

## B ICT expenditure and investment

### B. 1 Investment in ICT equipment and software

Investments into ICT equipment and software (hereafter **ICT investment**) in the tables shall mean the **gross fixed capital formation** (GFCF: P.51), which includes mainly acquisitions of fixed assets (P.511) used in the production processes repeatedly or continuously for more than one year. The definition of GFCF used here follows **The European System of Regional and National Accounts (ESA 2010)**.

ICT investment has **three components**: **information technology (IT) equipment** (computers and related hardware), **communications equipment** and computer software and databases (hereafter **software**). Software includes acquisition of pre-packaged software, customized software and software developed in-house (own-account software).

ICT assets can be also classified to the groups of the **Classification of Products by Activity (CZ-CPA)** as follows:

- **ICT equipment**: Computers and peripheral equipment (26.2); Communication equipment (26.3) and Consumer electronics (26.4)
- **IT services (software)**: Software publishing services (58.2); Computer programming, consultancy and related services (62.0) and Data processing, hosting and related services; web portals (63.1).

Investments into **computer** and **telecommunication equipment** became according to ESA 2010 a part of a newly created item of non-financial assets as **ICT equipment (AN.1132)**.

**Computer software and databases (AN.1173)** newly involve according to ESA 2010 two sub-items. **Computer software (AN.11731)** involves computer programs, program descriptions and supporting materials for both systems and application software. **Databases (AN.11732)** includes data files organized so as to enable cost-effective data access and use.

### B. 2 Households expenditures on ICT equipment and ICT services

Data on the total ICT investment in this chapter are supplemented with data on **Final ICT consumption expenditure of households**. The final consumption expenditure of households is recorded in international classification COICOP. This is a classification where individual items of consumption are divided according to its purpose.

**ICT equipment and ICT services** according to this classification include the following items:

- **ICT equipment**: Telephone and telefax equipment (08.2); Audio-visual, photographic and information processing equipment (09.1)
- **Telecommunication (ICT) services**: Telephone and telefax services (08.3). This category contains primarily payments for calls via landline, mobile phone and payments for Internet connection.

The both data, the total ICT investment and final household consumption expenditure on ICT equipment and ICT services come from the **Annual National Accounts Statistics** of the Czech Statistical Office. **2016 data are preliminary**. For more information see:

<http://apl.czso.cz/pll/rocenka/rocenka.indexnu?mylang=EN>

For the **international comparison OECD and Eurostat** data sources were used.

**Further information on ICT investment can be found at** (only in Czech): [https://www.czso.cz/csu/czso/investice\\_v\\_ict](https://www.czso.cz/csu/czso/investice_v_ict)

## B ICT expenditure and investment

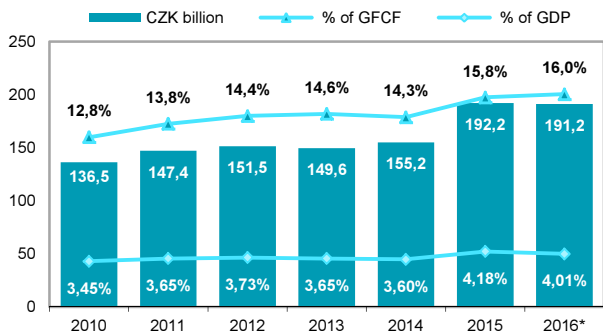
**Table B1 ICT investment in the Czech Republic**

CZK million

	2014	2015	2016*
<b>Total</b>	<b>155 156</b>	<b>192 247</b>	<b>191 226</b>
ICT equipment	77 338	95 977	93 238
Computer software and databases	77 818	96 270	97 988
<b>Industry (CZ-NACE Section)</b>			
Agriculture, forestry and fishing	951	808	2 284
Mining and quarrying	542	522	642
Manufacturing	44 469	53 940	65 374
Electricity, gas and water supply	4 524	5 372	7 143
Construction	2 986	3 246	4 013
Wholesale and retail trade	9 326	11 300	13 390
Transportation and storage	3 759	5 031	5 043
Accommodation and food service activities	1 535	1 650	1 742
Information and communication	41 599	49 744	40 451
Financial and insurance activities	13 569	19 217	20 657
Real estate activities	1 476	1 731	1 765
Professional, scientific and technical activ.	8 267	10 367	10 255
Administrative and support service activ.	1 482	1 964	2 174
Public administration and defence	9 902	12 484	7 104
Education	4 988	5 468	2 477
Human health and social work activities	3 768	6 274	3 865
Arts, entertainment and recreation	902	1 535	1 201
Other services	1 111	1 594	1 646

