D ICT external trade

ICT external trade **contains** trade in both ICT goods and ICT services. Goods and services in the field of information and communication technology (hereinafter as the ICT goods and services or ICT products) are **defined** as goods or services, which core function is to implement information processing and communication by electronic means, including transmission and display (OECD, 2009).

D. 1 External trade in ICT goods

The **list of ICT goods** that is used for the external trade statistics is based on the Harmonised System Nomenclature (HS Nomenclature 2007), a classification of goods used for the international trade. List of ICT goods defined at 6-digit level of HS2007 was further grouped into the five main categories as follows:

- Computer equipment and peripherals;
- Communication equipment;
- Consumer electronics;
- Electronic components;
- Miscellaneous ICT components and accessories (ICT parts n.e.s.)

The **External Trade Statistics Database** of the Czech Statistical Office (CZSO) was used as a data source for national data. For more information see: http://apl.czso.cz/pll/stazo/STAZO.STAZO?jazyk=EN

The **UNCTAD database** and **The UN Comtrade database** was used as a data source for the international comparison:
http://unctad.org/en/Pages/Statistics.aspx; http://comtrade.un.org/db/

D. 2 External trade in ICT services

Data on exports and imports of the **ICT services** come from the CZSO direct survey at respondents on exports and imports of services.

Respective items of the ICT services are then defined according to the **International Classification** of **Extended Balance of Payment Services** (EBOPS 2010). The ICT services are subdivided into three categories as follows:

- Telecommunications services (code SI1);
- Other computer services (code SI22); and
- Computer software (codes SI21 and SH3).

Telecommunication services include, first of all, transactions of Czech and foreign telecommunication operators for implemented international calls by means of fixed or mobile telephone networks. Other telecommunication services involve payments for the access to the Internet, cable television, and to other computer networks.

Computer services consist mainly of consultancy services in the fields of hardware and software of computers, including maintenance and repairs of both hardware and software and services related to data processing.

Computer software involves purchase and sale of tailor-made software and applications (original computer software), including purchase and sale of ownership rights to such software or licence fees for the software use. Furthermore, it is also purchase and sale of standard software and applications **supplied over the Internet**, including purchase and sale of ownership rights to such software or licence fees for the software use. The computer software category here includes also **licences to reproduce and/or distribute computer software (code SH3)**

Data for **international comparisons** come from **Eurostat** data sources.

For further information on ICT external trade see (only in Czech)**:**
https://www.czso.cz/csu/czso/zahranicni-obchod-s-ict-zbozim-a-sluzbami

Table D1 ICT goods exports from the Czech Republic

CZK million

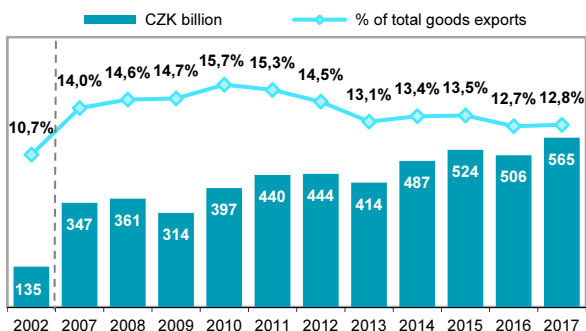|	2015	2016	2017
Total	**523 827**	**506 018**	**564 570**
Computer equipment and peripherals	247 168	236 892	283 506
Communication equipment	104 021	97 651	138 167
Consumer electronics	70 087	72 922	74 650
Electronic components	42 707	45 144	33 101
ICT parts n.e.s.	59 844	53 409	35 146

Figure D1 ICT goods exports

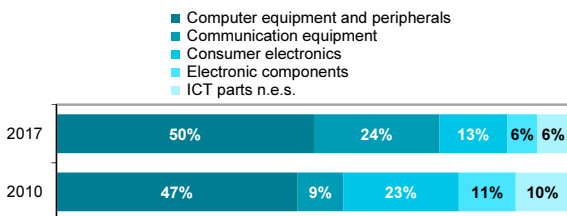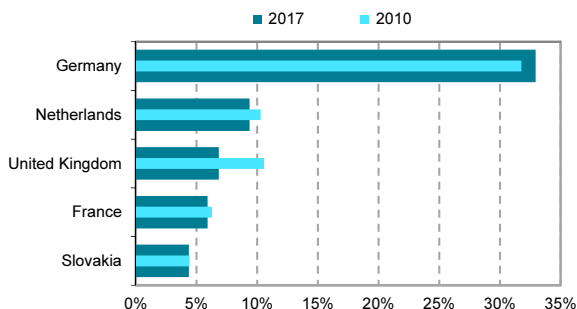## Figure D2 ICT goods exports by commodities

Figure D3 ICT goods exports from the Czech Rep. by countries

Source: CZSO, External Trade Statistics Database

D ICT external trade
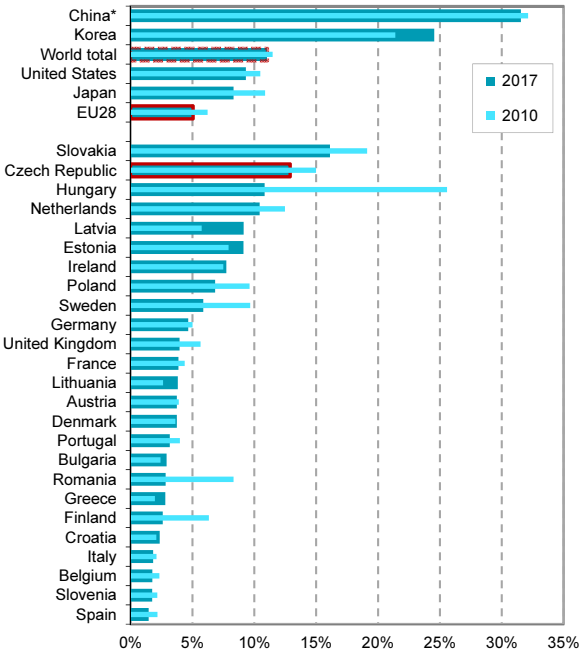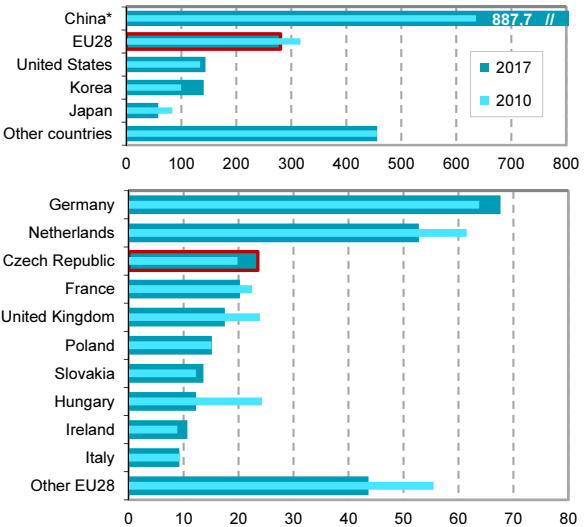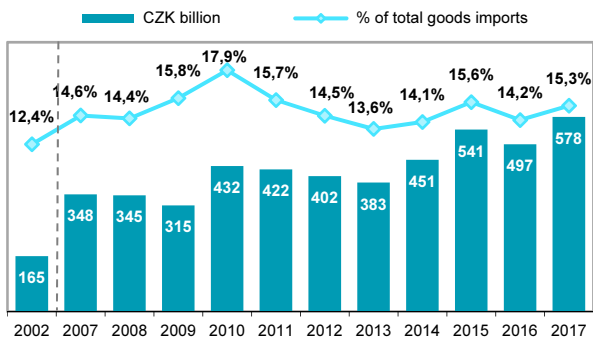
Figure D4 ICT goods exports (% of total goods exports)

