

B ICT expenditure and investment

B. 1 ICT investment

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 by asset type has **three main components**: computer (IT) equipment, communications equipment and computer software and databases (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)**, the national version of the European standard of the Statistical Classification of Products by Activity (CPA 2008), as follows:

- **ICT equipment**: Computers and peripheral equipment (26.2); Communication equipment (26.3) and Consumer electronics (26.4)
- **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. **2017 data are preliminary**. For more information, see: <http://apl.czso.cz/pll/rocenka/rocenka.indexnu?mylang=EN>

Further information on ICT investment can be found at (only in Czech): https://www.czso.cz/csu/czso/investice_v_ict

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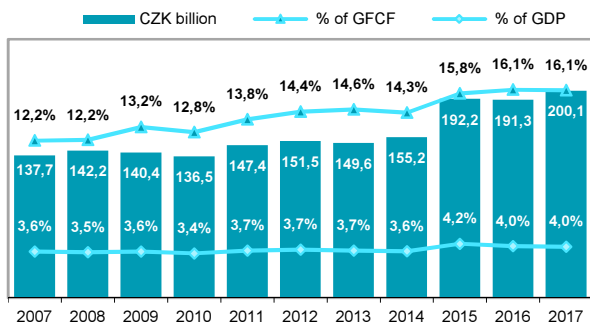
Table B1 ICT investment in the Czech Republic

CZK million

	2015	2016	2017*
Total	192 247	191 276	200 063
ICT equipment	95 977	87 256	89 820
Computer software and databases	96 270	104 020	110 243
Industry (CZ-NACE Section)			
Agriculture, forestry and fishing	808	2 094	2 393
Mining and quarrying	522	573	665
Manufacturing	53 940	57 057	62 484
Electricity, gas and water supply	5 372	7 620	7 361
Construction	3 246	4 189	4 666
Wholesale and retail trade	11 300	12 633	14 600
Transportation and storage	5 031	5 437	6 339
Accommodation and food service activities	1 650	1 954	2 165
Information and communication	49 744	47 037	43 882
Financial and insurance activities	19 217	22 665	21 878
Real estate activities	1 731	1 675	1 849
Professional, scientific and technical activ.	10 367	10 061	11 817
Administrative and support service activ.	1 964	2 336	2 707
Public administration and defence	12 484	7 225	7 753
Education	5 468	2 297	2 847
Human health and social work activities	6 274	3 575	3 621
Arts, entertainment and recreation	1 535	1 282	1 326
Other services	1 594	1 566	1 710

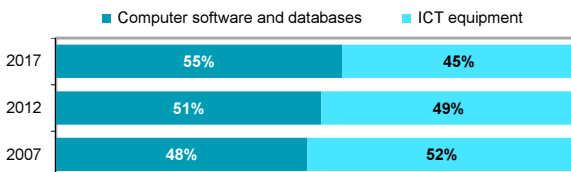
* Preliminary data

Figure B1 Total ICT investment



GFCF - Gross Fixed Capital Formation (total investment)