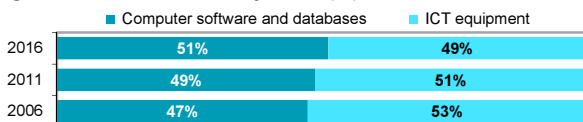
\* Preliminary data

**Figure B1 Total ICT investment**



GFCF - Gross Fixed Capital Formation (total investment)

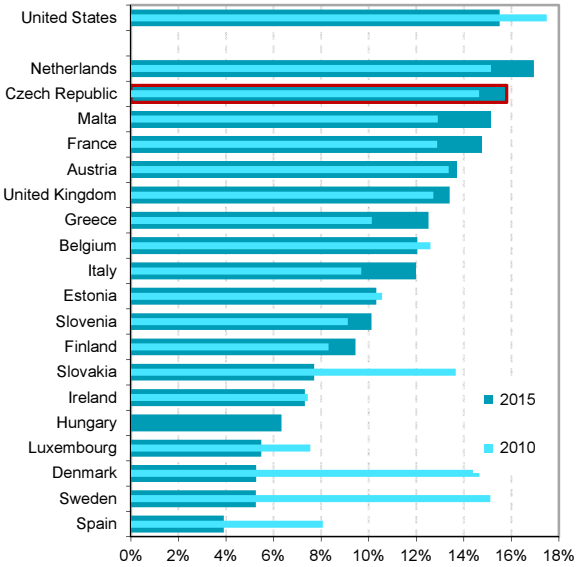
**Figure B2 ICT investment by asset (%)**



Source: CZSO, Annual National Accounts Statistics

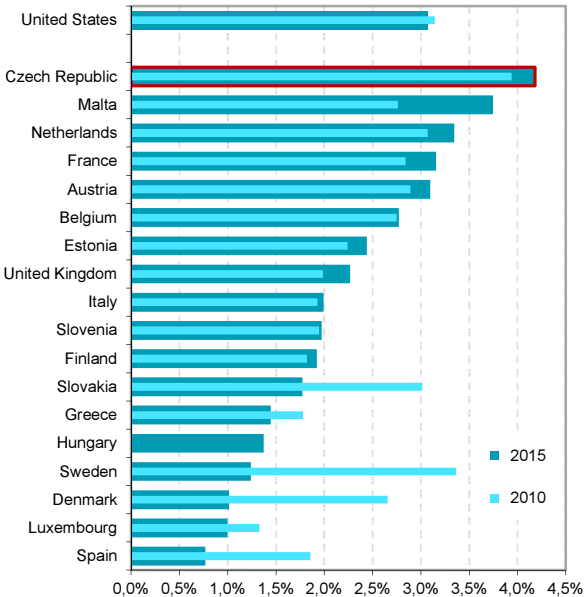
## B ICT expenditure and investment

**Figure B3 ICT investment (% of total GFCF)**



GFCF - Gross Fixed Capital Formation (total investment)

