



World Broadband Statistics

Q4 2015

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1 Introduction

The end of Q4 2015 saw a further steady growth of fixed broadband subscribers with the global total reaching 751m.

The main trends that we can spot this quarter:

- China has swapped nearly South Korea sized copper subscriber base to FTTH in one quarter.
- Among the largest FTTH markets Vietnam stands out with a 25% quarterly growth, having nearly quadrupled its FTTH broadband connections y-o-y.
- End to end copper decline is accelerating, while fibre is growing at an increasing rate. This quarter we observed an annual growth rate of over 60% for FTTH globally.
- There are now more FTTH subscribers worldwide than those using cable broadband technologies.
- Italy has recorded a 33% quarterly growth in VDSL subscribers this quarter, remaining top of the list in this category globally.

Note: Our global broadband subscriber figures now include Kazakhstan, Kenya, Nepal and Uganda.

Global and regional perspective

Global trends

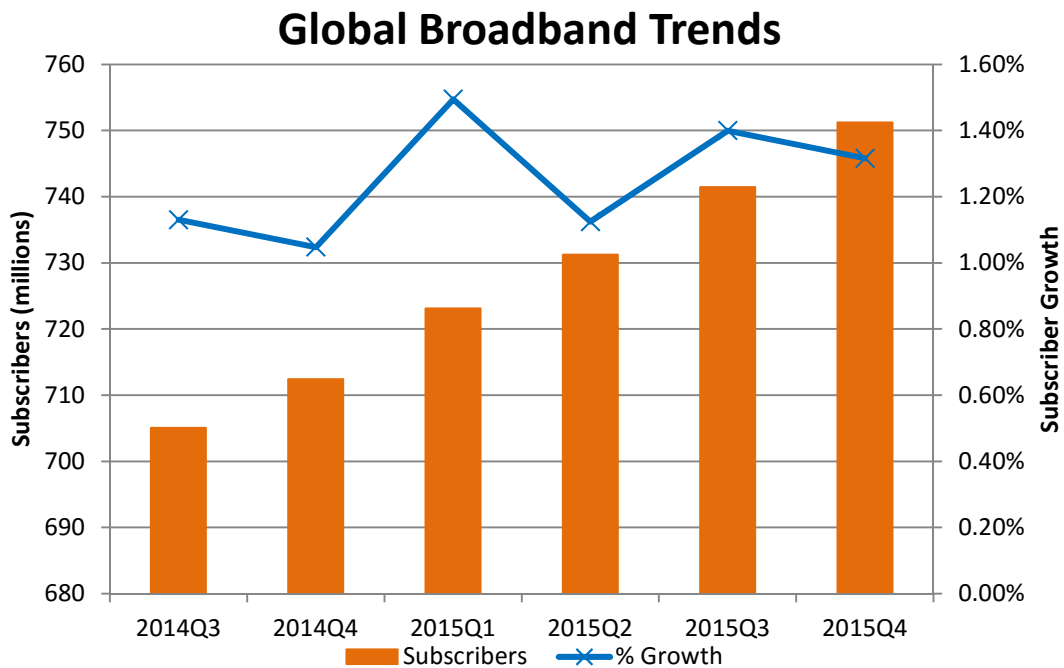


Figure 1: World broadband subscriber numbers with growth. Source – Point Topic.

In Q4 2015, the quarterly growth (1.32%) has recovered compared to Q4 2014 albeit it was slightly lower than in Q3 2015. This quarter the growth was driven mostly by parts of Asia, Europe and North America.

Quarter	Subscribers	Net adds	% Growth
Q3 2014	705,058,437	7,883,273	1.13%
Q4 2014	712,446,223	7,387,786	1.05%
Q1 2015	723,098,079	10,651,856	1.50%
Q2 2015	731,232,355	8,134,276	1.12%
Q3 2015	741,470,524	10,238,169	1.40%
Q4 2015	751,233,364	9,762,840	1.32%

Figure 2: World broadband subscriber quarterly growth figures. Source – Point Topic.

