

A ICT Infrastructure

This chapter examines trends in the available telecommunication and internet networks (**ICT infrastructure**) measured by number of telephone and broadband subscriptions. Data used in this chapter are collected from the telecommunication or Internet service providers (ISP) and should be distinguished from data based on ICT users' surveys.

Reference period: end of the year

Definitions:

- **Fixed telephone subscription** refers to a natural person or legal entity connected to the public switched telephone network (PSTN). Number of fixed telephone subscriptions is measured as a number of active **fixed telephone lines**. *The fixed telephone lines are further classified as residential telephone lines, business telephone lines and public payphones. VoIP subscriptions are not included here.*
- **Mobile telephone subscription** refers to a natural person or legal entity connected to a public mobile telephone service that provides access to the PSTN using cellular technology and offering voice communication. Number of mobile telephone subscriptions is measured as a number of **SIM cards**. *Both post-paid and active prepaid SIM cards that have been used during the last three months are included.*
- **Broadband subscription** includes both **fixed** (wired and wireless) and **mobile** permanently available access to the Internet with nominal speed 256 or more kbit/s, in one or both directions. Broadband subscription by technology includes:
 - **xDSL (e.g. ADSL) lines** - technology using digital subscriber line (DSL) services and enabling broadband connectivity over ordinary copper telephone lines.
 - **Cable modem (CATV)** - internet service using a modem attached to a cable television network.
 - **Fixed wireless access (FWA)** - the terrestrial internet connection by means of a radio line both in licensed frequency bands (e.g. WiMAX) and in frequency bands with no licence required (Wi-Fi). It is characteristic by the placing of the end point device on a fixed location. It is included here only if these services are used as the transport mechanism of ISP – often the case in the Czech Republic.
 - **Mobile access** - dedicated data service over mobile networks within the CDMA or UMTS standards offered separately from voice services, either as a standalone service (e.g. using a data card such as a USB modem/dongle) or as an add-on data package to voice services that requires an additional subscription.
 - **Fibre (FTTx)** - optical connections of the type of FTTH (Fibre to the Home), when the optical fibre takes the optical connectivity to the dwelling, and FTTB (Fibre to the Building), when the optical fibre takes the optical connectivity to the building only and indoor the connection is distributed by other means.
 - **Other technologies** - Leased (dedicated) lines provided by telecommunication operators; Satellite connection; Broadband-over-powerline (BPL); Ethernet LAN etc.
- **The telephone traffic** originated in fixed or mobile telephone networks is measured by means of the number of actually called minutes (real minutes of calling), not the invoiced ones during the reference year.

Statistical information from the **Czech Telecommunication Office** was used as main data source for the Czech Republic.

The **International Telecommunication Union**, **EC** and **OECD** online databases were used for the international comparison. More information can be found at: <http://www.itu.int/ITU-D/ict/> or <http://www.oecd.org/sti/ict/broadband>

Further information on statistics about ICT infrastructure can be found on the following dedicated website (temporarily only in Czech):

http://www.czso.cz/csu/redakce.nsf/i/telekomunikacni_a_internetova_infrastruktura

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Tab. A1 Telecommunication infrastructure in the Czech Republic

thous./mil.

	2008	2009	2010
fixed telephone lines (thous.)	2 264	2 070	1 889
residential lines	1 273	1 161	989
business lines	969	889	882
others	22	20	18
mobile phone subscriptions (thous. active SIM cards)	13 780	14 217	14 359
pre-paid	7 294	7 207	7 072
post-paid	6 482	7 010	7 287
outgoing fixed telephone traffic (mil. minutes)	3 389	2 964	2 418
domestic	3 170	2 793	2 274
international	219	171	144
outgoing mobile phone traffic (mil. minutes)	12 698	13 824	14 954
domestic	12 351	13 509	14 638
international	347	315	316

Figure A1 Telephone subscriptions per 100 inhabitants

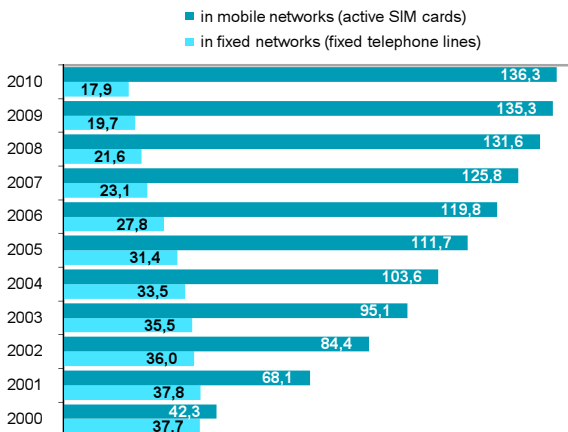
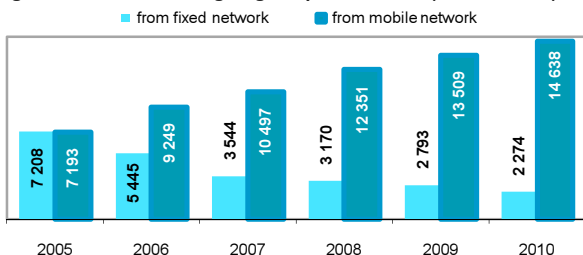