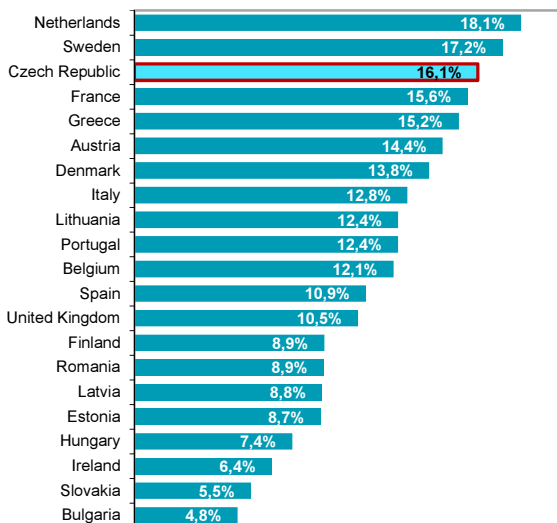
Figure B2 ICT investment by asset



Source: CZSO, Annual National Accounts Statistics

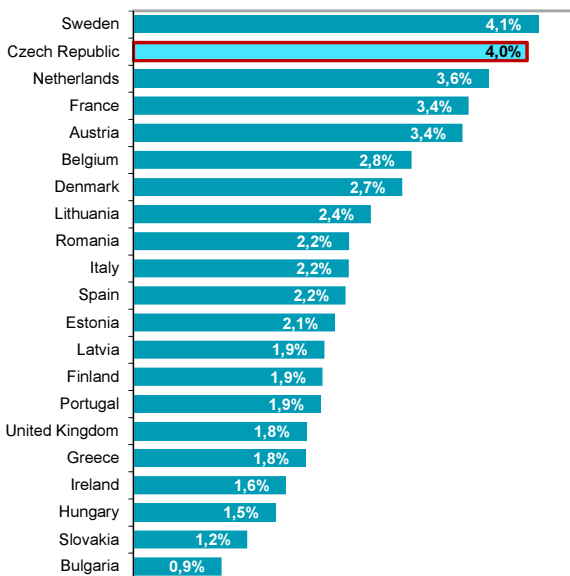
B ICT expenditure and investment

Figure B3 ICT investment; 2016*
(as a percentage of total GFCF)



GFCF - Gross Fixed Capital Formation (total investment)

Figure B4 ICT investment; 2016*
(as a percentage of GDP)