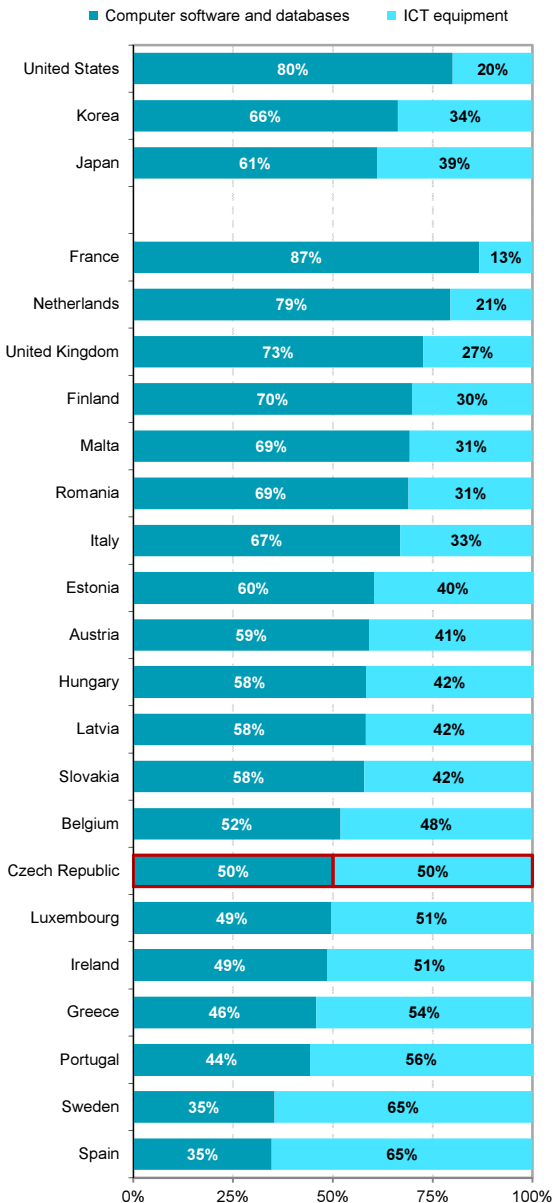
**Figure B4 ICT investment (% GDP)**



Source: CZSO calculations based on Eurostat and OECD data, 2017

## B ICT expenditure and investment

**Figure B5 ICT investment by asset; 2015\* (%)**

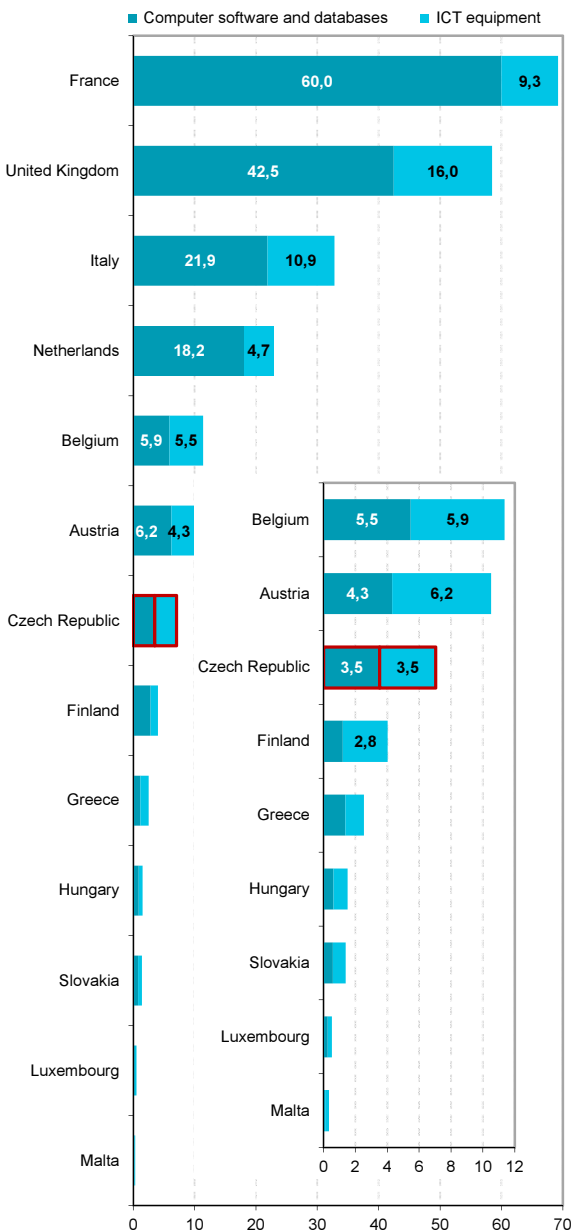


\* or the latest year available

Source: CZSO calculations based on Eurostat and OECD data, 2017

## B ICT expenditure and investment

Figure B6 ICT investment by asset; 2015\* (EUR billion)



