



Commission for
Communications Regulation

Irish Communications Market

Quarterly Key Data Report

Data as of Q2 2015

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An Coimisiún um Rialáil Cumarsáide
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Corrigendum to Q1 2015 Report¹

Four operators have informed ComReg about incorrect historically provided information:

Note 1: Total fixed voice subscriptions from Q4 2012 to Q1 2015 inclusive have been revised following an operator revision of historically provided fixed voice only subscriptions. Total fixed voice subscriptions as well as total fixed subscriptions have been revised downwards with such downward revisions ranging from 4,835 to 63,003 subscriptions. These changes also affect fixed voice subscriptions market shares. Hence, these metrics have also been revised.

Note 2: Wholesale revenues from Q1 2013 to Q1 2015 inclusive have been revised following an operator revision of historically provided interconnect revenues. Total wholesale revenues have been revised downwards with such downward revisions ranging from €3.9 million to €19,3 million. These changes also affect fixed line revenue (retail and wholesale) market shares. Hence, these metrics have also been revised.

Note 3: Fixed line retail revenues in Q1 2015 have been revised upwards by €100,000 following an operator revision of historically provided retail broadband revenues. This change also affects fixed line retail revenue market shares. Hence, this metric has also been revised.

Note 4: Fixed voice traffic in Q1 2015 has been revised downwards by 7,2 million minutes following an operator revision of historically provided fixed voice traffic information.

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¹ ComReg is currently considering the reasons cited by the relevant operators for the reinstatement of historically submitted information.

Summary

During the period Q1 2015 to Q2 2015 overall industry retail revenues increased by 2.2%. Total retail revenues in the twelve months to June 2015 at €2.99 billion were down from over €3.06 billion over the 12 months previous. There were 1,699,176 total broadband subscriptions this quarter which was a decrease of 0.4% from Q1 2015, but an increase of 0.1% compared to Q2 2014. Overall voice traffic volumes decreased by 0.4% this quarter. Presented below is a tabular summary of the data presented throughout this Quarterly Key Data Report.

Irish Quarterly Communications Market Data Q2 2015				
	Q2'15	Q1'15	Quarterly Change	Annual change
Total Retail Market Revenues ²	€748,283,165	€732,387,308	+2.2%	+0.6%
Fixed Line Retail Revenues ³	€323,440,569	€314,442,556	+2.9%	-0.2%
Mobile Retail Revenues	€383,426,026	€376,473,041	+1.8%	+1.5%
Broadcasting Retail Revenues ⁴	€41,416,570	€41,471,711	-0.1%	-2.1%
Fixed Line Wholesale Revenues ⁵	€143,169,381	€140,227,909	+2.1%	+11.6%
Mobile Wholesale Revenues	€70,303,774	€73,413,790	-4.2%	-9.1%
Total Voice Traffic (Minutes)	4,154,365,239	4,171,333,832	-0.4%	+1.1%
Fixed Voice Traffic (Minutes) ⁶	1,109,052,279	1,160,415,491	-4.4%	-7.6%
Mobile Voice Traffic (Minutes)	3,045,312,960	3,010,718,341	+1.1%	+4.8%
Total Internet Subscriptions ⁷	1,704,666	1,711,957	-0.4%	+0.02%
Total Broadband Subscriptions	1,699,176	1,706,106	-0.4%	+0.1%
Fixed Broadband Subscriptions	1,286,566	1,270,914	+1.2%	+4.9%
Mobile Broadband Subscriptions (HSDPA and LTE)	412,610	435,192	-5.2%	-12.4%
Fixed Subscriptions ⁸	1,876,187	1,899,218	-1.2%	-1.4%

² Mobile and Fixed line wholesale revenues are excluded from this figure.

³ Fixed line retail revenues were revised in Q1 2015. See note 3 within the corrigendum to Q1 2015 on page 5 of this report.

⁴ ComReg only captures Cable/MMDS/IPTV revenues from a number of TV providers for publication under broadcasting revenues in the Quarterly Key Data Report. The collection and publication of licence fee and/or television (advertising) revenues) does not fall within ComReg's remit and therefore is not included in the broadcasting revenue figure.

⁵ Fixed line wholesale revenues were revised from Q1 2013 to Q1 2015 inclusive. See note 2 within the corrigendum to Q1 2015 on page 5 of this report.

⁶ Fixed voice traffic was revised in Q1 2015. See note 4 within the corrigendum to Q1 2015 on page 5 of this report.

⁷ The difference between Internet and broadband subscriptions is accounted by the inclusion of narrowband subscriptions in Internet subscriptions.

⁸ Fixed subscriptions to voice, fixed Internet and TV services (both single play and bundled subscriptions). Total fixed subscriptions were revised from Q4 2012 to Q1 2015 inclusive. See note 1 within the corrigendum to Q1 2015 on page 5 of this report.

Fixed Voice Subscriptions ⁹	1,497,735	1,503,789	-0.4%	-1.9%
Total Mobile Subscriptions (inc. Mobile broadband and M2M)	5,783,731	5,770,638	+0.2%	+0.3%
Machine to Machine Subscriptions	497,059	476,047	+4.4%	+19.5%
Mobile Subscriptions ¹⁰ (exc. Mobile broadband and M2M)	4,874,062	4,859,399	+0.3%	-0.1%

- Overall electronic communications network and service retail revenues at the end of June 2015 were over €748 million for the quarter. Industry retail revenues rose by 2.2% this quarter and increased by 0.6% compared to Q2 2014. The quarterly increase in retail revenues was driven by increases in mobile and fixed line revenues.
- At the end of June 2015 there were 1,497,735 fixed voice subscriptions in Ireland, a decrease of 0.4% since last quarter and a decrease of 1.9% since Q2 2014.
- Total voice traffic minutes decreased by 0.4% this quarter, but were 1.1% higher than in Q2 2014. Mobile minutes form the majority of voice minutes at 73.3%, with fixed minutes representing the remaining 26.7%. Mobile voice minutes increased by 1.1% this quarter while fixed voice minutes fell by 4.4% this quarter.
- Broadband subscriptions (fixed and mobile) decreased by 0.4% this quarter, but were up by 0.1% compared to Q2 2014. Cable (+6,602) and VDSL (+41,524) subscriptions increased this quarter while DSL (-30,808), FWA (-983), satellite/fibre (-683) and dedicated mobile broadband (-22,582) subscriptions fell this quarter.
- The estimated fixed broadband household penetration rate¹¹ was 65.9% in Q2 2015. The fixed broadband per capita penetration rate was 27.8%. The broadband per capita penetration rate (including mobile broadband) was 36.7%.
- Average fixed broadband speeds continue to increase. In Q2 2015 approximately 65.2% of all fixed broadband subscriptions were equal to or greater than 10Mbps up from 59.0% in Q2 2014. 51.3% of all fixed broadband subscriptions were equal to or greater than 30Mbps up from 40.1% in Q2 2014.

⁹ Total fixed voice subscriptions were revised from Q4 2012 to Q1 2015 inclusive. See note 1 within the corrigendum to Q1 2015 on page 5 of this report.

¹⁰ As of Q2 2013 Machine to Machine (M2M) subscriptions are excluded from mobile voice subscriptions. Therefore, changes in subscriptions are not directly comparable to previous periods. See section 4.6 for a more detailed description of M2M.

¹¹ This estimate excludes business subscriptions and mobile broadband subscriptions.

- At the end of June 2015 there were 5,783,731 mobile subscriptions (including mobile broadband and M2M) in Ireland, an increase of 0.2% since last quarter. The mobile penetration rate was 124.9% including mobile broadband and Machine to Machine subscriptions and 105.2% excluding mobile broadband and Machine to Machine subscriptions.
- The number of voice and data subscribers using 3G/4G networks increased to 3,594,077 this quarter, up by 2.6% from Q1 2015 and up by 27.8% compared to Q2 2014.
- There were 481,154 gross additions in the number of mobile subscriptions. Of these, 80,703 were subscriptions with ported numbers. On average, there were 96,559 numbers ported and 522,900 total gross additions per quarter over the last 12 months.
- In Q2 2015 mobile ARPU was €24.75 per month, down from €24.98 per month in Q2 2014. Declining mobile ARPU is likely to be a reflection of a number of factors such as those attributable to lower priced mobile plans, increased sales of bundled products (combining mobile with fixed calls, broadband and TV) and reductions in mobile roaming and termination rates, among others.

Notes to data:

- Both Meteor and emobile brands are reported under the umbrella of Eircom Group Mobile.
- Following the completion of the Three's acquisition of O2, Three, O2 and 48 brands are reported under the umbrella of the Three Group as of Q2 2014.
- As of Q2 2015 mobile to mobile voice traffic between O2 and Three is treated as on net traffic.
- As of Q3 2013 ComReg gathers information from additional mobile operators¹² (including Lycamobile). Hence, information since that quarter is not strictly comparable with data published in previous periods.
- As of Q4 2014 a more precise breakdown of business versus residential fixed subscriptions (fixed voice and fixed broadband subscriptions) is available following an operator upgrade of its reporting systems.
- Sky Ireland does not provide public information on TV subscriptions and TV revenues. Thus, information based on actual data from Sky is not included in the

¹² Historical data on mobile subscriptions in Q1 and Q2 2013 was also updated.

report. Sky Ireland's distribution of subscriptions by type (single play, double play or triple play) is instead estimated using the percentage distribution of Sky Ireland's subscriptions as obtained from market survey data conducted by RED C Research & Marketing Ltd on behalf of ComReg. For more details on survey method, see the Appendix on page 79.

- From Q2 2015 an Irish population estimate¹³ of 4,632,100 is used, with this being obtained from the Central Statistics Office (CSO) QNHS survey. From Q2 2015, an estimated household number of 1,698,200 is used with this being obtained from the Central Statistics Office (CSO) QNHS survey.
- A number of external sources are used for international comparisons. These include the CSO, Analysys Mason, and Strategy Analytics (Teligen).
- In most cases data has been rounded to one decimal place in this report.
- Not all charts in this report may sum exactly to 100% due to rounding.
- While quarter on quarter comparisons are made in the report, definitive conclusions with regard to trends cannot be drawn from this and year on year comparisons are used to improve the reliability of the analysis.
- Further explanations and descriptions of data supplied in this report can be found in the accompanying explanatory memorandum 15/102a.
- Extracts of data used in this report can be downloaded at www.comstat.ie
- Data previously published may have been amended since publication. Any such amendments are noted in the corrigendum notice on page 5 of this report.

¹³ Estimates based on Quarterly National Household Survey (QNHS).

1. Overall Market Data

Data presented in this report is based on questionnaires completed by authorised operators for the period from 1 March to 30 June 2015. The report is based on submissions from 39 active operators¹⁴.

1.1 Number of Authorisations

Figure 1.1.1 - Total Number of Authorisations

Total Authorisations	June 2015
No. of fixed and wireless authorisations	466
No. of mobile telephony authorisations	11
No. of broadcasting authorisations (incl. Cable TV, MMDS)	63
Total Number	540

Before providing networks or services to third parties, operators are required to submit a notification to ComReg which is added to a central register of authorised operators. At the end of Q2 2015 there were 540 authorised undertakings in Ireland up from 527 at the end of Q1 2015.

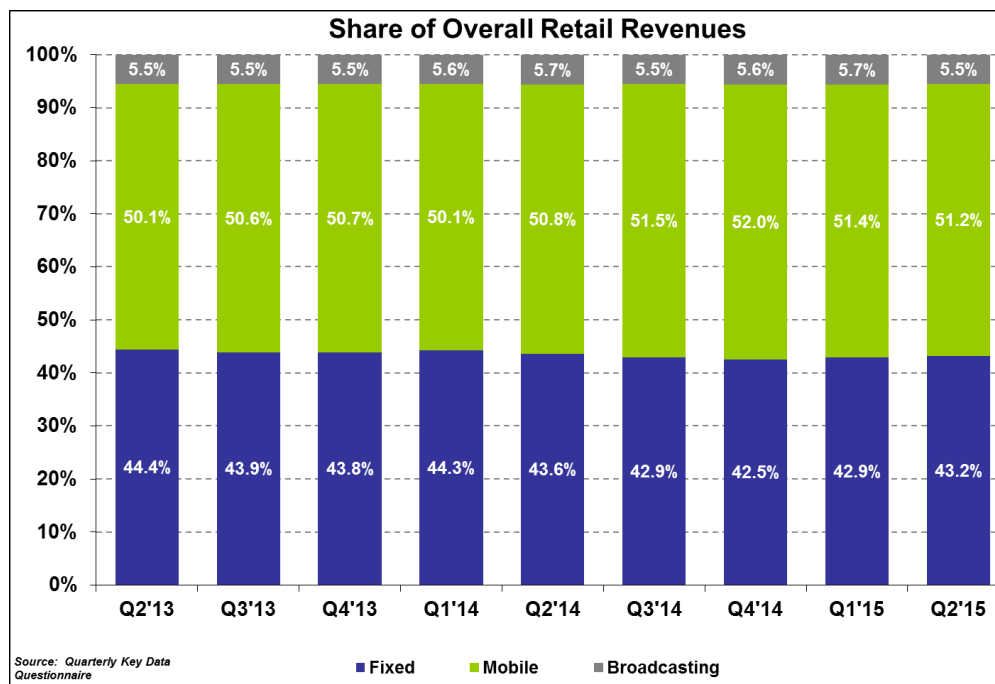
It should be noted that the list above refers to the number of general authorisations granted by ComReg under the European Framework for Authorisations, and does not necessarily reflect the total number of commercially active organisations or entities currently operating in the market. The total includes a number of undertakings who are authorised to use licence-exempt spectrum for the provision of services.

1.2 Overall Electronic Communications Revenues¹⁵

Figure 1.2.1 shows the proportion of industry retail revenue attributable to the provision of fixed line, mobile and certain TV broadcasting services.

¹⁴ See table A2 in the Appendix for the list of respondents submitting information to ComReg.

¹⁵ Further detail on terms and definitions - ComReg Doc. 15/102a Explanatory Memorandum.

Figure 1.2.1 – Fixed, Mobile & Broadcasting as a % of Total Retail Revenues

According to CSO, Ireland's Gross National Product for Q1 2015¹⁶ was approximately €41 billion. Based on the Q1 2015 retail revenue data reported to ComReg by operators in the Irish communications sector, these revenues were approximately 1.8% of GNP in that quarter.

Overall electronic communications network and service retail revenues for Q2 2015 were €748 million. This was a 2.2% increase on the previous quarter. Comparing Q2 2014 to Q2 2015, industry retail revenues have increased by 0.6%. Over the twelve months to June 2015, total retail revenues were over €2.99 billion.

This quarter, mobile retail revenues increased by 1.8% and increased by 1.5% when compared to Q2 2014. Fixed line retail revenues increased by 2.9% this quarter, but decreased by 0.2% when compared to Q2 2014. Broadcasting (Cable/MMDS/IPTV) retail revenues decreased by 0.1% this quarter and declined by 2.1% compared to Q2 2014. The broadcasting network retail revenues in this report only captures Cable/MMDS/IPTV revenues and thus, exclude Sky Ireland's satellite revenues and all content related revenues.¹⁷

¹⁶ Q1 2015 is the latest period for which GNP data is available.

¹⁷ ComReg captures Cable/MMDS/IPTV revenues from a number of TV providers for publication in the Quarterly Report under broadcasting revenues. The collection and publication of licence fee and/or television advertising revenues does not fall within ComReg's remit and therefore is not included in the broadcasting revenue figure.

1.3 Overall Call Volumes

Figure 1.3.1 - Share of Total Voice Call Volumes (Minutes)¹⁸

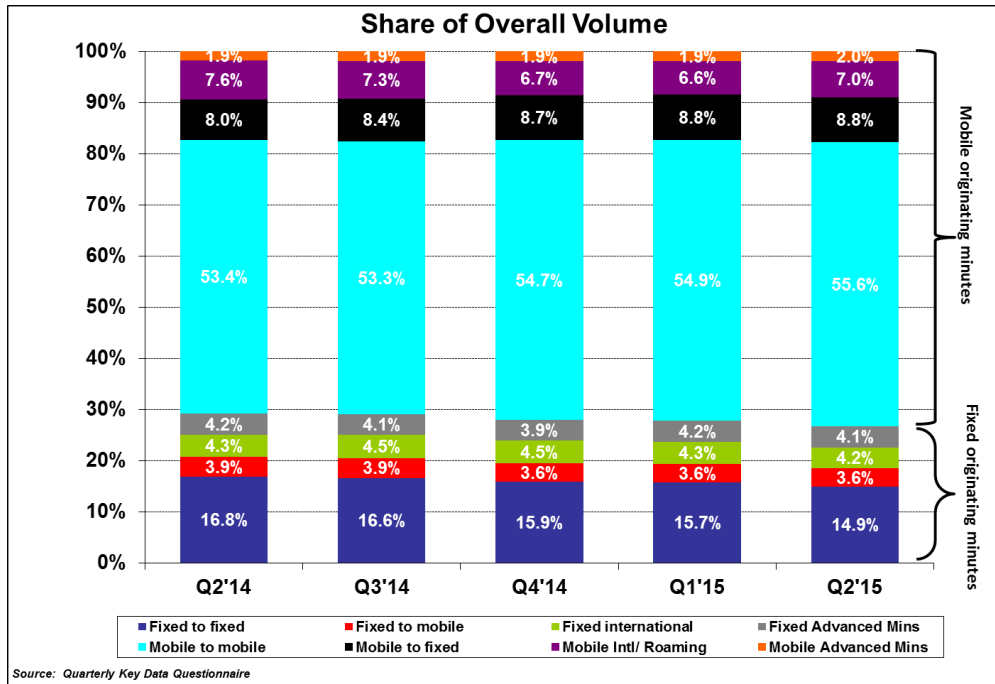


Figure 1.3.1 profiles volumes of originating voice calls by call type on both fixed and mobile networks on a quarterly basis. There was a decrease in total voice minutes this quarter. Voice minutes for Q2 2015 totalled 4.15 billion minutes and there were 16.7 billion minutes in the twelve months to the end of June 2015. Total voice minutes decreased by 0.4% from the previous quarter, but increased by 1.1% since Q2 2014.

It should be noted that managed VoB minutes are included with calls originating from fixed networks in figure 1.3.1, and are split according to the same call categorisations (i.e. domestic, international, mobile, other).

Mobile originating voice minutes (up 4.8% on Q2 2014) accounted for 73.3% of all voice minutes in Q2 2015 (compared to 70.8% in Q2 2014) while traffic originating on fixed line networks (down 7.6% on Q2 2014) accounted for the remaining 26.7% of all voice minutes (compared to 29.2% in Q2 2014). Figure 1.3.2 shows total voice traffic in Ireland at the end of Q2 2015.

¹⁸ Fixed advanced minutes include premium rate services minutes, freephone minutes, payphone minutes, operator services minutes, national and international virtual private network minutes. Mobile advanced minutes include premium rate services minutes and other mobile minutes such as voicemail, DQ, call completion minutes etc.

Figure 1.3.2 – Total Voice Traffic

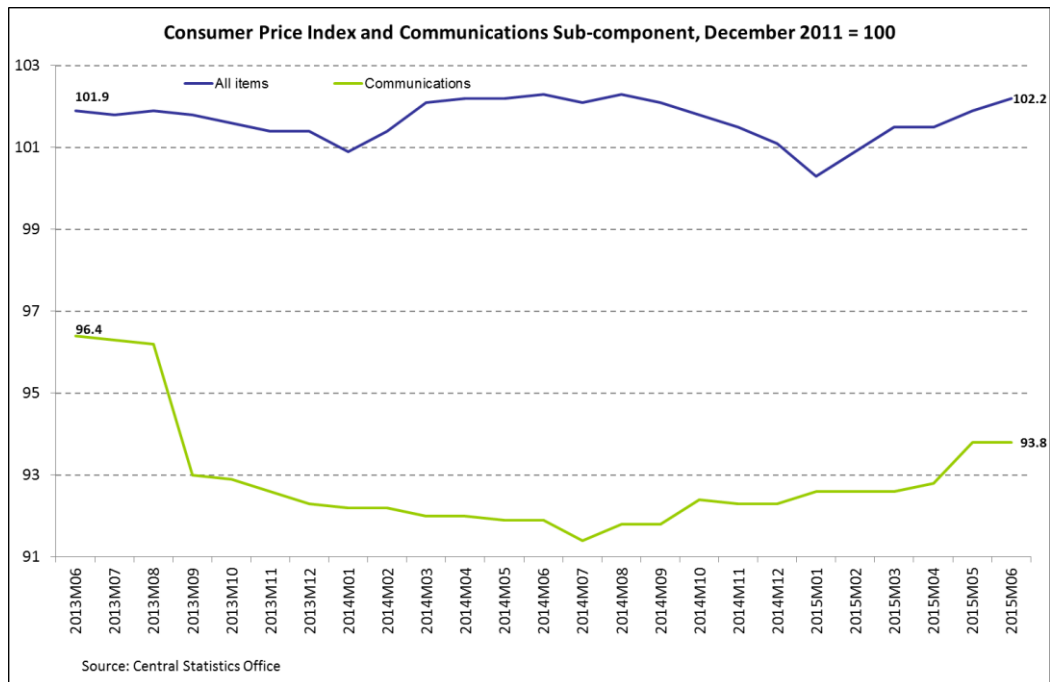
	Q2'15 Mins	Q1'15 – Q2'15 Growth	Q2'14 – Q2'15 Growth
Fixed voice minutes	1,109,052,279	-4.4%	-7.6%
Mobile voice minutes	3,045,312,960	+1.1%	+4.8%
Total voice minutes	4,154,365,239	-0.4%	+1.1%

1.4 Communications and the Consumer Price Index

Figure 1.4.1 shows the monthly change in the Consumer Price Index (CPI) and the communications sub-component from June 2013 to June 2015. In January 2015, the CSO has revised its weighting for the communications basket to 3.030% of the total CPI, up from 2.932% previously.¹⁹

Using December 2011 as the base period, communications prices have been generally stable over the last 12 months. Communication prices have increased by 1.9 base points since June 2014, compared to a decrease in the overall CPI of 0.1 base points in the same period.

Figure 1.4.1 – Consumer Price Index and Communications Sub-Component



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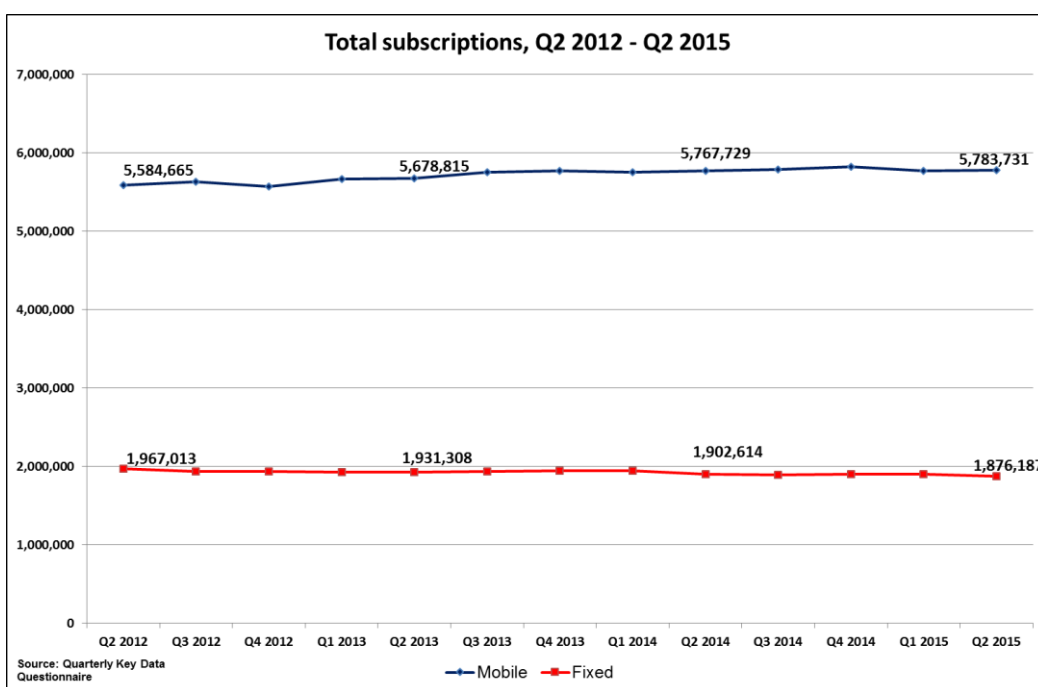
<http://www.cso.ie/en/releasesandpublications/er/rppi/residentialpropertypriceindexjanuary2015/#.VWM9c09VhHw>

1.5 Fixed and Mobile Market Retail Voice, Internet and TV Subscriptions

Figure 1.5.1 shows the total number of mobile voice and data subscriptions (also reported in section 4.1) and the estimated number of fixed subscriptions to voice, internet and TV services (both single play and bundled subscriptions) in Ireland.

Customers purchasing either a single fixed service or more than one service (as part of a bundle) are included in the fixed subscriptions category. Total mobile subscriptions have increased by 0.2% since Q1 2015, while total fixed subscriptions²⁰ decreased by 1.2% over the same period. It should be noted that it is possible that a customer may have more than one subscription, particularly where a mobile customer has more than one SIM card or in the case of a business customer with multiple fixed line subscriptions across several offices.

Figure 1.5.1 – Total Subscriptions (Fixed and Mobile), Q2 2012 – Q2 2015



²⁰ Total fixed subscriptions were revised from Q4 2012 to Q1 2015 inclusive. See note 1 within the corrigendum to Q1 2015 on page 5 of this report.

2. Fixed Market Data

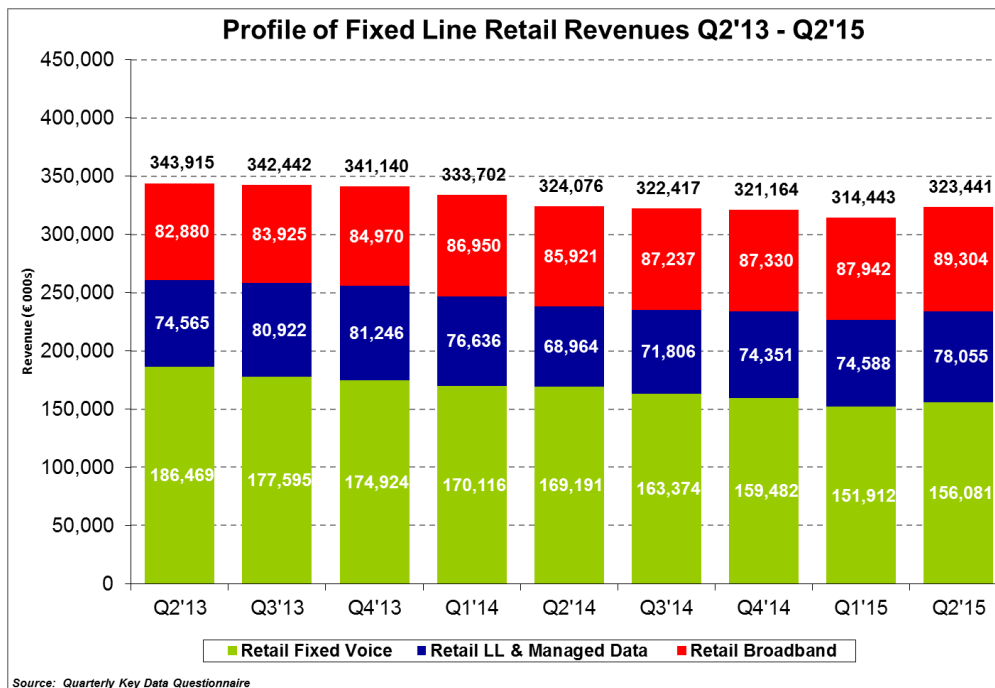
2.1 Fixed Line Revenues

Figure 2.1.1 shows the profile of fixed line retail revenues in Ireland over the last two years. Total fixed line retail revenues for Q2 2015 were over €323 million. This was an increase (2.9%) on Q1 2015 revenues, but a 0.2% decrease on Q2 2014 revenues.

Retail fixed voice revenues (-7.7%) have fallen since Q2 2014, but retail broadband revenues (+3.9%) as well as retail leased lines, managed and other data services revenues (+13.2%) have increased in the same period.

Comparing Q2 2014 to Q2 2015, the proportion of retail fixed line revenues attributable to retail leased lines, managed data and other advanced data services increased by 2.9 percentage points and retail broadband revenues' share increased by 1.1 percentage points. The proportion of retail fixed voice revenues has fallen by 4.0 percentage points, to 48.3% of overall fixed line retail revenues.

Figure 2.1.1 – Profile of Fixed Line Retail Revenues



Fixed line wholesale revenues were over €143 million in Q2 2015, the majority of which were related to interconnect and wholesale fixed narrowband access revenues, followed by wholesale leased lines, managed and other data services revenues and wholesale broadband access revenues. Wholesale revenues increased by 2.1% compared to Q1 2015 and were up by 11.6% since Q2 2014.

2.1.1 Authorised Operators’ Share of Fixed Line Revenues

Figure 2.1.2.1 below outlines the revenue shares for the fixed retail market (comprising narrowband, broadband, leased line, managed and other data revenues) held by the incumbent fixed line operator (Eircom), authorised operators having at least a 2% market share, and all other authorised operators (OAOs) with market share less than 2%.

In Q2 2015, Eircom had the highest retail revenue share in the fixed retail market with 47.5% market share. Vodafone (fixed only) had 13.2%, followed by UPC with 12.5%, BT (6.6%), Sky Ireland (3.5%) and Verizon (2.5%). OAOs accounted for the remaining 14.3%.