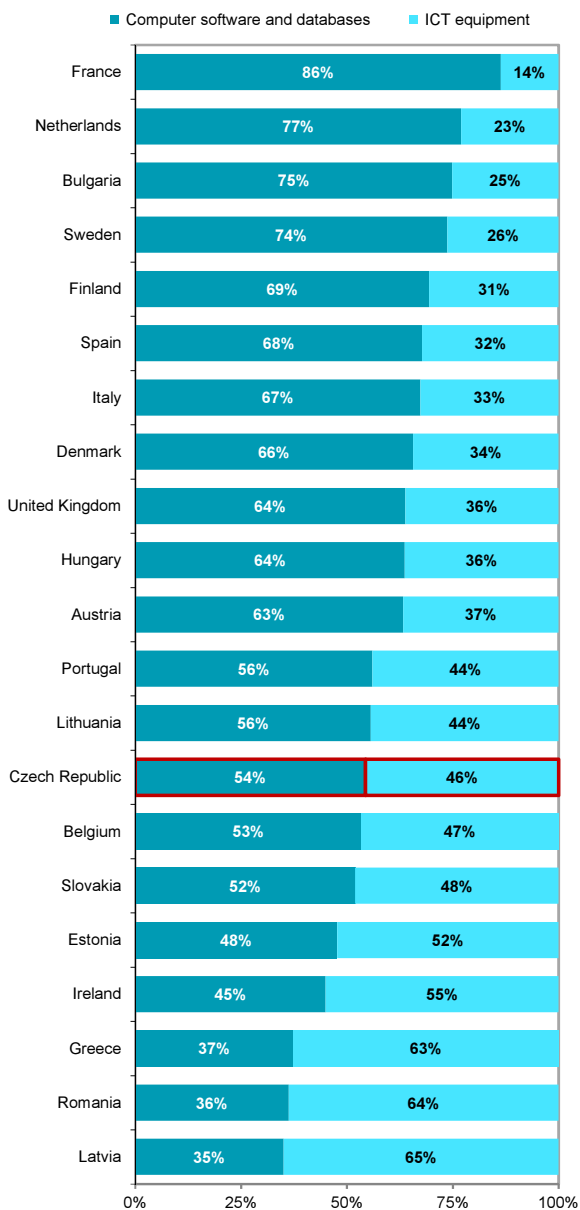


* Denmark, Estonia, Ireland, Latvia, Lithuania, Romania and Greece data for 2015

Source: CZSO calculations based on Eurostat data, 2018

B ICT expenditure and investment

Figure B5 ICT investment by asset; 2016*

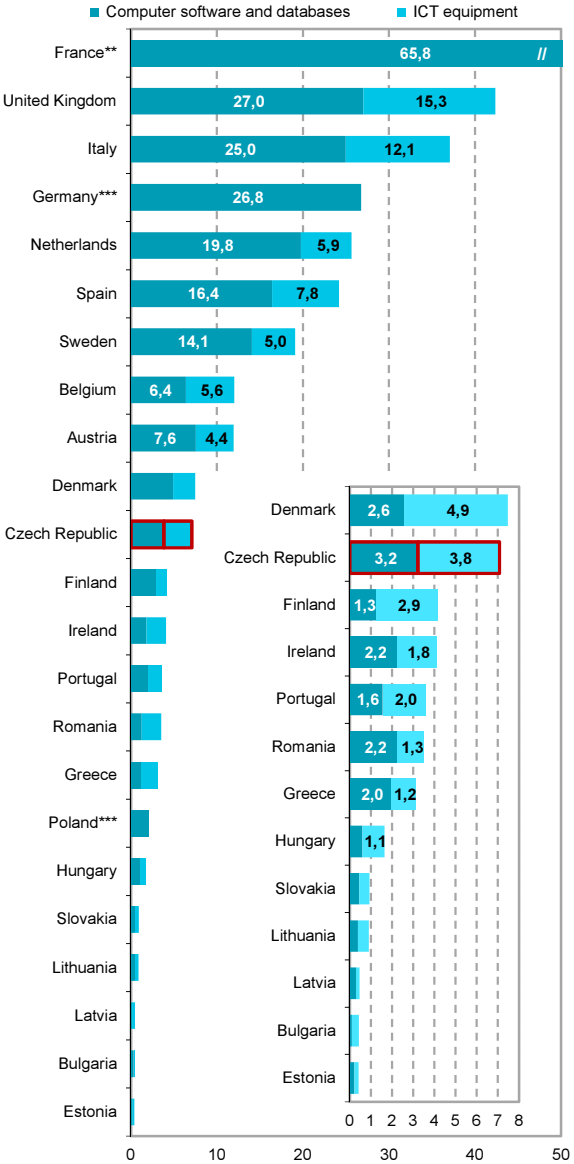


* Denmark, Estonia, Ireland, Latvia, Lithuania, Romania and Greece data for 2015

Source: CZSO calculations based on Eurostat data, 2018

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Figure B6 ICT investment by asset; 2016* (EUR billion)



* Denmark, Estonia, Ireland, Latvia, Lithuania, Romania and Greece data for 2015

** ICT equipment investment in France was 10,2 billion EUR in 2016

*** ICT equipment investment data for Germany and Poland in 2016 are not available

Source: CZSO calculations based on Eurostat data, 2018

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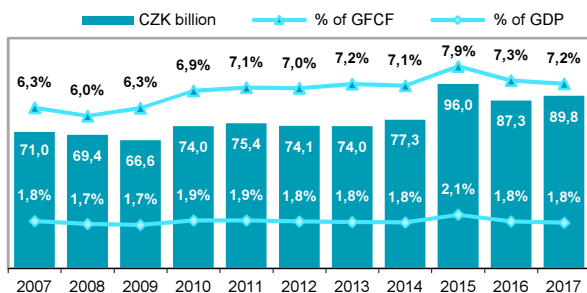
Table B2 ICT equipment investment in the Czech Republic

CZK million

	2015	2016	2017*
Total	95 977	87 256	89 820
Computer (IT) equipment	76 398	64 221	66 918
Communication equipment	19 579	23 035	22 902
Industry (CZ-NACE Section)			
Agriculture, forestry and fishing	498	1 809	2 033
Mining and quarrying	431	454	539
Manufacturing	41 090	43 374	47 793
Electricity, gas and water supply	3 528	5 441	4 879
Construction	2 353	3 162	3 579
Wholesale and retail trade	2 816	4 057	5 225
Transportation and storage	1 949	1 743	2 037
Accommodation and food service activities	1 360	1 694	1 878
Information and communication	16 426	11 564	5 812
Financial and insurance activities	2 499	1 148	1 256
Real estate activities	668	685	816
Professional, scientific and technical activ.	4 195	3 377	4 425
Administrative and support service activ.	624	861	1 122
Public administration and defence	6 789	3 009	3 120
Education	4 385	1 346	1 730
Human health and social work activities	5 283	2 573	2 594
Arts, entertainment and recreation	828	684	651
Other services	255	275	331

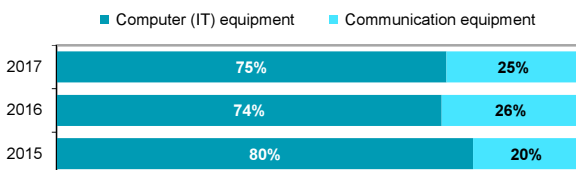
* Preliminary data

Figure B7 Total ICT equipment investment



GFCF - Gross Fixed Capital Formation (total investment)