\* or the latest year available

Source: CZSO calculations based on Eurostat and OECD data, 2017

## B ICT expenditure and investment

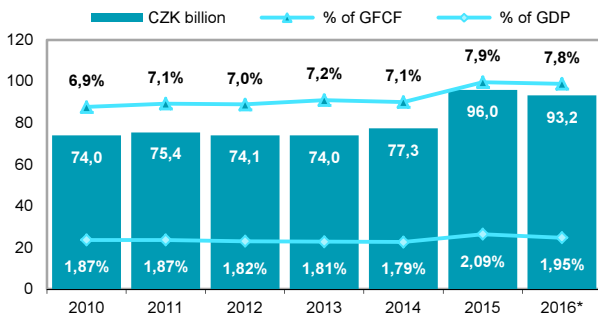
**Table B2 ICT equipment investment in the Czech Republic**

CZK million

	2014	2015	2016*
<b>Total</b>	<b>77 338</b>	<b>95 977</b>	<b>93 238</b>
Computer (IT) equipment	55 680	76 398	73 094
Communication equipment	21 658	19 579	20 144
<b>Industry (CZ-NACE Section)</b>			
Agriculture, forestry and fishing	683	498	1 960
Mining and quarrying	419	431	551
Manufacturing	34 135	41 090	52 073
Electricity, gas and water supply	2 836	3 528	5 146
Construction	2 142	2 353	3 111
Wholesale and retail trade	2 791	2 816	4 708
Transportation and storage	1 266	1 949	1 762
Accommodation and food service activities	1 310	1 360	1 448
Information and communication	14 245	16 426	5 781
Financial and insurance activities	933	2 499	3 165
Real estate activities	531	668	689
Professional, scientific and technical activ.	3 209	4 195	3 677
Administrative and support service activ.	381	624	776
Public administration and defence	4 837	6 789	3 020
Education	3 868	4 385	1 487
Human health and social work activities	2 986	5 283	2 976
Arts, entertainment and recreation	544	828	621
Other services	222	255	287

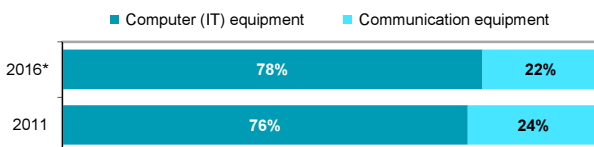
\* Preliminary data

**Figure B7 Total ICT equipment investment**



GFCF - Gross Fixed Capital Formation (total investment)

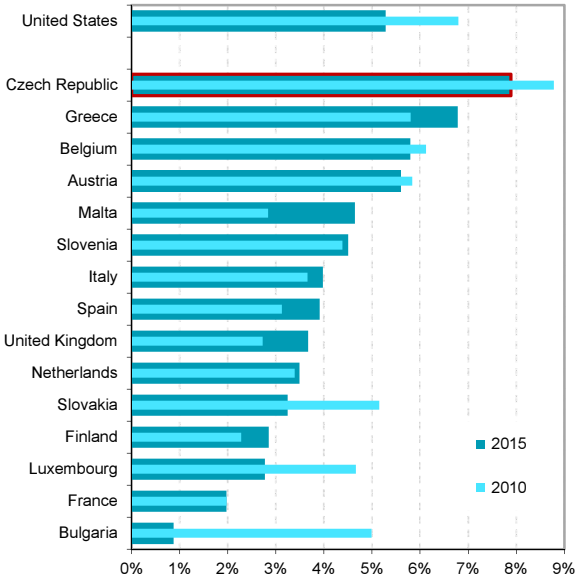
**Figure B8 ICT equipment investment by asset**