Regional trends

Regional Market Share

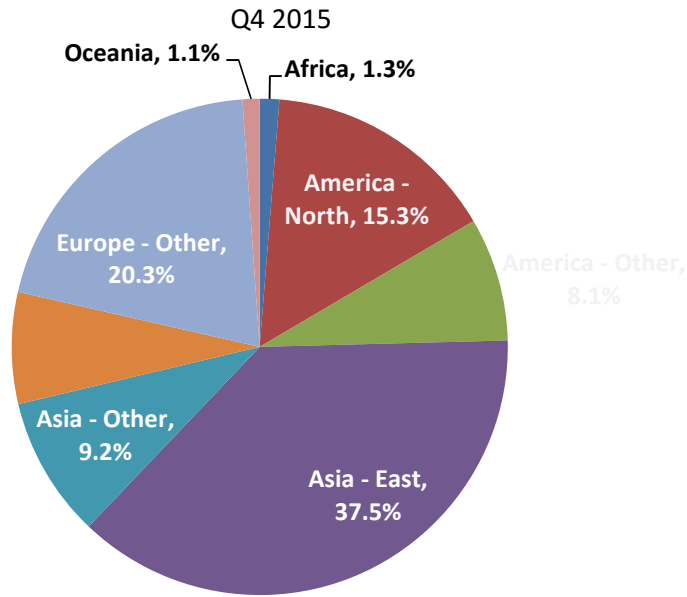


Figure 3: Share of world broadband subscribers by region, Q4 2015. Source – Point Topic.

While regional market shares remained more or less stable in Q4 2015 compared to Q3 2015, Asia – Other and all regions of Europe saw their share of net additions increase this quarter. This was partly determined by high quarterly growth in Vietnam, Indonesia, Philippines, Portugal, Slovenia and a number of other countries.

Net adds % by Region

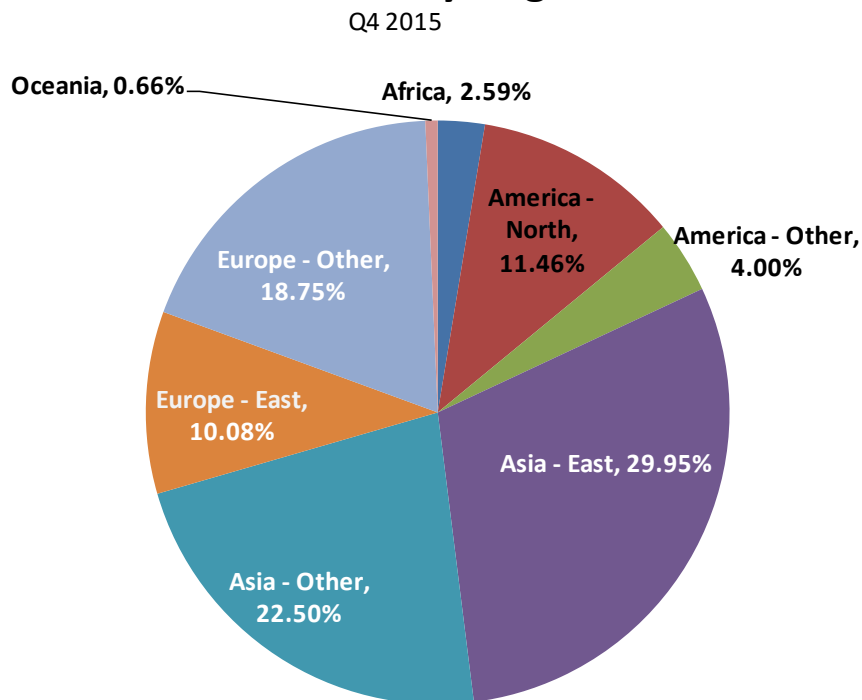


Figure 4: Share of quarterly growth by region, Q4 2015. Source – Point Topic.

