

2. TARGETING NEW GROWTH AREAS

2.3. Telecommunication networks

Broadband Internet and mobile phones have dramatically increased opportunities for long-distance communications and often now replace face-to-face interaction. Information can now be transmitted at any time and from anywhere via e-mail, conference calls, and virtual meetings. Improved communication channels can reduce commuting and business travel and thus the impact of productive activities on the environment. Telecommunication networks, therefore, are an important infrastructure for green growth.

Since 2005, the two major growth areas in telecommunication networks have been mobile and broadband. Mobile subscriptions grew at an annual rate of 10% over 2005-07, bringing the number of OECD-area mobile subscriptions to 1.14 billion by 2007. Over the same period, the number of fixed telephone access paths (analogue + ISDN lines) declined by 3.4% a year. Together, communications access paths grew at an annual rate of 7.4%. The number of broadband subscribers has grown by 22.3% a year since 2005, and this has helped protect fixed line operators from much more dramatic losses. It has also increased the value of cable networks around the world.

The total number of communications paths (fixed, mobile, and broadband) in the OECD area reached 1.6 billion in 2007 for just over 1 billion inhabitants. Mobile and broadband accounted for 74% of all communication subscriptions in 2007 (61% for mobile and 13% for broadband). Standard phone lines have dropped to 26%. This is a dramatic turnaround from 2000 when fixed line subscribers outnumbered mobile subscribers. Mobile's effective penetration rate is 96.1 subscribers per 100 inhabitants. Italy has the highest penetration rate with 151 subscribers per 100 inhabitants. Only nine countries had less than one subscription per person.

In 2005, dial-up connections still accounted for 40% of fixed Internet connections but by 2007 they accounted for only 10%. In Korea dial-up has practically disappeared and now accounts for fewer than two out of every 1 000 Internet connections. DSL is the leading broadband technology, accounting for 60% of all broadband subscriptions in December 2008. Cable represents 28% and fibre-based connections 10%. The remaining 2% of connections are fixed-wireless, satellite and broadband over power lines. At the end of 2008 there were 22.4 broadband subscribers per 100 inhabitants in the OECD area.

Telecommunication networks

In the past, the penetration of standard access lines provided a reasonable indication of the extent to which basic telecommunication connections were available to users. Today, the take-up of ISDN (integrated services digital network) in most OECD countries has made this indicator inappropriate. A measure is the penetration of telecommunication paths, including those made possible by ISDN. To appreciate overall telecommunication penetration rates across the OECD area, it is also increasingly necessary to take into account the development of mobile communication networks and of broadband Internet access. The two leading technologies currently used to provide high-speed Internet access are digital subscriber lines (DSL) and cable modem. Other broadband connections include satellite broadband Internet access, fibre-to-home Internet access, Ethernet LANs (local areas networks), and fixed wireless access. The data for broadband subscribers include business and residential connections.

A significant shift in fixed broadband technologies occurred in 2008. In June of that year, Japan and Korea became the first two countries to have more fibre-based subscriptions than either DSL or cable.

Source

OECD (2009), *OECD Communications Outlook*, OECD, Paris, www.oecd.org/sti/telecom/outlook.

Going further

OECD, *Telecommunications Database*, 2009.

OECD, *Broadband Statistics*, www.oecd.org/sti/ict/broadband.

OECD, *ICT Key Indicators*, www.oecd.org/sti/ICTindicators.