Source: CZSO, Annual National Accounts Statistics

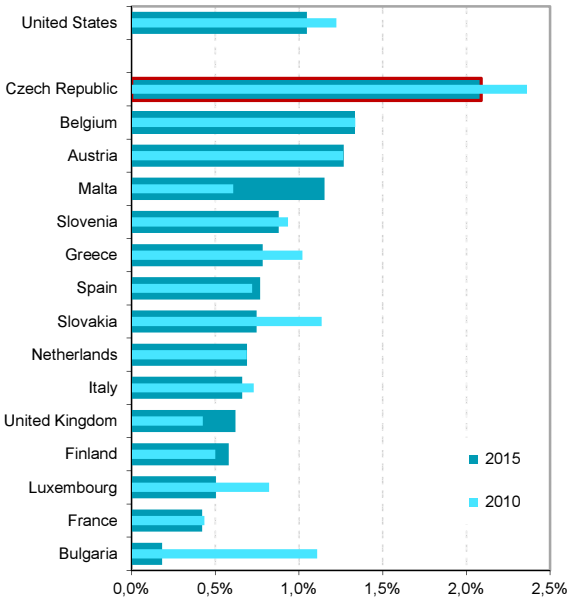
## B ICT expenditure and investment

**Figure B9 ICT equipment investment (% of total GFCF)**



GFCF - Gross Fixed Capital Formation (total investment)

**Figure B10 ICT equipment investment (% of GDP)**



Source: CZSO calculations based on Eurostat and OECD data, 2017

## B ICT expenditure and investment

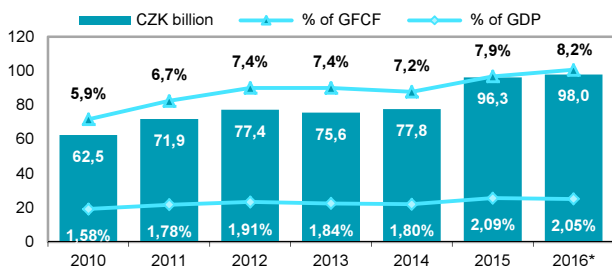
**Table B3 Software investment in the Czech Republic**

CZK million

	2014	2015	2016*
<b>Total</b>	<b>77 818</b>	<b>96 270</b>	<b>97 988</b>
own-account software	17 815		
<b>Type</b>			
Computer Software	63 584	79 772	81 274
Databases	14 234	16 498	16 714
<b>Industry (CZ-NACE Section)</b>			
Agriculture, forestry and fishing	268	310	324
Mining and quarrying	123	91	91
Manufacturing	10 334	12 850	13 301
Electricity, gas and water supply	1 688	1 844	1 997
Construction	844	893	902
Wholesale and retail trade	6 535	8 484	8 682
Transportation and storage	2 493	3 082	3 281
Accommodation and food service activities	225	290	294
Information and communication	27 354	33 318	34 670
Financial and insurance activities	12 636	16 718	17 492
Real estate activities	945	1 063	1 076
Professional, scientific and technical activ.	5 058	6 172	6 578
Administrative and support service activ.	1 101	1 340	1 398
Public administration and defence	5 065	5 695	4 084
Education	1 120	1 083	990
Human health and social work activities	782	991	889
Arts, entertainment and recreation	358	707	580
Other services	889	1 339	1 359

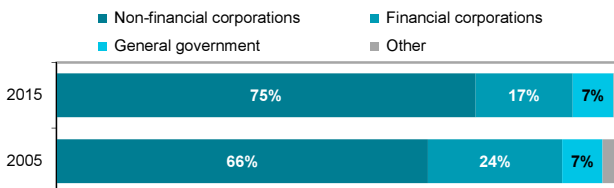
\* Preliminary data

**Figure B11 Total software investment**



GFCF - Gross Fixed Capital Formation (total investment)