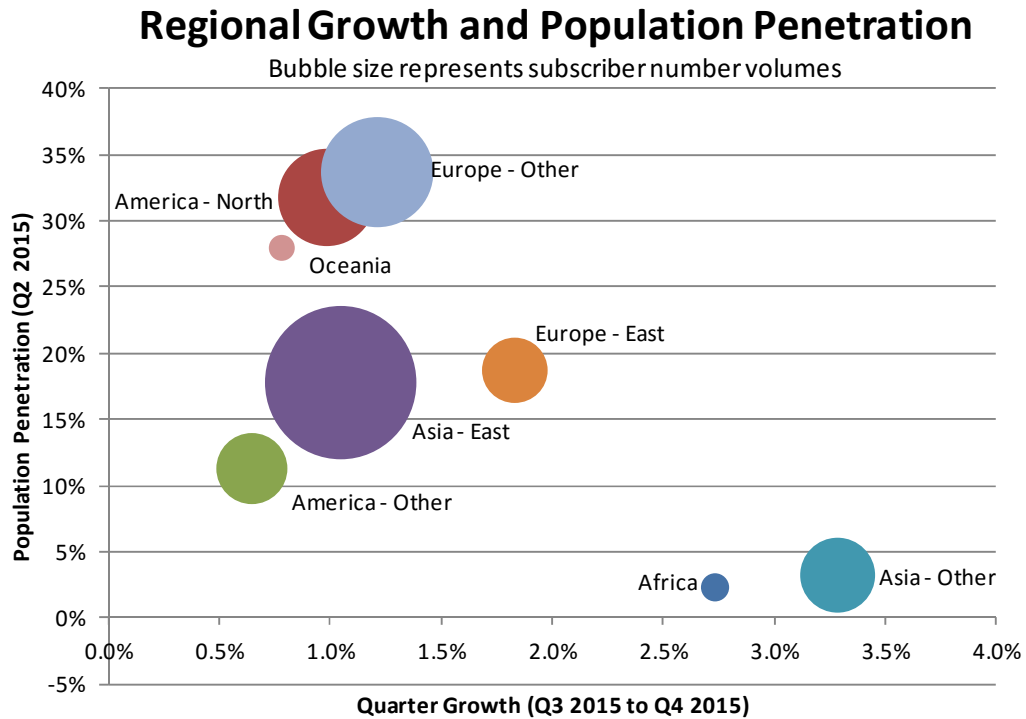


Figure 5: Penetration and quarterly growth by region (size of bubble represents subscriber volume in Q4 2015). Source – Point Topic.

East Asia slipped further from its leading position in terms of the quarterly growth towards the bottom of the league, mainly due to the slowing growth in China. Nevertheless, the region remains the largest broadband market by far.

Technology trends

Copper based technologies (DSL, ADSL and ADSL2+) no longer have the dominant share worldwide. In terms of any connection with fibre in the local loop there are now more infrastructure lines in the ground than end to end copper.

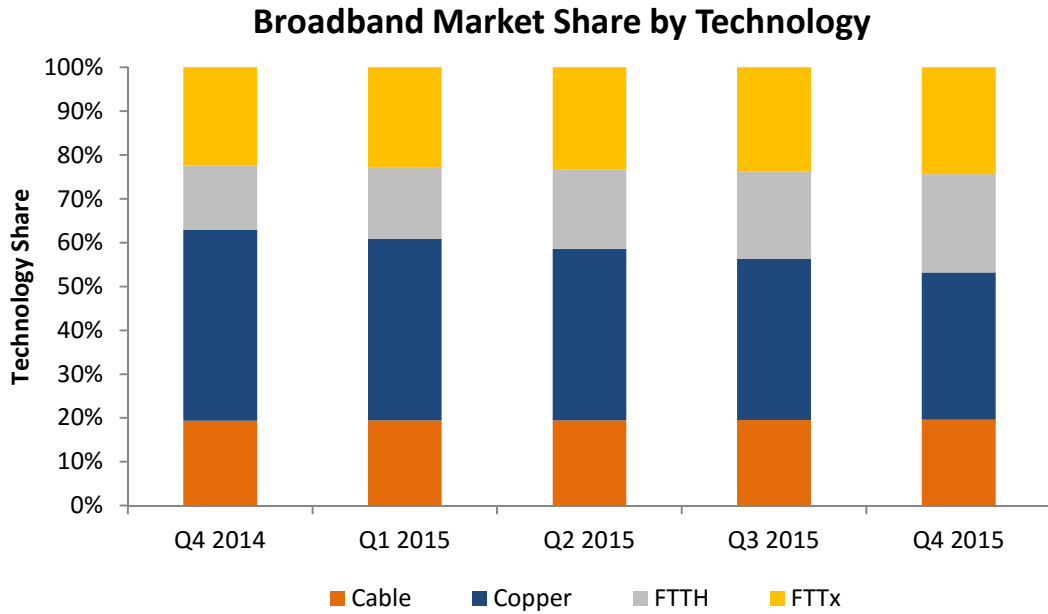


Figure 6: Technology market share. Source – Point Topic.

