, and analysed the likely range of financial impacts of 700 MHz acquisition on active network sharing business cases.

About Digital Fuel Monitor

Digital Fuel Monitor is Rewheel's premium subscription service that comprehensively monitors and analyses competitiveness of mobile internet access in EU and OECD countries since 2014.

DFMonitor subscription has become an indispensable resource for many leading mobile operator groups, MVNO groups, telecom regulators, competition authorities and various players of the digital economy and mobile cloud and IoT ecosystem in Europe and the US. The telecom and tech investor community also shows a great interest in our research - DFMonitor findings have been cited in many investor presentations.