Figure 2.1.1.1 – Fixed Retail Revenue Market Shares

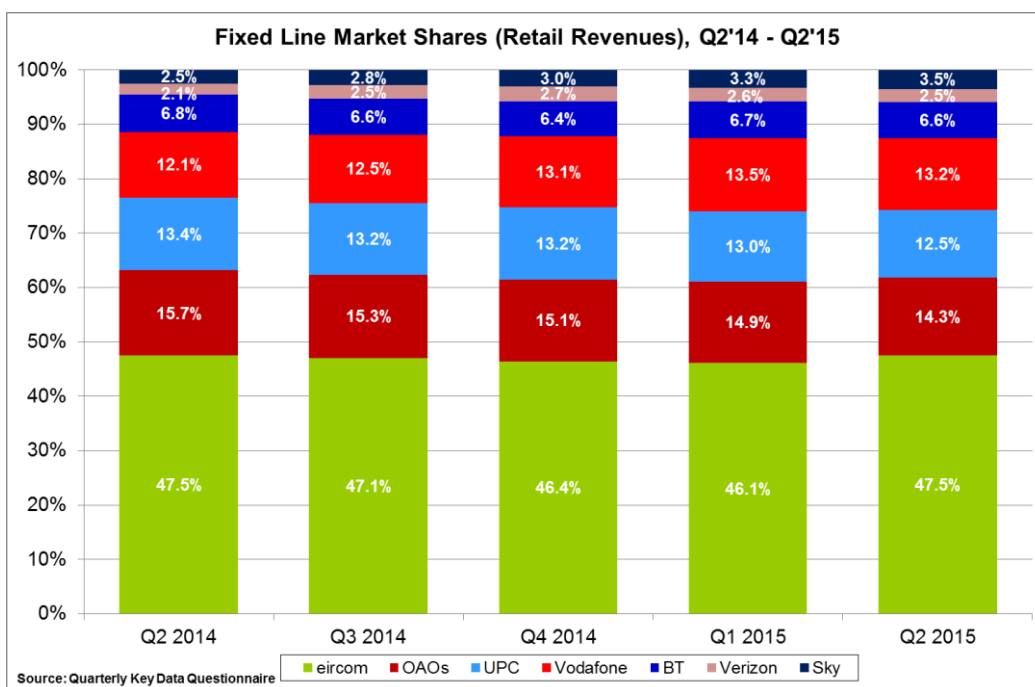
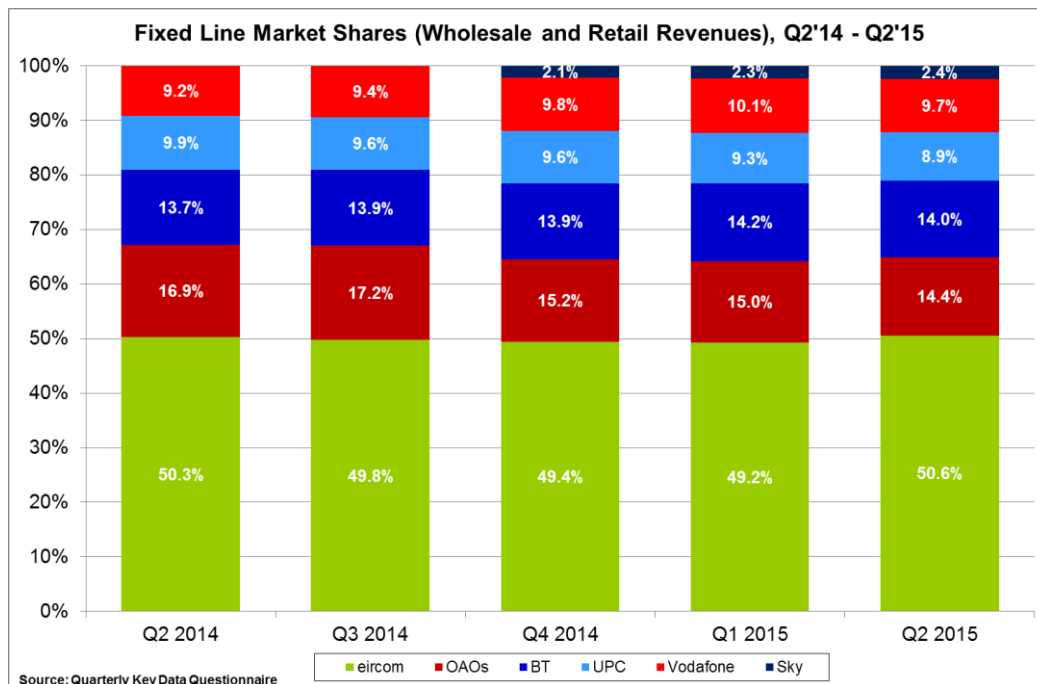


Figure 2.1.1.2 below outlines the revenue shares in the fixed market (comprising fixed line retail and wholesale revenues). When making comparisons, it is important to note that the market shares presented below are based on shares across all fixed wholesale and retail revenue streams and some operators may not offer products and services across all segments of these markets.

In Q2 2015, Eircom had the highest revenue market share with 50.6%. ComReg estimates that the next four largest operators (BT, Vodafone (fixed only), UPC and Sky Ireland) contribute a further 35.0% share of total (retail and wholesale) industry revenue, while OAOs account for the remaining 14.4%.

Figure 2.1.1.2 – Fixed Revenue Market Shares

2.2 Fixed Line Access Paths²¹ and subscriptions

2.2.1 Access Paths and VoB subscriptions

Figure 2.2.1.1 presents the total number of narrowband copper fixed access paths (PSTN and ISDN) and Voice over Broadband (VoB) subscriptions. PSTN and ISDN access paths are usually used for voice services and internet access. There were over 1.56 million direct and indirect PSTN and ISDN access²² paths in the Irish market in Q2 2015. This represents a decrease of 1.1% on last quarter and a decline of 3.6% since Q2 2014. The number of PSTN access paths decreased by 1.8% from last quarter and declined by 4.9% since Q2 2014. The number of ISDN access paths has increased by 1.0% since Q1 2015 and rose by 0.7% since Q2 2014. At the same time, the number of VoB subscriptions has increased by 0.6% since Q1 2015 and by 7.7% since Q2 2014.

²¹ Access paths are not synonymous with access lines as for example in the case of ISDN paths, there may be more than one path provided via a single ISDN line.

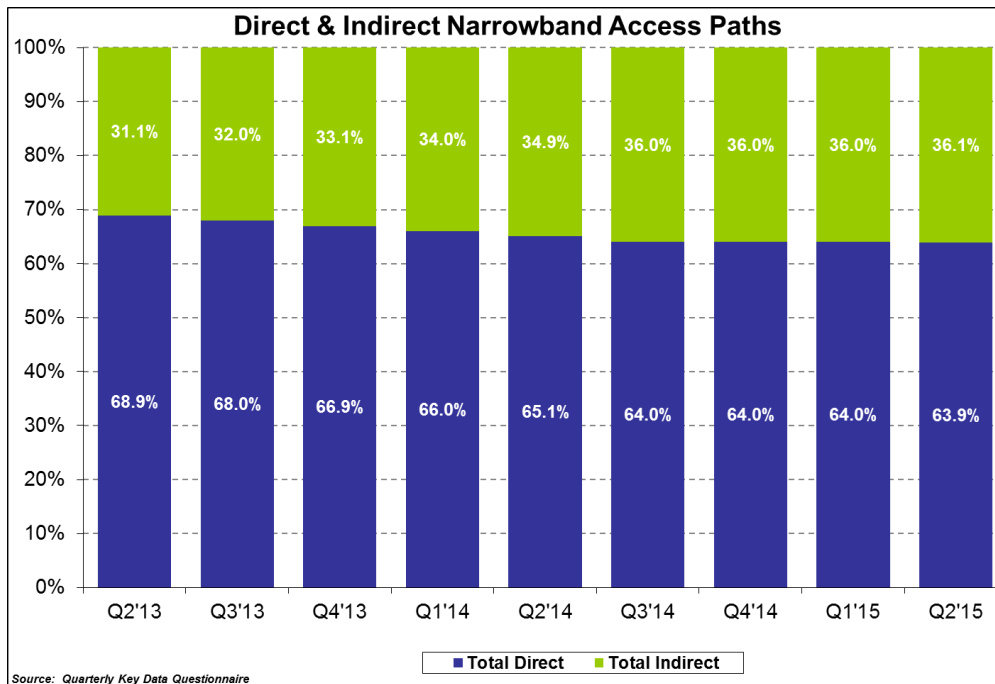
²² Indirect access paths relate to telephone lines provided to customers by means of Carrier Pre-select (CPS), Wholesale Line Rental (WLR) or Switchless Voice (SV). CPS allows the user to receive all or a portion of calls from one provider and line rental from another provider (usually Eircom). SB-WLR (also known as Single Billing-WLR) allows the user to receive every aspect of telephone service, including all calls and line rental from one single supplier. SV also known as White Label Access-Voice Access (WLA-(Voice)) is a switchless voice service which allows an operator to purchase end-to-end call services without the need to have its own interconnection infrastructure.

Figure 2.2.1.1 – Narrowband Fixed Access Paths and VoB subscriptions

	Q2'15	Q1'15 – Q2'15 Growth	Q2'14 – Q2'15 Growth
PSTN	1,189,504	-1.8%	-4.9%
ISDN Basic	127,512	-1.5%	-5.6%
ISDN Fractional	55,584	-1.2%	-4.3%
ISDN Primary	194,130	+3.3%	+6.9%
Total ISDN	377,226	+1.0%	+0.7%
Total PSTN and ISDN	1,566,730	-1.1%	-3.6%
VoB subscriptions	382,805	+0.6%	+7.7%

Figure 2.2.1.2 presents the total number of narrowband fixed access paths broken out by direct and indirect access. In Q2 2015, indirect access accounted for 36.1% of all access paths in the fixed line market. While this chart shows the number of narrowband only access paths in Ireland, fixed voice can also be supplied by other means such as broadband. Details on the broadband market in Ireland can be found in chapter 3 of this report.

Figure 2.2.1.2 – Direct & Indirect Narrowband Fixed Access Paths



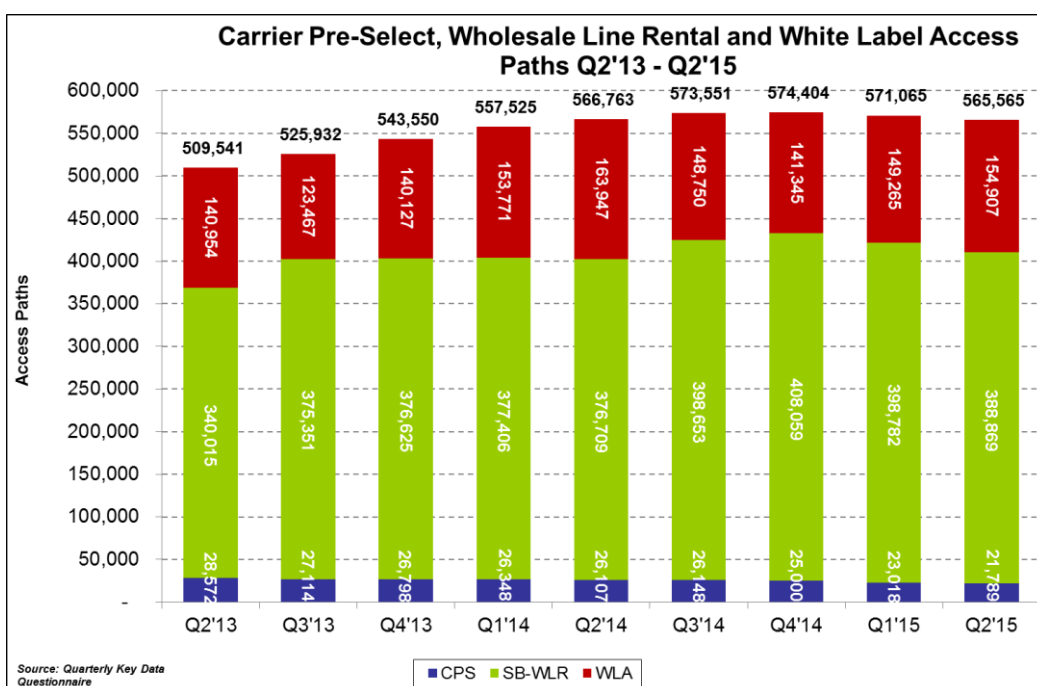
2.2.2 Indirect Access Paths

Figure 2.2.2 illustrates the overall number of indirect PSTN and ISDN paths provided by means of either Carrier Pre-Selection (CPS) only, Single Billing Wholesale Line Rental (SB-WLR) and White Label Voice Access (WLA). In Q2 2015, there were 565,565 indirect access paths in Ireland. The number of indirect access paths decreased by 1.0% this

quarter, and fell by 0.2% in the year to Q2 2015 due to a decrease in CPS and WLA access paths.

The data indicates that OAOs continue to migrate their customer base to single-bill services, i.e. SB-WLR or WLA rather than CPS only (i.e. a calls only service, excluding line rental). SB-WLR used by OAOs now accounts for 68.8% of indirect access paths compared to 66.7% in Q2 2013. WLA paths account for 27.4% of total indirect access paths compared to 27.7% in Q2 2013. The share of CPS only indirect access paths has declined by 1.8 percentage points in the last two years and now accounts for 3.9% of overall indirect access paths.

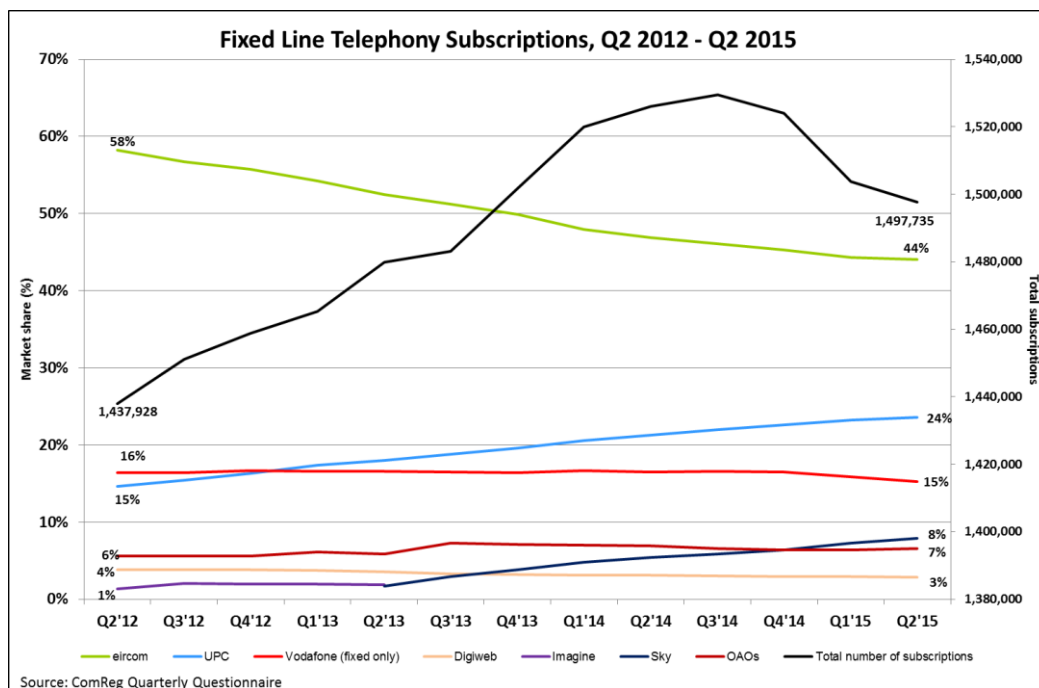
Figure 2.2.2 – Narrowband Indirect Access Paths



2.2.3 Fixed Voice Subscriptions

Figure 2.2.3 shows the estimated number of retail customers/subscriptions to fixed voice services (either standalone or as part of a bundle) and operators' market shares based on these subscriptions. At the end of Q2 2015 there was 1,497,735 fixed voice subscriptions (a decrease of 0.4% on Q1 2015 and a decrease of 1.9% on Q2 2014). As of Q2 2015 Eircom had 44% of all fixed voice subscriptions followed by UPC (24%), Vodafone (15%) and Sky (8%).

Figure 2.2.3 – Fixed Voice subscriptions, Q2 2012 – Q2 2015²³



2.2.4 Fixed Market Retail Subscriptions by Type

Figures 2.2.4 shows the estimated proportion of retail customers/subscriptions to fixed line services (mobile is excluded from single play subscriptions, but included when part of a bundle e.g. double/triple/quad play) broken out by those with a single service and those taking a bundle of two or more services as of Q2 2015 (subscriptions mean a customer with at least one contract with an electronic communications service provider).²⁴ Single play subscriptions include fixed line services only (including standalone cable TV and IPTV services) which means that standalone mobile voice, standalone mobile broadband and standalone satellite TV subscriptions are excluded from this figure.

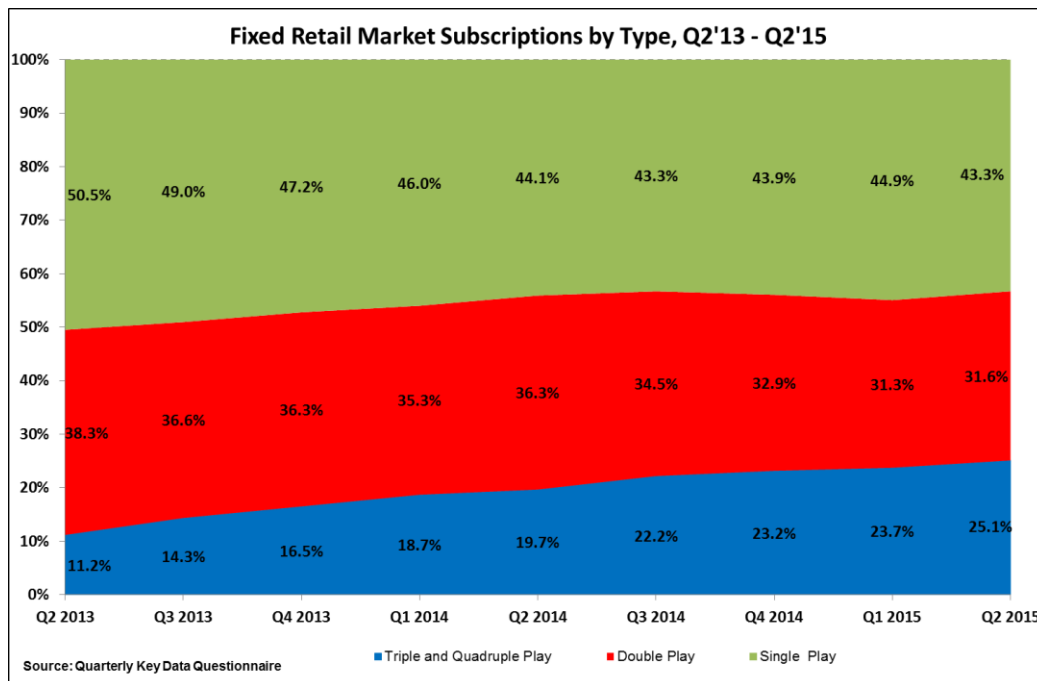
It is estimated that there were 1,876,187 fixed market retail subscriptions in Q2 2015 across both business and residential customers (a business customer may have multiple subscriptions). In Q2 2015 an increase in double play subscriptions as well as triple and quadruple play subscriptions was observed when compared to Q1 2015. In Q2 2015 43.3% of fixed market retail subscriptions were single play compared to 44.1% in Q2

²³ In Q2 2013 Sky reached the 2% market share publication threshold, while Imagine’s market share fell below it. Total fixed voice subscriptions were revised from Q4 2012 to Q1 2015 inclusive. See note 1 within the corrigendum to Q1 2015 on page 5 of this report.

²⁴ Double play subscriptions can refer to either fixed telephony and internet or television or mobile telephony; television and the internet; mobile telephony and internet or television subscriptions. Triple play subscriptions can refer to fixed telephony and internet and television; fixed telephony and mobile telephony and internet; fixed telephony and mobile telephony and television; or, mobile telephony and internet and television subscriptions. Quadruple play subscriptions refer to fixed telephony, internet, television and mobile subscriptions.

2014, 31.6% of subscriptions were double play (a bundle of two services) compared to 36.3% in Q2 2014 and 25.1% were triple play (a bundle of three services) and quadruple play (a bundle of four services) compared to 19.7% in Q2 2014.

Figure 2.2.4 – Fixed Market Retail Subscriptions by Type, Q2 2013 – Q2 2015²⁵



2.3 Fixed Voice Call Volumes

Fixed voice traffic in Q2 2015 was just below 1.11 billion minutes, which was a 4.4% decrease on Q1 2015 and a fall of 7.6% since Q2 2014. Fixed voice traffic has fallen consecutively quarter on quarter since Q1 2011.

Managed voice over broadband (VoB) minutes account for approximately 12.2% of total fixed voice minutes up from 11.2% in Q2 2014.

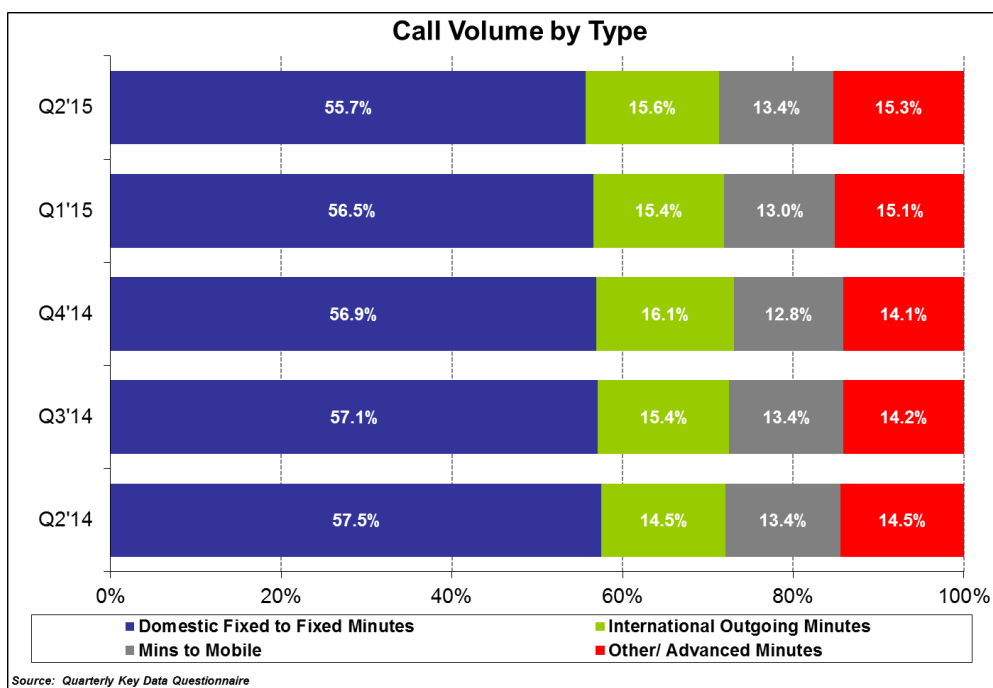
The numbers quoted in this report represent managed VoB information only (for example by Eircom, UPC and other providers such as Blueface) and do not include unmanaged or over the top VoB services by providers such as Skype.

²⁵Sky Ireland do not provide information on TV subscriptions. Sky Ireland’s distribution of subscriptions by type (single play, double play or triple play) is estimated using the percentage distribution of Sky Ireland’s subscriptions obtained from the market survey data conducted by RED C Research & Marketing Ltd on behalf of ComReg. For more details on the survey method, see the Appendix on page 79. Total fixed subscriptions were revised from Q4 2012 to Q1 2015 inclusive. See note 1 within the corrigendum to Q1 2015 on page 5 of this report.

It should be noted that the split of managed VoB minutes by category (i.e. domestic, international, mobile, other) is placed into those respective fixed minutes categories in figures 2.3.1, 2.3.2 and 2.3.3.

Figure 2.3.1 shows that domestic fixed to fixed minutes accounted for 55.7% of all fixed voice traffic in Q2 2015. International outgoing minutes accounted for 15.6% of all fixed voice traffic. The share of fixed to mobile minutes was 13.4% while other/advanced minutes (which include premium rate minutes) represented 15.3% of all fixed voice traffic.

Figure 2.3.1 – Fixed Voice Call Volume (Minutes)²⁶



Figures 2.3.2 and 2.3.3 show the change in the average monthly fixed voice call minutes per business and residential subscribers respectively. In Q2 2015 the average business subscriber originated 763 minutes of voice calls. The average residential subscriber usage was 154 minutes per month. As noted on page 8 above, a more precise breakdown of business and residential fixed voice subscriptions since Q4 2014 is available. Hence, in Figures 2.3.2 and 2.3.3 call volumes since Q4 2014 are not directly comparable to call volumes in previous periods.

²⁶ Domestic Calls include local & national calls. Advanced service and other minutes include minutes to premium rate numbers, freephone numbers, callsave, operator services, VPN minutes, payphones and other services.

Figure 2.3.2 – Fixed Voice Call Volume per business subscriber (Minutes)

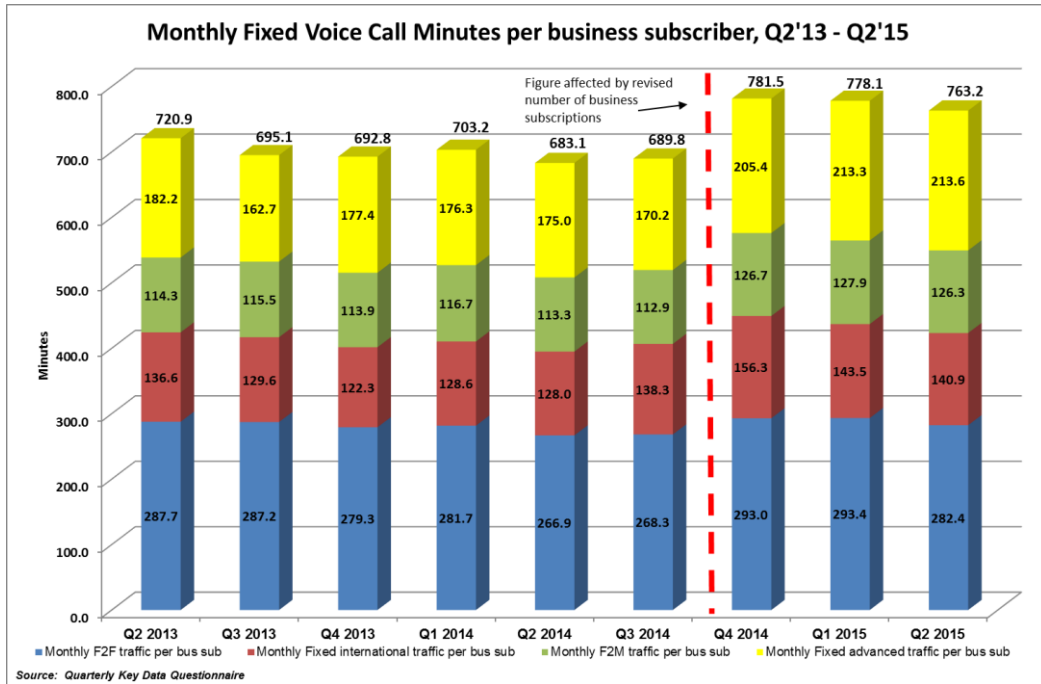
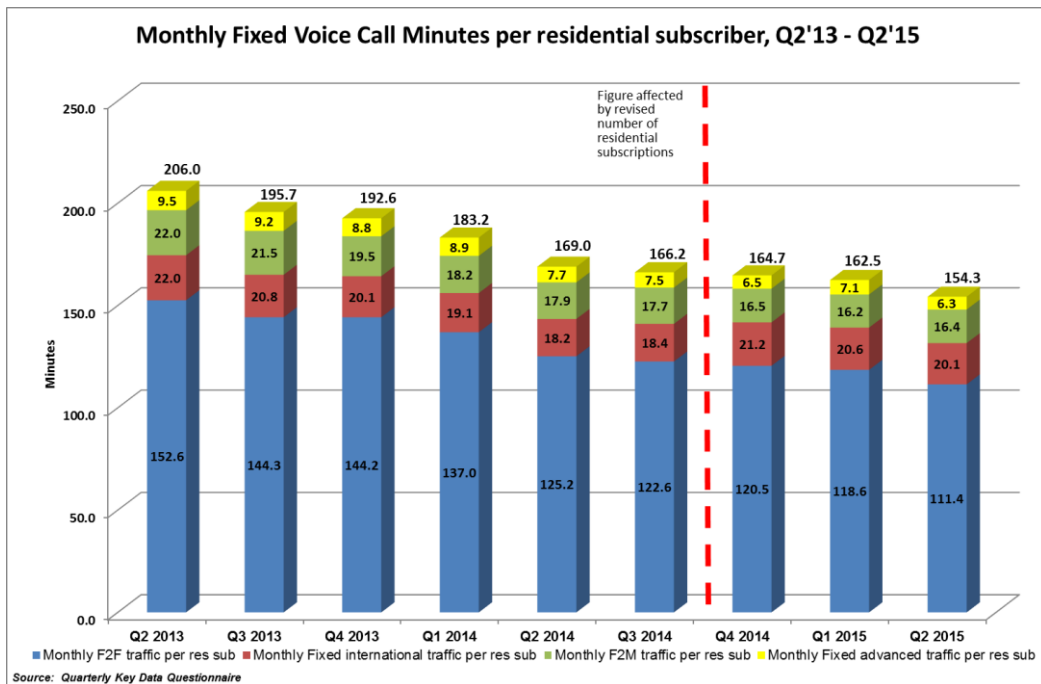


Figure 2.3.3 – Fixed Voice Call Volume per residential subscriber (Minutes)

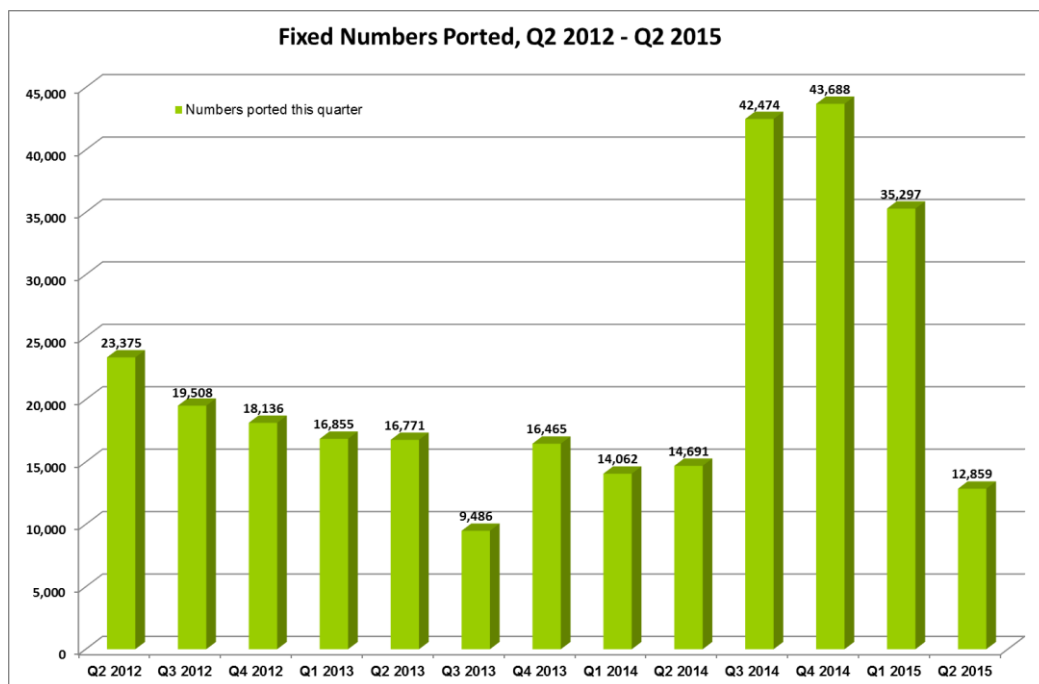


2.4 Switching in the Fixed Voice Market

Figure 2.4.1 illustrates the number of fixed numbers (geographic and non-geographic) ported between Irish fixed voice service providers since Q2 2012. Fixed Number Portability (FNP) allows consumers to switch fixed voice provider while retaining their fixed number.

In the quarter to June 2015, 12,859 numbers²⁷ were ported between operators (134,318 numbers in the twelve months to June 2015). Over the last 12 months, an average of 33,580 numbers has been ported each quarter. ComReg notes that a significant increase in the number of ported numbers is due to an audit of the central reference database which records porting activity of fixed numbers. The audit began in August 2014 and was finished in January 2015. Operators have updated the central reference database as a consequence of this audit.