**Figure B12 Software investment by sector**

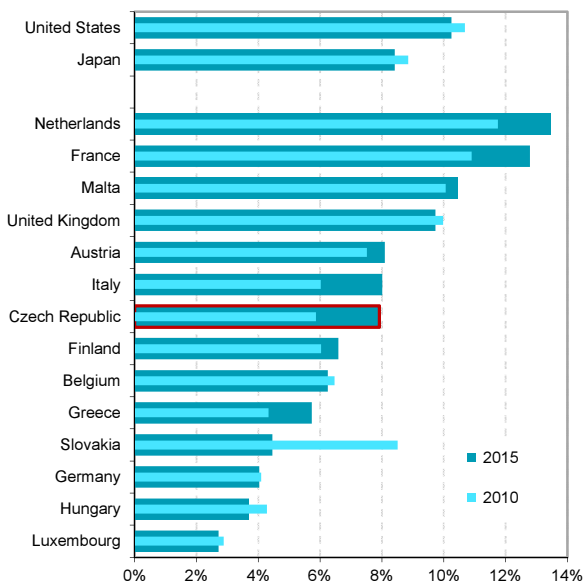


Source: CZSO, Annual National Accounts Statistics



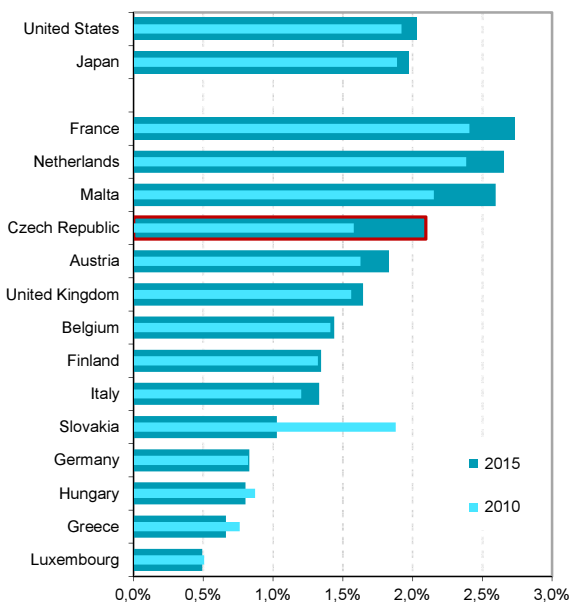
## B ICT expenditure and investment

**Figure B13 Software investment (% of total GFCF)**



GFCF - Gross Fixed Capital Formation (total investment)

**Figure B14 Software investment (% of GDP)**



Source: CZSO calculations based on Eurostat and OECD data, 2017

## B ICT expenditure and investment

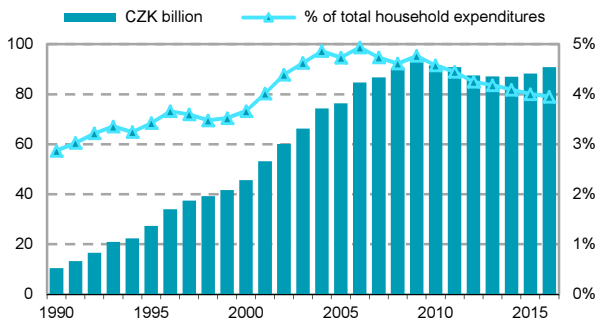
**Table B4 Household consumption expenditures on ICT equipment and services in the Czech Republic**

CZK million

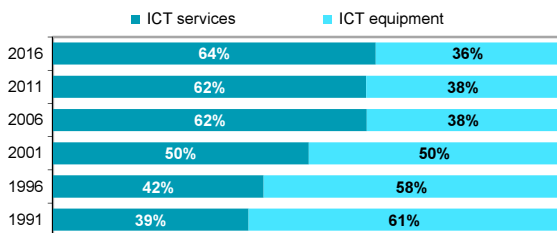
	2014	2015	2016*
<b>Total</b>	<b>86 984</b>	<b>88 331</b>	<b>90 786</b>
Total ICT equipment	31 333	31 413	32 931
Telephone equipment	3 256	3 210	3 416
Computers and consumer electronics	28 077	28 203	29 515
Telecommunication (ICT) services	55 651	56 918	57 855