Legend: 2017, 2010

Countries (top to bottom): China*, Korea, World total, United States, Japan, EU28, Slovakia, Czech Republic, Hungary, Netherlands, Latvia, Estonia, Ireland, Poland, Sweden, Germany, United Kingdom, France, Lithuania, Austria, Denmark, Portugal, Bulgaria, Romania, Greece, Finland, Croatia, Italy, Belgium, Slovenia, Spain

Axis: 0% 5% 10% 15% 20% 25% 30% 35%

Figure D5 ICT goods exports (USD billion)

China* 887.7 //

Legend: 2017, 2010

Countries (top to bottom): China*, EU28, United States, Korea, Japan, Other countries

Axis: 0 100 200 300 400 500 600 700 800

Countries (top to bottom): Germany, Netherlands, Czech Republic, France, United Kingdom, Poland, Slovakia, Hungary, Ireland, Italy, Other EU28

Axis: 0 10 20 30 40 50 60 70 80

China = China; Hong Kong China; Macao China; China Taiwan

Source: CZSO calculations based on UNCTAD

D ICT external trade

Table D2 ICT goods imports to the Czech Republic

CZK million

	2015	2016	2017
Total	**540 741**	**496 943**	**578 294**
Computer equipment and peripherals	189 009	170 630	196 963
Communication equipment	121 222	103 219	141 049
Consumer electronics	41 813	44 109	43 031
Electronic components	78 750	84 734	101 739
ICT parts n.e.s.	109 946	94 251	95 512

Figure D6 ICT goods imports

Figure D7 ICT goods imports by commodities

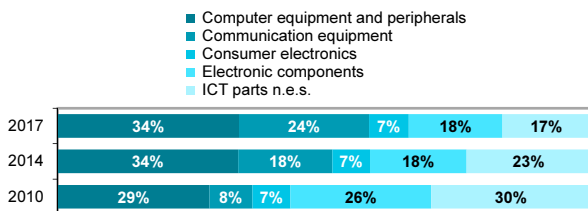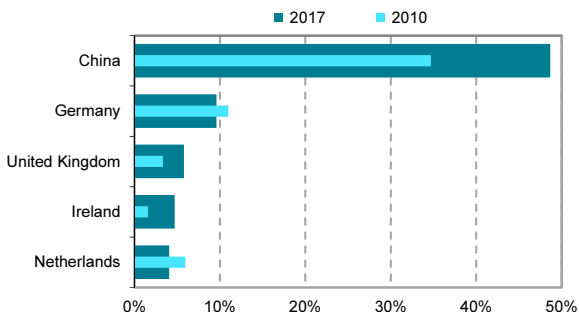## Figure D8 ICT goods imports to the Czech Rep. by countries

Source: CZSO, External Trade Statistics Database

Figure D9 ICT goods imports (% of total goods imports)