Figure 2.4.1 – Fixed Numbers Ported



2.5 Standalone Fixed Voice Service Pricing Data

ComReg uses independently collated Strategy Analytics (Teligen) pricing data using OECD-approved methodologies to examine the relative prices of a number of specific fixed voice usage baskets of national and international telecoms services for both residential and business users. The pricing data used for international comparisons currently includes pricing information for selected countries, namely Germany, Denmark, Spain, Netherlands and the United Kingdom²⁸.

For national comparisons, the prices advertised²⁹ by the largest operators (in terms of number of subscribers to standalone fixed voice services³⁰) during Q2 2015 were

²⁷ Non geographic number ports constitute less than 1% of total ports in a quarter.

²⁸ In future Quarterly Key Data Reports ComReg may expand the analysis and include more countries for international price comparisons.

²⁹ The pricing analysis is based on a review of operators' advertised prices in the period Q2 2015.

analysed³¹ for selected usage baskets. In this Quarterly Key Data Report, standalone fixed voice service prices advertised by Eircom, Sky, Digiweb, Pure Telecom and Vodafone (business tariffs) were analysed. Thus, the pricing analysis does not necessarily present the lowest prices available in the whole market, but rather the lowest prices offered by the operators having the largest number of subscribers.

For international comparisons, the prices advertised³² by three largest operators (in terms of number of subscribers to standalone fixed voice service) in each of the respective countries during Q2 2015 were analysed³³ for selected usage baskets³⁴ (with an average per country price presented based on the average of these three operators). In order to enable international comparisons, prices are presented in Euro Purchasing Power Parities (PPPs) and exclude VAT charges. PPPs provide an indication of the cost of telecoms services in countries analysed in relation to the cost of all other products and services.

The presented national and international comparison analysis incorporates discounts offered by operators. Nonrecurring charges (e.g. charges for the installation of a service) are discounted/amortised over five years. Fixed recurring monthly costs such as line rental and any other additional recurring charges are included. Calls to fixed, mobile and international destinations are included in the baskets.

The OECD basket methodologies are reviewed and revised periodically, with the latest revision made in early 2010³⁵. For more detailed information on basket methodologies see ComReg's accompanying Memorandum, document 15/102a.

The following baskets are presented in this report³⁶:

³⁰ Standalone fixed voice services are voice services not sold as part of a bundle or other services.

³¹ The subscribers of these operators jointly account for over 90% of all standalone fixed voice subscribers.

³² The pricing analysis is based on a review of operators' advertised prices in the period Q2 2015.

³³ The subscribers of these operators jointly account for over 80% of all standalone fixed voice subscribers in each of the respective countries.

³⁴ The same basket was applied to each respective country in order to make the international comparison.

³⁵ See <http://www.oecd.org/sti/broadband/48242089.pdf>

³⁶ In future Quarterly Key Data Reports ComReg may expand the analysis and present price comparisons based on additional and/or different usage baskets.

Residential and Business Standalone Fixed Voice Service Baskets

Type of basket	Basket
Residential	60 calls (190 minutes)
Business	260 calls (606 minutes) basket

These baskets were selected given they most closely related to the fixed voice usage patterns presented in figures 2.3.2 and 2.3.3 above. ComReg notes that these baskets reflect usage patterns of an average user and do not necessarily reflect prices of tariffs that are geared towards customers having different usage profiles.

ComReg notes that comparisons are based on the prices of advertised tariffs³⁷ only and the analysis does not take into consideration other potentially important factors such as quality of the network, level of customer care, additional units of consumption available after having accounted in the analysis for the units in the OECD usage basket, minimum contract term etc.

OECD Residential Standalone Fixed Voice Service Basket

Figure 2.5.1 compares tariffs advertised by standalone fixed voice service providers for residential customers based on a basket of 60 calls (190 minutes)³⁸. Pure Telecom offers the cheapest tariff for this particular basket at €32.38, followed by Digiweb (€40.72) and Sky (€43.25).

³⁷ Tariffs publically advertised during Q2 2015.

³⁸ Basket assumes the usage of 150 fixed to fixed minutes, 25 fixed to mobile minutes and 15 international minutes.

Figure 2.5.1 - Residential Standalone Fixed Voice Basket (National comparison)

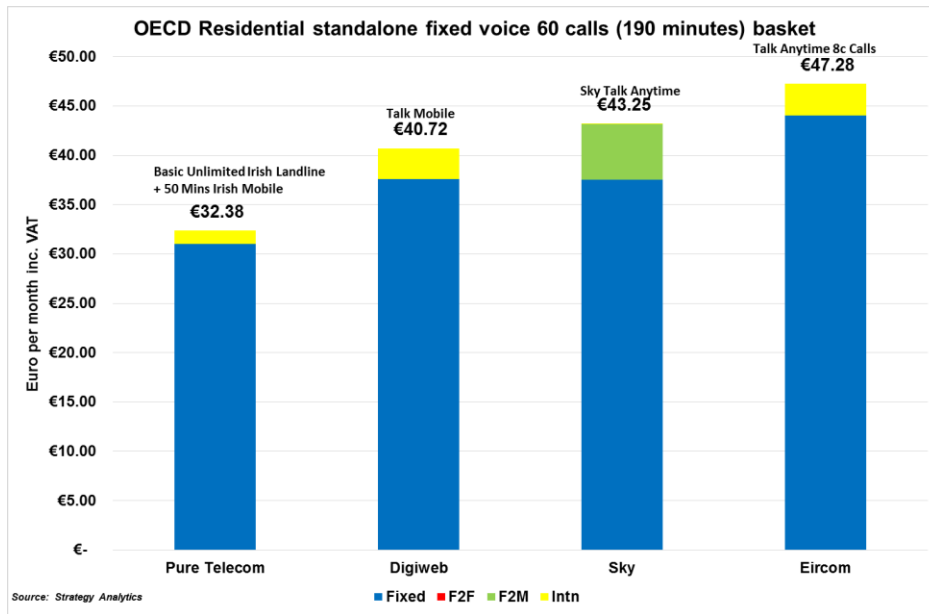
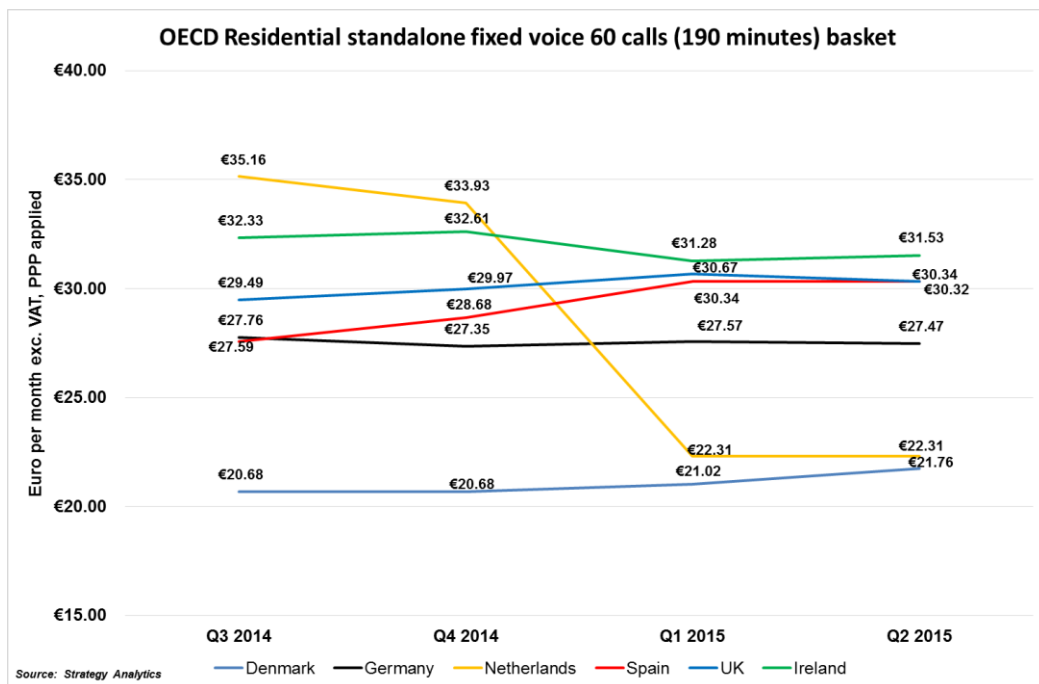


Figure 2.5.2 illustrates Ireland’s ranking alongside five other Western European countries. In Q2 2015 Ireland ranked in sixth place with an average price of €31.53³⁹ for this particular basket. The average price in Ireland is 16% more expensive than the average price⁴⁰ for all of the countries included in the analysis.

Figure 2.5.2 - Residential Standalone Fixed Voice Basket (International comparison)



³⁹ As noted previously, average prices used for international comparisons exclude VAT charges.

⁴⁰ The average of prices presented in Figure 2.5.2. Prices include line rental.

OECD Business Standalone Fixed Voice Service Basket

Figure 2.5.3 compares tariffs advertised by standalone fixed voice service providers⁴¹ for business customers based on a basket of 260 calls (606 minutes)⁴². Presented prices exclude VAT charges. Vodafone offers the cheapest tariff for this particular basket at €30.08.

Figure 2.5.3 - Business Standalone Fixed Voice Basket (National comparison)

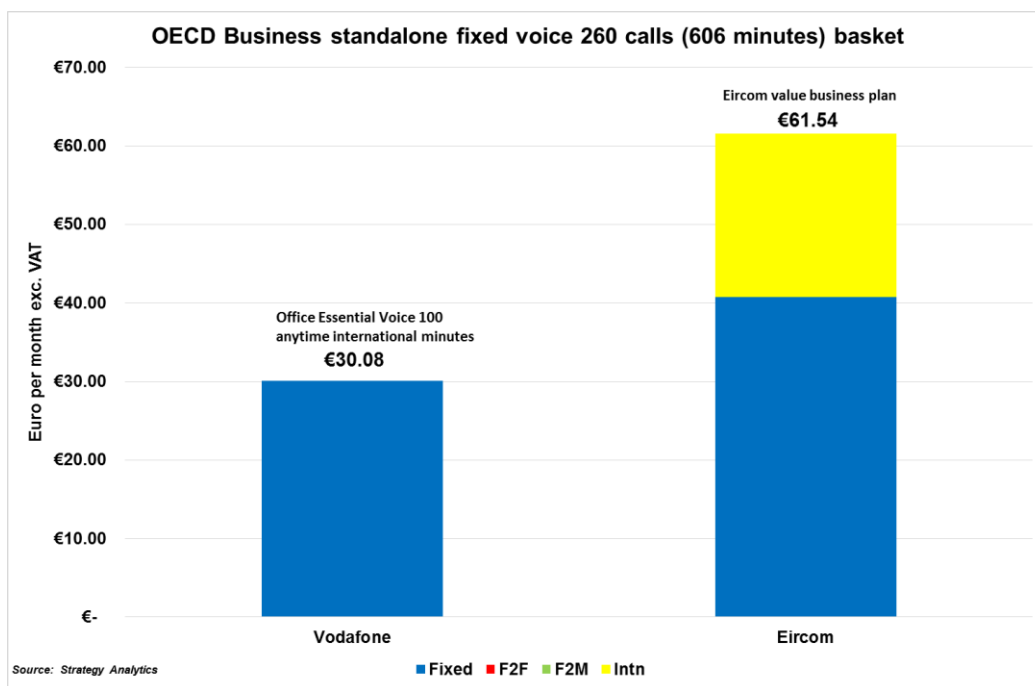


Figure 2.5.4 shows that Ireland (€45.81⁴³) ranks in the third place. The average price in Ireland is 15% cheaper than the average price⁴⁴ for all of the countries included in the analysis.

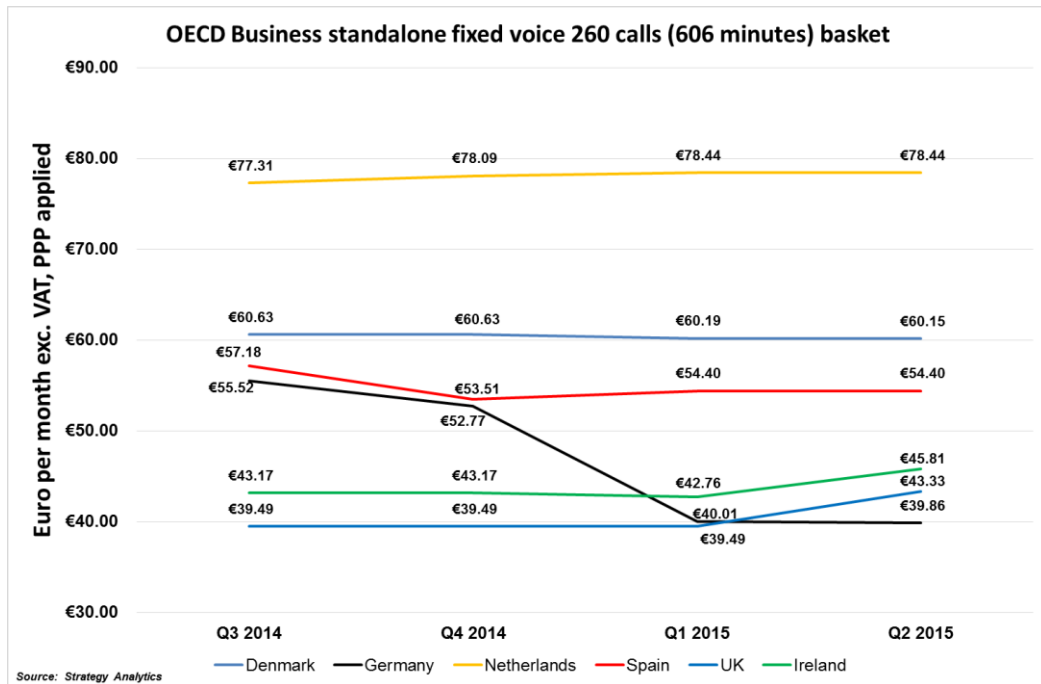
⁴¹ In this Quarterly Key Data Report only tariffs advertised by Vodafone and Eircom were analysed for business customers. This can arise for reasons such as operators not offering fixed voice services to business customers or not advertising prices publicly. ComReg may expand the analysis and include additional operators in the future Quarterly Key Data Reports.

⁴² Basket assumes the usage of 402 fixed to fixed minutes, 116 fixed to mobile minutes and 88 international minutes.

⁴³ As noted previously, average prices used for international comparisons exclude VAT charges.

⁴⁴ The average of prices presented in Figure 2.5.4.

Figure 2.5.4 - Business Standalone Fixed Voice Basket (National comparison)



3. Internet and Broadband

3.1 Total Internet Subscriptions and provision of broadband⁴⁵ services

Figure 3.1.1 shows the total number of narrowband and broadband internet subscriptions in Ireland as of Q2 2015. At the end of June 2015, there were 1.70 million active internet subscriptions in Ireland. This was a decrease of 0.4% on the previous quarter, but a 0.02% increase on June 2014.

In Q2 2015, there were 1,699,176 broadband subscriptions in Ireland⁴⁶. This is a decrease of 0.4% since Q1 2015, but an increase of 0.1% since Q2 2014. There was an increase in total fixed line broadband subscriptions this quarter (up by 15,652), but mobile broadband subscriptions fell again this quarter (down by 22,582 subscriptions). ComReg reports active mobile broadband subscriptions and does not include internet access over mobile handsets (such as smartphones) within these numbers.

Cable (up by 1.8%) and VDSL⁴⁷ (up by 17.3%) subscriptions showed positive growth this quarter. FWA (down by 2.1%), mobile broadband (down by 5.2%), DSL⁴⁸ (down by 5.1%) and 'other' (down by 6.1%) subscriptions fell this quarter. It is likely that some or all of the DSL reductions are accounted for by consumers switching to VDSL based broadband services.

Figure 3.1.1 – Total Number of Active Internet Subscriptions

Subscription Type	Q2'15 Subs	Quarterly Growth Q1'15 – Q2'15	Year-on-Year Growth Q2'14 – Q2'15
Narrowband	5,490	-6.2%	-26.2%
DSL Broadband	573,822	-5.1%	-14.7%
VDSL Broadband⁴⁹	281,022	+17.3%	+111.7%
Cable Broadband	375,112	+1.8%	+5.5%

⁴⁵ ComReg notes that the data provided in this section relates to active subscriptions reported by operators. It takes into account multiple active subscriptions to broadband offerings by individual subscribers.

⁴⁶ The difference between this and the total internet subscriptions is accounted for by narrowband internet subscriptions.

⁴⁷ VDSL refers to very-high-bit-rate digital subscriber line. These lines are typically utilised in the provision of next generation broadband services. Since Q3 2013 VDSL lines are reported in the separate category. In Q2 2013 report VDSL lines were included in DSL category.

⁴⁸ DSL refers to a digital subscriber line, the means by which broadband speeds (i.e. in excess of 144k downstream) are delivered over the copper telecoms network.

FWA Broadband	46,140	-2.1%	-14.1%
Other Broadband⁵⁰	10,470	-6.1%	-11.5%
Total Fixed broadband	1,286,566	+1.2%	+4.9%
Mobile Broadband	412,610	-5.2%	-12.4%
Total Broadband	1,699,176	-0.4%	+0.1%
Total Internet Subscriptions	1,704,666	-0.4%	+0.02%

Figure 3.1.2 profiles internet subscriptions in Ireland using the subscription type classifications of outlined in Figure 3.1.1.

Figure 3.1.2 – Total Broadband Subscriptions

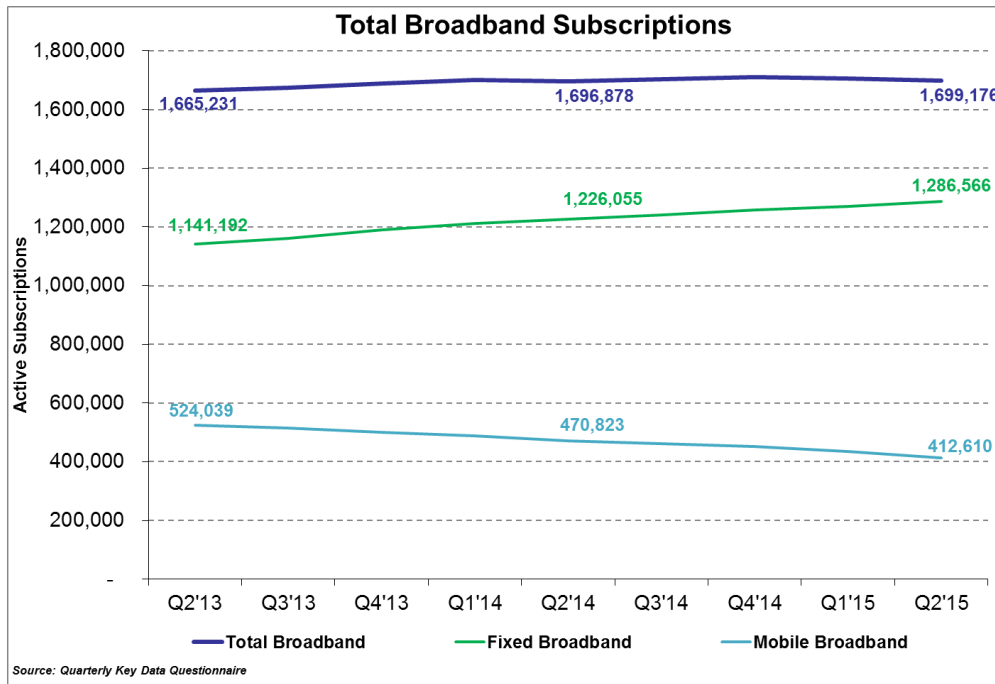
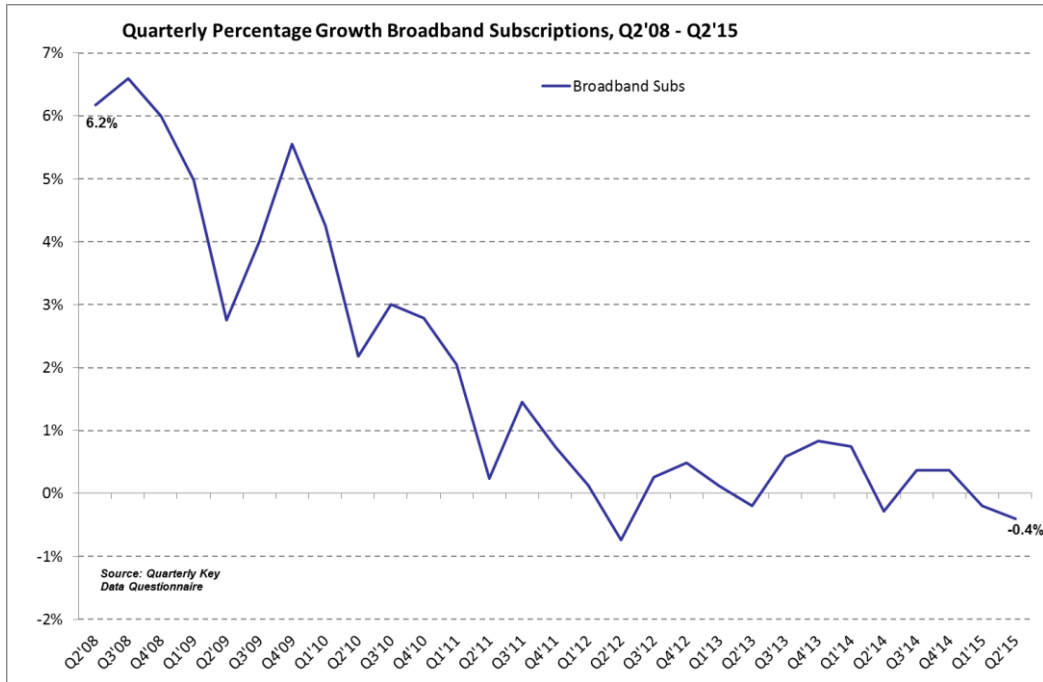


Figure 3.1.3 shows the quarterly percentage change in broadband subscriptions since Q2 2008. In general, there has been a continual slowdown in the rate of growth of broadband subscriptions over the period. The growth in broadband subscriptions picked up again in Q3 2013. However, there was minor negative growth in total broadband subscriptions this quarter. It should be noted that ComReg reports on active broadband subscriptions and the mobile broadband numbers reported by ComReg do not include internet access over mobile handsets (such as smartphones).

⁵⁰ Other Broadband includes fibre and satellite broadband subscriptions.

Figure 3.1.3 – Quarterly Growth in Total Broadband subscriptions



DSL subscriptions account for the largest share of broadband subscriptions (33.8%), but its share has decreased by 5.9 percentage points over the last year. VDSL accounted for 16.5% of all broadband subscriptions in Q2 2015 up from 7.8% in Q2 2014. Mobile broadband subscriptions share has declined again this quarter, now accounting for 24.3% of all broadband subscriptions down from 27.7% in Q2 2014. Cable has a 22.1% share of all broadband subscriptions up from 20.9% in Q2 2014. FWA has a 2.7% share of broadband subscriptions down from 3.2% in Q2 2014. 'Other' (satellite/fibre) broadband subscriptions represent the remaining 0.6% of broadband subscriptions in Q2 2015 (down from 0.7% in Q2 2014).

Figure 3.1.4 illustrates the split by type of broadband subscriptions in the Irish market since Q2 2014, while Figure 3.1.5 shows the net additions to broadband subscriptions by each platform. While the net total number of broadband subscriptions decreased this quarter, there was growth in VDSL and cable broadband subscriptions.

Figure 3.1.4 – Broadband Subscriptions by Platform

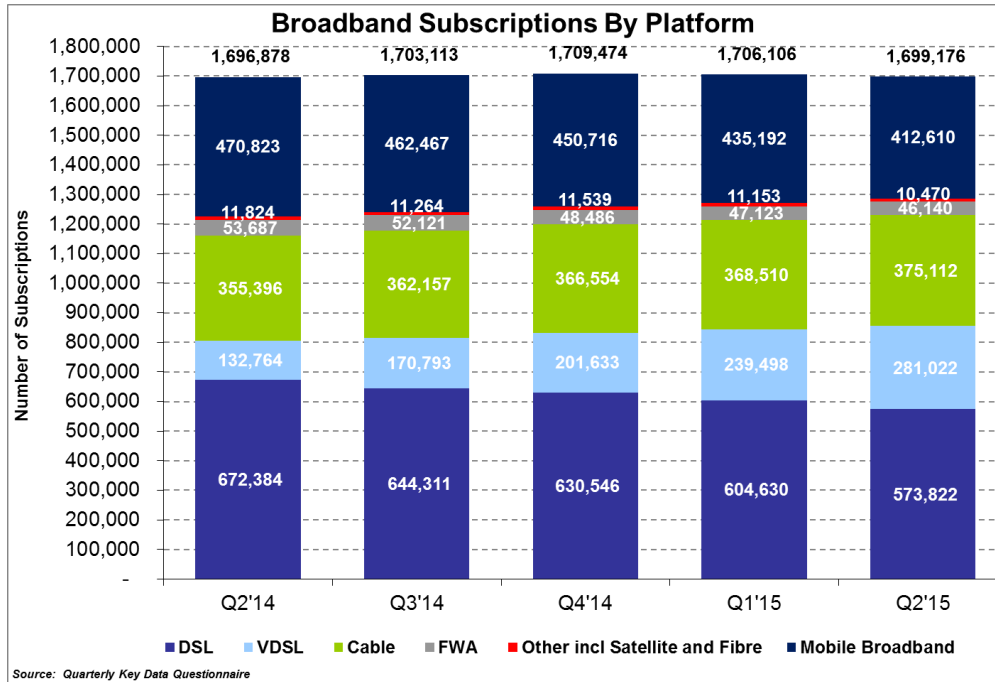


Figure 3.1.5 – Broadband Subscriptions - Net additions, Q2 2013 – Q2 2015

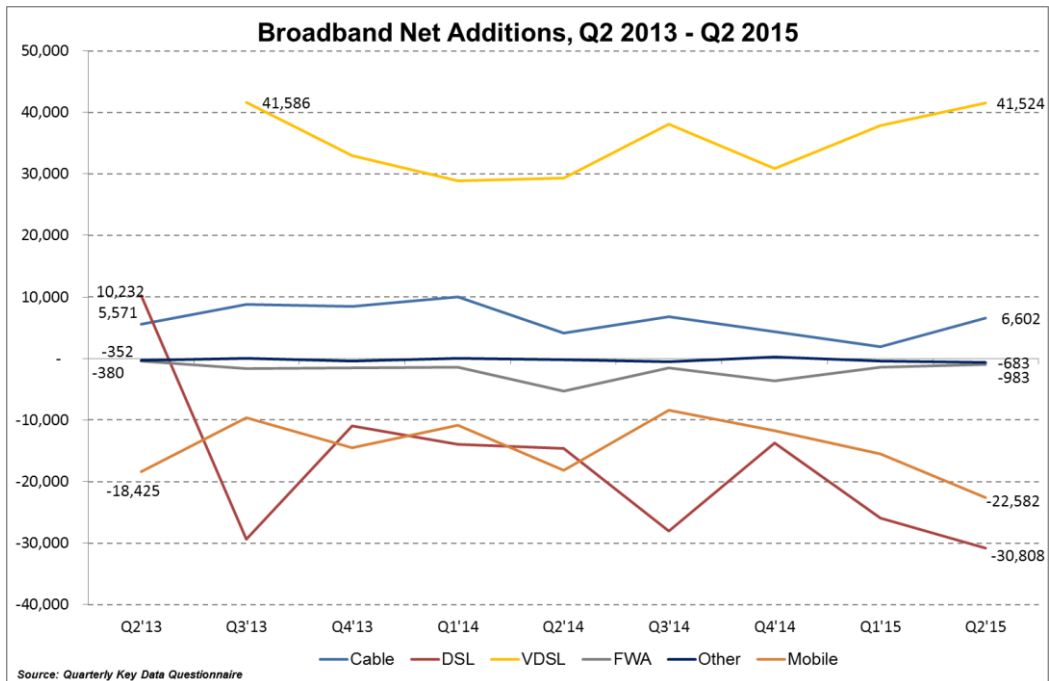


Figure 3.1.6 provides an estimate of the proportion of business and residential subscriptions to DSL, VDSL, cable, FWA, mobile broadband, fibre and satellite broadband services. In Q2 2015, 83.2% of broadband subscriptions on all platforms were classed as residential broadband subscriptions. The platform with the highest

percentage of residential vis-à-vis business subscriptions is cable broadband, while the mobile broadband category has the highest percentage of business customers.

Figure 3.1.6 – Broadband Subscriptions by Subscription Type

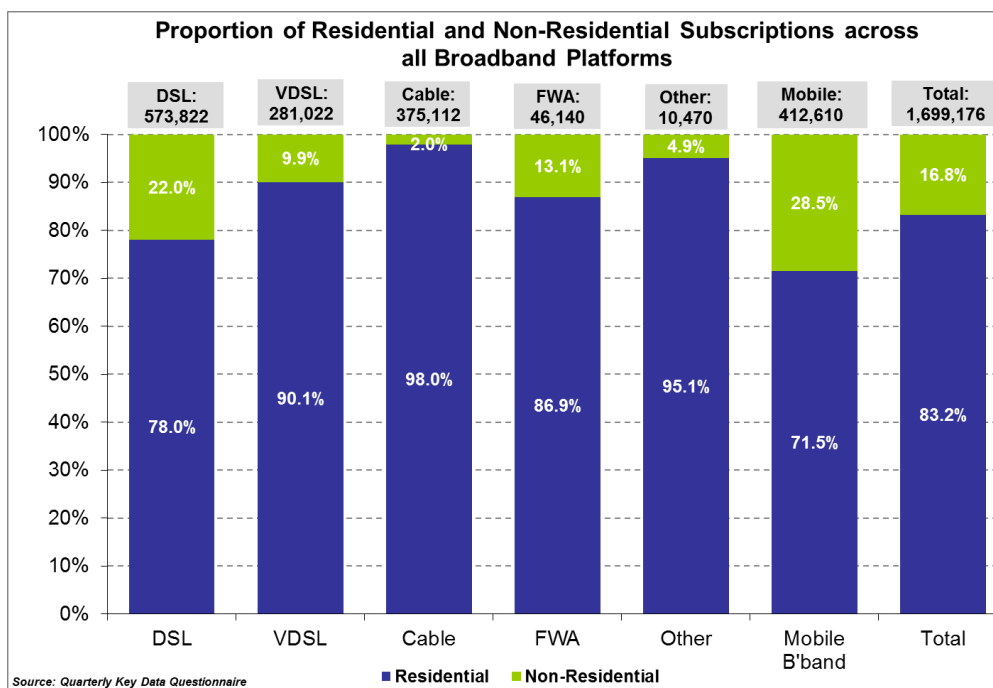


Figure 3.1.7 illustrates the breakdown of broadband subscriptions by contracted speed across all fixed broadband platforms (mobile broadband is excluded). In total, approximately 65.2% of broadband subscriptions were ≥ 10 Mbps (with 51.3% ≥ 30 Mbps). This equates to approximately 70.0% (55.7% ≥ 30 Mbps) of residential subscriptions and 33.9% (21.4% ≥ 30 Mbps) of business subscriptions.