If we look at the annual changes, copper decline continued to accelerate – from 15% in Q3 2015 to nearly 19% this quarter, while FTTH growth jumped further to nearly 61% (from 56% last quarter).

Growth in Subscribers by Technology

Q4 2014 to Q4 2015

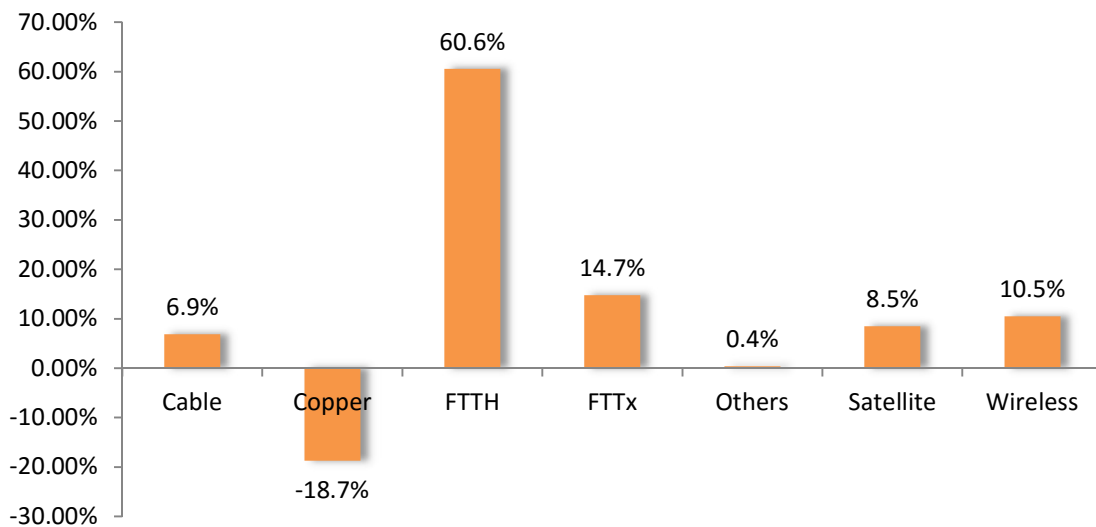


Figure 7: Annual growth in technology subscriber numbers (%). Source – Point Topic.