Figure A2 Domestic outgoing telephone traffic (mil. minutes)



Source: Czech Telecommunication Office

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Figure A3 Fixed telephone lines per 100 inhabitants

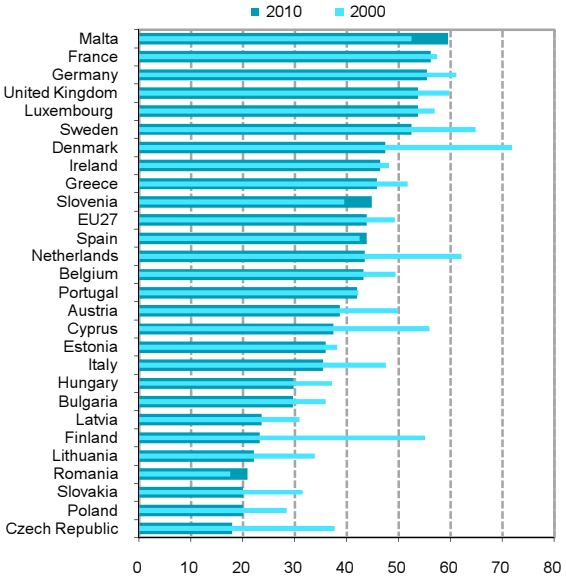
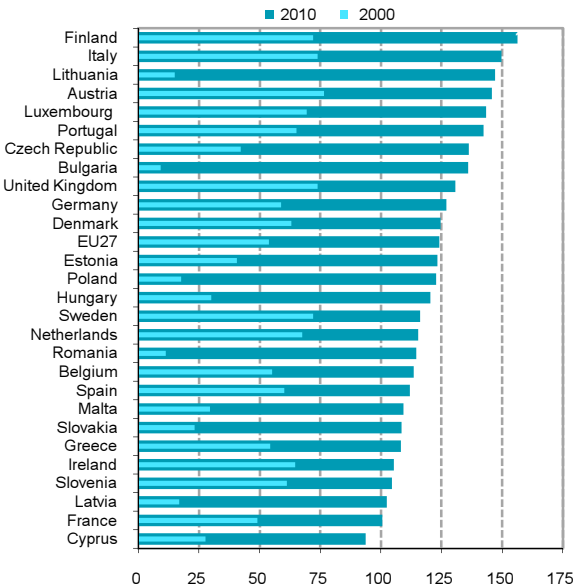


Figure A4 Mobile phone subscriptions per 100 inhabitants



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Tab. A2 Broadband subscriptions in the Czech Republic

	thous.		
	2008	2009	2010
Total	2 036	2 376	2 782
by technology			
DSL (ADSL) lines	697	778	859
Fixed wireless access (FWA)	610	680	720
Cable modem (CATV)	383	442	481
Mobile networks (CDMA or UMTS)*	277	371	542
Fibre (FTTx)	70	105	180

Figure A5 Broadband subscriptions by technology (thous.)

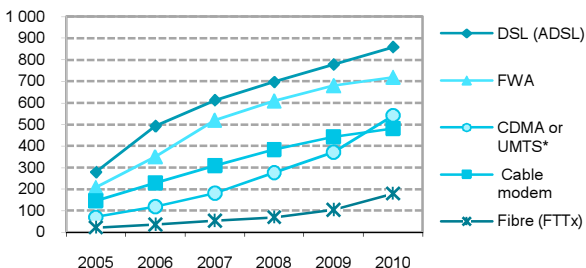
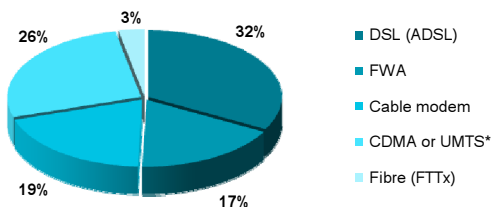
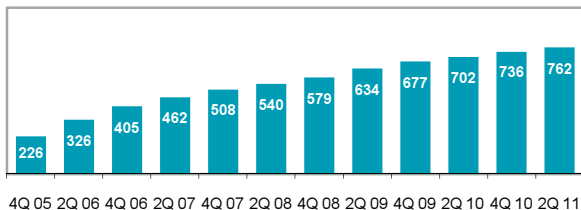


Figure A6 Broadband subscriptions by technology (%); 2010



* refers only to subscriptions (active internet users) to dedicated data services over a mobile network using CDMA 2000 or UMTS standards that are purchased separately from voice services, either as a standalone service (e.g. using a data card such as a USB modem/dongle) or as an add-on data package to voice services that requires an additional subscription.

Figure A7 ADSL internet subscriptions (thous.)