The data suggests that most business users subscribe to broadband services with download speeds of between 2Mbps - 10Mbps while most residential users subscribe to broadband services with speeds ≥ 30 Mbps. This may be due in part to UPC primarily serving the residential market rather than business market as evidenced in Figure 3.1.6 above. Many larger business users access their broadband services over dedicated leased lines. Leased lines are not included in these charts. Leased line speeds can range up to speeds in excess of 1 gigabyte per second.

Figure 3.1.7 – Fixed Broadband Subscriptions by Contracted Download Speeds and Subscription Type

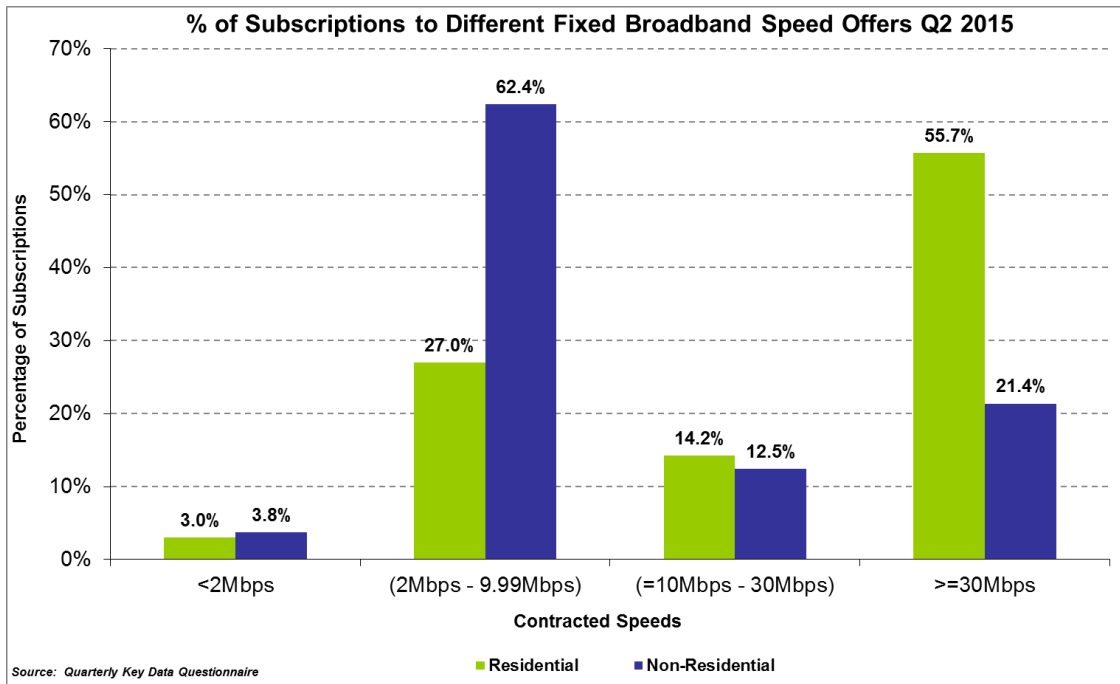
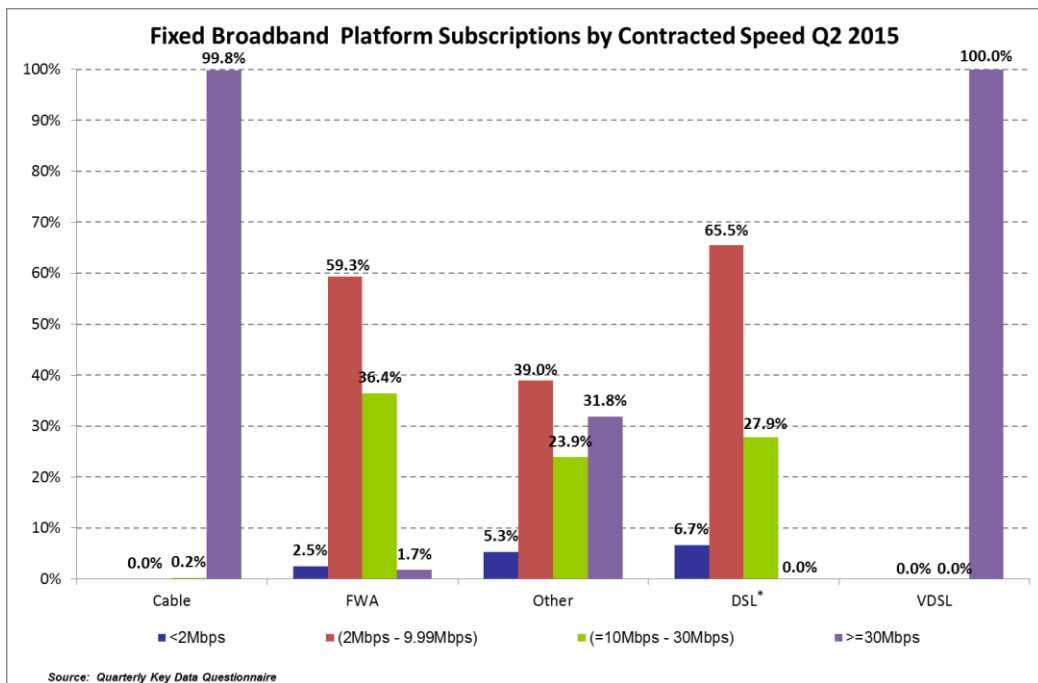


Figure 3.1.8 shows broadband subscriptions by contracted speed and the type of broadband platform subscribed to.

Figure 3.1.8 – Fixed Broadband Subscriptions by Contracted Download Speeds and Broadband Platform⁵¹



⁵¹ *Estimate percentage split.

Figure 3.1.9 shows the change in fixed broadband subscriptions by contracted download speeds between Q2 2013 and Q2 2015. Over the entire period, growth in broadband speeds has been mainly in the ≥ 30 Mbps category, which has increased from 29.9% to 51.3%.

Figure 3.1.9 – Fixed Broadband Subscriptions by Contracted Download Speeds

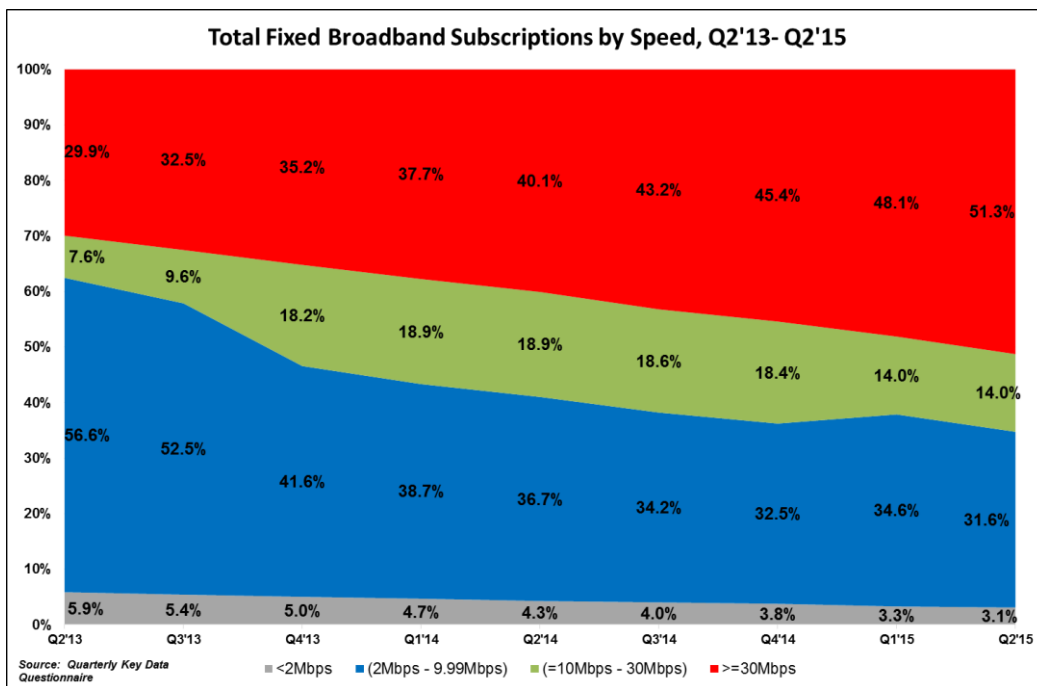


Figure 3.1.10 provides the market shares of fixed broadband operators by number of subscriptions. DSL, VDSL cable modem, FWA, satellite and fibre subscriptions are used to calculate fixed broadband market shares.

Operators with a market share of 2% or more are shown in the chart below. All those operators with less than 2% of total fixed broadband subscriptions are grouped together under the heading 'OAOs'.

According to the data received from operators for Q2 2015, Eircom had 35.3% of total fixed broadband subscriptions, followed by UPC who had 29.0% of subscriptions. Vodafone had 17.6% (excluding mobile broadband subscriptions) and Sky Ireland had 8.8% market share. All OAOs combined accounted for the remaining 9.2% share of fixed broadband subscriptions.

Figure 3.1.10 – Subscription Market Share of Fixed Broadband Market

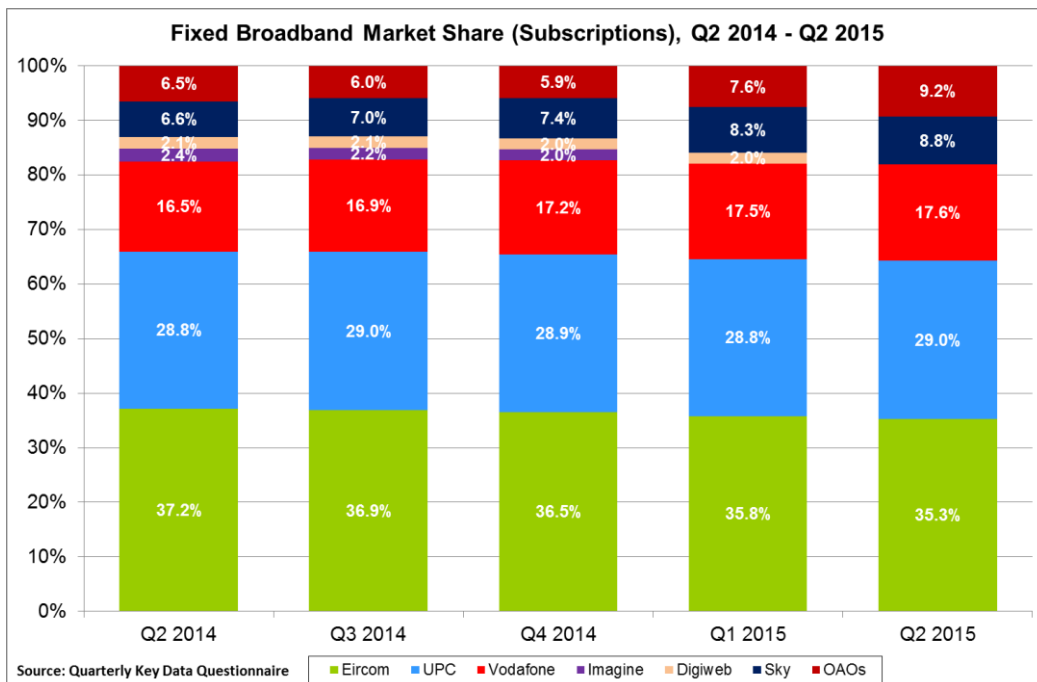
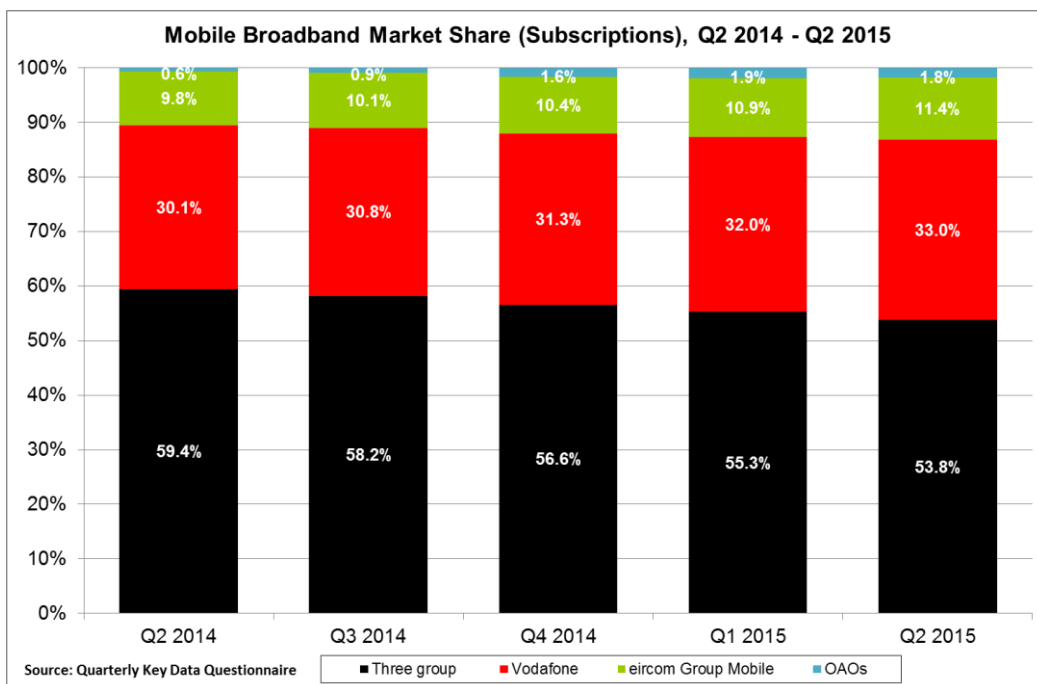


Figure 3.1.11 shows the market share of mobile broadband operators by subscriptions. As of Q2 2015, Three Group had the largest share with 53.8%⁵². Vodafone’s market share was 33.0%, up from 30.1% in Q2 2014. Eircom Group Mobile had a market share of 11.4% up from 9.8% in Q2 2014 while OAOs accounted for the remaining 1.8%.

Figure 3.1.11 – Subscription Market Share of Mobile Broadband Market



⁵² As of Q2 2014 O2 data is included under Three Group umbrella. For more details see note on page 9 of this report.

3.2 Provision of DSL Access

Figure 3.2.1 examines the provision of DSL access. DSL broadband services are provided to consumers by operators using three alternative methods of access. DSL may be provided directly to the consumer by Eircom using direct access to its network; this accounted for 48.0% of all DSL subscriptions in Q2 2015. Eircom’s market share of retail DSL lines has declined by 5.7 percentage points over the last year. Retail DSL may also be provided by OAOs who use either wholesale bitstream, which enables OAOs to resell another operator’s DSL service, or by offering DSL-based broadband using local-loop unbundling (LLU).

In Q2 2015, 39.2% of all DSL lines were provided by OAOs using wholesale bitstream. In absolute terms there were 224,986 wholesale bitstream lines in Q2 2015, an increase of 0.5% since Q2 2014. The remaining 12.8% of DSL lines were provided to subscribers by OAOs using local-loop unbundling. In Q2 2015 there were 73,231 unbundled local loops, down from 87,528 in Q2 2014 and down from 79,020 in Q1 2015.

Figure 3.2.1 - Provision of DSL Access

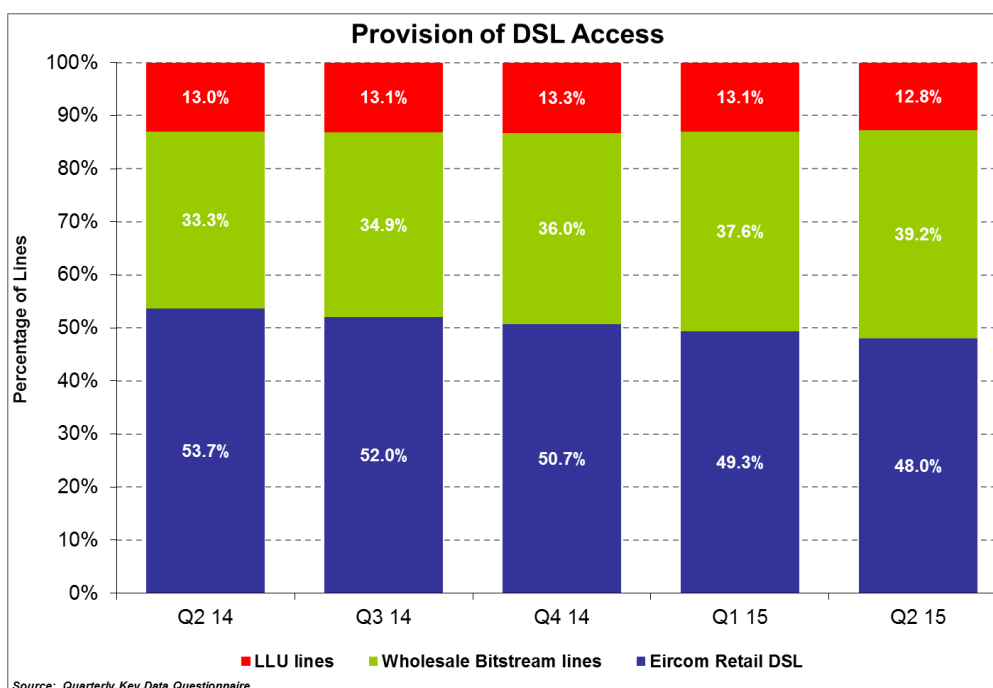
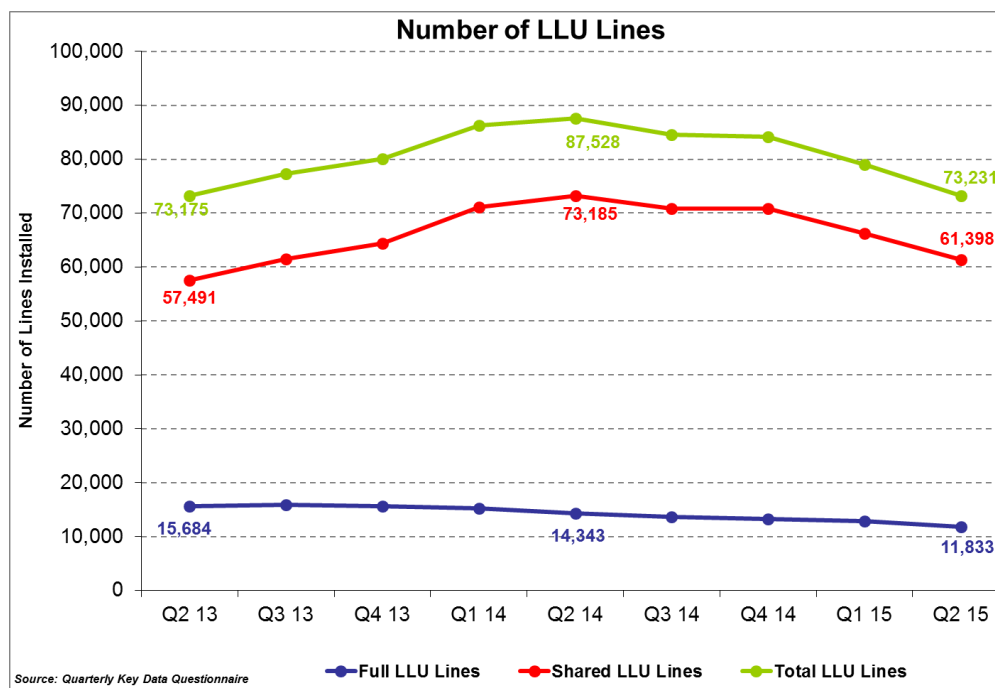


Figure 3.2.2 shows the number of unbundled lines according to their shared and full⁵³ unbundling status. Between Q2 2014 and Q2 2015 the total number of LLU lines decreased by 16.3% and declined by 7.3% since Q1 2015. Full LLU lines have decreased

⁵³ Full LLU and shared LLU are two ways a copper loop may be unbundled. While full LLU assigns the entire copper loop to the leasing operator, shared LLU enables other operators and the incumbent to share the same line. With shared access consumers can acquire voice and data services from an operator or alternatively data services alone while retaining the voice services of the incumbent.

by 17.5% since Q2 2014 and declined by 7.8% since Q1 2015. Shared LLU lines decreased by 16.1% since Q2 2014 and declined by 7.2% since Q1 2015.

Figure 3.2.2 – Number of Local Loops Unbundled



3.3 Provision of VDSL Access

VDSL broadband services are provided to consumers by operators using three alternative methods of access. VDSL may be provided directly to the consumer by Eircom using direct access to its network; this accounted for 63.5% of all VDSL subscriptions in Q2 2015. Retail VDSL may also be provided by OAOs who use either wholesale bitstream, which enables OAOs to resell another operator's VDSL service, or by offering VDSL-based broadband using virtual unbundled access (VUA); this accounted for the remaining 36.5% of all VDSL subscriptions.

3.4 Broadband Penetration

The total number of broadband subscriptions in Ireland for Q2 2015 was 1,699,176. Using fixed residential broadband subscriptions only, 1,118,446 (i.e. excluding business subscriptions and mobile broadband subscriptions), the estimated fixed broadband household penetration rate (there were 1,698,200 households in Ireland using CSO Q1 2015 estimate) as of Q2 2015 was 65.9%.

Based on the total number of broadband subscriptions in Ireland for Q2 2015, the broadband per capita penetration rate (including mobile broadband) was 36.7%. When

mobile broadband is excluded, the penetration rate was 27.8%.⁵⁴ These figures are based on a population of 4,632,100 from Central Statistics Office (CSO) Q1 2015 estimate⁵⁵.

Figure 3.4.1 shows fixed broadband subscriptions per capita among 28 EU countries in Q4 2012 and Q4 2014⁵⁶. Based on this data, Ireland’s fixed broadband per capita penetration rate (26.7%) remains behind the benchmarked EU28 average of 29.6%.

Figure 3.4.1 – Fixed Broadband Subscriptions per Capita, Q4 2012 – Q4 2014

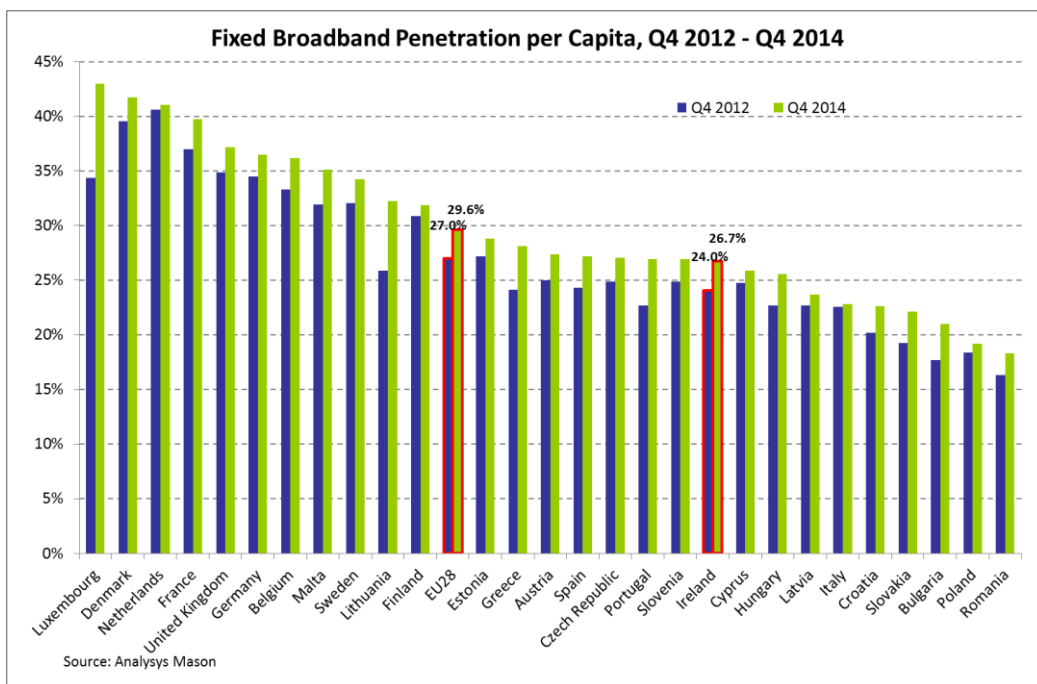


Figure 3.4.2 shows the proportion of households with broadband connections from 2010 to 2014. Both fixed and mobile broadband⁵⁷ are included. Ireland’s household broadband penetration rate, at 80%, is higher than the EU28 average of 78%. Penetration has increased by 22 percentage points since 2010 while the EU28 penetration has increased by 17 percentage points. Figure 3.4.3 presents broadband penetration rates in Ireland and EU since 2004.

⁵⁴ It should be noted that ComReg reports dedicated mobile broadband subscriptions (i.e. on the basis of mobile dongles/datacards) only. Subscriptions with Internet access over a handset are not included. Therefore, the total number of mobile broadband users (i.e. dedicated mobile broadband and handset subscriptions with internet access) will be higher than stated in this report. On the other hand, a broadband subscriber may have both a fixed and mobile broadband subscription and therefore, a broadband penetration rate based on both mobile and fixed subscriptions may overestimate the penetration rate.

⁵⁵ Estimates based on Quarterly National Household Survey (QNHS).

⁵⁶ Q4 2014 is the latest quarter for which this information is available.

⁵⁷ Households with at least one member aged 16–74. Broadband connection includes: DSL, VDSL, wired fixed (cable, fibre, Ethernet, PLC), fixed wireless (satellite, WiFi, WiMax) and mobile wireless (3G/4G).

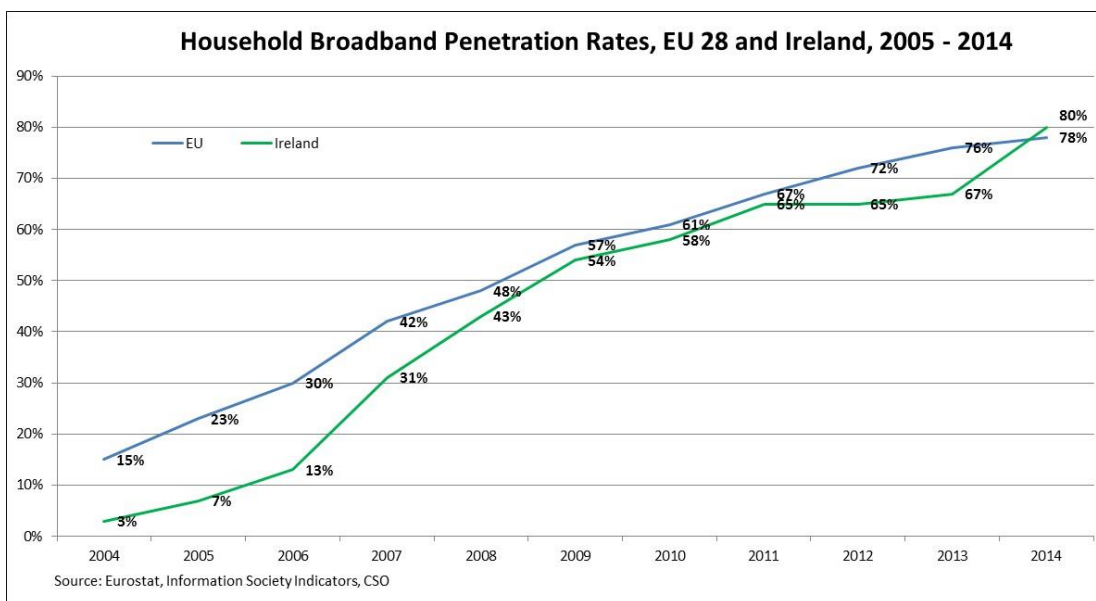
Figure 3.4.2 – Household Broadband Subscriptions, 2014

	Broadband internet connections		
	2010	2012	2014
AT	64	77	79
BE	70	75	81
BG	26	51	56
CY	51	62	69
CZ	54	63	76
DE	75	82	87
DK	80	85	85
EE	64	73	81
EL	41	51	65
ES	56	65	73
EU-28	61	72	78
FI	76	85	89
FR	66	77	77
HU	52	68	74
HR	49	60	68
IE	58	65	80
IT	49	55	71
LT	54	60	65
LU	70	68	93
LV	53	67	73
MT	69	77	80
NL	80	84	95
PL	57	67	71
PT	50	60	63
RO	23	50	58
SE	83	87	87
SI	62	73	75
SK	49	72	76
UK	80	86	88

(u) data is not reliable

Source: Eurostat⁵⁸

Figure 3.4.3 – Household Broadband Penetration, 2005 - 2014



⁵⁸ (online data code [isoc_bde15b_h](#))

3.5 Wi-Fi Broadband Access

While Wi-Fi originally emerged as an alternative to share broadband connectivity in the home and to provide access to nomadic laptop users in airports and other public places, it is now being used by a broader range of service providers with different business models and services which include in home connectivity, outdoor access for nomadic users, and off-loading and coverage alternatives for mobile operators.

ComReg presents data on the Wi-Fi market based on the number of public Wi-Fi hotspots and access points located nationally. Internet hotspots are typically public wireless access points where a computer, usually a laptop, or other portable device such as an iPhone or tablet can connect to the internet. A Wi-Fi hotspot can be made up of one or more Wi-Fi access points⁵⁹. Wi-Fi hotspots tend to be found in airports, hotel lobbies and cafés and restaurants. In most cases, the user pays for high-speed internet access at an access point, based either on a vouchered payment for a specific amount of time online or a recurring monthly subscription. There are a number of providers of these services in Ireland including Bitbuzz⁶⁰, Eircom, Sky Ireland and BT Ireland.

Comparing Q2 2014 to Q2 2015, the number of Wi-Fi hotspots and access points have increased by approximately 5.0% and 9.6% respectively. Wi-Fi minutes increased by 61.6% over this period. This may be a reflection of the increasing take up of smartphones and tablet devices among Irish consumers, as well as changes in Wi-Fi operators' conditions of access. It should be noted that due to changes in policy by some Wi-Fi operators towards termination of a session (i.e. in the past a user's session was terminated if they dropped of the network for a short period of time. However, a user can now be off the network for longer periods before the session is terminated) the number of Wi-Fi minutes has increased as a result.

A breakout of the data by operators' percentage shares in Q2 2015 is also provided below.

⁵⁹ Hotspots are typically public locations at which broadband internet access can be obtained. At these hotspots, users with a computer (usually a laptop) can wirelessly connect to the internet either for free or on payment of a fee. Typical locations for such hotspots include cafes and restaurants, hotels and airports. In general terms, more than one access point can be found at a hotspot.

⁶⁰ Bitbuzz has been acquired by UPC.