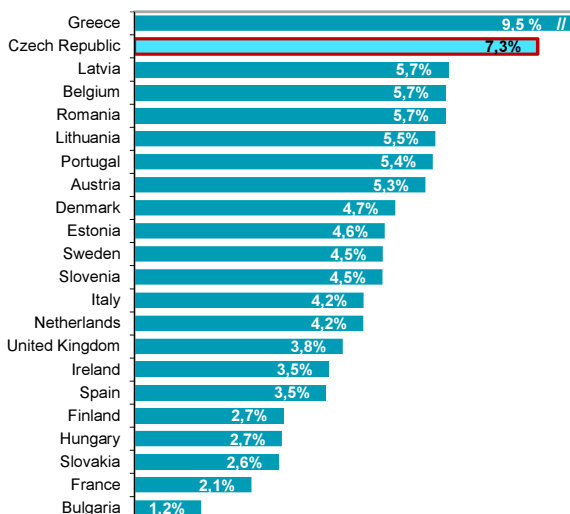
Figure B8 ICT equipment investment by asset



Source: CZSO, Annual National Accounts Statistics

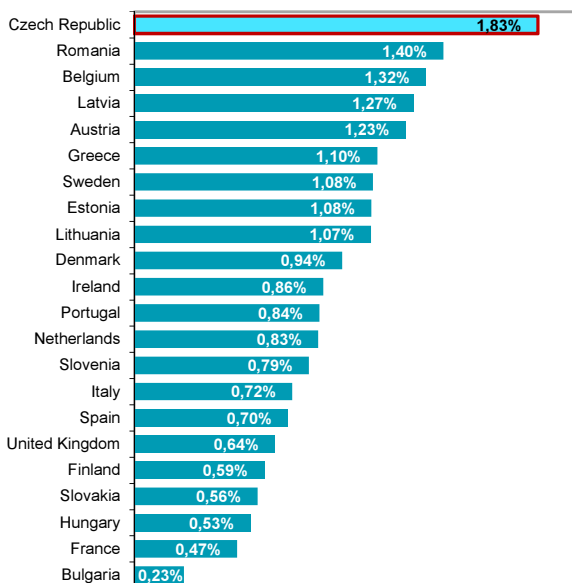
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Figure B9 ICT equipment investment; 2016*
(as a percentage of total GFCF)



GFCF - Gross Fixed Capital Formation (total investment)

Figure B10 ICT equipment investment; 2016*
(as a percentage of GDP)



* Denmark, Estonia, Ireland, Latvia, Lithuania, Rumania and Greece readings per 201

Source: CZSO calculations based on Eurostat data, 2018

B ICT expenditure and investment

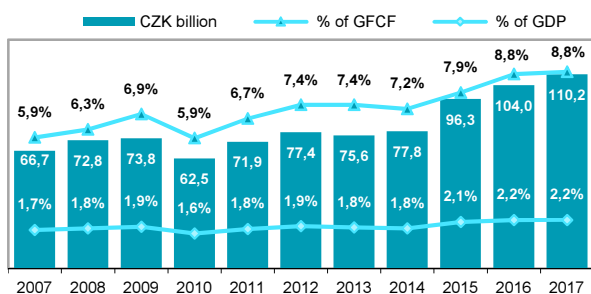
Table B3 Software investment in the Czech Republic

CZK million

	2015	2016	2017*
Total	96 270	104 020	110 243
own-account software	21 402	22 640	23 610
Type			
Computer Software	79 772	84 497	91 128
Databases	16 498	19 523	19 115
Industry (CZ-NACE Section)			
Agriculture, forestry and fishing	310	285	360
Mining and quarrying	91	119	126
Manufacturing	12 850	13 683	14 691
Electricity, gas and water supply	1 844	2 179	2 482
Construction	893	1 027	1 087
Wholesale and retail trade	8 484	8 576	9 375
Transportation and storage	3 082	3 694	4 302
Accommodation and food service activities	290	260	287
Information and communication	33 318	35 473	38 070
Financial and insurance activities	16 718	21 517	20 622
Real estate activities	1 063	990	1 033
Professional, scientific and technical activ.	6 172	6 684	7 392
Administrative and support service activ.	1 340	1 475	1 585
Public administration and defence	5 695	4 216	4 633
Education	1 083	951	1 117
Human health and social work activities	991	1 002	1 027
Arts, entertainment and recreation	707	598	675
Other services	1 339	1 291	1 379