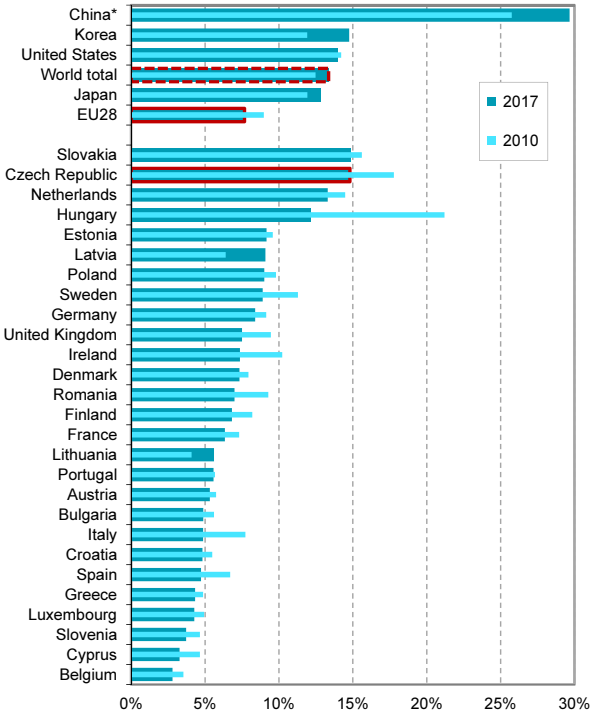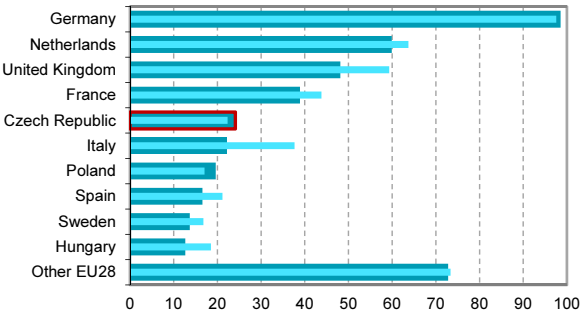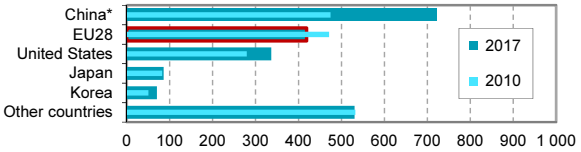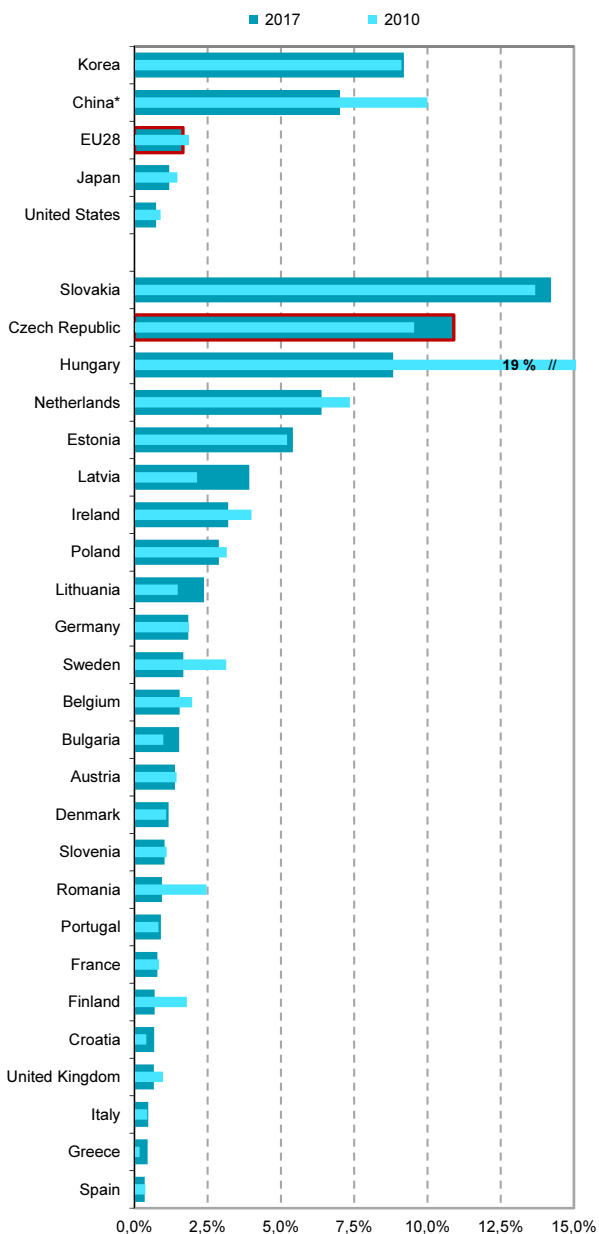Legend: 2017, 2010

Countries (top to bottom): China*, Korea, United States, World total, Japan, EU28, Slovakia, Czech Republic, Netherlands, Hungary, Estonia, Latvia, Poland, Sweden, Germany, United Kingdom, Ireland, Denmark, Romania, Finland, France, Lithuania, Portugal, Austria, Bulgaria, Italy, Croatia, Spain, Greece, Luxembourg, Slovenia, Cyprus, Belgium

Axis: 0%, 5%, 10%, 15%, 20%, 25%, 30%

Figure D10 ICT goods imports (USD billion)

Legend: 2017, 2010

Countries (top to bottom): China*, EU28, United States, Japan, Korea, Other countries

Axis: 0, 100, 200, 300, 400, 500, 600, 700, 800, 900, 1 000

Countries (top to bottom): Germany, Netherlands, United Kingdom, France, Czech Republic, Italy, Poland, Spain, Sweden, Hungary, Other EU28
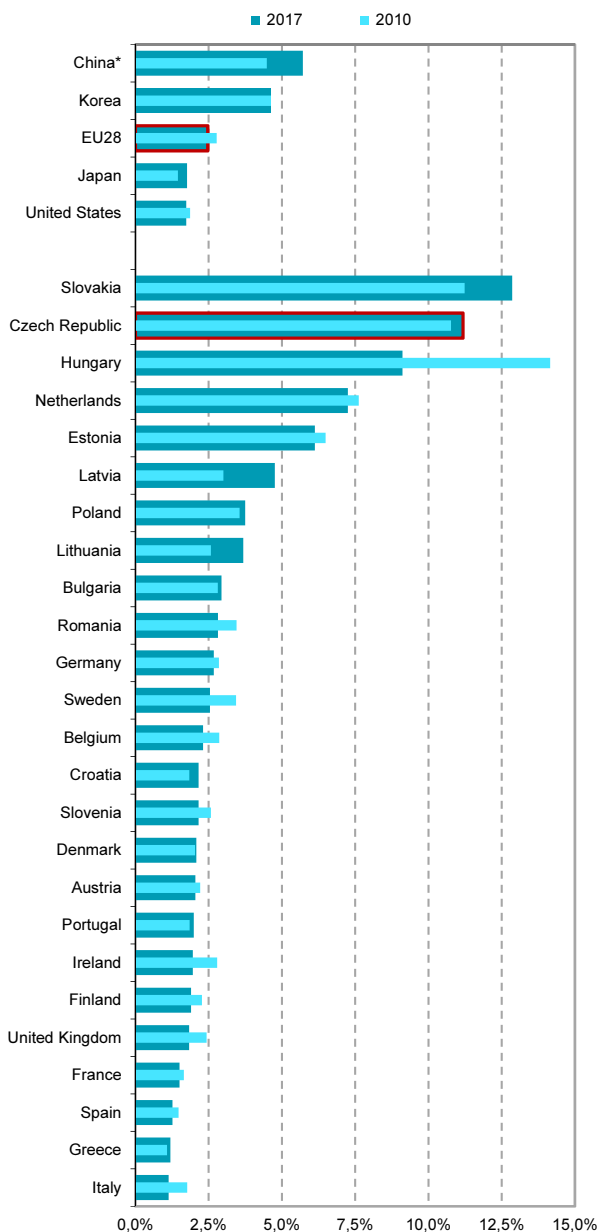
Axis: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100
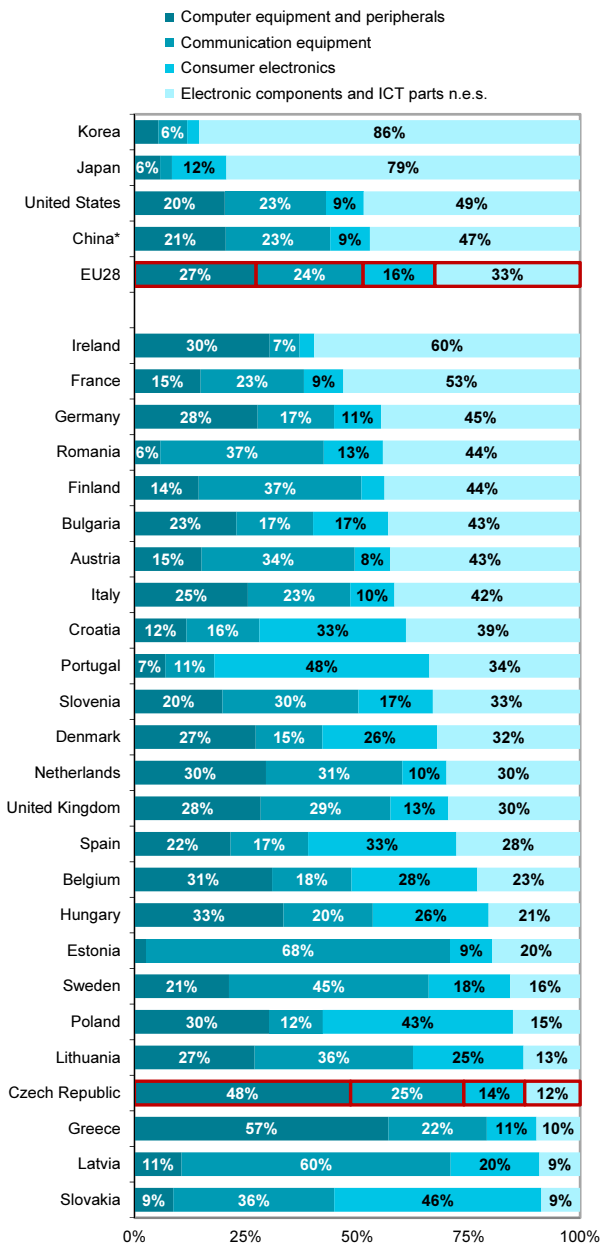
China = China; Hong Kong China; Macao China; China Taiwan