Figure 3.5.1 – Wi-Fi Hotspots, Access Points and Minutes of Use

	Q2 2015	Q1'15-Q2'15 Growth	Q2'14-Q2'15 Growth
Wi-Fi Hotspots	3,392	-0.4%	+5.0%
Wi-Fi Access Points	5,862	+0.4%	+9.6%
Wi-Fi Minutes of Use	832,574,421	+25.3%	+61.6%

% Share - Q2 2015	Bitbuzz	Eircom	BT	OAOs
Wi-Fi Hotspots	12.6%	82.6%	3.5%	1.3%
Wi-Fi Access Points	40.9%	55.7%	2.5%	0.9%
Wi-Fi Minutes of Use	36.2%	51.4%	11.5%	0.9%

3.6 Fixed and Mobile Broadband Pricing Data

ComReg uses independently collated Strategy Analytics (Teligen) pricing data using OECD-approved methodologies to examine the relative prices of a number of specific fixed broadband and mobile broadband usage baskets of national broadband services and broadband services in other selected countries for both residential and business users. The pricing data used for international comparisons includes pricing information for selected countries, namely Germany, Denmark, Spain, Netherlands and the United Kingdom⁶¹.

For national comparisons, the prices advertised⁶² by the largest operators (in terms of number of subscribers to fixed broadband services and separately number of subscribers to mobile broadband services) during Q2 2015 were analysed⁶³ for selected OECD usage baskets. In this Quarterly Key Data Report standalone fixed broadband service prices advertised by Eircom, UPC, Vodafone, Sky, Digiweb and Imagine were analysed. For mobile broadband service, prices advertised by Three Group, Vodafone, Meteor, eMobile and Tesco were analysed. Thus, the broadband pricing analysis does not necessarily

⁶¹ In future Quarterly Key Data Reports ComReg may expand the analysis and include more countries for international price comparisons.

⁶² The pricing analysis is based on a review of operators' advertised prices in the period Q2 2015.

⁶³ The subscribers of these operators jointly account for over 94% of all fixed broadband subscribers and 100% of all mobile broadband subscribers. For fixed broadband, tariffs based on broadband services provided over DSL, Fibre (incl. VDSL), Cable and FWA were analysed. For mobile broadband, tariffs on broadband services provided over 3G and 4G networks were analysed.

present the lowest prices available in the entire market, but rather the lowest prices offered by the operators having the largest number of subscribers. It should also be noted that some of the operators included in the analysis do not offer their services nationally⁶⁴. In addition, some operators only offer broadband services bundled with another service (e.g. fixed voice services which can include line rental, sometimes also with an inclusive amount of call minutes). In these instances, the analysis is based on the cost of the bundle excluding any voice related usage patterns. i.e., only broadband usage related factors are taken into account⁶⁵ in the analysis.

For international comparisons, prices advertised⁶⁶ by the three largest operators (in terms of the number of subscribers to fixed broadband services and separately number of subscribers to mobile broadband services) operators in each of the respective countries during Q2 2015 were analysed⁶⁷ for selected usage baskets⁶⁸ (with an average per country price presented based on the average of these three operators). In order to enable international comparisons, prices are presented in Euro Purchasing Power Parities (PPPs) and exclude VAT charges. PPPs provide an indication of the cost of telecoms services in countries analysed in relation to the cost of all other products and services.

The presented analysis accounts for the fact that broadband services differ in terms of advertised download/upload speeds to ensure that a meaningful comparison can be made between packages in terms of contracted download speeds offered. Packages which limit usage through speed restrictions when usage exceeds inclusive allowances are excluded. The presented analysis also incorporates discounts offered by operators. Nonrecurring charges (e.g. charges for the installation of a service) are discounted/amortised over three years and other recurring fixed costs such as line rental (in case of fixed broadband) are included and any other additional broadband related charges are included in the baskets.

The OECD basket methodologies are reviewed and revised periodically, with the latest revision made in early 2010⁶⁹ for fixed broadband baskets and 2012⁷⁰ for mobile

⁶⁴ For example, UPC offers fixed broadband services only in the areas where its cable network has been rolled out.

⁶⁵ In other words, the broadband pricing analysis does not take account of fixed voice call usage.

⁶⁶ The pricing analysis is based on a review of operators' advertised prices in the period Q2 2015.

⁶⁷ The subscribers of these operators jointly account for over 80% of all fixed broadband subscribers and 80% of all mobile broadband subscribers in each of the respective countries.

⁶⁸ The same basket was applied to each respective country in order to make the international comparison.

⁶⁹ See <http://www.oecd.org/sti/broadband/48242089.pdf>

broadband baskets. Further information on the composition of the broadband basket can be found in the Explanatory Memorandum which accompanies this report.

The following baskets are presented in this report⁷¹:

OECD Residential and business fixed and mobile broadband baskets

Type of basket	Basket
Fixed Broadband Residential	18GB basket
Fixed Broadband Business	33GB basket
Mobile Broadband Residential	5GB basket
Mobile Broadband Business	10GB basket

These baskets were selected given their closeness to the national broadband usage patterns observed having regard to the data provided by fixed and mobile broadband operators to ComReg for the purpose of the Quarterly Key Data Report. See Figure 4.3.5 below for mobile broadband data usage patterns. ComReg notes that these baskets reflect usage patterns of an average user and do not necessarily reflect prices of tariffs that are geared towards customers having different usage profiles.

ComReg notes that comparisons are based on the prices of advertised tariffs only⁷² and the analysis does not take into consideration other important factors such as quality of the network, levels of customer care, additional units of consumption available after having accounted in the analysis for the units in the OECD usage basket, minimum contract term etc.

⁷⁰

See

<http://www.oecd-ilibrary.org/docserver/download/5k92wd5kw0nw.pdf?expires=1417540956&id=id&accname=quest&checksum=F27F571EC7CA723CF50FE9183C21AEE4>

⁷¹ In future Quarterly Key Data Reports ComReg may expand the analysis and present price comparisons based on additional and/or different usage baskets.

⁷² Tariffs publically advertised during Q2 2015.

OECD Residential Fixed Broadband Service Basket

Figure 3.6.1 compares the cheapest residential tariffs advertised by fixed broadband providers (whether standalone broadband or broadband sold as part of a bundle) for residential customers based on an OECD 18GB monthly data usage basket. For fixed broadband where the advertised download speed of the broadband service does not exceed 30Mbps, Imagine offers the cheapest tariff⁷³ for this particular usage profile at €23.17, followed by Digiweb⁷⁴ (€30.78) and Sky (€40.00). For fixed broadband where advertised download speed of broadband service exceeds 30Mbps, UPC offers the cheapest tariff (€33.33), followed by Digiweb (€36.31) and Vodafone (€38.00).

Figure 3.6.1 - Residential Fixed Broadband Basket (National comparison)

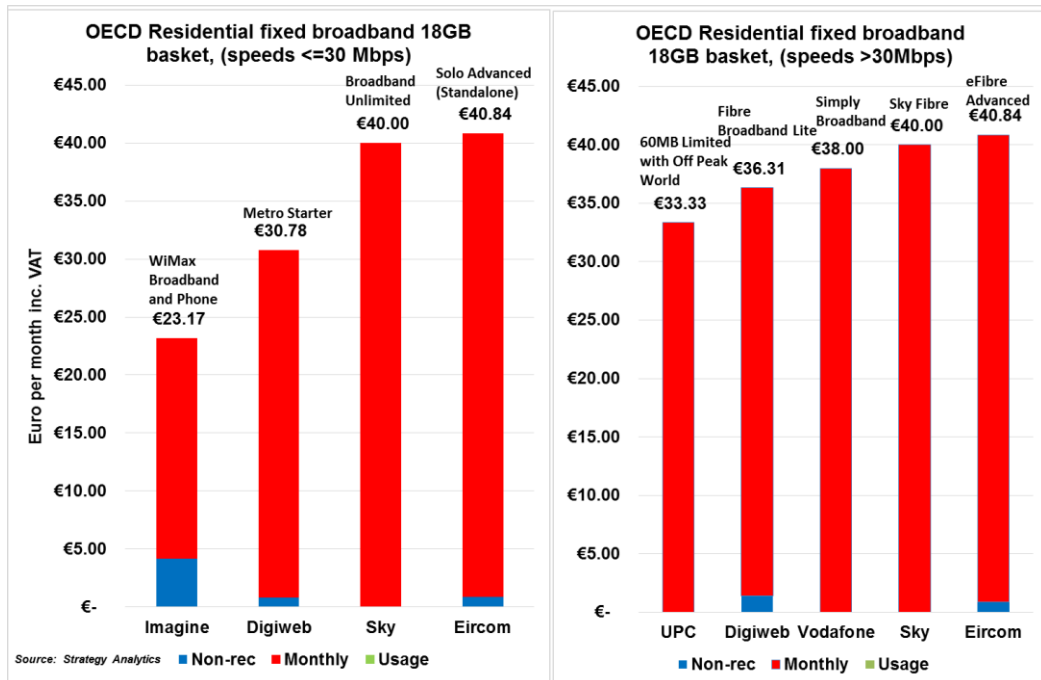


Figure 3.6.2 illustrates Ireland’s ranking alongside five other Western European countries. Ireland ranks in third place with an average price of €29.17⁷⁵ for this particular residential basket. The average price in Ireland is 9% cheaper than the average price⁷⁶ for all of the countries included in the analysis.

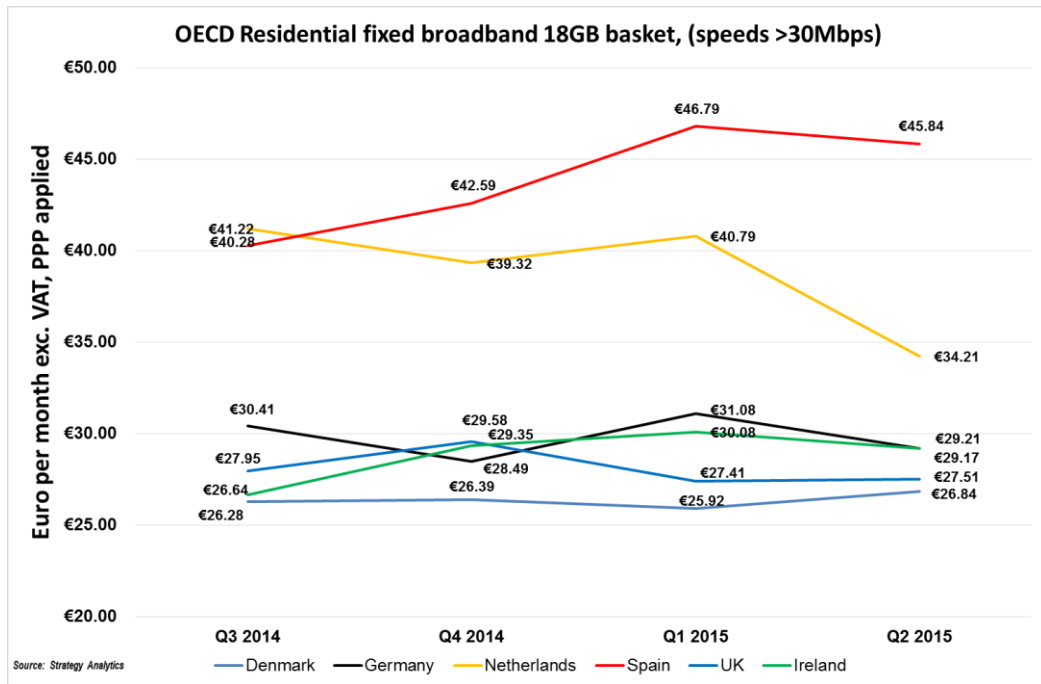
⁷³ This tariff is based on Imagine’s fixed wireless access (FWA) broadband service.

⁷⁴ This tariff is based on Digiweb’s fixed wireless access (FWA) broadband service.

⁷⁵ As noted previously, average prices used for international comparisons exclude VAT charges.

⁷⁶ The average of prices presented in Figure 3.6.2.

Figure 3.6.2 - Residential Fixed Broadband Basket (International comparison)



OECD Business Fixed Broadband Service Basket

Figure 3.6.3 compares business tariffs advertised by fixed broadband service providers (whether standalone broadband or broadband sold as part of a bundle) for business customers based on a 33GB monthly data usage basket. Presented prices exclude VAT charges. Digiweb offers the cheapest tariff (€30.36) followed by Vodafone (€35.00) and Eircom (€42.27).

Figure 3.6.3 - Business Fixed Broadband Basket (National comparison)

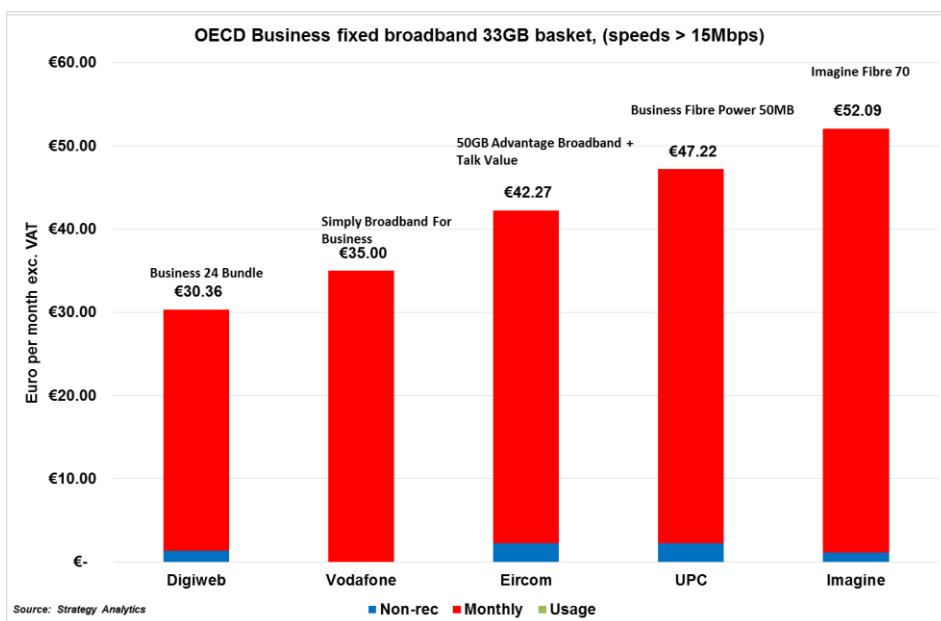
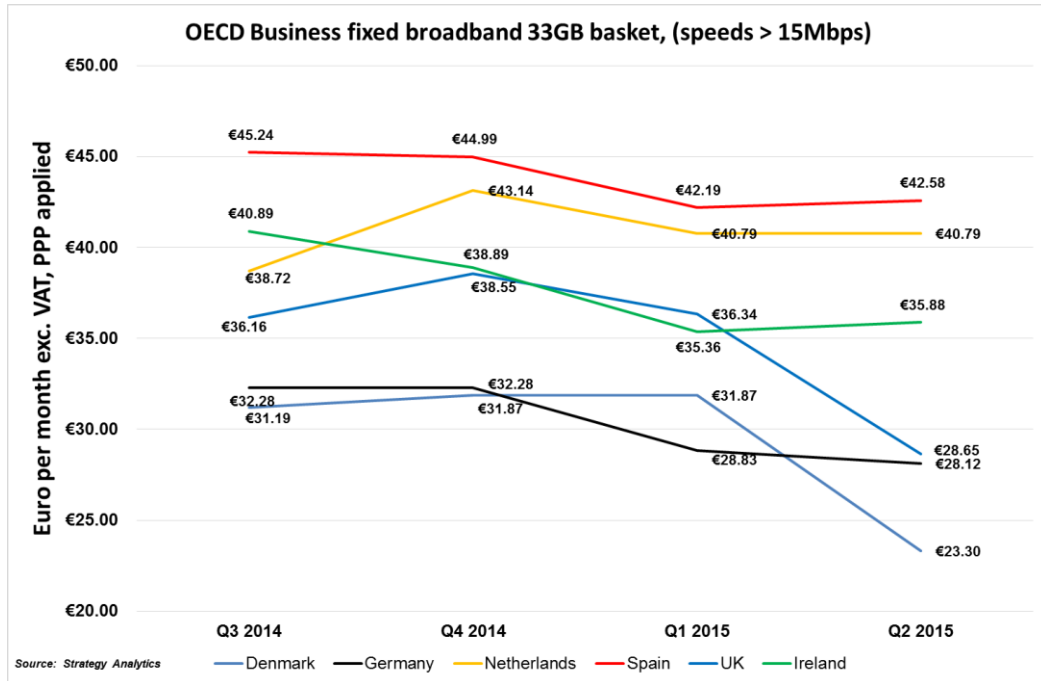


Figure 3.6.4 shows that in an international comparison context Ireland (€35.88⁷⁷) ranks in fourth place. The average price in Ireland is 8% higher than the average price⁷⁸ for all of the countries included in the analysis.

Figure 3.6.4 - Business Fixed Broadband Basket (International comparison)



OECD Residential Mobile Broadband Service Basket

Figure 3.6.5 compares pre-paid and post-paid tariffs advertised by mobile broadband service providers for residential customers based on an OECD 5GB monthly mobile data usage basket. Tesco offers the cheapest tariff (€10.00) followed by Meteor (€14.99) and eMobile (€18.62).

⁷⁷ As noted previously, average prices used for international comparisons exclude VAT charges.

⁷⁸ The average of prices presented in Figure 3.6.4.

Figure 3.6.5 - Residential Mobile Broadband Basket (National comparison)

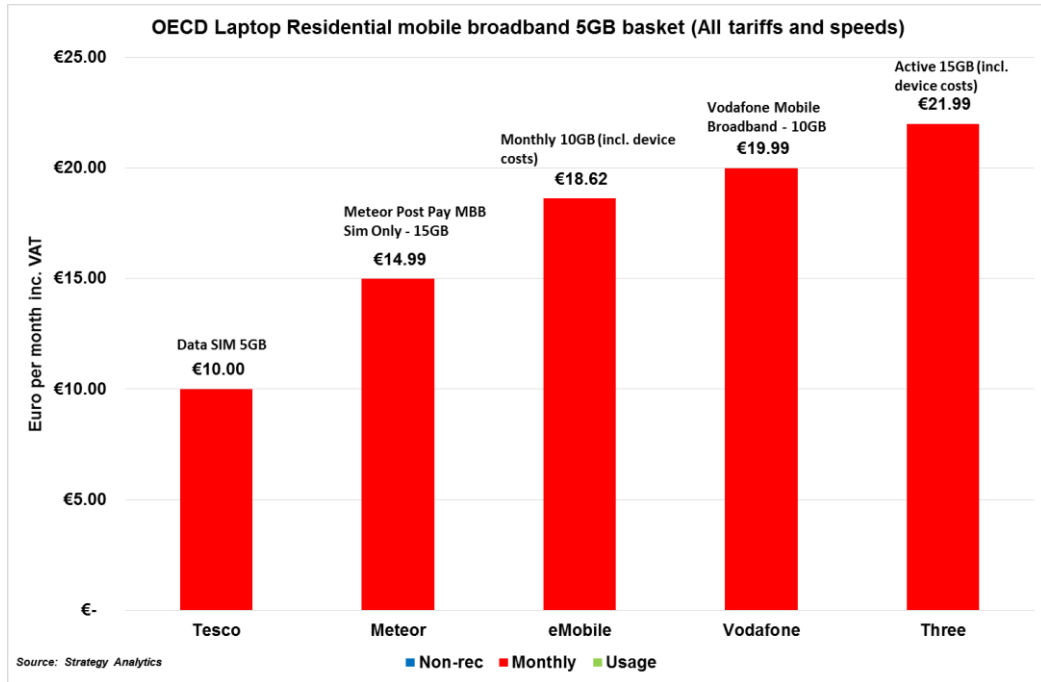
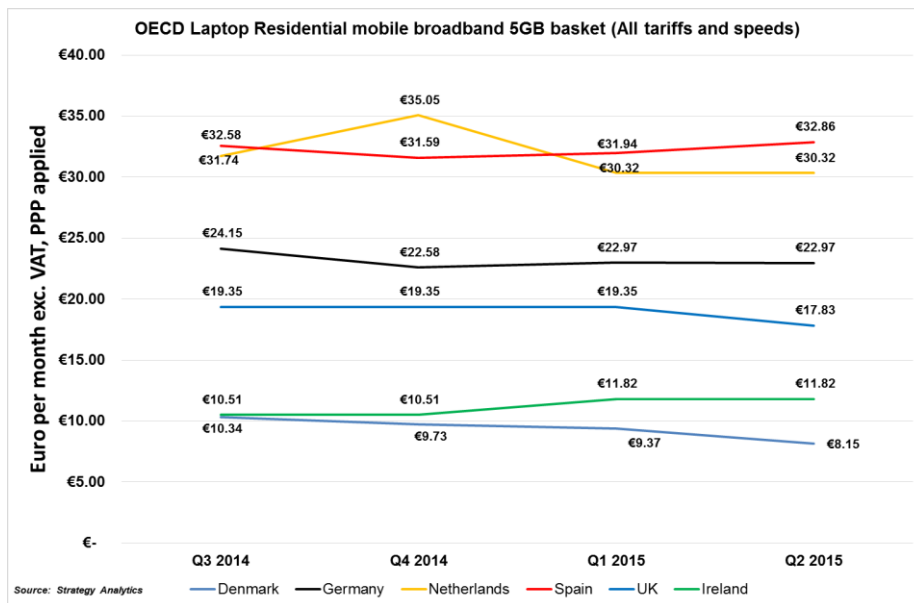


Figure 3.6.6 below illustrates Ireland’s ranking alongside five other Western European countries. Ireland ranks in second place with an average price of €11.82⁷⁹ for this particular basket. The average price in Ireland is 43% cheaper than the average price⁸⁰ for all of the countries included in the analysis.

Figure 3.6.6 - Residential Mobile Broadband Basket (International comparison)



⁷⁹ As noted previously, average prices used for international comparisons exclude VAT charges.

⁸⁰ The average of prices presented in Figure 3.6.6.

OECD Business Mobile Broadband Service Basket

Figure 3.6.7 compares post-paid tariffs advertised by mobile broadband service providers⁸¹ for business customers based on an OECD 10GB monthly data usage basket. Presented prices exclude VAT charges. Vodafone (€16.25) offers the cheapest tariff followed by eMobile (€16.52) and Three (€20.32).

Figure 3.6.7 - Business Mobile Broadband Basket (National comparison)

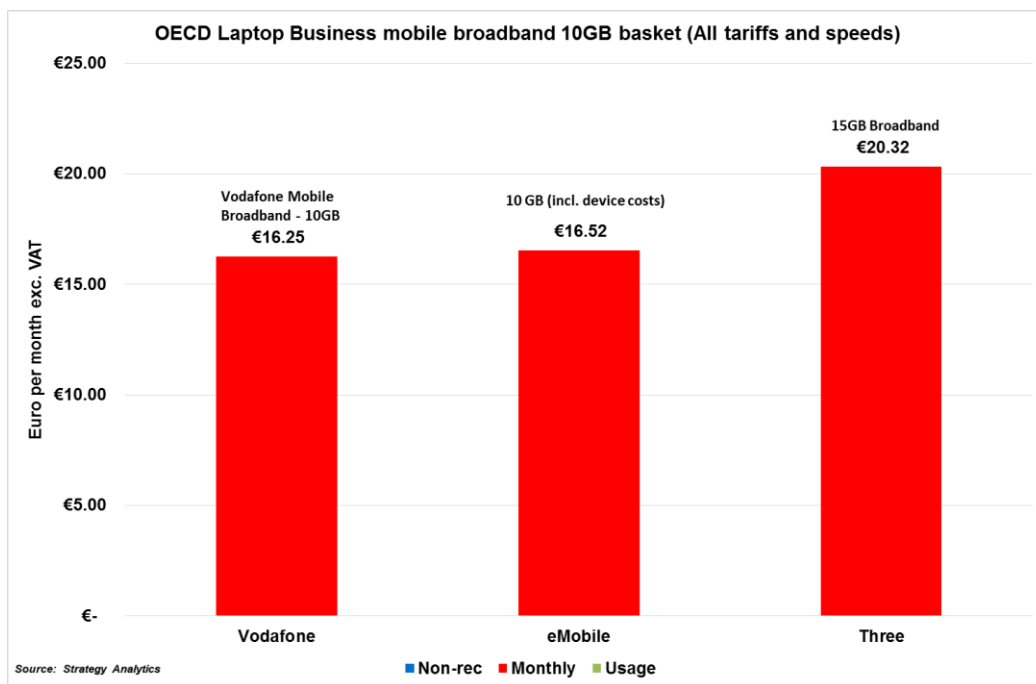


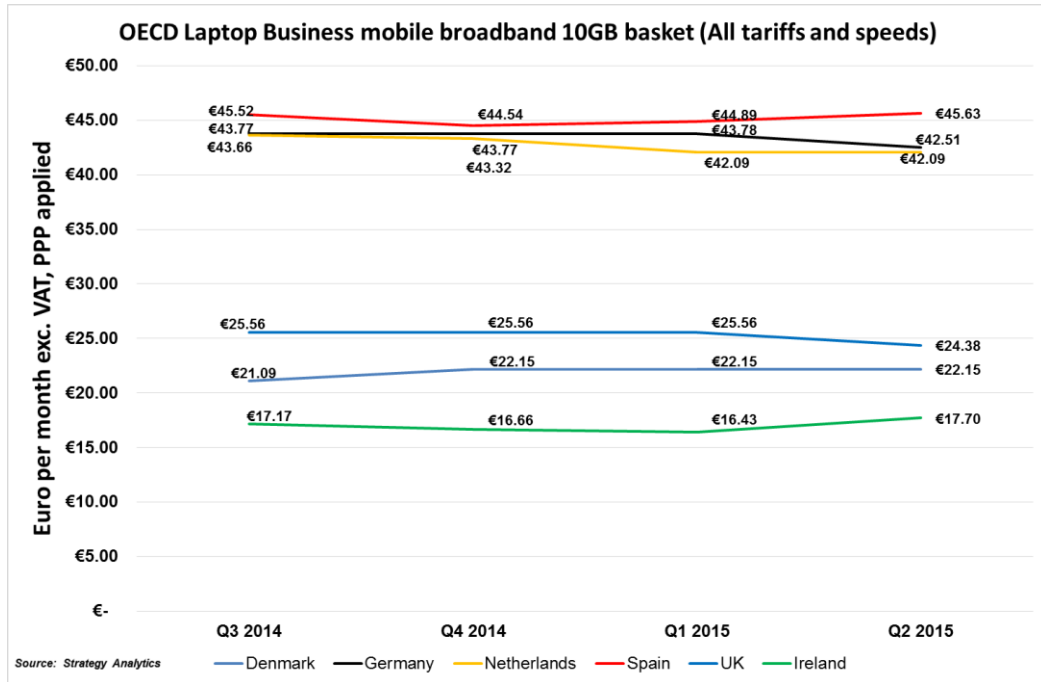
Figure 3.6.8 shows that, from an international comparison perspective, Ireland (€17.70⁸²) ranks in first place. The average price in Ireland is 45% cheaper than the average price⁸³ for all of the countries included in the analysis.

⁸¹ Only tariffs advertised by Vodafone, Three and eMobile were analysed for business customers. Some operators do not offer mobile broadband service to business customers. ComReg will expand the analysis and include additional operators such as eMobile in the future Quarterly Key Data Reports.

⁸² As noted previously, average prices used for international comparisons exclude VAT charges.

⁸³ The average of prices presented in Figure 3.6.8.

Figure 3.6.8 - Business Mobile Broadband Basket (International comparison)



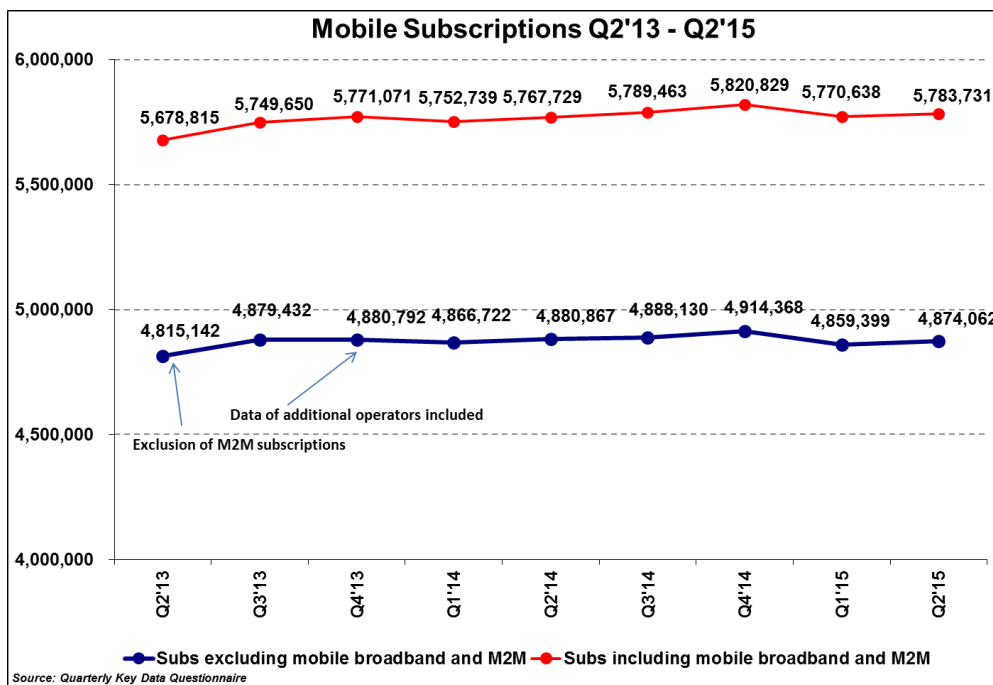
4. Mobile Market Data

4.1 Number of Subscriptions and Penetration Rate

ComReg notes that mobile subscriptions from additional mobile operators (including Lycamobile) was, for the first time, incorporated into the mobile market data set in Q1 2013 and separately in Q4 2013. Therefore, information on the mobile market prior to Q1 2013 is not strictly comparable with information from previous periods.

At the end of June 2015 there were 5,783,781 mobile subscriptions in Ireland, including mobile broadband and Machine to Machine ('M2M')⁸⁴ subscriptions. If mobile broadband subscriptions (412,610) and M2M subscriptions (497,059) are excluded, the total number of mobile subscriptions in Ireland was 4,874,062.

Figure 4.1.1 – Mobile Subscriptions



In Q2 2015 there were 3,594,077 mobile voice and data subscribers using 3G/4G networks in Ireland. This figure can be taken as an indication of the number of smartphone users accessing advanced data services such as web/internet content, online multiplayer gaming content, Video on Demand (VoD) or other equivalent advanced data services (excluding SMS and MMS). This represents approximately 73.7% of all mobile subscriptions (excluding dedicated mobile broadband and M2M) in Q2 2015.

⁸⁴ As of Q2 2013 M2M subscriptions are excluded from mobile voice subscriptions. Therefore, changes in subscriptions are not directly comparable to previous periods.

Figure 4.1.2 below shows the breakdown of total active subscribers, total standard mobile voice and data subscribers using 3G/4G networks and dedicated mobile broadband subscribers from Q2 2014 to Q2 2015.