\* Preliminary data

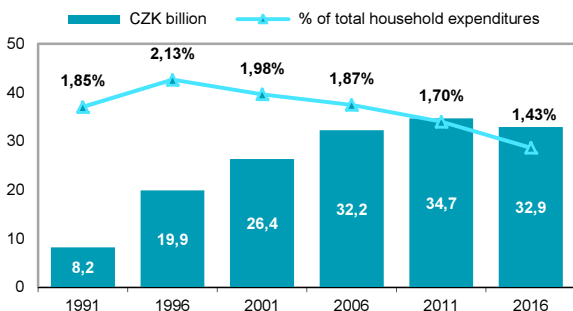
**Figure B15 Total household consumption expenditures on ICT**



**Figure B16 Households ICT expenditures by commodities**



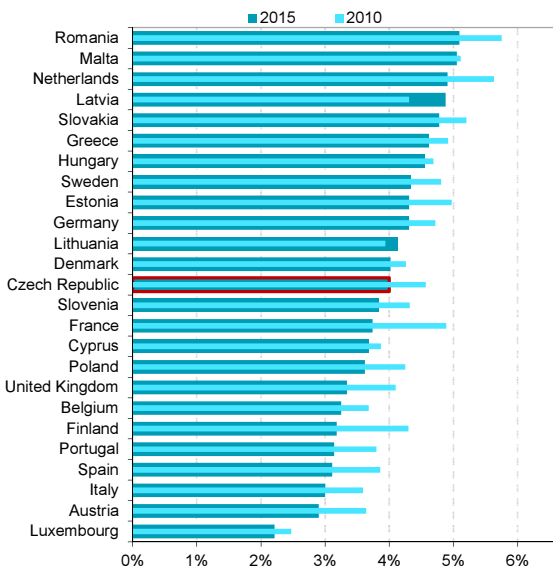
**Figure B17 Households ICT equipment expenditures**



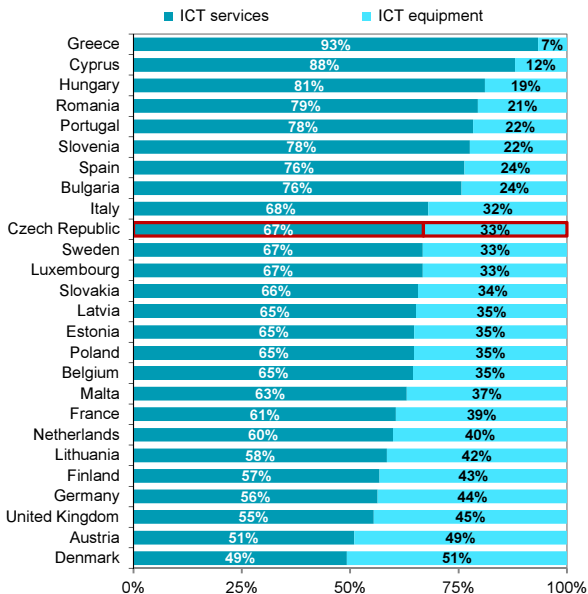
Source: CZSO, Annual National Accounts Statistics