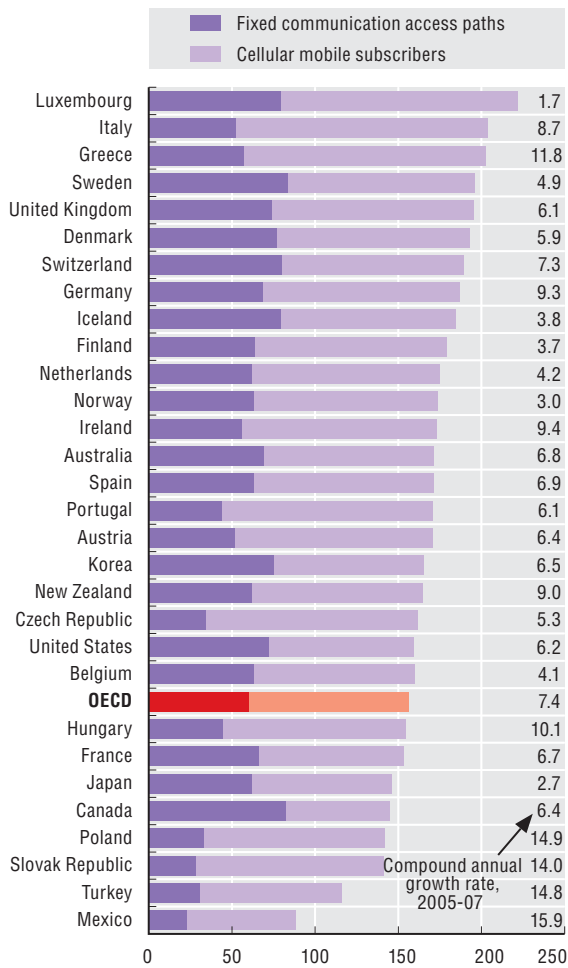
Figure notes

Fixed communication access paths = analogue lines + ISDN lines + DSL + cable modem + fibre/LAN.

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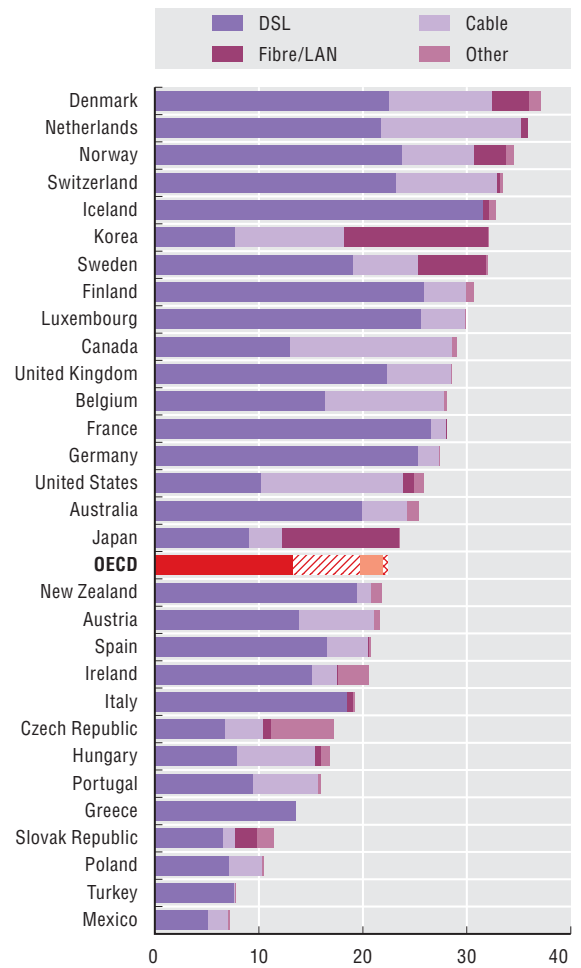
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Communication access per 100 inhabitants, 2007



StatLink <http://dx.doi.org/10.1787/743035742321>

Broadband subscribers in OECD countries, per 100 inhabitants, by technology, December 2008



StatLink <http://dx.doi.org/10.1787/743043842747>



From:
**OECD Science, Technology and Industry
Scoreboard 2009**

Access the complete publication at:
https://doi.org/10.1787/sti_scoreboard-2009-en

Please cite this chapter as:

OECD (2009), "Telecommunication networks", in *OECD Science, Technology and Industry Scoreboard 2009*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/sti_scoreboard-2009-20-en

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