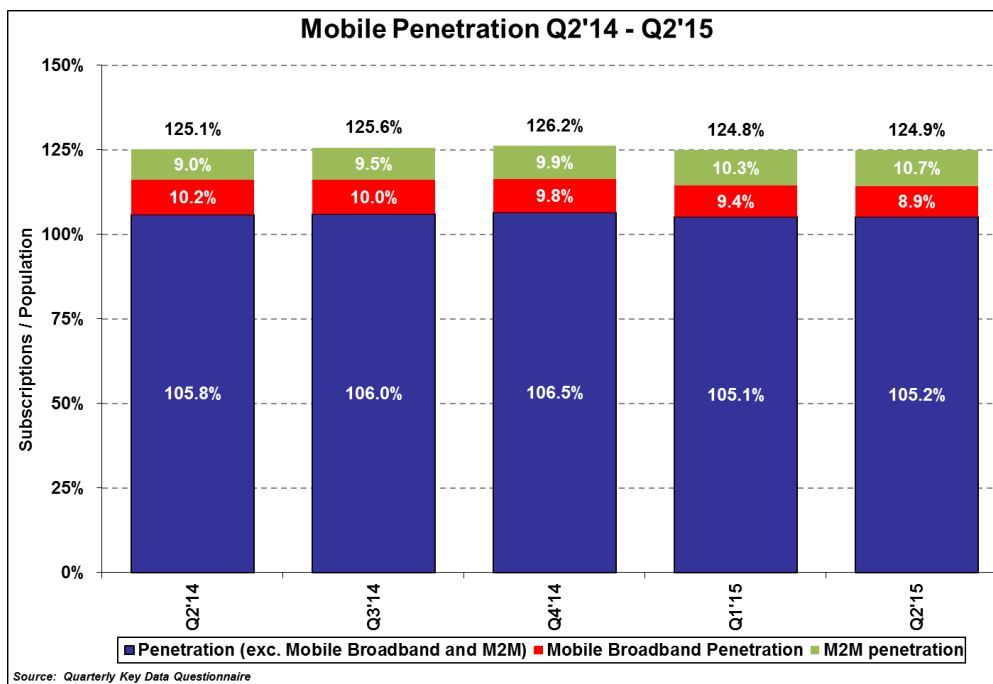
Figure 4.1.2 – Mobile Subscribers using data services over 3G/4G networks

	Q2'15	Q2'14	Quarterly Change (Q1'15 – Q2'15)	Annual Change (Q2'14 – Q2'15)
Total active subscriptions	5,783,731	5,767,729	+0.2%	+0.3%
Mobile voice and data subscribers using 3G and 4G networks	3,594,077	2,811,170	+2.6%	+27.8%
Dedicated mobile broadband subscribers	412,610	470,823	-5.2%	-12.4%

Figure 4.1.3 charts mobile penetration since Q2 2014 and shows that at the end of March 2015, mobile penetration, based on a population of 4,632,100 (using CSO Q1 2015 estimate), was 124.9% including mobile broadband and M2M and 105.2% excluding mobile broadband and M2M. Mobile penetration is recognised as the standard metric internationally to measure the adoption of mobile services, and is calculated based on the number of active SIM cards per 100 of the population.

Given that some mobile users may have used more than one active SIM card during the period, there is likely to be some over-estimation of actual individual mobile penetration using this metric. ComReg's calculation of mobile subscriptions includes active SIMs bundled with mobile broadband data cards and USB modems for internet access via laptops/PCs, SIMs that enable the flow of data between Machines as well as SIM cards used in mobile phones for voice and data services.

Figure 4.1.3 – Irish Mobile Penetration Rate



4.2 The Profile of Mobile Subscriptions in Ireland

Mobile users pay for their mobile service by either purchasing pre-paid credit, or by receiving a monthly bill from their mobile operator, described in this report as a post-paid payment option.

Figures 4.2.1 and 4.2.2 illustrate the mobile subscription base (including mobile broadband and M2M) in Ireland classified by the proportion of pre-paid and post-paid subscriptions on 2G, 3G and 4G networks at the end of June 2015. Post-paid subscriptions are increasing, accounting for 49.0% of subscriptions in Q2 2015, up from 46.3% one year previously at the expense of a decline in pre-paid subscriptions. The majority of both pre-paid and post-paid subscriptions include broadband/data packages while all M2M subscriptions are post-paid.

Figure 4.2.1 – Profile of Pre-Paid and Post-Paid Subscriptions

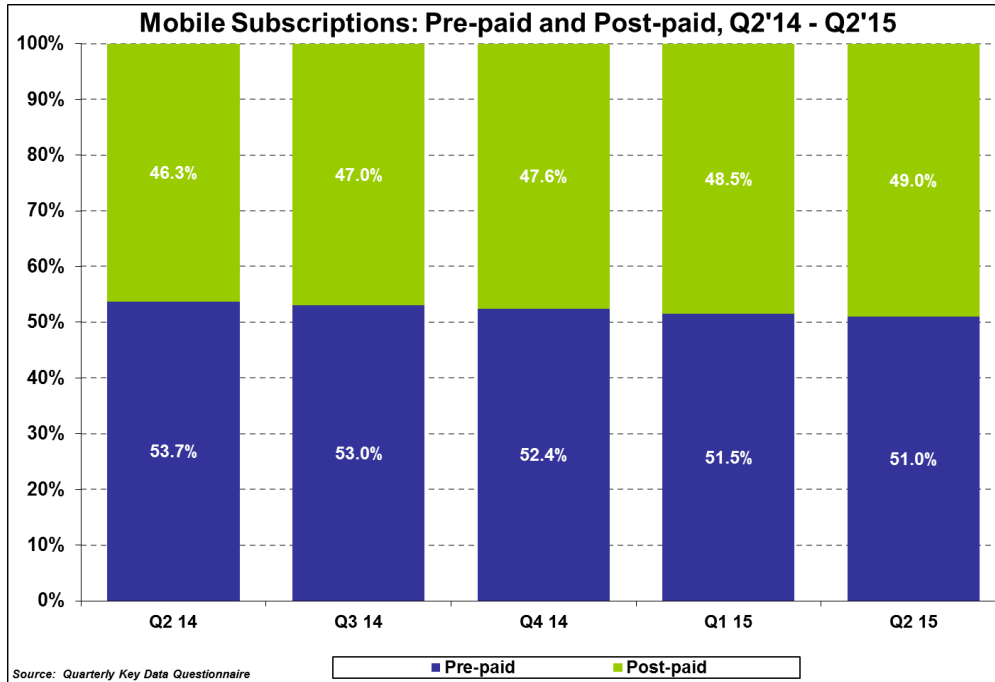


Figure 4.2.2 – Mobile Subscriptions by Pre-pay/Post-pay Split, Q2'14 – Q2'15

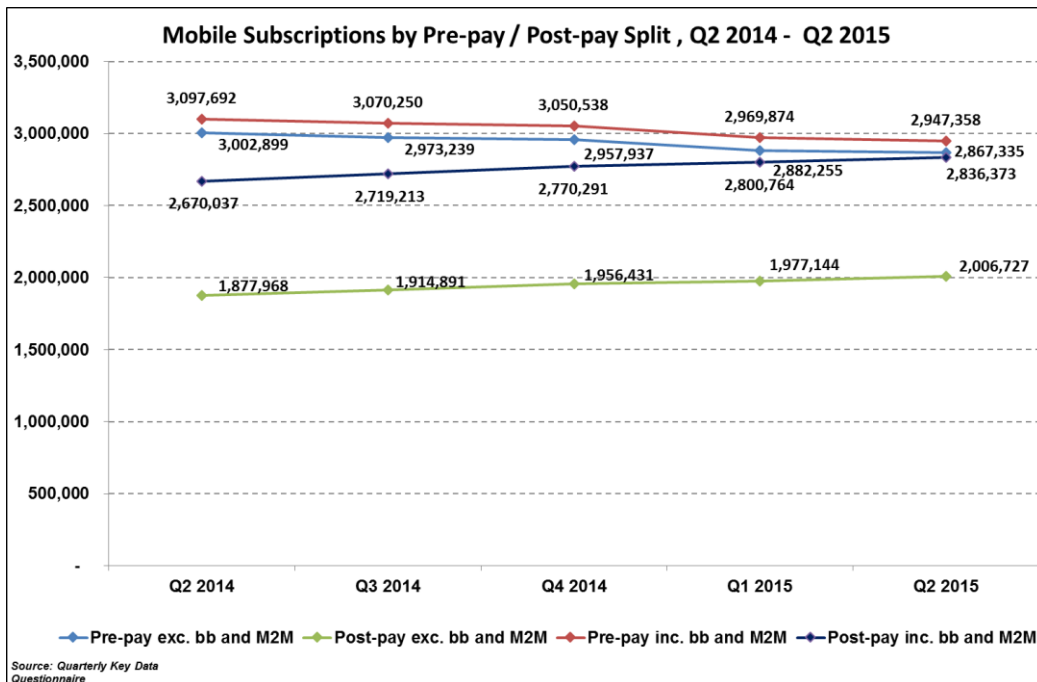


Figure 4.2.3 shows the pre-paid and post-paid subscription profile for each of the mobile operators in the Irish market. Mobile broadband and M2M subscriptions are included in this data. As of Q2 2015, the mobile operator with the highest proportion of post-paid subscriptions was Three Group (56.7%), followed by Vodafone (52.7%), eircom group

mobile (43.9%) and Tesco mobile (12.6%) while all of Lycamobile’s subscriptions are pre-paid.

Figure 4.2.3 – Profile of Pre-Paid and Post-Paid Subscriptions by Operator

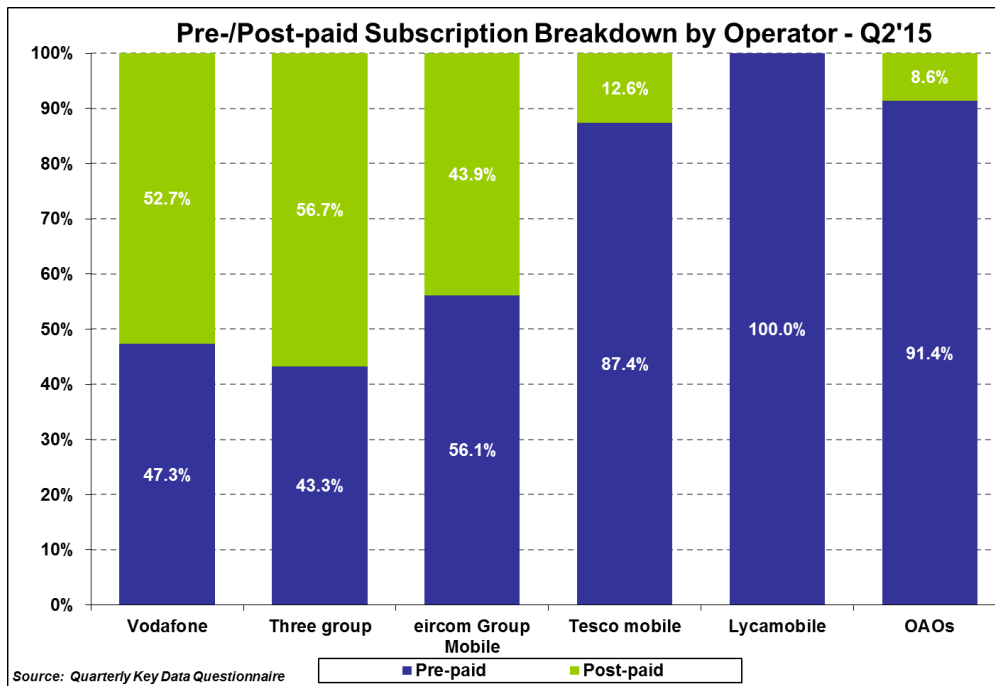


Figure 4.2.4 shows the split between pre-paid and post-paid mobile broadband subscriptions between Q2 2014 and Q2 2015. 80.6% of all mobile broadband subscriptions were post-paid at the end of June 2015, up from 79.9% one year previously.

Figure 4.2.4 – Profile of Pre-Paid and Post-Paid Mobile Broadband Subscriptions

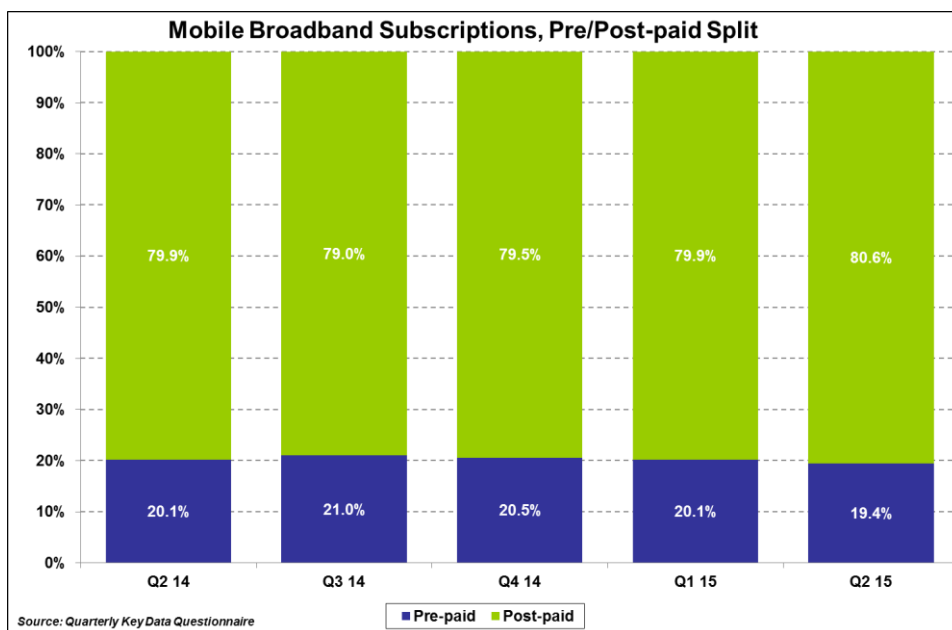


Figure 4.2.5 shows the split of post-paid business and non-business mobile subscriptions including and excluding mobile broadband and M2M between Q2 2014 to Q2 2015. Approximately 46.0% of post-paid mobile subscriptions (including mobile broadband and M2M) and 34.4% of post-paid mobile subscriptions (excluding mobile broadband and M2M) were classed as business subscriptions in Q2 2015.

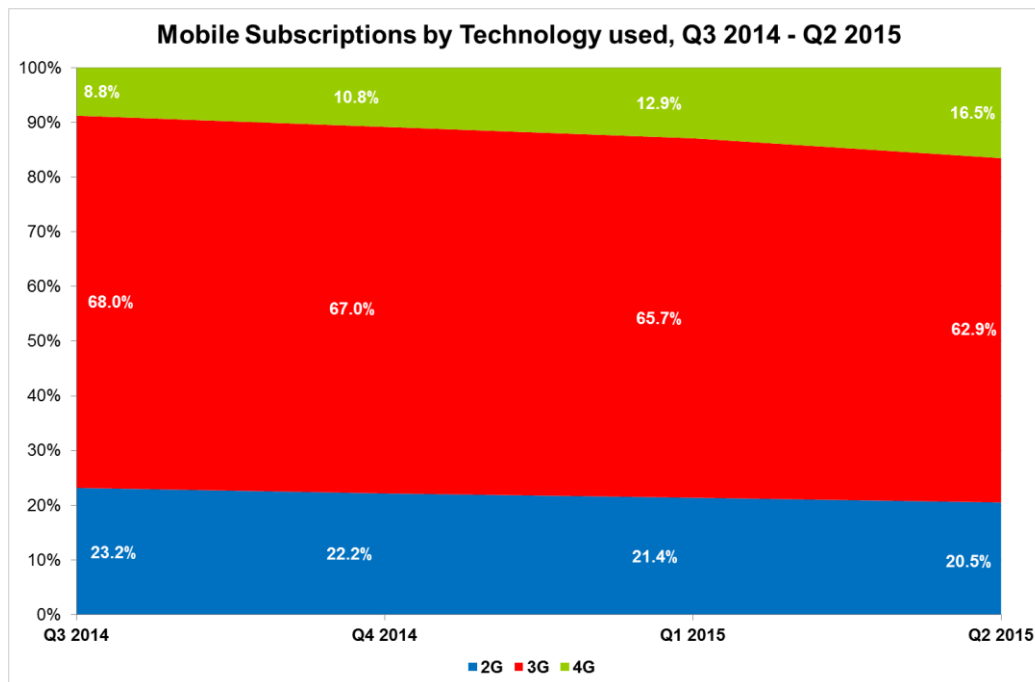
Figure 4.2.5 – Post-Paid Business and Residential Mobile Subscriptions

	Q2 2015	Q1 2015	Q4 2014	Q3 2014	Q2 2014
Residential subs inc. mobile broadband⁸⁵	1,530,829	1,532,459	1,532,005	1,510,561	1,499,595
Residential subs exc. mobile broadband	1,315,823	1,304,222	1,293,852	1,264,052	1,243,970
Business subs inc. mobile broadband & M2M	1,305,544	1,268,305	1,238,286	1,208,652	1,170,442
Business subs exc. mobile broadband & M2M⁸⁶	690,904	672,922	662,579	650,839	633,998

Figure 4.2.6 shows the split of mobile subscribers (including mobile broadband and M2M subscribers) broken down by mobile network technology used by these subscribers. For example, subscribers who purchase 4G plans and have generated traffic on a 4G network are categorised as 4G subscribers. Categories are mutually exclusive in that subscribers who have generated traffic on multiple networks (e.g. 2G and 3G) are categorised as users of the higher quality network (3G in this example). By the end of June 2015, 16.5% of mobile subscribers have been categorised as 4G network users, 62.9% use 3G network with the remaining 20.5% of subscribers using 2G networks only.

⁸⁵ All M2M subscriptions are assumed to be business subscriptions.

⁸⁶ M2M subscriptions excluded since Q2 2013.

Figure 4.2.6 – Mobile Subscriptions by Network used

4.3 Mobile Volumes

Figure 4.3.1 illustrates the change in voice minutes, SMS, and MMS (Multimedia Messaging Service) messages and 'other data'⁸⁷ volumes (internet uploads and downloads) sent between Q2 2011 and Q2 2015. Total retail mobile voice traffic totalled 3.05 billion minutes in Q2 2015, an increase of 4.8% on Q2 2014.

The total number of SMS messages sent by mobile users in Ireland was over 1.69 billion in Q2 2015, down 9.7% on Q2 2014 and down by 5.0% since Q1 2015. The number of multimedia messages (MMS) sent was down by 3.6% in the year to Q2 2015. Data usage volumes continue to rise, increasing by 84.1% in the year to Q2 2015 to reach 28,947 terabytes.

⁸⁷ Other data volumes means mobile traffic for which customers do and do not have to pay per MB charges and refers to both uploads and downloads. Retail international roaming data downloaded from network subscribers roaming on foreign networks (including EU-28) is also included.

Figure 4.3.1 – SMS, MMS, Other Data and Call Minute Volumes

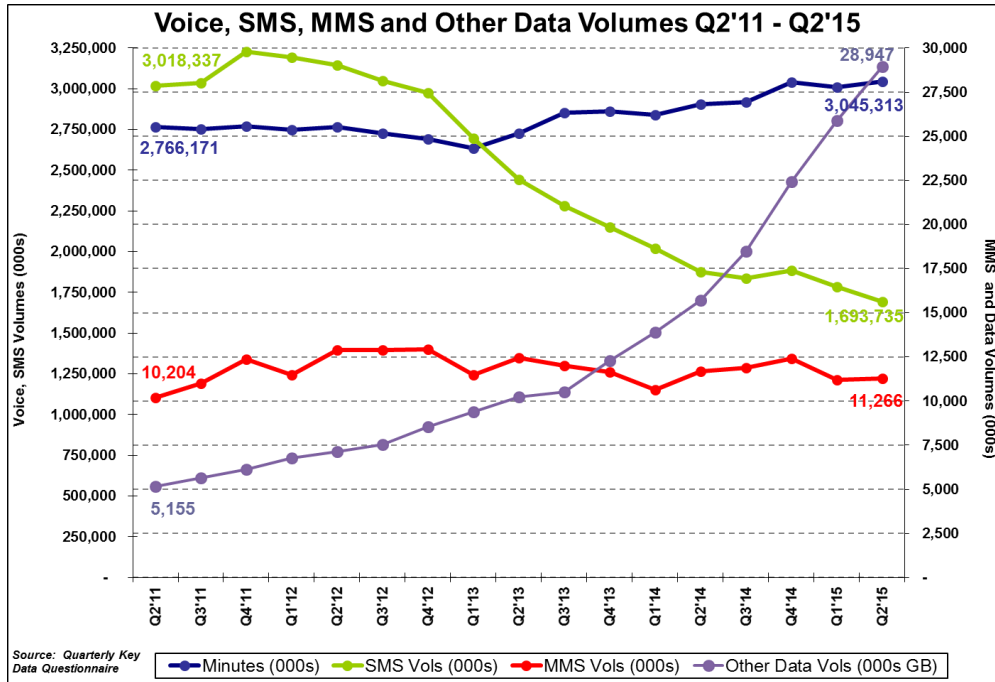


Figure 4.3.2 illustrates the share of types of mobile voice call minutes. As of Q2 2015, 75.8% of all mobile voice minutes were classified as mobile-to-mobile (on-net and off-net); 11.9% of mobile voice minutes were to fixed line phones, 9.6% were classified as international and roaming minutes and the remaining 2.7% were advanced voice minutes which include calls to premium rate services.

Figure 4.3.2 – Voice Call Minute Volumes by Type

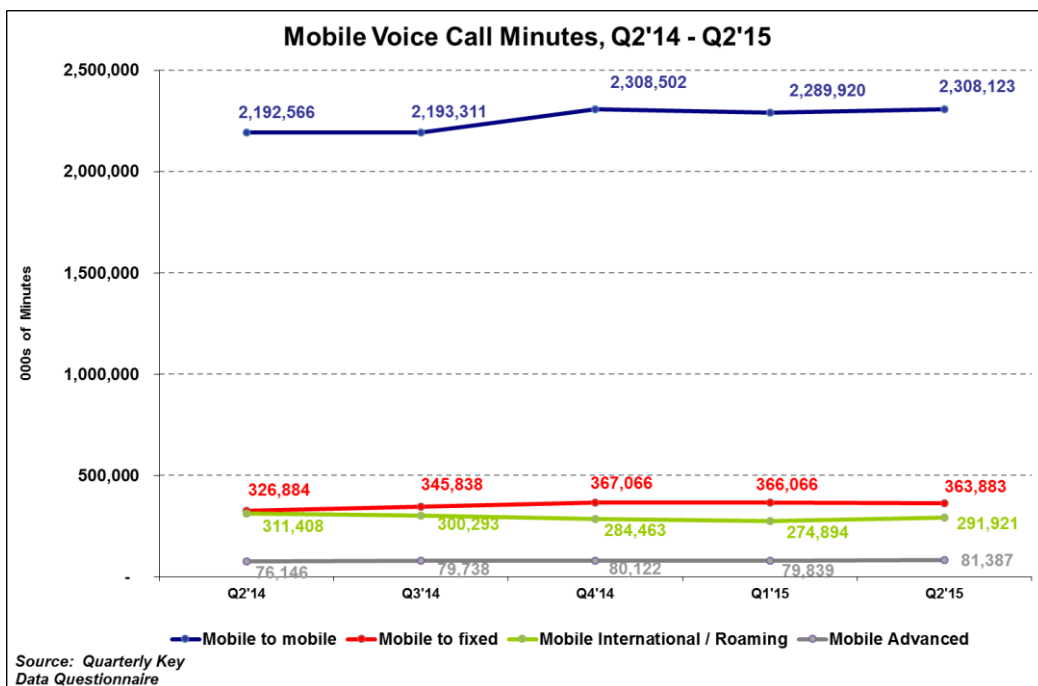


Figure 4.3.3 shows the change in the on net and off net mobile to mobile voice call minutes since Q2 2014. As of Q2 2015, 59.8% of all mobile to mobile voice minutes were classified as on-net down from 61.0% in Q2 2014.

Figure 4.3.3 – Mobile to Mobile Voice Call Minute Volumes by Type

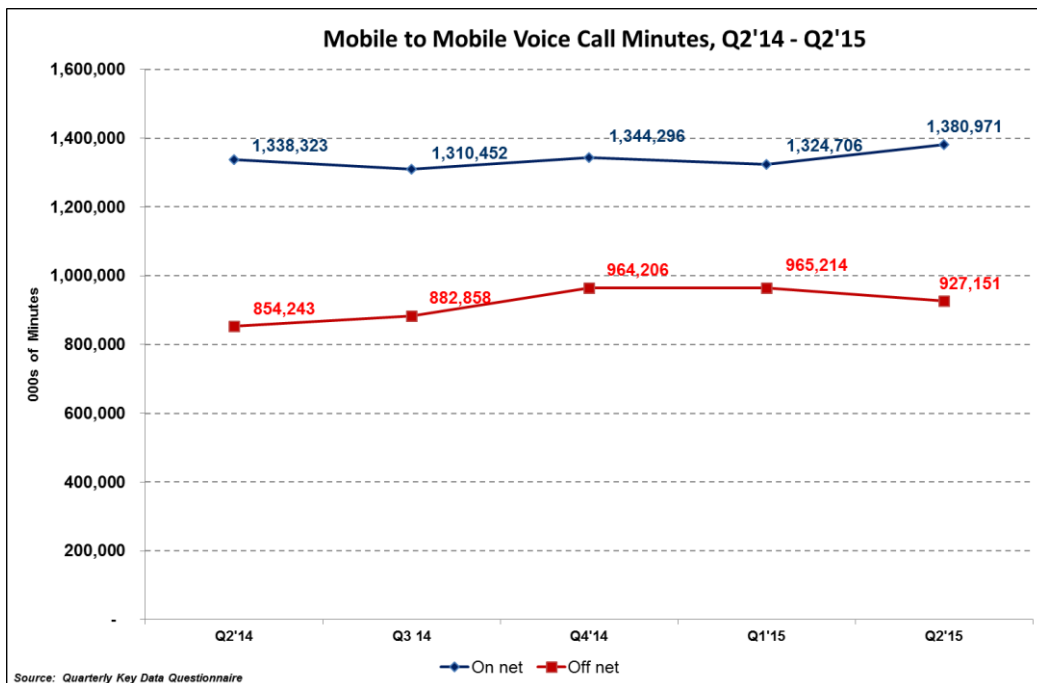


Figure 4.3.4 shows the change in the monthly mobile voice call minutes per subscription. In Q2 2015 the average usage was 208.3 minutes. From Q2 2013, the mobile voice subscription base is affected (relative to previous periods) by the subtraction of M2M subscriptions and thus, average minutes per subscriber reported from Q2 2013 are not directly comparable with the corresponding values in the previous quarters.

Figure 4.3.4 – Monthly Mobile Voice Call Minutes per Subscription by Type

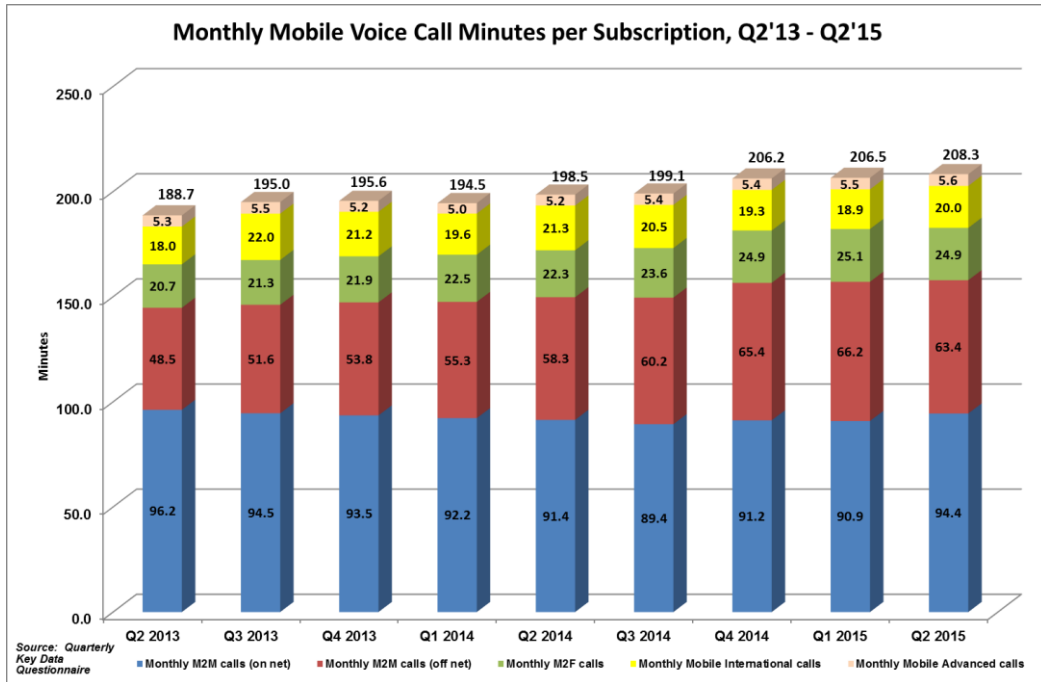
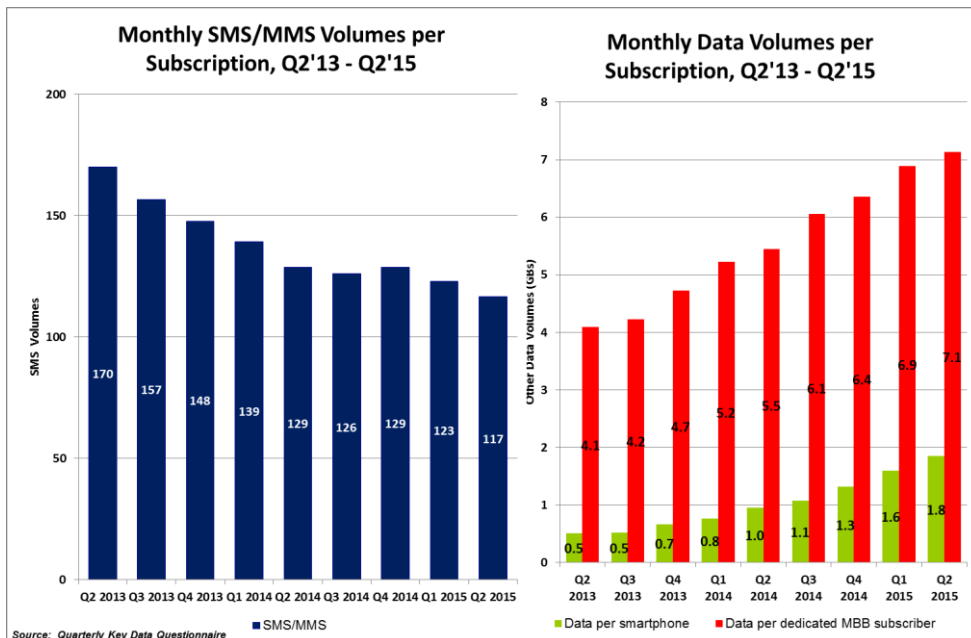


Figure 4.3.5 shows the change in the monthly mobile data volumes per subscription. In Q2 2015 the average monthly number of SMS/MMS sent was 117 and the average traffic per smartphone⁸⁸ reached 1.8 GB of data, while the average traffic per dedicated mobile broadband subscriber was 7.1 GB of data⁸⁹.