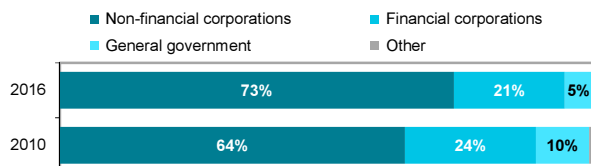
* Preliminary data

Figure B11 Total software investment



GFCF - Gross Fixed Capital Formation (total investment)

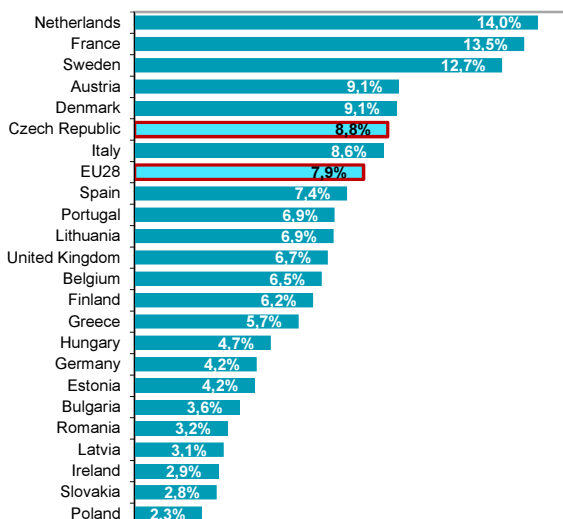
Figure B12 Software investment by sector



Source: CZSO, Annual National Accounts Statistics

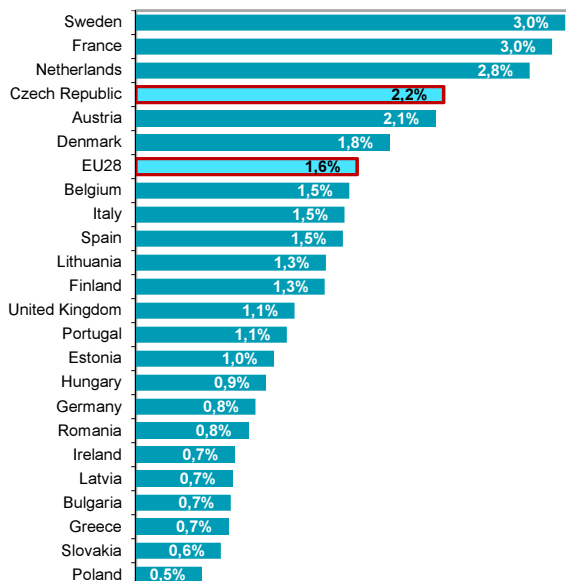
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Figure B13 Software investment; 2016
(as a percentage of total GFCF)



GFCF - Gross Fixed Capital Formation (total investment)

Figure B14 Software investment; 2016*
(as a percentage of GDP)



* Denmark, Estonia, Ireland, Latvia, Lithuania, Romania and Greece data for 2015

Source: CZSO calculations based on Eurostat data, 2018

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

CZK million

	2015	2016	2017*
Total	88 959	91 577	95 945
Total ICT equipment	31 892	33 925	36 520
Telephone equipment	3 397	4 921	5 355
Computers and consumer electronics	28 495	29 004	31 165
Telecommunication (ICT) services	57 067	57 652	59 425