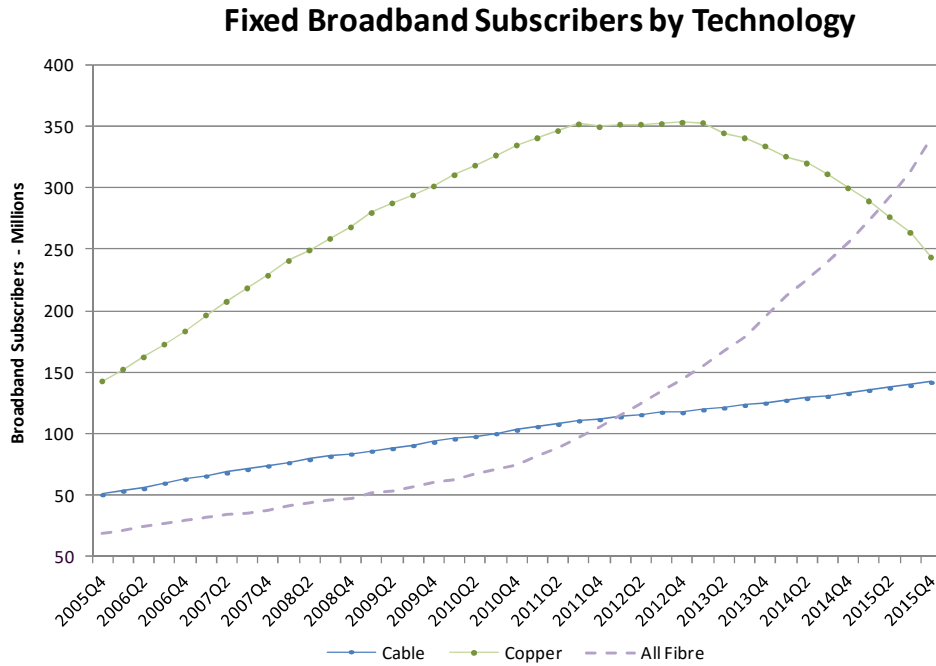


Figure 8: Trends in broadband subscriber numbers by technology. Source – Point Topic.

(NB: we include FTTx+VDSL subscribers in the fibre category)

All fibre based connections (FTTH + FTTx) have exceeded the number of connected copper lines several quarters ago, while FTTH now has more subscribers than cable. China alone has contributed to this trend dramatically by adding another 18 million FTTH subscribers this quarter and a total of 51 million y-o-y.

With an increasing number of fibre network upgrades to gigabit speeds announced recently by a number of operators worldwide, this trend is likely to continue, although some of the cable providers are responding with Docsis 3.1 deployments.

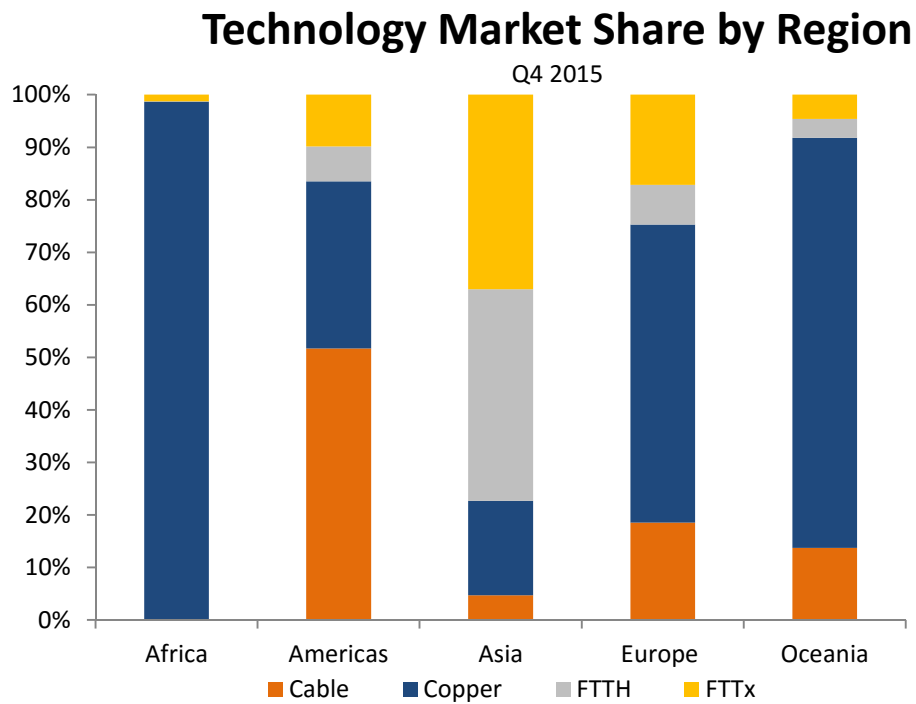


Figure 9: Technology market share by region, Q4 2015. Source – Point Topic.

In the current quarter we are seeing a higher proportion of the FTTH connections in Europe compared to Q3 2015, mainly driven by high FTTH growth in Spain, France and Switzerland (14-15%).