Figure 4.3.5 – Monthly Mobile Messaging and Data Volumes per Subscription



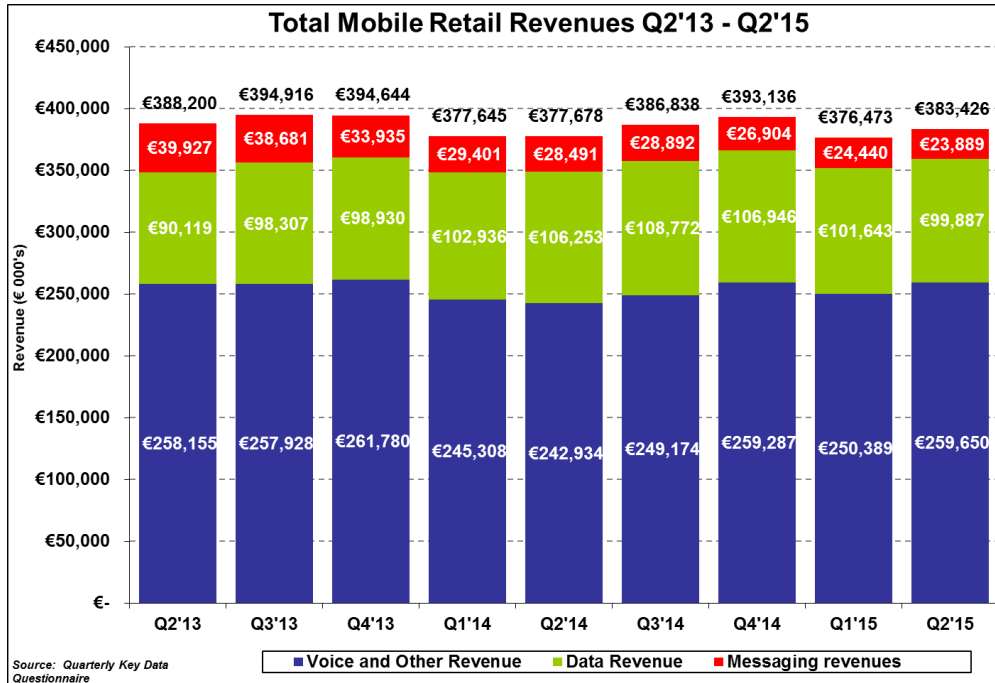
⁸⁸ Based on the number of standard mobile voice and data subscribers using 3G and 4G networks.

⁸⁹ Data traffic refers to both uploads and downloads.

4.4 Mobile Revenues

Figure 4.4.1 shows that mobile retail revenues for Q2 2015 were over €383 million. Messaging revenues decreased by 2.3% this quarter, data revenues decreased by 1.7% while voice and other revenues increased by 3.7% since Q1 2015.

Figure 4.4.1 – Total Mobile Retail Revenues



Wholesale mobile revenues were over €70 million in Q2 2015 (a decrease of 4.2% since Q1 2015), the vast majority accounted for by terminating traffic, followed by access⁹⁰ and roaming⁹¹ revenues.

4.5 Average Monthly Revenue per User

Mobile ARPU is a function of both the price of mobile services and the level of usage of mobile services. In Q2 2015 mobile APRU was €24.75 per month, down from €24.79 per month in the previous quarter, and down from €24.98 per month in the period Q2 2014. This overall decline over this period is in line with a general downward trend in ARPU across Western European countries. Based on data from Analysys Mason’s Telecom

⁹⁰ Includes revenues from the wholesale provision of voice, messaging and data services to MVNOs and access revenues not related to traffic. Includes revenues from the provision of wholesale roaming (outbound) services (voice/text/data services) to hosted MVNOs. Includes revenues from wholesale provision of voice, messaging and data services based on national roaming agreements.

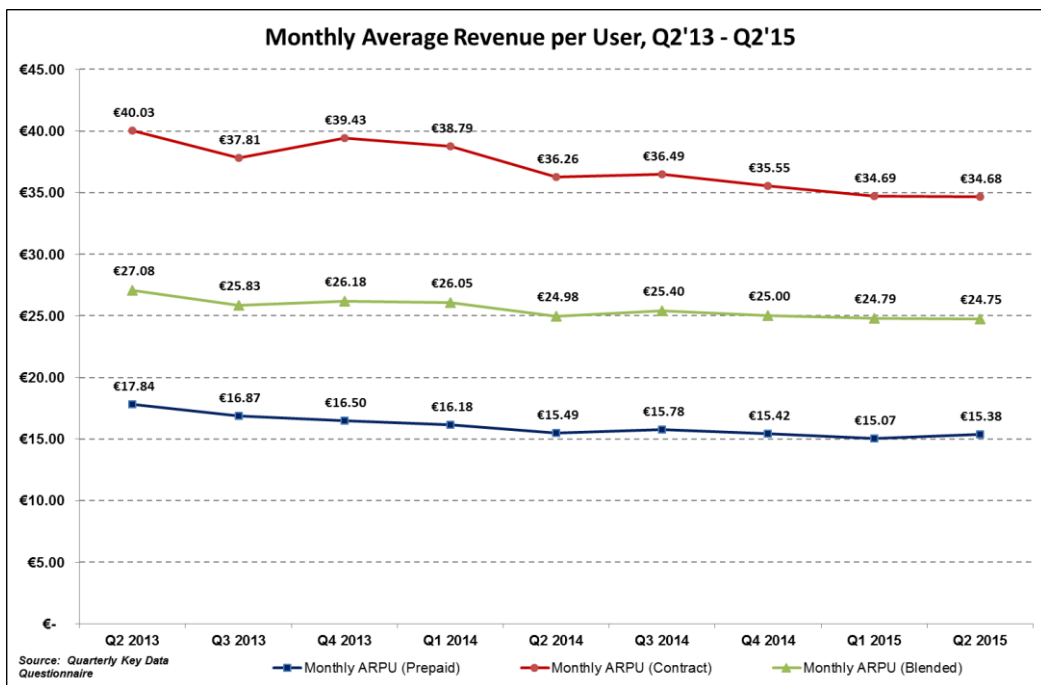
⁹¹ Revenues from the provision of wholesale roaming (inbound) services (voice/text/data services). Excludes revenues from the provision of wholesale roaming (outbound) services to hosted MVNOs.

Matrix monthly mobile ARPU across the average of 14 Western European countries fell by 2.4% in Q4 2014⁹² compared to Q4 2013.

Figure 4.5.1 illustrates the change in ARPU for prepaid and post-paid subscribers. In Q2 2015 mobile ARPU for prepaid subscribers was €15.38 per month (down 0.7% since Q2 2014) while mobile ARPU for post paid subscribers was €34.68 per month (down 4.4% since Q2 2014).

The general decline in ARPU is likely to be a reflection of a number of factors such as those attributable to lower priced mobile plans, increased sales of bundled products (combining mobile with fixed calls and sometimes broadband and/or TV) and reductions in roaming and mobile termination rates, among others.

Figure 4.5.1 – Monthly Average Revenue per User by Type



⁹² Q4 2014 is the latest quarter for which this information is available.

4.6 Machine to Machine subscriptions

Machine to Machine (M2M) refers to technologies that involve data communication between devices or systems in which, at least in principle, human intervention does not occur. These technologies may encompass either wireless or wired communications, or both. M2M communication is already widely deployed in Ireland and its usage is set to grow rapidly, driven in no small part by the expansion of next generation telecommunications technology and a decline in the cost of the embedded wireless modules and sensors that enable M2M services. This continued improvement in the infrastructural environment around M2M has led to a rapid growth of applications and services that meet users' business and lifestyle needs. M2M technologies transfer data on the condition of physical assets and devices to a central location (which is distantly located the devices) for effective monitoring and control. M2M has a multitude of uses, with current deployments in the healthcare, energy, home automation and transportation sectors. Specific examples of M2M applications include smart metering, vehicle and consignment tracking and alarm monitoring systems of various kinds, ATM machines signalling the need for cash replacement, smart grid monitoring of real time electricity demand, smart home applications such as switching on and off lights, heating and other appliances.

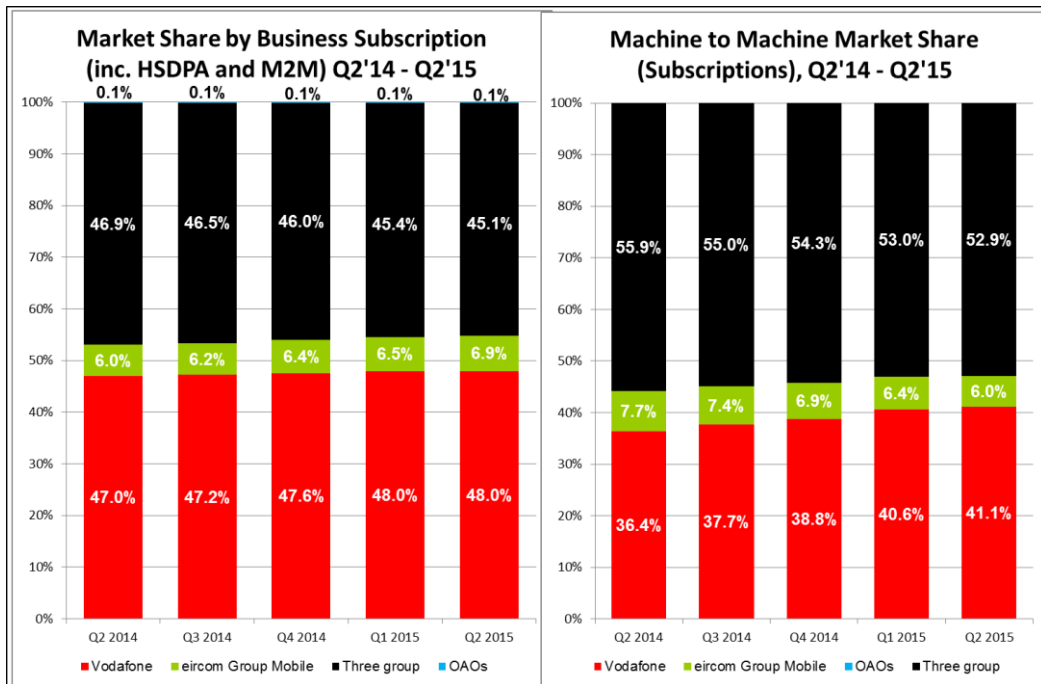
Different networking technologies can be used to connect M2M devices, depending on the amount of mobility needed, quality required, data rate, the degree of dispersion of devices over an area, and so on. Gathering data on dedicated M2M mobile connections assists ComReg in assessing future regulatory needs for M2M, e.g. for numbering resources. The additional data also allows for more accurate assessment of mobile telephony and broadband connections.

There were 497,059 M2M subscriptions at the end of June 2015. This is an increase of 19.5% since Q2 2014. Figure 4.6.1 outlines market shares based on active M2M subscriptions as well as market shares in terms of business subscribers (including mobile broadband and M2M subscriptions).

In Q2 2015 the Three Group had the largest market share of M2M subscriptions at 52.9% followed by Vodafone with 41.1% market share. Eircom Group Mobile had the remaining 6.0% of M2M subscriptions.

Vodafone had the largest market share in terms of business subscriptions (48.0%) followed by Three Group (45.1%) and Eircom Group Mobile (6.9%). OAOs accounted for the remaining 0.1%.

Figure 4.6.1 – Market Share – Number of Business Subscriptions/Number of M2M Subscriptions⁹³



4.7 Competition in the Mobile Market

Figures 4.7.1 and 4.7.2 outline mobile market shares based on the number of active subscriptions reported by each operator. ComReg notes that market shares in Q4 2013 are not directly comparable with previous periods as data from additional MVNOs have been included in each of those subsequent periods.

Figure 4.7.1 includes mobile broadband and M2M while figure 4.7.2 excludes mobile broadband and M2M. Vodafone has the highest market share including and excluding mobile broadband and M2M (38.4% and 38.5%), followed by Three Group (35.1% and 31.7%), Eircom Group Mobile (18.7% and 20.6%), Tesco Mobile (5.5% and 6.4%) and Lycamobile (2.1% and 2.4%). OAOs have market shares of 0.3% and 0.3% respectively.

⁹³ As of Q2 2014 O2 is included under Three Group umbrella. For more details see note on page 8 of this report.

Figure 4.7.1 – Market Share – Number of Subscriptions (inc. mobile broadband and M2M)⁹⁴

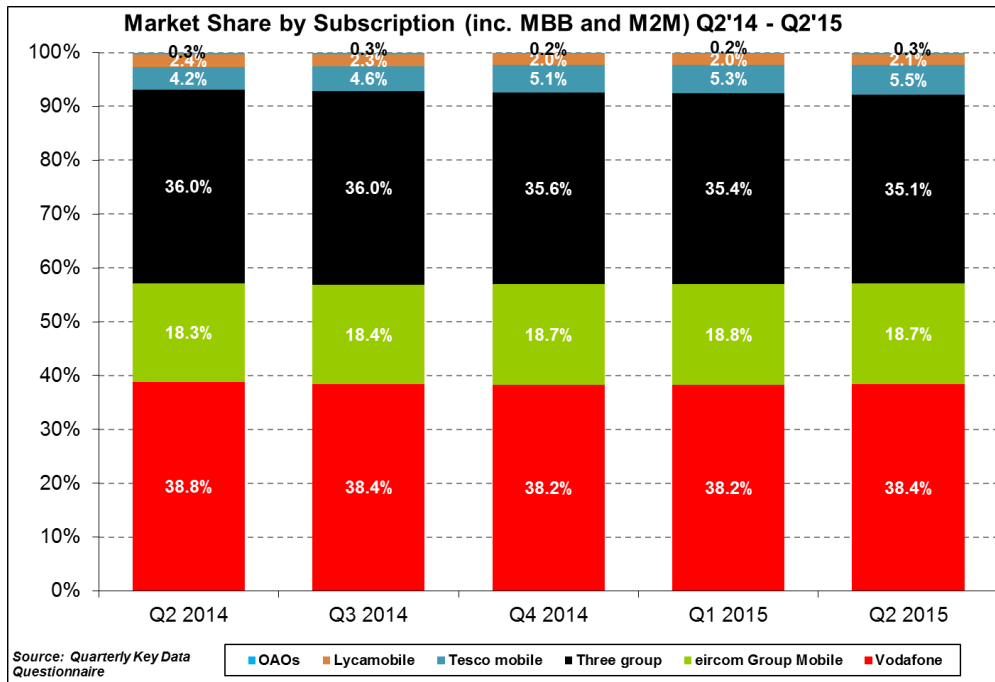
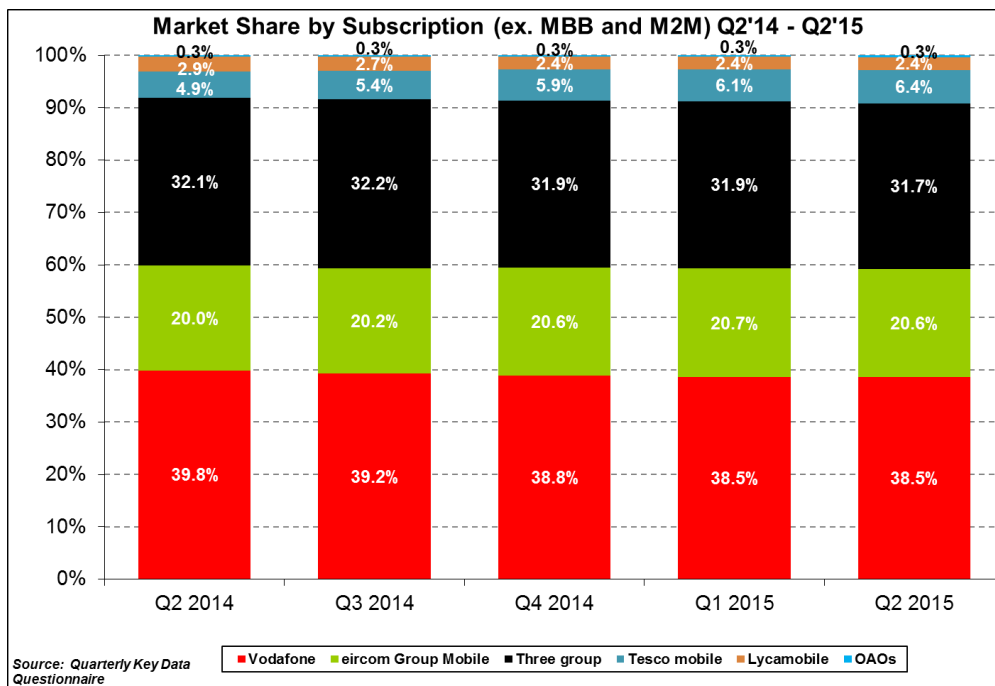


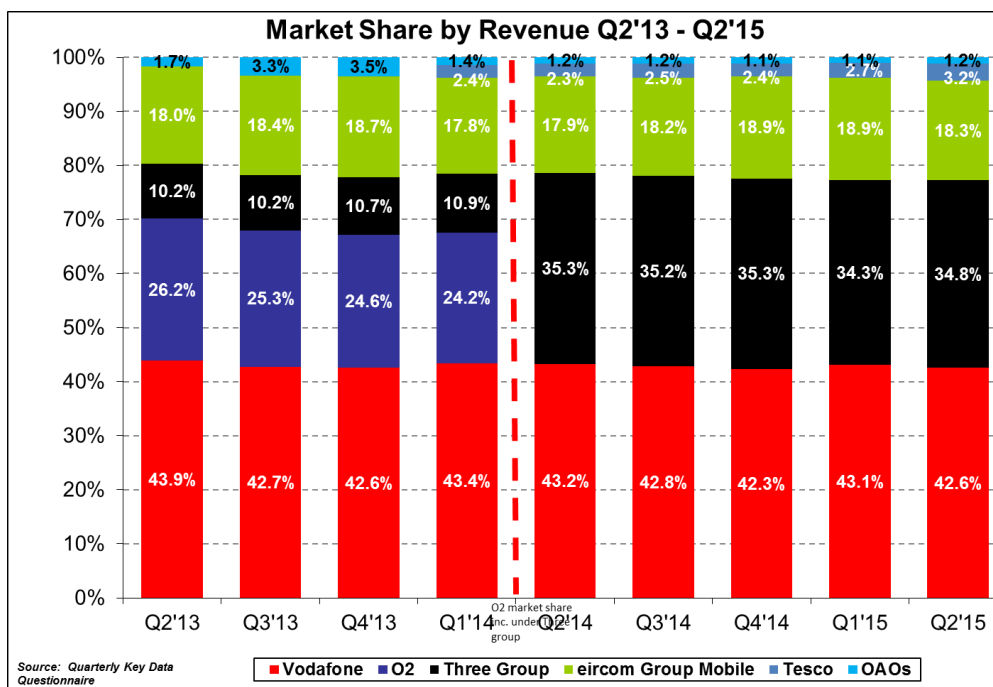
Figure 4.7.2 – Market Share – Number of Subscriptions (ex. mobile broadband and M2M)



⁹⁴ As of Q2 2014 O2 is included under Three Group umbrella. For more details see note on page 8 of this report.

Figure 4.7.3 shows market shares by total retail revenues for mobile operators. As of Q3 2013, data from additional mobile operators is included in this chart. Therefore, market shares previous to Q3 2013 are not directly comparable. Vodafone’s market share remains highest at 42.6% followed by Three Group at 34.8%. Eircom Group Mobile’s market share is the next largest at 18.3% followed by Tesco and OAOs at 3.2% and 1.2% respectively.

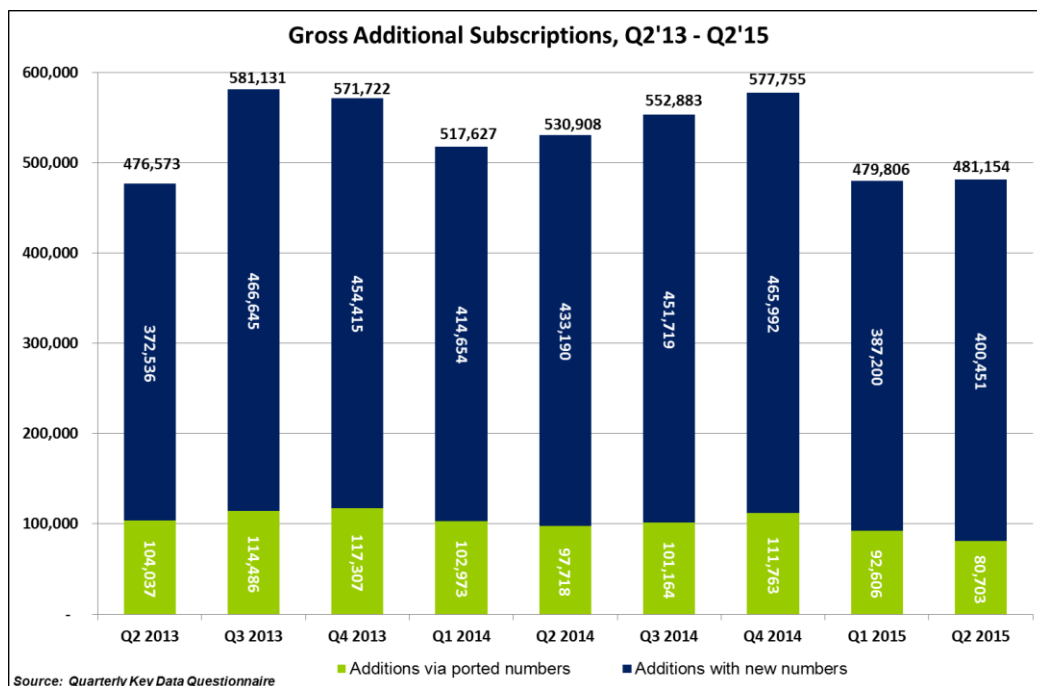
Figure 4.7.3 – Revenue Market Share



4.8 Switching in the Mobile Market

Figure 4.8.1 illustrates the number of subscribers who port their numbers as a proportion of total gross additions⁹⁵. There were 481,154 gross additional subscriptions in Q2 2015. In the quarter to June 2015, 80,703 numbers were ported between mobile operators with a total of 386,236 numbers having been ported over a twelve month period. Gross additions via ported numbers accounted for 16.8% of total gross additions in Q2 2015.

⁹⁵ Gross additions include consumers who decide to avail of multiple SIMs and thus, slightly overstate the switching intensity in Ireland.

Figure 4.8.1 – Gross Subscription Additions and Numbers Ported

4.9 Mobile Pricing Data

ComReg uses independently collated Strategy Analytics (Teligen) pricing data using OECD-approved methodologies to examine the relative prices of a number of specific mobile phone usage baskets of national and international telecoms services for both residential and business users. The pricing data used for international comparisons includes pricing information for selected countries, namely Germany, Denmark, Spain, Netherlands and the United Kingdom⁹⁶.

For national comparisons, the prices advertised⁹⁷ by the largest operators (in terms of the number of subscribers to mobile voice services) during Q2 2015 were analysed⁹⁸ for selected usage baskets. In this Quarterly Key Data Report prices advertised by Three, Vodafone, Meteor, eMobile⁹⁹, Tesco and Lycamobile were analysed. Thus, the analysis does not necessarily present the cheapest tariffs available in the whole market, but rather the lowest cost tariffs offered by the largest operators.

⁹⁶ In future Quarterly Key Data Reports ComReg may expand the analysis and include more countries for international price comparisons.

⁹⁷ The pricing analysis is based on a review of operators' advertised prices in the period Q2 2015.

⁹⁸ The subscribers of these operators jointly account for over 99% of all mobile voice subscribers. 4G tariffs were included in the analysis.

⁹⁹ eMobile tariffs for eircom customers were excluded from the analysis.

For international comparisons, the prices advertised¹⁰⁰ by three largest operators (in terms of the number of subscribers to mobile voice services) in each of the respective countries during Q2 2015 were analysed¹⁰¹ for selected OECD mobile phone usage baskets¹⁰². In order to enable international comparisons, prices are presented in Euro Purchasing Power Parities (PPPs) and exclude VAT charges. PPPs provide an indication of the cost of telecoms services in countries analysed in relation to the cost of all other products and services.

The presented analysis incorporates discounts offered by operators. Nonrecurring charges (e.g. charges for the activation of a service) are discounted/amortised over three years. Calls to mobile (on net and off net) and fixed phones are included in the baskets.

The OECD basket methodologies are reviewed and revised periodically, with the latest revision made in 2012¹⁰³. Further information on the composition of the broadband basket can be found in the Explanatory Memorandum which accompanies this report.

The following baskets are presented in this report¹⁰⁴:

Residential and business mobile phone usage baskets

Type of basket	Basket
Prepaid Residential	30 calls (50 minutes), 100 SMS, 0.1GB data basket
Postpaid Residential	100 calls (182 minutes), 140 SMS and 2GB data basket
Business	300 calls (569 minutes), 225 SMS and 1GB data basket

These baskets were selected given they most closely related to the mobile voice usage patterns presented in figures 4.3.4 and 4.3.5 above. ComReg notes that these baskets

¹⁰⁰ The pricing analysis is based on a review of operators' advertised prices in the period Q2 2015.

¹⁰¹ The subscribers of these operators jointly account for over 80% of all mobile voice subscribers in each of the respective countries.

¹⁰² The same basket was applied to each respective country in order to make the international comparison.

¹⁰³ See <http://www.oecd-ilibrary.org/docserver/download/5k92wd5kw0nw.pdf?expires=1417540956&id=id&accname=guest&checksum=F27F571EC7CA723CF50FE9183C21AEE4>

¹⁰⁴ In the future reports ComReg may expand the analysis and present price comparisons based on additional and/or different usage baskets.

reflect usage patterns of an average user and do not necessarily reflect prices of tariffs that are geared towards customers having different usage profiles.

ComReg notes that comparisons are based on the prices of advertised tariffs only and the analysis does not take into consideration other important factors such as quality of the network, levels of customer care, additional units of consumption available after having accounted in the analysis for the units in the OECD usage basket, minimum contract term etc.

OECD Pre-Paid Residential Mobile Basket

Figure 4.9.1 compares pre-paid tariffs advertised by mobile phone services providers for residential customers based on a basket of 30 calls (50 minutes), 100 SMS and 100 MB data usage. Lycamobile (€9.99) offers the cheapest tariff for this particular OECD basket, followed by Three (€16.72) and Meteor (€19.98).

Figure 4.9.1 – Residential Pre-paid Mobile Phone Services Basket (National comparison)¹⁰⁵

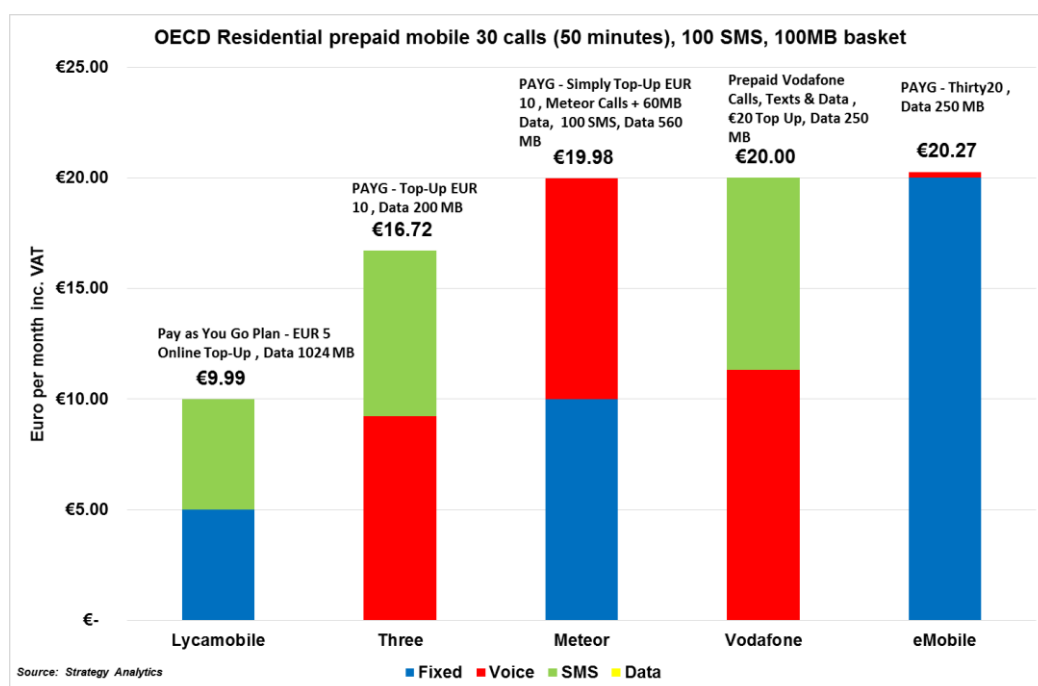


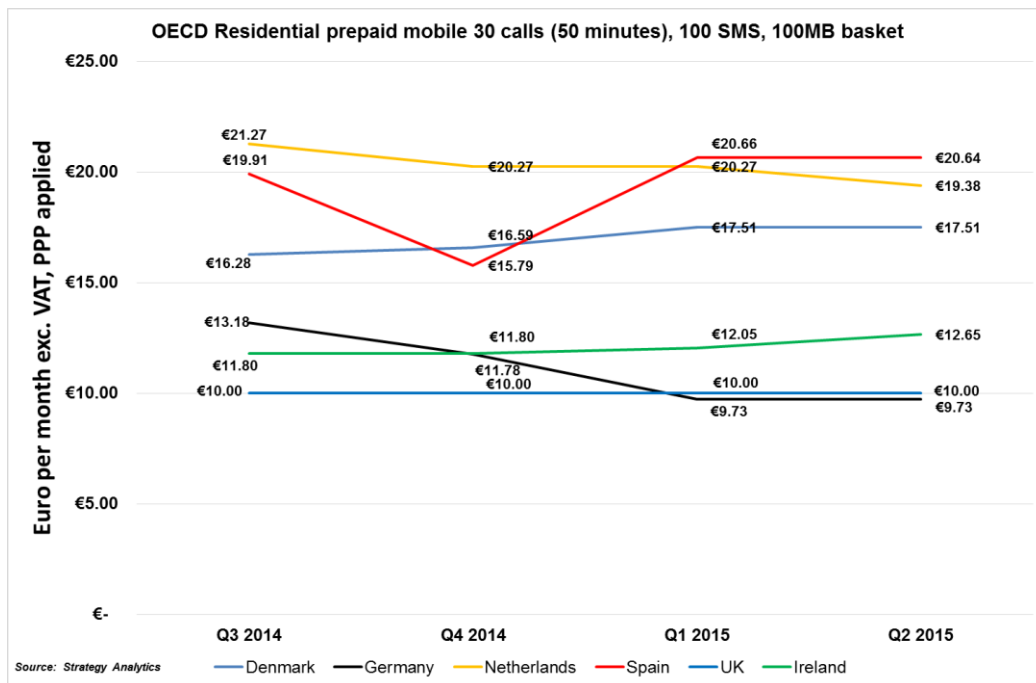
Figure 4.9.2 illustrates Ireland’s ranking alongside five other Western European countries. Ireland ranks in third place with an average price of €12.65¹⁰⁶ for this

¹⁰⁵ Fixed element of the price refers to the pre-paid tariffs that require mandatory top-ups.

¹⁰⁶ As noted previously, average prices used for international comparisons exclude VAT charges.

particular basket. The average price in Ireland is 16% cheaper than the average price¹⁰⁷ for all of the countries included in the analysis.