* Preliminary data

Figure B15 Total household consumption expenditures on ICT

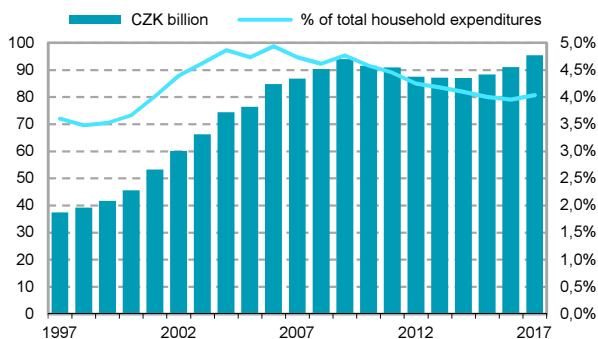


Figure B16 Households ICT expenditures by commodities

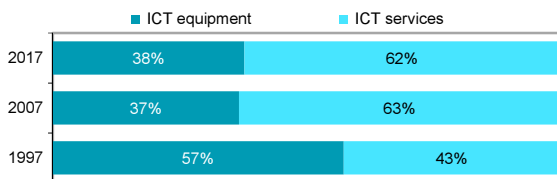
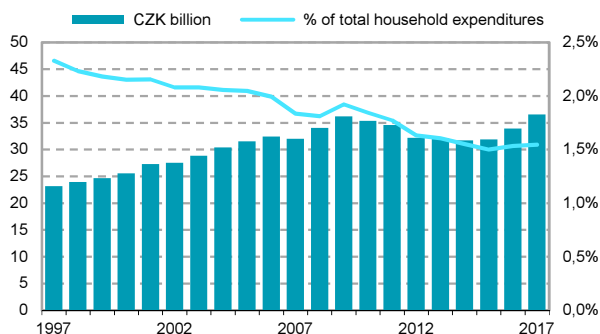


Figure B17 Households ICT equipment expenditures



Source: CZSO, Annual National Accounts Statistics

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

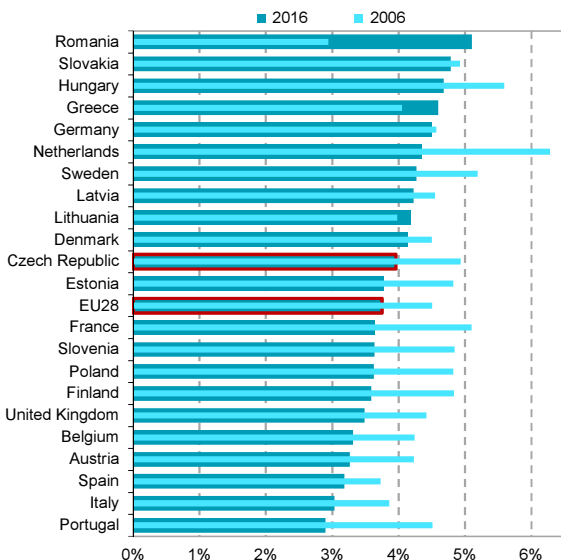
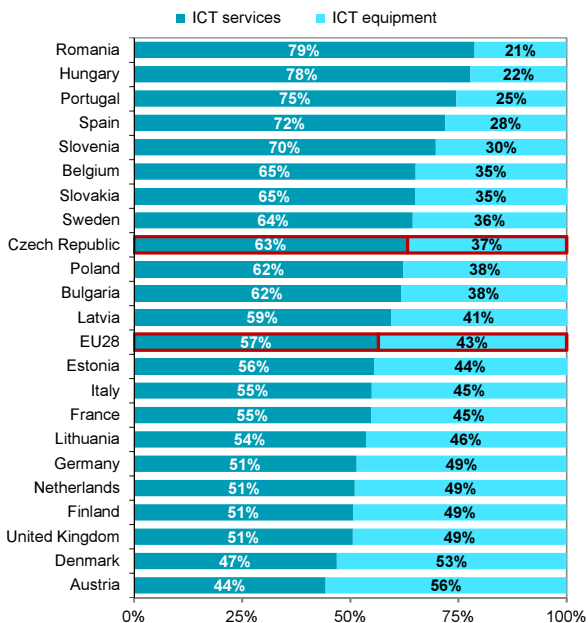


Figure B19 Household consumption expenditures on ICT by commodities; 2016 (%)



Source: CZSO calculations based on Eurostat data, 2018

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Table B5 Household consumption expenditures on telecommunication in the Czech Republic

CZK million

	2015	2016	2017
Total	60 464	62 573	64 780
Telephone equipment	3 397	4 921	5 355
Telecommunication services	57 067	57 652	59 425