Top broadband countries

Number of subscribers

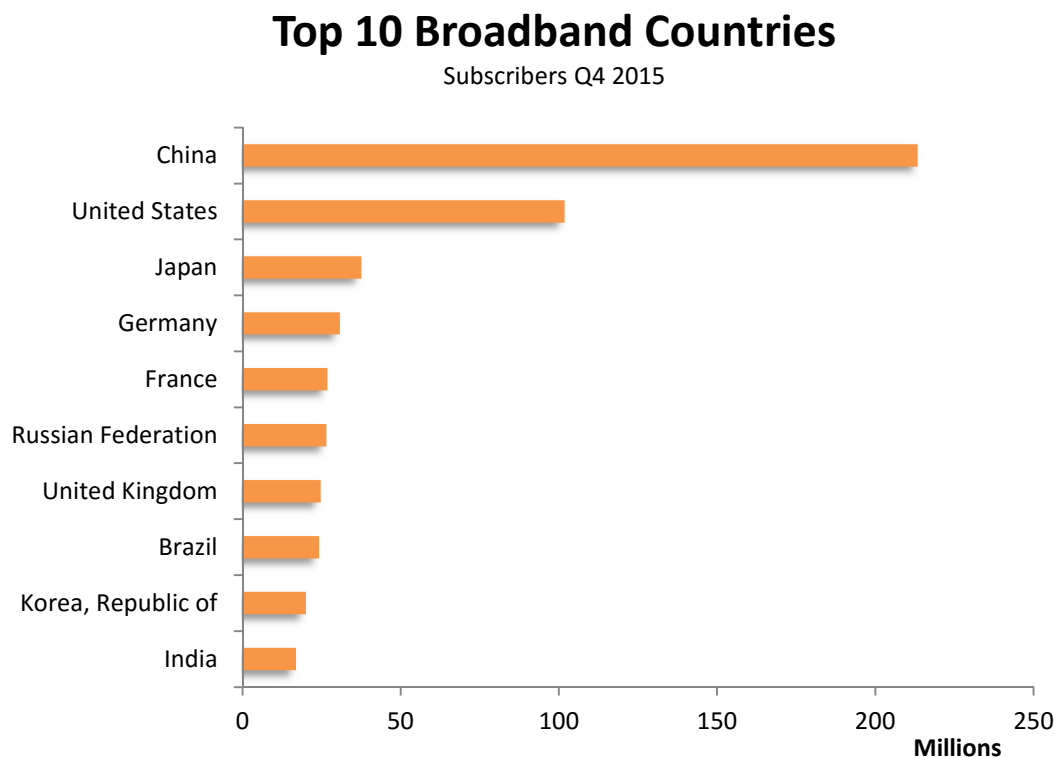


Figure 10: Country ranking by broadband subscribers in Q4 2015. Source – Point Topic.

The US is the second country which passed 100M broadband connections several quarters ago. It will be a while before the next contender reaches the same milestone. As before, France faces serious competition from the Russian Federation, United Kingdom and Brazil for the fifth position in the rating.