Source: CZSO calculations based on UNCTAD

Figure D11 ICT goods exports (% of GDP)

Legend: ■ 2017 ■ 2010

Country	
Korea	
China*	
EU28	
Japan	
United States	
Slovakia	
Czech Republic	
Hungary	19 % //
Netherlands	
Estonia	
Latvia	
Ireland	
Poland	
Lithuania	
Germany	
Sweden	
Belgium	
Bulgaria	
Austria	
Denmark	
Slovenia	
Romania	
Portugal	
France	
Finland	
Croatia	
United Kingdom	
Italy	
Greece	
Spain	

Axis: 0,0% 2,5% 5,0% 7,5% 10,0% 12,5% 15,0%

China = China; Hong Kong China; Macao China; China Taiwan

Source: CZSO calculations based on UNCTAD

Figure D12 ICT goods imports (% of GDP)

■ 2017   ■ 2010

* *China = China; Hong Kong China; Macao China; China Taiwan*

Source: CZSO calculations based on UNCTAD
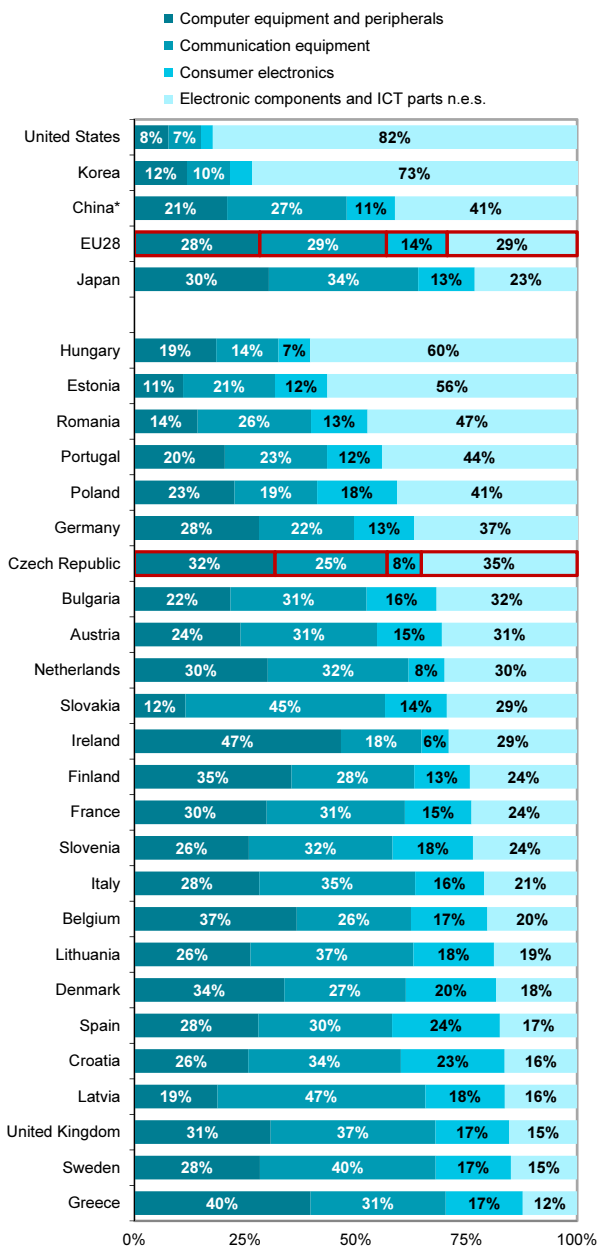
Figure D13 ICT goods exports by commodities; 2017

- Computer equipment and peripherals
- Communication equipment
- Consumer electronics
- Electronic components and ICT parts n.e.s.

Country	Computer equipment and peripherals	Communication equipment	Consumer electronics	Electronic components and ICT parts n.e.s.
Korea	6%			86%
Japan	6%	12%		79%
United States	20%	23%	9%	49%
China*	21%	23%	9%	47%
EU28	27%	24%	16%	33%
Ireland	30%	7%		60%
France	15%	23%	9%	53%
Germany	28%	17%	11%	45%
Romania	6%	37%	13%	44%
Finland	14%	37%		44%
Bulgaria	23%	17%	17%	43%
Austria	15%	34%	8%	43%
Italy	25%	23%	10%	42%
Croatia	12%	16%	33%	39%
Portugal	7%	11%	48%	34%
Slovenia	20%	30%	17%	33%
Denmark	27%	15%	26%	32%
Netherlands	30%	31%	10%	30%
United Kingdom	28%	29%	13%	30%
Spain	22%	17%	33%	28%
Belgium	31%	18%	28%	23%
Hungary	33%	20%	26%	21%
Estonia		68%	9%	20%
Sweden	21%	45%	18%	16%
Poland	30%	12%	43%	15%
Lithuania	27%	36%	25%	13%
Czech Republic	48%	25%	14%	12%
Greece	57%	22%	11%	10%
Latvia	11%	60%	20%	9%
Slovakia	9%	36%	46%	9%

0% — 25% — 50% — 75% — 100%

* China = China; Hong Kong China; Macao China; China Taiwan

Source: CZSO calculations based on UNCTAD

Figure D14 ICT goods imports by commodities; 2017

- Computer equipment and peripherals
- Communication equipment
- Consumer electronics
- Electronic components and ICT parts n.e.s.