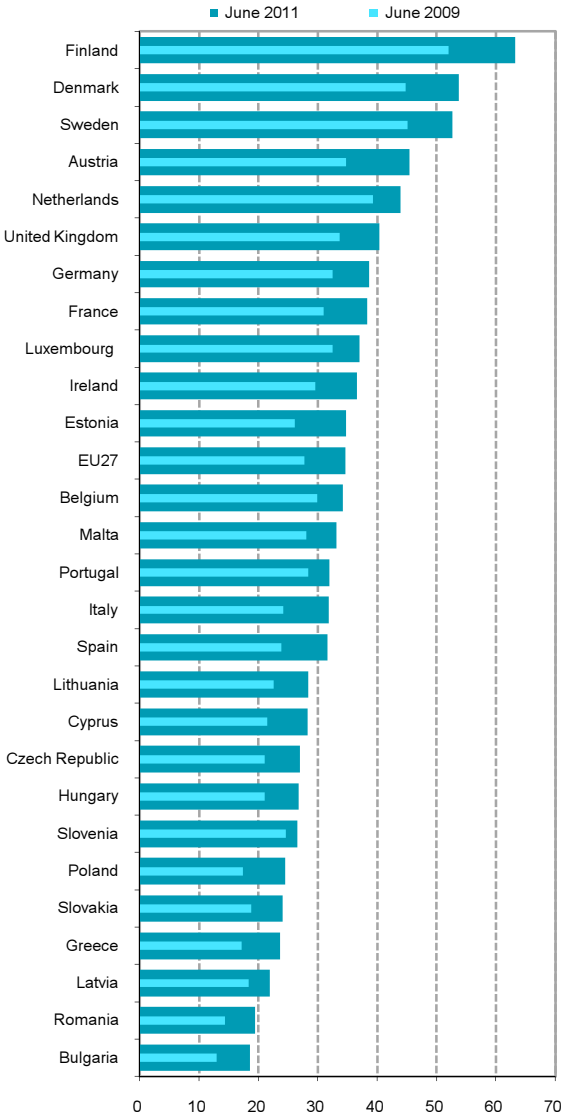


Source: TO2 - Telefónica O2 Czech Republic, Inc.

Source: Czech Telecommunication Office

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Figure A8 Broadband subscriptions per 100 inhabitants

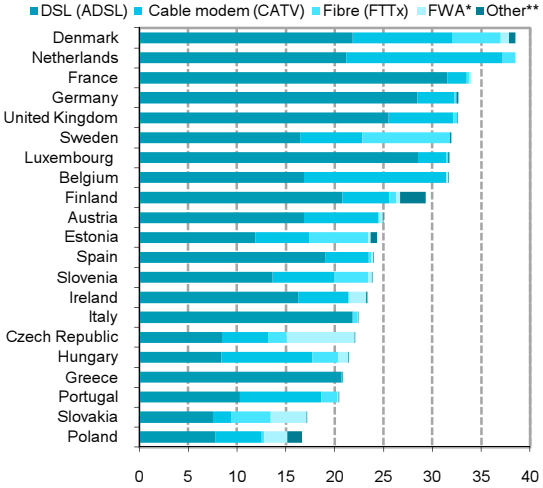


Note: Includes also mobile broadband subscription but only active internet users to dedicated data services using CDMA 2000 or UMTS standards that are purchased separately from voice service, either as a standalone service (e.g. using a data card such as a USB modem/dongle) or as an add-on data package to voice services that requires an additional subscription.

Source: European Commission, 2012

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Figure A9 Fixed broadband subscriptions per 100 inhabitants by technology; June 2011

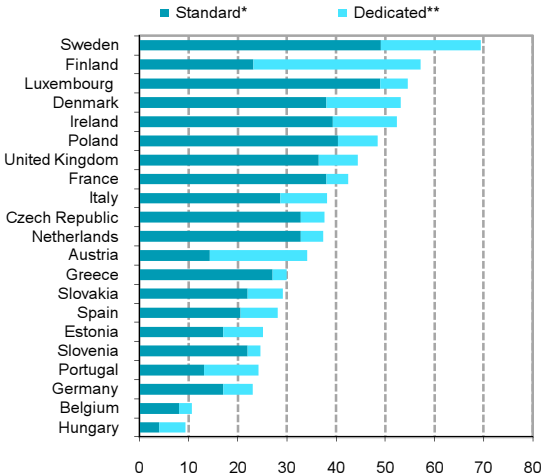


*Only if it is used as the transport technology subscribed from the ISP by means of a radio line incl. usage of Wi-Fi based technologies.

**Includes leased lines (circuits) and BPL technologies

Note: Not for all countries data available for all kinds of broadband connection

Figure A10 Mobile broadband subscriptions per 100 inhabitants; June 2011



* includes mobile internet subscriptions on a pay-per-use basis.

** includes mobile internet subscriptions with a separate monthly data plans.

Source: CZSO, OECD and European Commission, 2012