Figure B20 Household expenditures on telecommunication

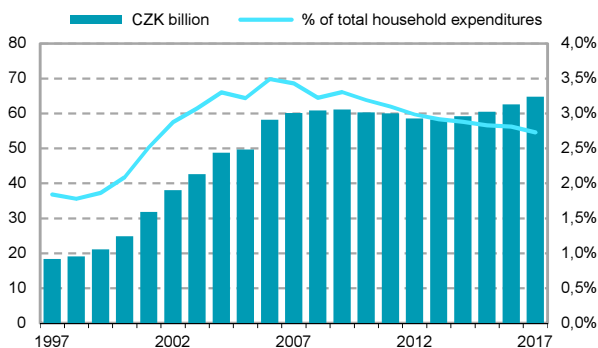


Figure B21 Household expenditures on telecommunication by commodities

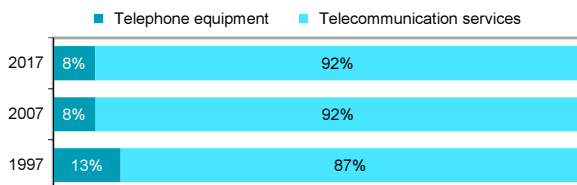
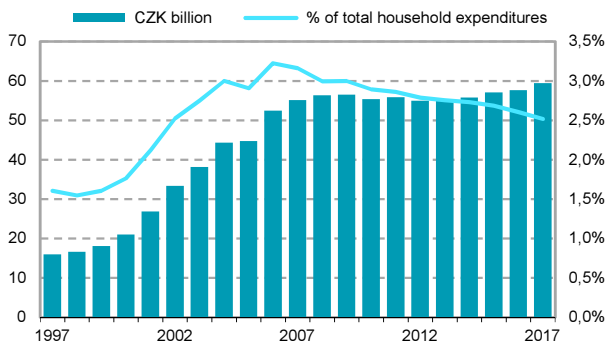


Figure B22 Household expenditures on telecommunication services



Source: CZSO, Annual National Accounts Statistics

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

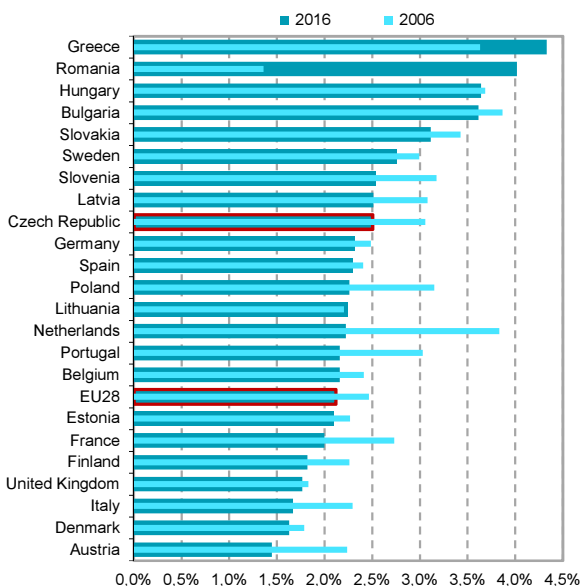
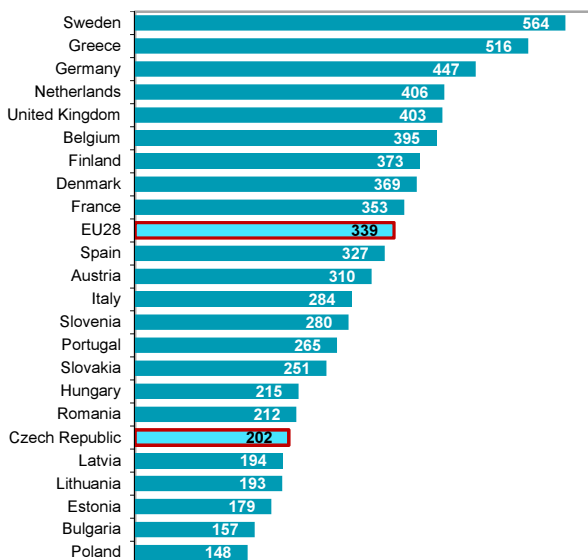


Figure B24 Household expenditures on telecommunication services (per 1 inhabitant, in EUR)



Source: CZSO calculations based on Eurostat data, 2018