Country	Computer equipment and peripherals	Communication equipment	Consumer electronics	Electronic components and ICT parts n.e.s.
United States	8%	7%		82%
Korea	12%	10%		73%
China*	21%	27%	11%	41%
EU28	28%	29%	14%	29%
Japan	30%	34%	13%	23%
Hungary	19%	14%	7%	60%
Estonia	11%	21%	12%	56%
Romania	14%	26%	13%	47%
Portugal	20%	23%	12%	44%
Poland	23%	19%	18%	41%
Germany	28%	22%	13%	37%
Czech Republic	32%	25%	8%	35%
Bulgaria	22%	31%	16%	32%
Austria	24%	31%	15%	31%
Netherlands	30%	32%	8%	30%
Slovakia	12%	45%	14%	29%
Ireland	47%	18%	6%	29%
Finland	35%	28%	13%	24%
France	30%	31%	15%	24%
Slovenia	26%	32%	18%	24%
Italy	28%	35%	16%	21%
Belgium	37%	26%	17%	20%
Lithuania	26%	37%	18%	19%
Denmark	34%	27%	20%	18%
Spain	28%	30%	24%	17%
Croatia	26%	34%	23%	16%
Latvia	19%	47%	18%	16%
United Kingdom	31%	37%	17%	15%
Sweden	28%	40%	17%	15%
Greece	40%	31%	17%	12%

0%   25%   50%   75%   100%

* China = China; Hong Kong China; Macao China; China Taiwan

Source: CZSO calculations based on UNCTAD

D ICT external trade

Table D3 Computer equipment exports from the Czech Republic

CZK million

	2015	2016	2017
Total	**247 168**	**236 892**	**283 506**
Portable computers	59 098	56 158	64 699
Other computers	88 595	80 871	121 211
Computer peripherals, total	99 476	99 862	97 596
Storage units	59 505	56 238	49 816
Sound, video, network and similar cards	8 933	9 930	12 097
Monitors used with computers	15 956	16 286	19 748
Printers, copying or faxing machines	7 036	7 813	6 388
Other input or output peripherals*	8 046	9 596	9 546

* Keyboards; joysticks, computer mice, scanners or optical readers

Figure D15 Computer equipment exports
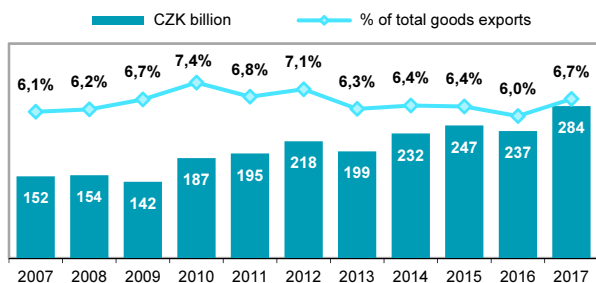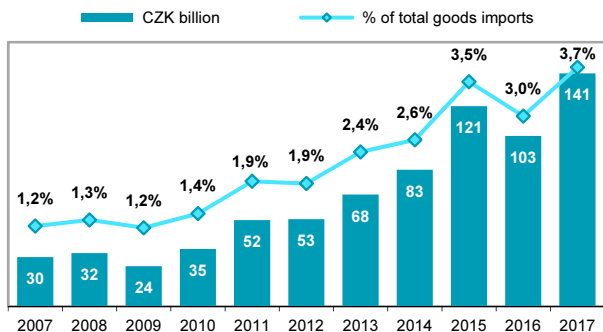

Figure D16 Computer equipment exports by commodities
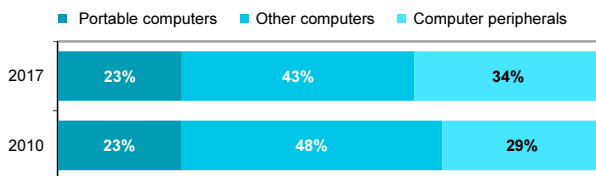
Figure D17 Computer equipment exports by countries
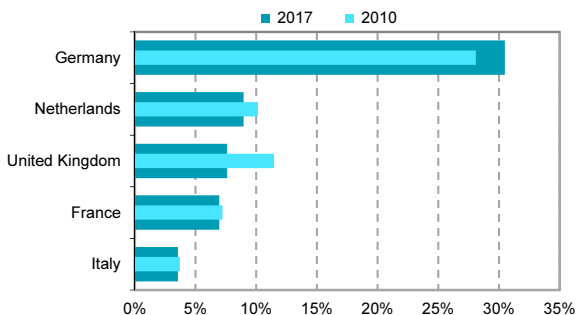
Source: CZSO, External Trade Statistics Database

Table D4 Computer equipment imports to the Czech Republic

CZK million

	2015	2016	2017
Total	**189 009**	**170 630**	**196 963**
Portable computers	75 255	60 020	71 830
Other computers	23 745	19 599	20 325
Computer peripherals, total	90 009	91 011	104 809
Storage units	50 873	50 022	57 324
Sound, video, network and similar cards	8 750	8 565	11 529
Monitors used with computers	15 164	15 885	19 875
Printers, copying or faxing machines	8 457	7 862	7 150
Other input or output peripherals*	6 766	8 677	8 931