Broadband subscriber net additions

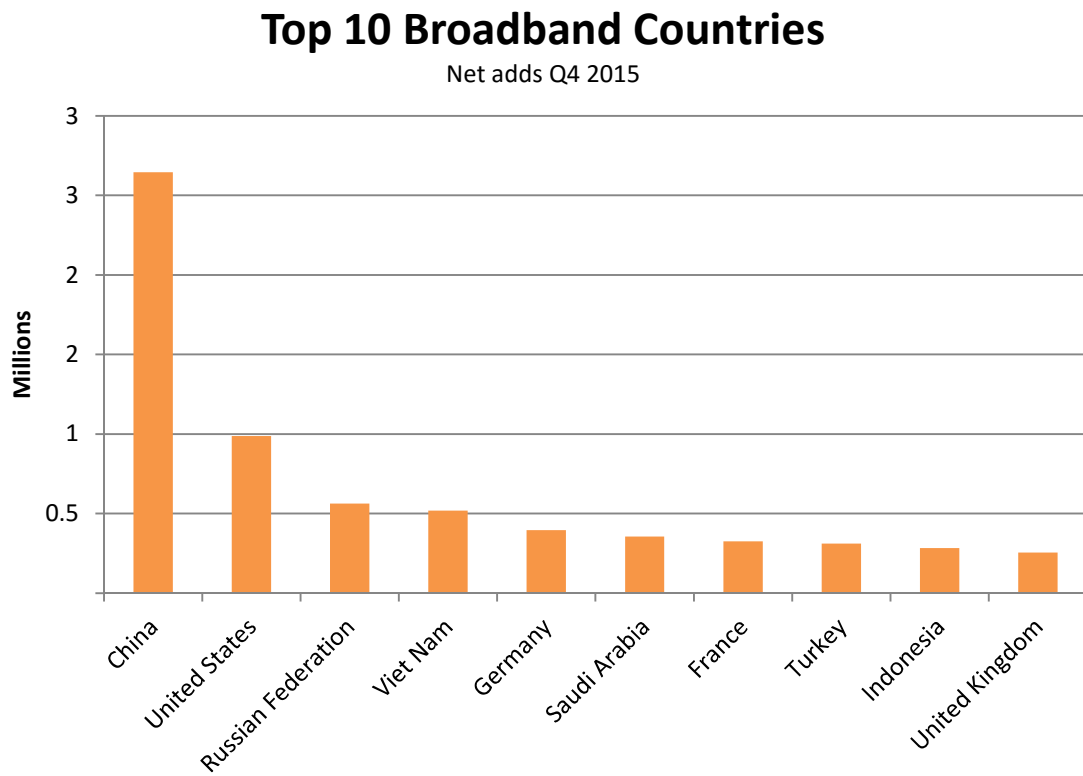


Figure 11: Broadband subscribers added in Q4 2015. Source – Point Topic.

Population penetration

Population penetration is generally highest in Europe partly due to the relatively small households (often less than 3 people on average) and high living standards. The high availability and low cost of services also has a significant impact, particularly once the point of growth inflexion is passed as is the case in most 'developed' countries.

Top 10 Broadband Countries

Population Penetration Q4 2015

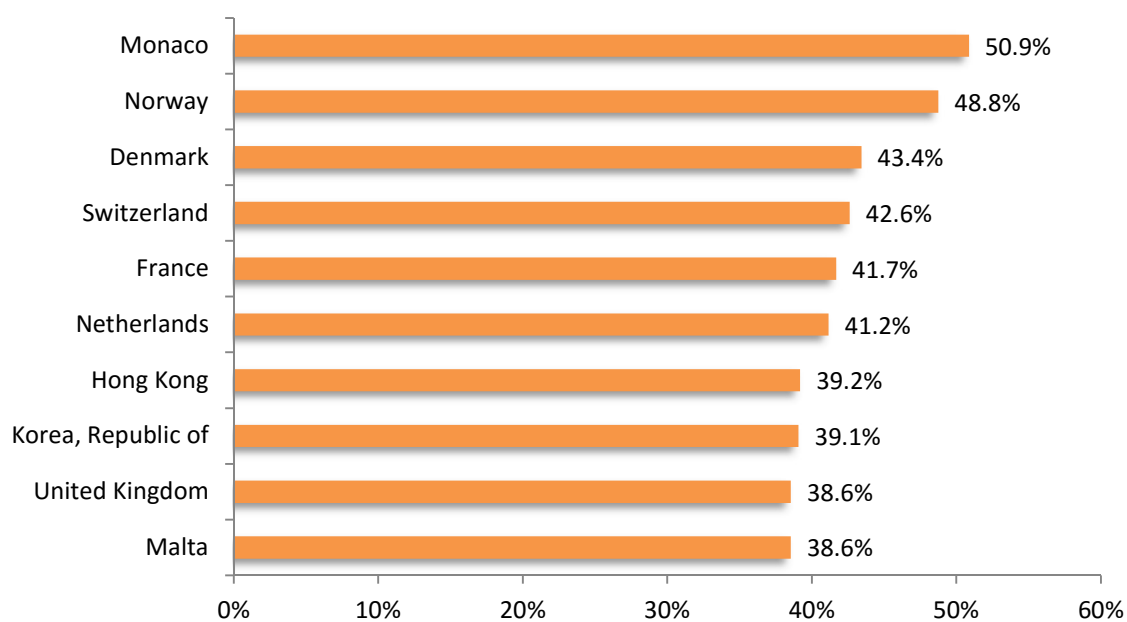


Figure 13: Top countries by population penetration in Q4 2015. Source – Point Topic.