Figure 4.9.2 – Residential Pre-paid Mobile Phone Services Basket (International comparison)



OECD Post-Paid Residential Mobile Basket

Figure 4.9.3 compares post-paid tariffs advertised by mobile phone service providers for residential customers based on a basket of 100 calls (182 minutes), 140 SMS and 2 GB data usage. Tesco offers the cheapest tariff for this particular basket at €20.60, followed together by Meteor (€25.00) and eMobile¹⁰⁸ (€25.00).

¹⁰⁷ The average of prices presented in Figure 4.9.2.

¹⁰⁸ eMobile tariffs for eircom customers were excluded from the analysis.

Figure 4.9.3 – Residential Post-paid Mobile Phone Services Basket (National comparison)

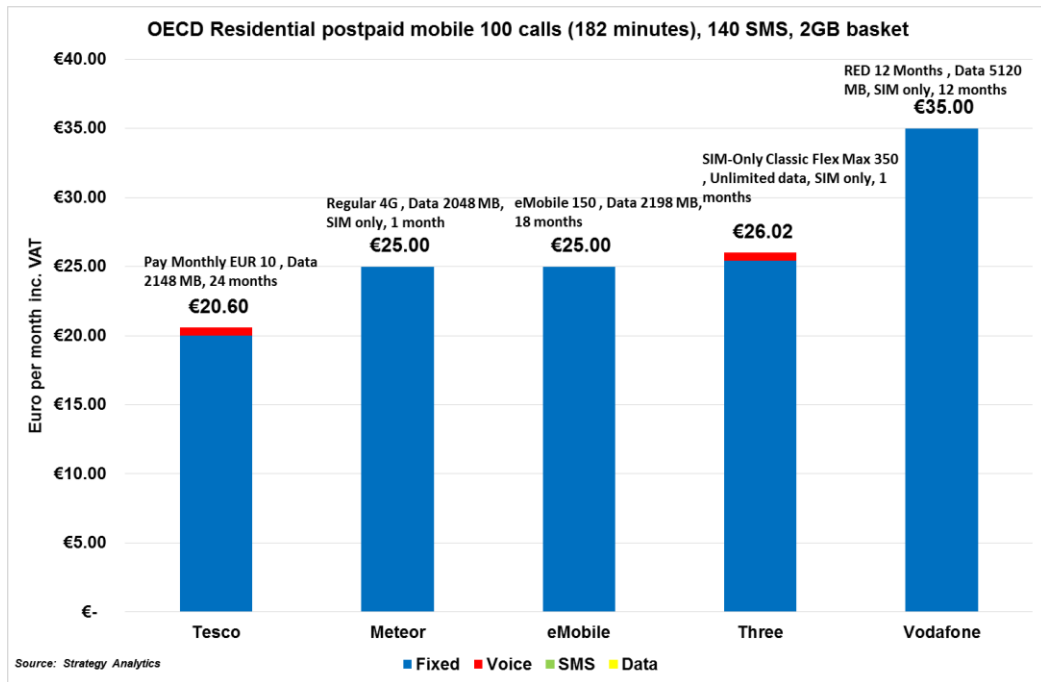
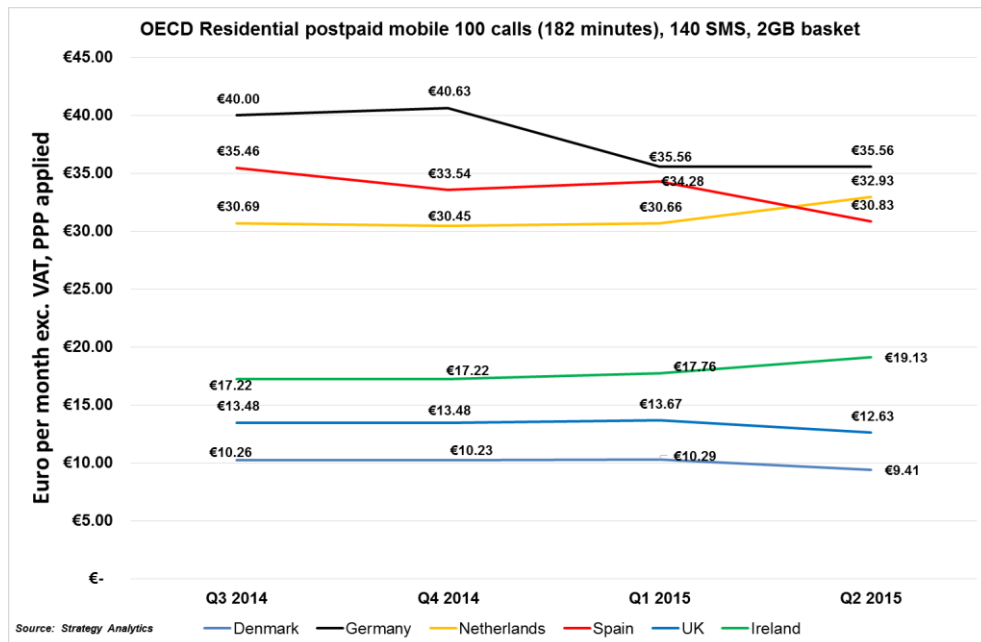


Figure 4.9.4 shows that Ireland (€19.13¹⁰⁹), in an international comparison context, ranks in third place. The average price in Ireland is 18% cheaper than the average price¹¹⁰ for all of the countries included in the analysis.

Figure 4.9.4 – Residential Post-paid Mobile Phone Services Basket (International comparison)



¹⁰⁹ As noted previously, average prices used for international comparisons exclude VAT charges.

¹¹⁰ The average of prices presented in Figure 4.9.4.

OECD Post-Paid Business Mobile Basket

Figure 4.9.5 compares post-paid tariffs advertised by mobile phone service providers¹¹¹ for business customers based on an OECD basket of 300 calls (569 minutes), 225 SMS and 1 GB data usage. Presented prices exclude VAT charges. Vodafone offers the cheapest tariff for this particular basket at €40.00, followed by Three (€45.00).

Figure 4.9.5 – Business Post-paid Mobile Phone Services Basket (National comparison)

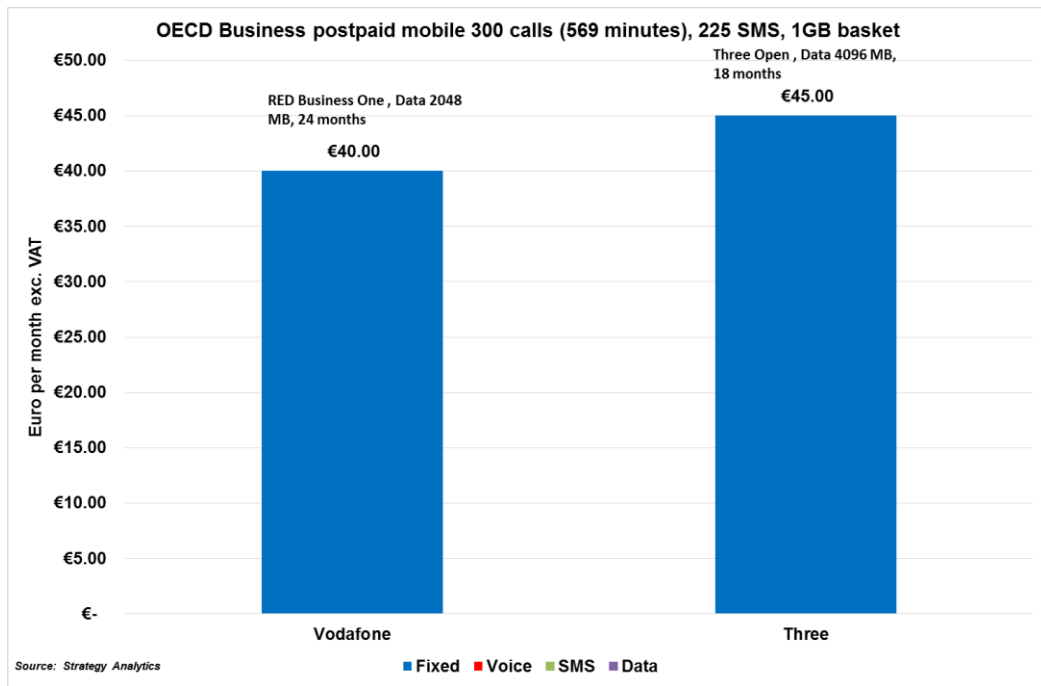


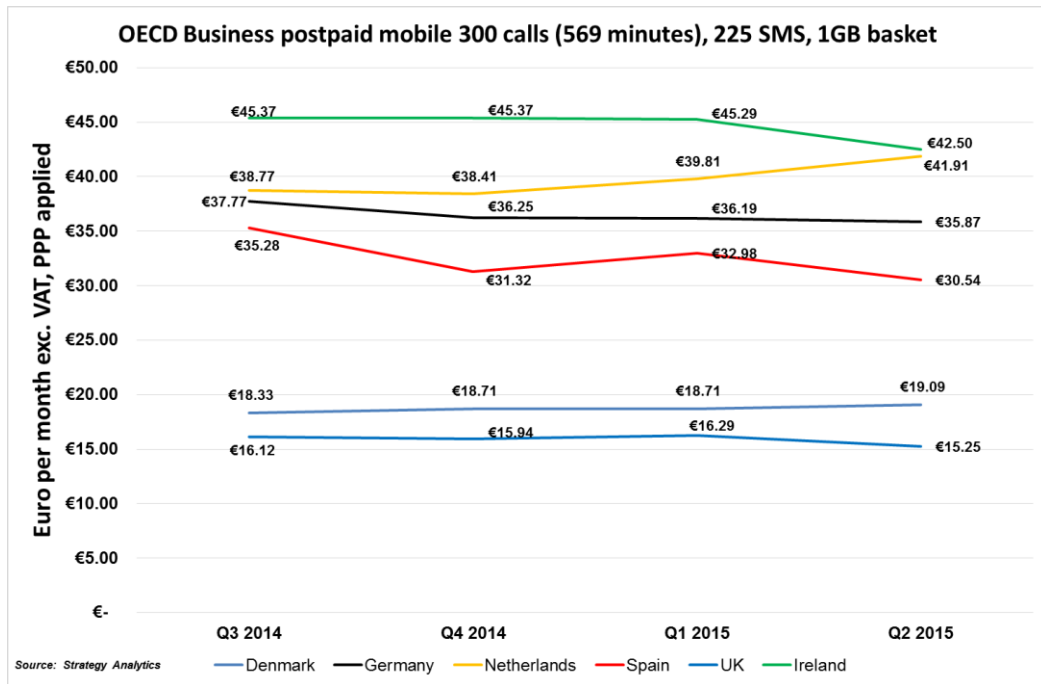
Figure 4.9.6 illustrates Ireland’s ranking alongside five other Western European countries. Ireland ranks in sixth place with an average price of €42.50¹¹² for this particular basket. The average price in Ireland is 38% more expensive than the average price¹¹³ for all of the countries included in the analysis.

¹¹¹ Only tariffs advertised by Vodafone and Three were analysed for business customers. Some operators do not offer services to business customers.

¹¹² As noted previously, average prices used for international comparisons exclude VAT charges.

¹¹³ The average of prices presented in Figure 4.9.6.

Figure 4.9.6 – Business Post-paid Mobile Phone Services Basket (International comparison)



5. Broadcasting

5.1 Overall Broadcasting Market

This broadcasting data is from the Nielsen TV Audience Measurement (TAM) Establishment Survey.¹¹⁴ The survey indicated that there were 1,583,000 TV homes in Ireland in May 2015. Figure 5.1.1 shows the estimated number of TV homes by reception type in May 2014 and May 2015 on the basis of the reception method through which the highest number of TV channels is received. Irish terrestrial DTT only homes represented 10.7% of all TV homes (although 40% of TV homes receive Irish DTT) as of May 2015. Cable/satellite platforms represented the remaining 89.3% of all TV homes in Ireland.¹¹⁵

Figure 5.1.1 – TV Homes by Reception Type¹¹⁶

Reception	May 2015 (000s)	May 2014 (000s)	May 2015 as % of Total TV Homes	% Change May '14 – May '15
Irish Terrestrial	170	156	10.7%	+9.0%
Multi Total	1,413	1,431	89.3%	-1.3%
Analogue Cable/Sat	19	23	1.2%	-17.4%
Digital Cable/Sat	1,394	1,408	88.1%	-1.0%
Total Cable/Sat	1,413	1,431	89.3%	-1.3%
Total TV Homes	1,583	1,587	N/A	-0.3%
RECEPTION: Reception type categories are hierarchically defined and mutually exclusive. A home is classified once within reception type and this is based upon the highest form of reception available within the home.				
Multi Total: Made up of UK DTT / FTA Satellite, Cable, and SKY homes.				
Irish Terrestrial In September 2014 homes which only receive any or all of the following: RTÉ One, RTÉ Two, TV3, TG4, 3e, RTÉ One+1, RTÉ News Now, RTÉ jr via an aerial and a set-top box or an aerial and an integrated digital TV or via Saorsat.				
Cable/Satellite: Includes UK DTT / FTA Satellite, Cable, IPTV and SKY homes. Sky homes based on the possession of SKY boxes, not on being SKY subscribers.				

¹¹⁴ The Establishment Survey is a survey produced by Nielsen TV Audience Measurement (fieldwork is carried out by Behaviours and Attitudes) on behalf of Television Audience Measurement Ireland Ltd (a TV ratings body). The Establishment Survey covers areas such as ownership of TV related equipment, method of TV reception and demographics of TV household individuals such as age etc.

¹¹⁵ MMDS (Multichannel Multipoint Distribution Service) is included under cable/satellite. MMDS is a wireless telecommunications technology, used usually in sparsely populated rural areas, where laying cables is not economically viable. Approximately 301,000 of those reported above as digital cable/sat and total cable/sat are UK DTT/FTA satellite.

¹¹⁶ Source: Nielsen TV Audience Measurement Establishment Survey on behalf of TAM Ireland.

Figure 5.1.2 shows TV homes by reception method¹¹⁷ from May 2013 to May 2015. The percentage of cable/satellite TV homes (this does not include other satellite i.e. respondents who said 'don't know' and satellites that receive foreign language stations including freesat) has averaged 70% over the last two years.¹¹⁸ Television homes that subscribe to other satellite services beside Sky represented 14% of TV homes in May 2015. Reception by IPTV method is relatively low (2% of TV homes). Approximately 40% of TV homes have Irish DTT.

Figure 5.1.2 – TV Homes by Reception Method¹¹⁹

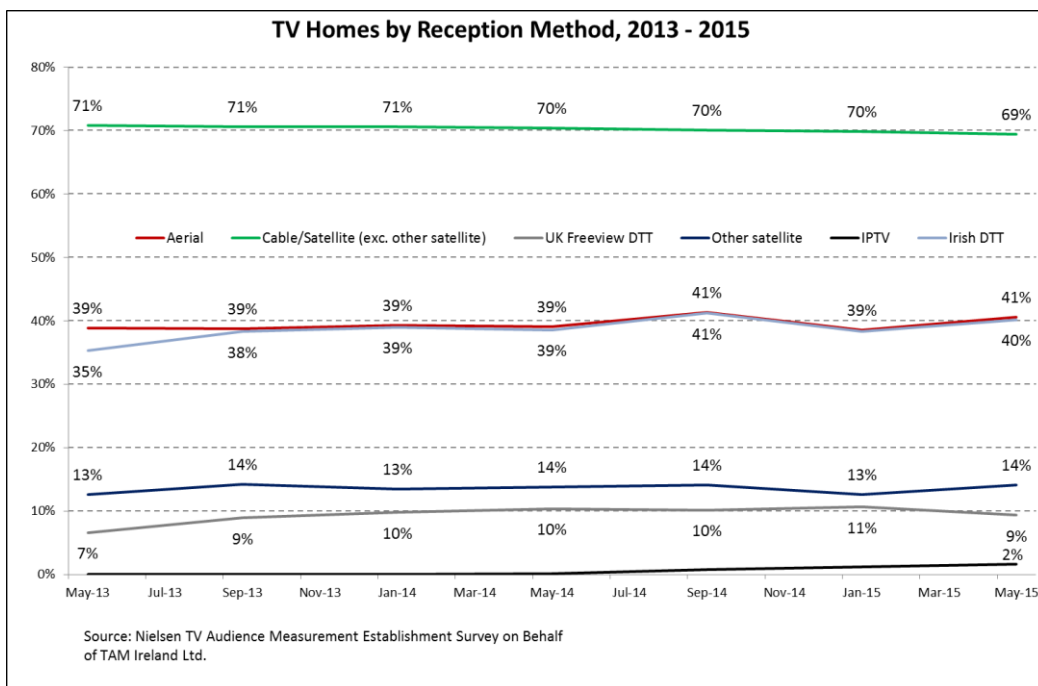


Figure 5.1.3 shows that, the total number of TV homes in May 2015 has remained the same since January 2015. Digital TV homes represent 98.8% of all TV homes compared to 73.4% in May 2011.

¹¹⁷ This is determined by the method by which homes with a TV receive their channels. Each home can have more than one method of reception e.g. aerial and cable or digital satellite, digital satellite and cable, etc. The question is asked for their main and up to 9 TV sets. For this reason, the total for the reception methods adds up to more than 100%.

¹¹⁸ It should be noted that from September 2011 the reporting of the cable/satellite figure has changed. This is because up to September 2011 cable/satellite reception method included homes that had both cable and satellite twice (i.e. (1) cable, (1) satellite). Nielsen now publish homes with cable and satellite as one reception method - as cable or satellite (i.e. cable or satellite (1)).

¹¹⁹ As of November 2012 'Aerial' includes Saorsat homes. Irish DTT includes Saorsat. Cable/satellite includes MMDS and IPTV, excludes UK DTT, Irish DTT and Saorsat.

Figure 5.1.3 – TV Homes 2010 –2015

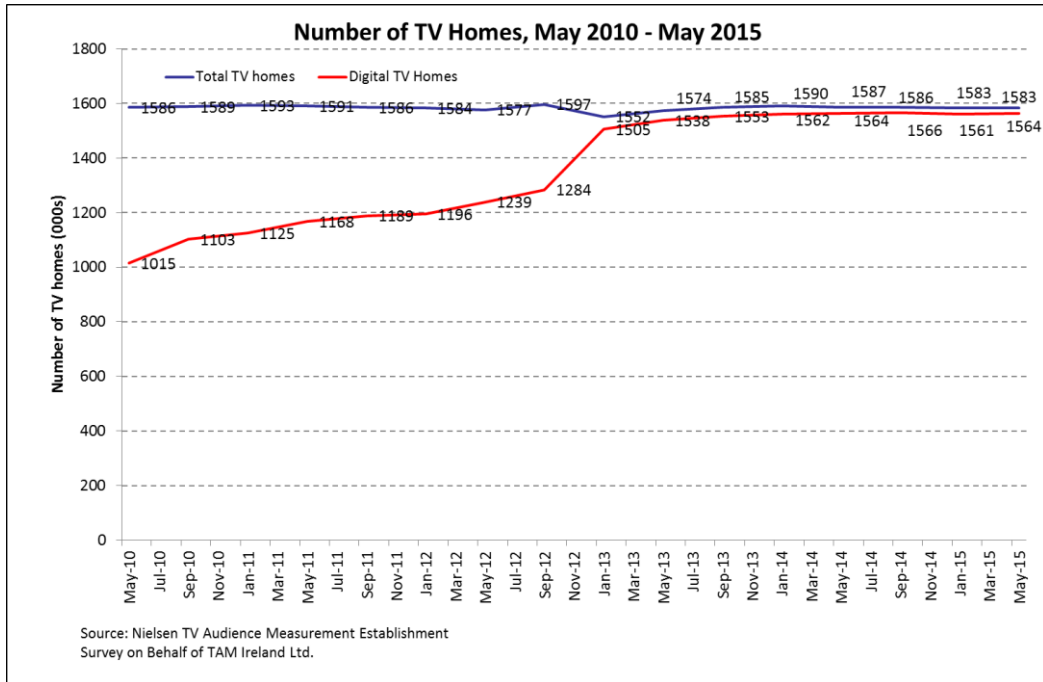


Figure 5.1.4 shows TV homes by DVD¹²⁰, broadband¹²¹ access, game console and PVR¹²² ownership between May 2012 and May 2015. 70% of television homes have a DVD player, but this figure has declined slightly over the last three years; down by four percentage points over the period. Broadband access was present in circa 73% of homes with a television in May 2015. The number of homes with games consoles has decreased over the last three years from 38% to 32%. PVR ownership was 58% in May 2015; up from 43% in May 2012.

¹²⁰ It should be noted that as of Sep 2013 VCR and DVD numbers are combined.

¹²¹ Both fixed and mobile broadband.

¹²² A PVR is an electronic device used to record media digitally. The PVR is also known as a digital video recorder or DVR. A PVR records and plays back television programmes, but, unlike the VCR, it stores the programs in digital rather than analogue format, for example, SKY+Box, or UPC Digital Video Recorder.

Figure 5.1.4 – DVD, Broadband, Games Console and PVR Trends

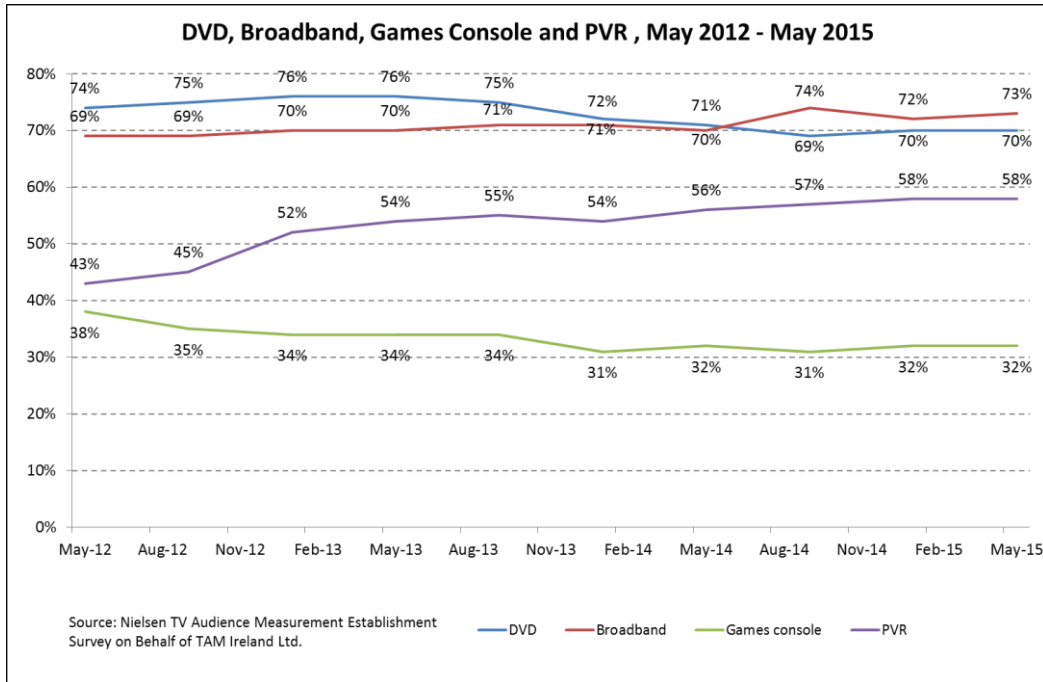
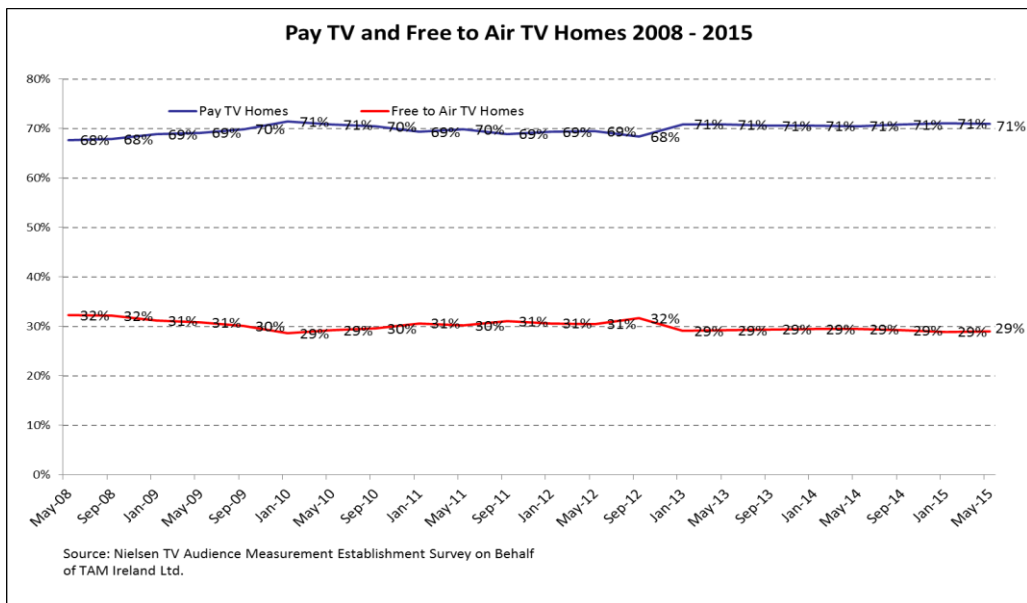


Figure 5.1.5 shows the level of household penetration of pay TV services and free to air TV services in Ireland based on reception method. This chart has been derived by ComReg using Nielsen data and is not a classification used by Nielsen or a classification used as part of the survey itself. Homes with a pay TV (cable, satellite and IPTV homes)¹²³ service have generally been stable since 2010 at 71% average of all TV homes.

Figure 5.1.5 – Pay TV vs Free to Air TV Homes, 2008 - 2015



¹²³ IPTV is included from September 2011.

6. Appendix

Sky Ireland's distribution of subscriptions by type (single play, double play or triple play) is estimated using percentage distribution of Sky Ireland's subscriptions obtained from the market survey data conducted by RED C Research & Marketing Ltd. The fieldwork on ComReg's behalf was carried out on June 22nd-24th, 2015.

1007 respondents¹²⁴ were asked the following question:

- Does the telecommunications service provider, Sky, provide any of the following telecommunications services in your home?
 - TV
 - Internet/Broadband
 - Home Landline Telephone Service

The respondents who stated that Sky provides more than one service (134 respondents) were then asked the following question:

- You mentioned that Sky provides your (x,y and/or z service). Do you receive one bill for these services (if 2 services mentioned) or do you receive one bill for at least two of this services (if 3 services mentioned)?

The respondents who gave the positive answer to the second question (112 respondents) are categorized as bundle subscribers.

Survey results showed that 79.3% of Sky Ireland's subscribers were subscribing to one service, 7.2% to two services and 13.5% to three services.

Table A1: Sky Ireland's distribution of subscriptions by type

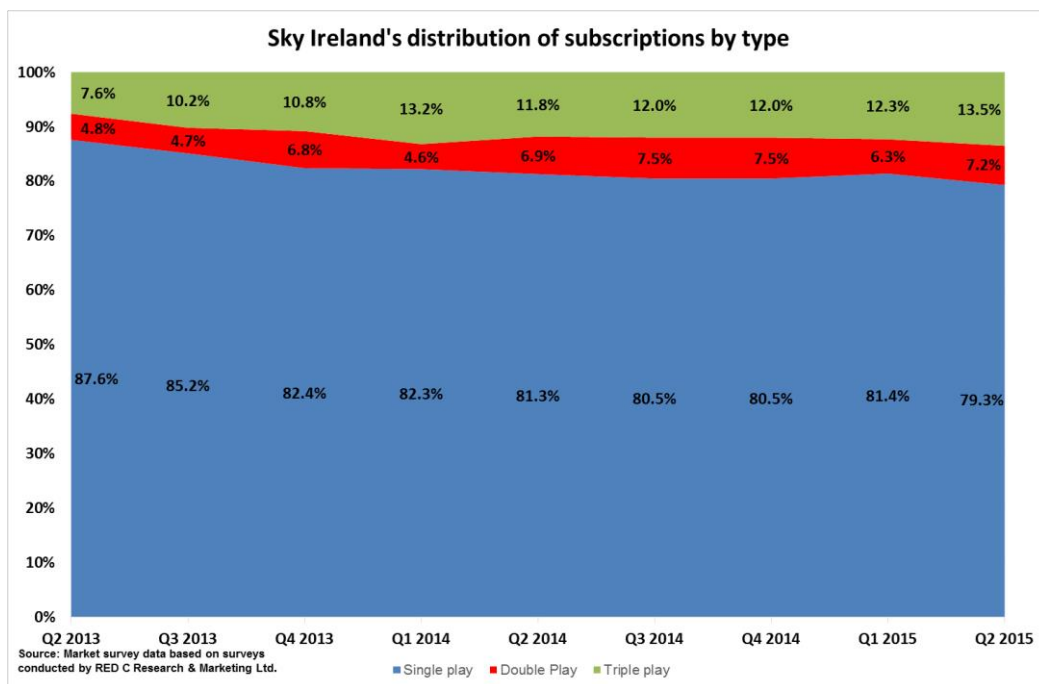
Subscription type (n=540)	Number of Sky's subscriptions	% share of total Sky's subscriptions
TV	369	68.3%
Broadband	38	7.0%
Fixed Voice	21	3.9%
TV and Fixed Voice	3	0.6%
TV and Broadband	30	5.6%
Fixed Voice and Broadband	6	1.1%

¹²⁴ The sample is nationally representative.

TV, Fixed Voice and Broadband	73	13.5%
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Figure A3 shows the estimated distribution of Sky Ireland’s subscriptions by type over the last two years. The number of bundled subscriptions is gradually increasing with double and triple play subscriptions accounting for 20.7% of all Sky Ireland’s subscriptions compared to 12.4% in Q2 2013.

Figure A2: Sky Ireland’s distribution of subscriptions by type, Q2 2013 – Q2 2015



The following table lists Respondents who submitted data which was used to produce Q2 2015 quarterly report.

Table A3: List of Respondents

Respondent Name (N=39)
AirSpeed Telecom
AT&T Global Network Services Ireland Ltd.
Ats Voice Ltd
Blue Face Ltd
BT Communications Ireland Ltd
Casey Cablevision Ltd
Colt Telecoms
Crossan CableComm
Digitalforge

Digiweb group
Edge Telecommunications Ltd
eircom Ltd
E-Net
Equant operations in Ireland (EGN BV and ENS Ltd)
ESB Telecoms
EuNetworks Ireland Private Fiber Ltd
Fastcom Broadband Ltd
Fulnett Limited t/a Strencom
IFA Telecom
Imagine Group
Level 3 Communications (Ireland) Limited
Lycamobile Ireland Ltd
Magnet Networks
Meteor Mobile Communications
Modeva Networks
Nova Networks Ltd
Onwave Limited
PermaNet
Postfone
Pure Telecom
Rapid Broadband Ltd
Ripplecom
Sky Ireland
SprintLink Ireland Limited
Tesco Mobile Ireland Ltd
Three Ireland (Hutchison) Limited
UPC Communications Ireland Limited
Verizon Ireland Limited
Vodafone Ireland