## B ICT expenditure and investment

**Figure B18 Household consumption expenditures on ICT; (% of total households consumption expenditures)**



**Figure B19 Household ICT expenditures by commodities; 2015 (%)**



Source: CZSO calculations based on Eurostat data, 2017

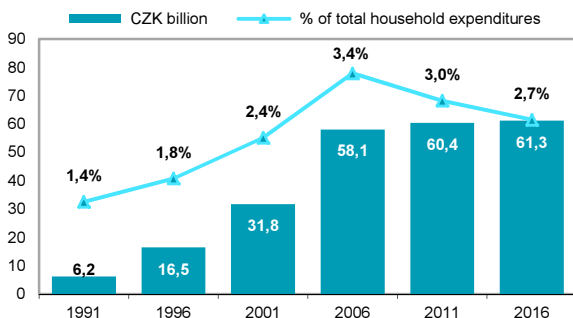
## B ICT expenditure and investment

**Table B5 Household consumption expenditures on telecommunication in the Czech Republic**

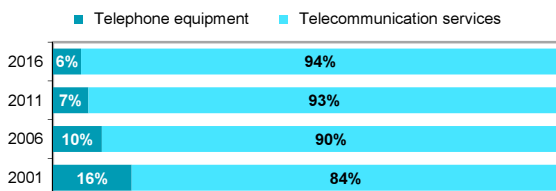
CZK million

	2014	2015	2016
<b>Total</b>	<b>58 907</b>	<b>59 228</b>	<b>61 271</b>
Telephone equipment	3 256	2 310	3 416
Telecommunication services	55 651	56 918	57 855

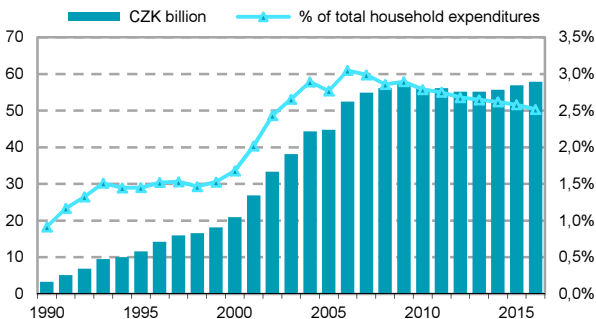
**Figure B20 Household expenditures on telecommunication**



**Figure B21 Household expenditures on telecommunication by commodities**



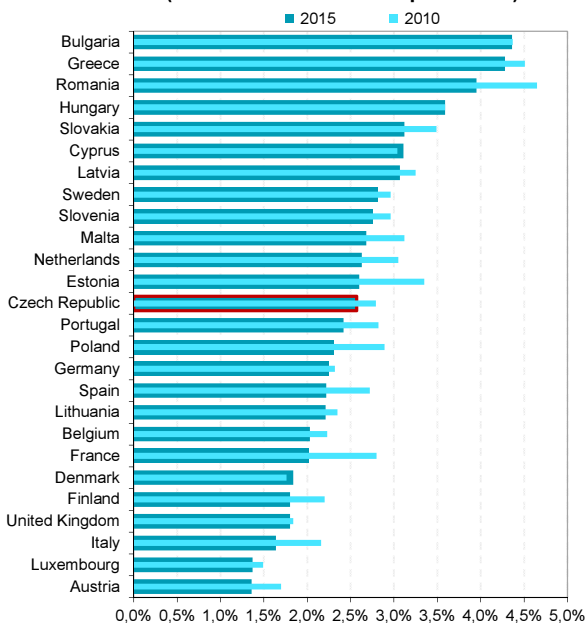
**Figure B22 Household expenditures on telecommunication services**



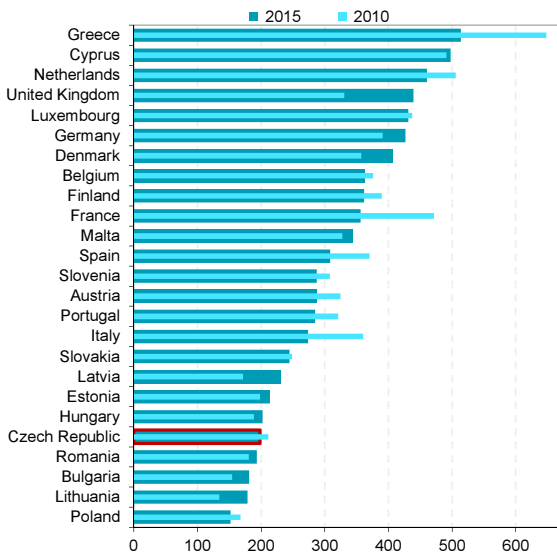
Source: CZSO, Annual National Accounts Statistics

## B ICT expenditure and investment

**Figure B23 Household expenditures on telecommunication services (% of total household expenditures)**



**Figure B24 Household expenditures on telecommunication services (per 1 inhabitant, in EUR)**



Source: CZSO calculations based on Eurostat data, 2017