* Keyboards; joysticks, computer mice, scanners or optical readers

Figure D18 Computer equipment imports
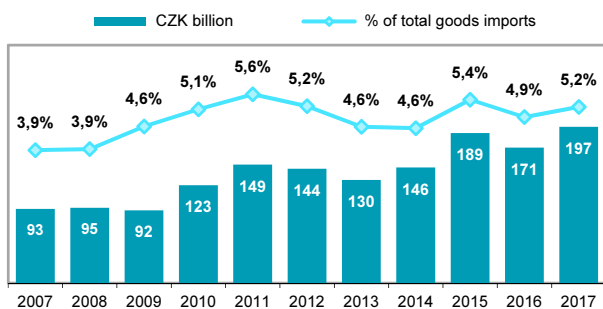
Figure D19 Computer equipment imports by commodities
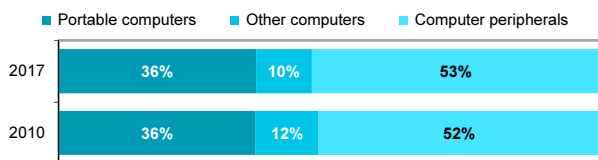
Figure D20 Computer equipment imports by countries
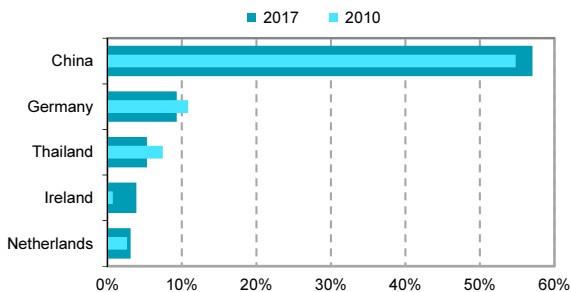
Source: CZSO, External Trade Statistics Database

Tab.D5 Communication equipment exports from the Czech Rep.

CZK million

	2015	2016	2017
Total	**104 021**	**97 651**	**138 167**
Mobile phones	67 793	62 246	87 374
Other communication equipment*	36 229	35 405	50 794

* Switching, routing and similiar apparatus such as routers, bridges, hubs or modems; Base stations and other apparatus for transmission or reception of voice, images or other data; Radio or television transmission apparatus

Figure D21 Communication equipment exports
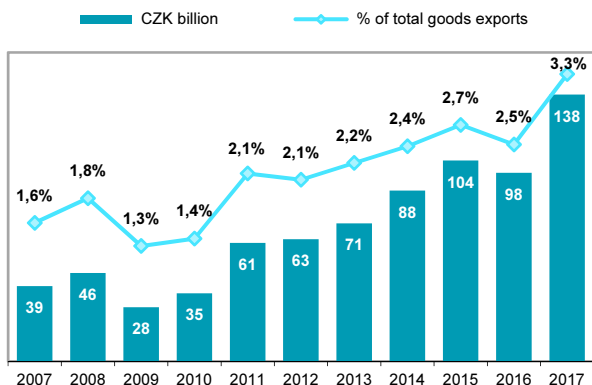
Figure D22 Communication equipment exports by commodities
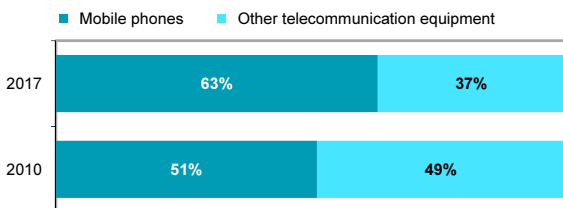
Figure D23 Communication equipment exports by countries
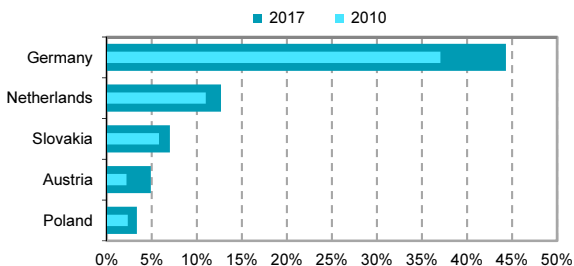
Source: CZSO, External Trade Statistics Database

Table D6 Communication equipment imports to the Czech Rep.

CZK million

	2015	2016	2017
Total	**121 222**	**103 219**	**141 049**
Mobile phones	85 666	68 538	98 042
Other communication equipment*	35 556	34 681	43 006

* Switching, routing and similiar apparatus such as routers, bridges, hubs or modems; Base stations and other apparatus for transmission or reception of voice, images or other data; Radio or television transmission apparatus

Figure D24 Communication equipment imports

Figure D25 Communication equipment imports by commodities
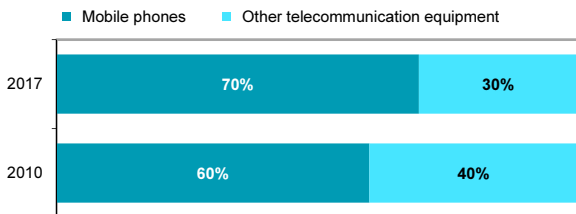
Figure D26 Communication equipment imports by countries
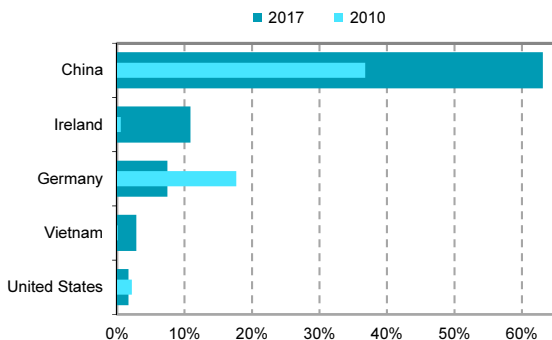
Source: CZSO, External Trade Statistics Database

Table D7 Consumer electronics exports from the Czech Republic

CZK million

	2015	2016	2017
Total	**70 087**	**72 922**	**74 650**
Radio and TV receivers	42 537	39 009	34 821
Sound and image recording and reproducing apparatuses	13 366	15 119	15 264
Consumer electronics accessories*	14 183	18 793	24 565

* Monitors and projectors; Microphones and stands there for; Loudspeakers; Headphones, earphones and combined microphone/speaker sets; Audio-frequency electric amplifiers; Electric sound amplifier sets; Non-recorded media