Methodology and supporting material

Data collection

Point Topic aims to offer the most complete, up-to-date and accurate source for world broadband statistics and estimates. In order to do this, we collect quarterly statistics from major primary suppliers of DSL, cable, FTTH and FTTx broadband services. We also collect data from service providers who resell products provided by these primary suppliers. Many operators now publish quarterly numbers as part of their regular reporting cycle. Numerous others provide us with their numbers via email and personal communication. We are, as always, most grateful to all of them for having taken the time to do so.

Some operators continue to release annual reports as opposed to quarterly ones. Some also choose to aggregate subscriber trends into overall totals, avoiding break-downs by technology. In these cases, Point Topic has continued conservatively estimating broadband take-up. Key sources for such estimated totals typically include prior and partial reports from the operators themselves. National Regulatory Authorities (NRAs) also frequently report DSL and other broadband statistics, although often with a greater time delay. Despite any difficulties that may arise as a consequence of this publication schedule, Point Topic will continue to provide the most up-to-date broadband statistics and estimates in our reports. In cases where these sources are unavailable, DSL and cable service providers often give useful indicators, as do estimates quoted by the trade press. Where we do have secondary estimates, we try as far as is possible to trace these to their original source.

During the research process for the latest quarterly statistics report, we often return to preceding quarters with the aim of synchronising earlier estimates with official sources. Some changes to previously reported numbers were necessary and deviation from earlier reports is also possible, sometimes resulting in backdated changes in quarterly growth and totals. We shall continue to maintain close correspondence with broadband operators, national regulators and industry organisations in order to avoid ambiguities and also so as to minimise the number of restatements. Some of the historical statistics will be different from those published in earlier reports and contained within Excel spreadsheet datasets. Point Topic's Global Broadband Statistics service (GBS) contains the most up-to-date information and we endeavour to continuously update its data entries on an ongoing basis. Generally, precedence should be given to the figures contained in the most recent version of this report and the figures in GBS.

Restatement reports with details on updates made to figures are available on our website. The first in the series of restatement reports relates to our Q3 2011 broadband statistics. Subsequent reports are published on a quarterly basis, to coincide with the release of our broadband numbers.

Data collected for individual operators may be aggregated in GBS in order to derive country and region totals, growth and penetration rates, market shares of operators and net additions. Full details at the operator level are also contained in the GBS service, which is available to Point Topic subscribers.

Variations in coverage and definitions

In principle, the definition of broadband internet refers to connections with downstream speeds of no less than 256 Kbps. For DSL statistics, all lines which are described by their suppliers as "DSL" are included. In practice the great majority of these are ADSL, variants such as ADSL2+ or other such versions of ADSL. The main exceptions are:

- In most cases - VDSL lines, of which Deutsche Telekom is a major reporting supplier
- Symmetrical DSL lines, offered mainly by Competitive Local Exchange Carriers such as Covad in the USA and their counterparts in other countries

Occasionally, there are contradictions between operator and regulator reports. This happens in South Korea, for example, where the operators typically report broadband subscriptions as either DSL or cable modem, whereas the regulator chooses to break this down further into an "apartment LAN" or "A-LAN" category. A-LAN is defined as using a shared fibre or broadband copper connection to the apartment block with Ethernet-based distribution within the apartment block. Operator classifications of these A-LAN subscriptions vary, but they are often included as DSL lines. We have classified all these A-LAN lines as FTTx, although a proportion of them do use copper rather than fibre backhaul.

Other reported statistics may combine broadband lines of different technology types. If a number is an aggregate of major broadband types, such as DSL and cable modem, we generally break up such an aggregate and state take-up for each category separately in GBS. In cases where there is only a marginal proportion using a different technology, the aggregate is kept and assigned to the larger group. These cases are usually noted with a comment in the source 'Notes' of (GBS v2).

Several quarters ago, we changed our regional definitions to reflect the UN standard regional structures. This has had the most noticeable impact on our reporting in Europe. We previously reported trends in Eastern and Western Europe only. We now report the UN definition of Eastern and Western Europe, and classify Northern and Southern Europe as 'Other Europe'.

If you believe there are any errors and omissions please notify us by sending an email to info@point-topic.com