Figure D27 Consumer electronics exports
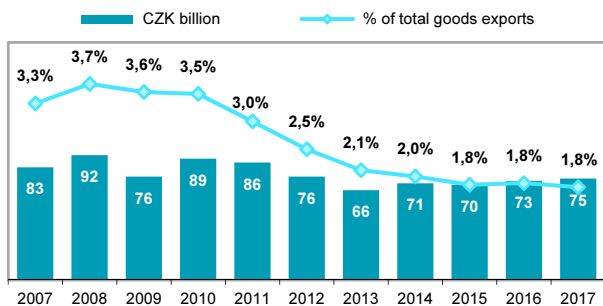
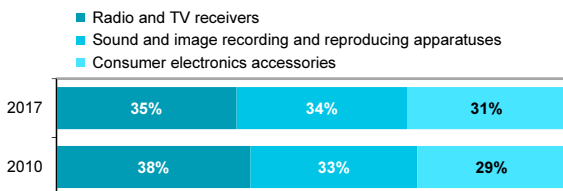
Figure D28 Consumer electronics exports by commodities
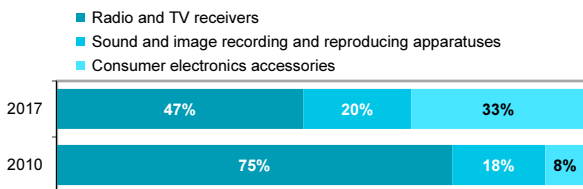
Figure D29 Consumer electronics exports by countries
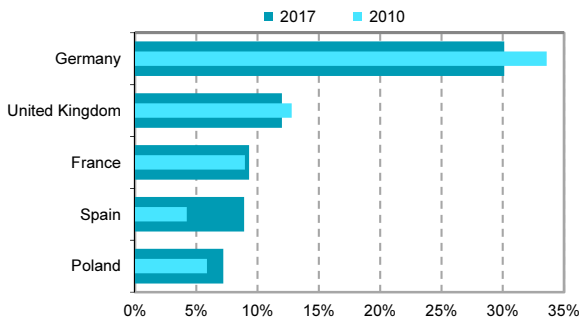
Source: CZSO, External Trade Statistics Database

Table D8 Consumer electronics imports to the Czech Republic

CZK million

	2015	2016	2017
Total	**41 813**	**44 109**	**43 031**
Radio and TV receivers	17 529	15 088	15 213
Sound and image recording and reproducing apparatuses	12 899	14 446	14 457
Consumer electronics accessories*	11 385	14 574	13 362

* Monitors and projectors; Microphones and stands there for; Loudspeakers; Headphones, earphones and combined microphone/speaker sets; Audio-frequency electric amplifiers; Electric sound amplifier sets; Non-recorded media

Figure D30 Consumer electronics imports
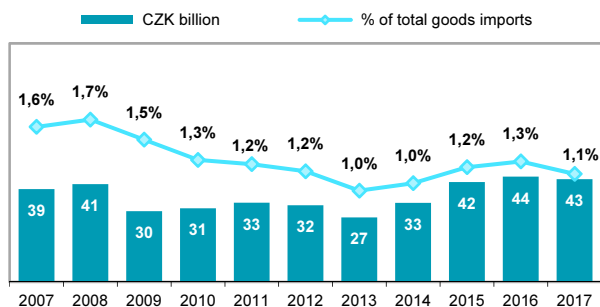
Figure D31 Consumer electronics imports by commodities

Figure D32 Consumer electronics imports by countries
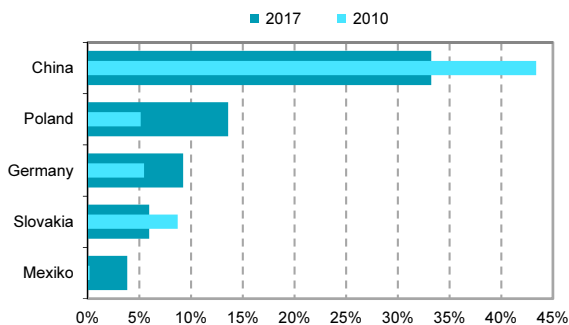
Source: CZSO, External Trade Statistics Database

Table D9 Electronic components exports from the Czech Rep.

CZK million

	2015	2016	2017
Total	**42 707**	**45 144**	**33 101**
Electronic integrated circuits	30 686	33 789	21 422
Printed circuits	4 584	4 874	4 555
Other electronic components	7 436	6 481	7 124

Figure D33 Electronic components exports
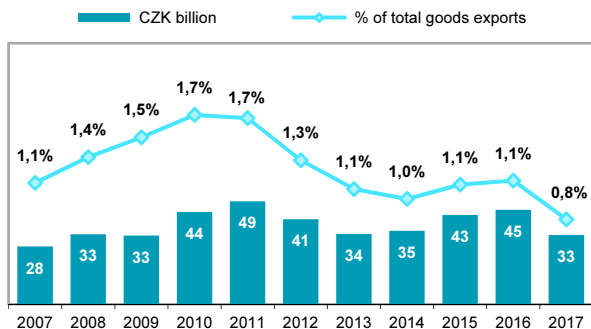
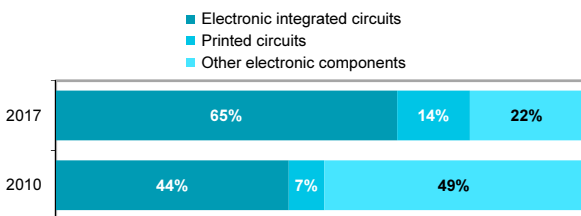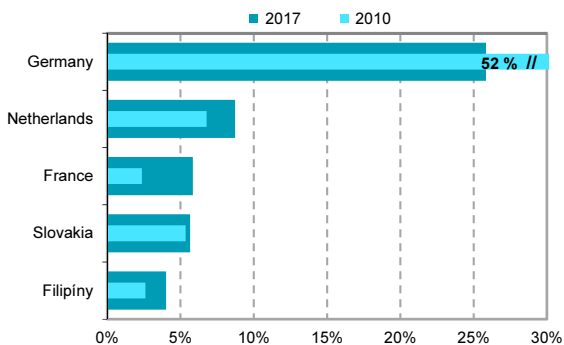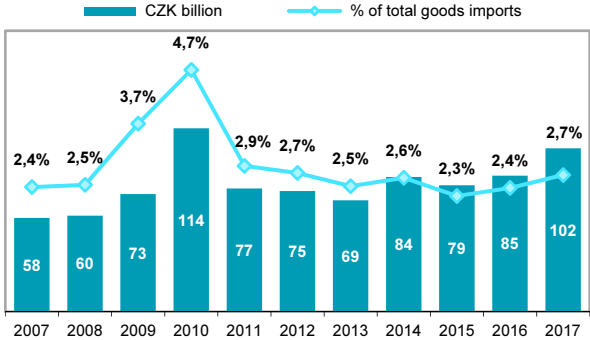## Figure D34 Electronic components exports by commodities

Figure D35 Electronic components exports by countries

Source: CZSO, External Trade Statistics Database

Table D10 Electronic components imports to the Czech Rep.

CZK million

	2015	**2016**	**2017**
Total	**78 750**	**84 734**	**101 739**
Electronic integrated circuits	57 802	63 101	77 417
Printed circuits	9 914	11 570	13 352
Other electronic components	11 034	10 064	10 969

Figure D36 Electronic components imports
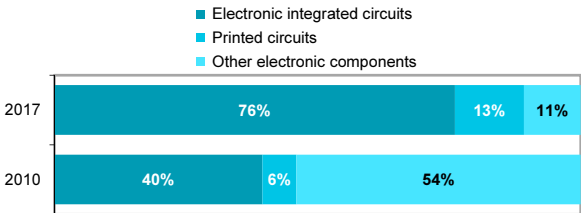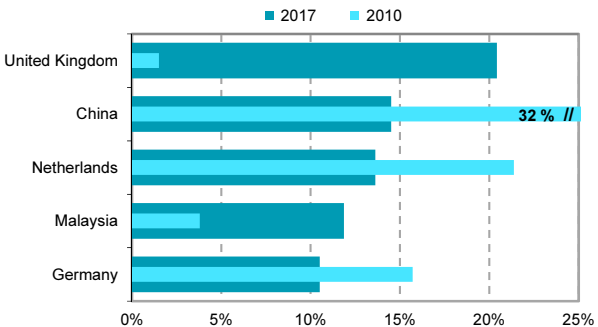

Figure D37 Electronic components imports by commodities

Figure D38 Electronic components imports by countries

Source: CZSO, External Trade Statistics Database

Table D11 Exports of ICT parts n.e.s. from the Czech Republic

CZK million

	2015	2016	2017
Total	**59 844**	**53 409**	**35 146**
Parts and accessories n.e.s. of			
- computers	35 203	29 212	17 458
- telecommunication equipment	18 987	19 520	11 638
- consumer electronics	5 654	4 677	6 050

n.e.s. - not else specified
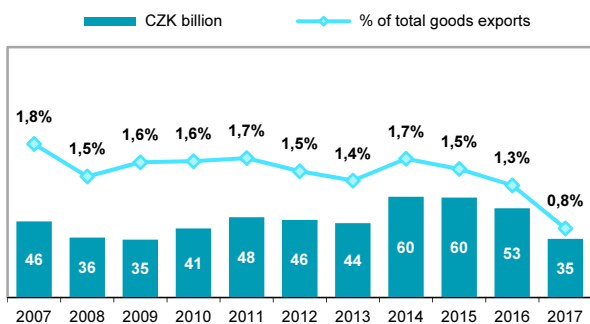
Figure D39 Exports of ICT parts and accessories n.e.s.

Figure D40 Exports of ICT parts n.e.s. by commodities
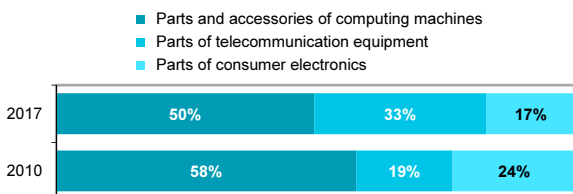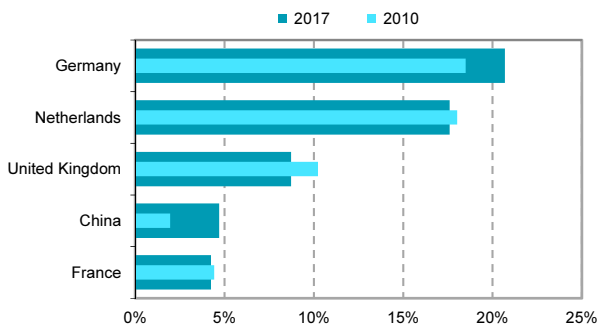

Figure D41 Exports of ICT parts n.e.s. by countries

Source: CZSO, External Trade Statistics Database

D ICT external trade

Table D12 Imports of ICT parts n.e.s. to the Czech Republic

CZK million

	2015	2016	2017
Total	**109 946**	**94 251**	**95 512**
Parts and accessories n.e.s. of			
- computers	66 188	54 163	59 231
- telecommunication equipment	19 500	14 324	7 792
- consumer electronics	24 258	25 765	28 489

n.e.s. - not else specified

Figure D42 Imports of ICT parts and accessories n.e.s.
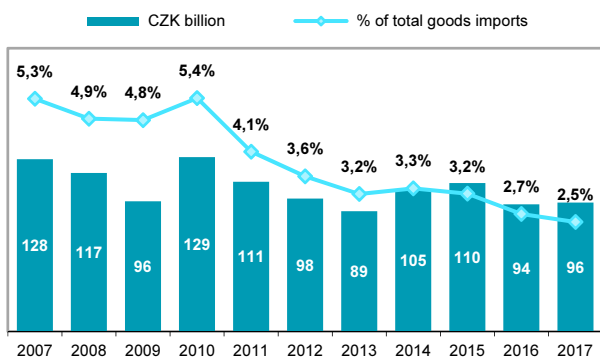

Figure D43 Imports of ICT parts n.e.s. by commodities
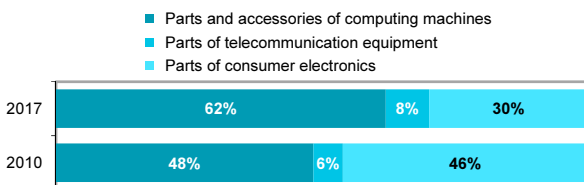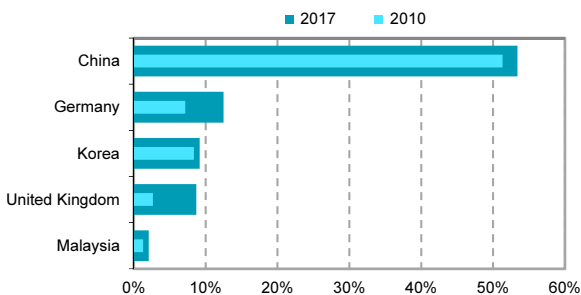

Figure D44 Imports of ICT parts n.e.s. by countries

Source: CZSO, External Trade Statistics Database

D ICT external trade

Table D13 Total ICT services exports from the Czech Republic

CZK million

	2015	2016	2017
Total	**67 988**	**79 287**	**87 987**
Telecommunication services	11 299	15 420	18 289
Computer services	39 502	43 899	47 747
Computer software	17 188	19 968	21 952
by selected countries			
EU28, total	44 680	49 812	53 717
of which to Germany	12 851	15 185	16 794
Other countries, total	23 308	29 475	34 270
of which to the United States	11 586	14 828	15 635

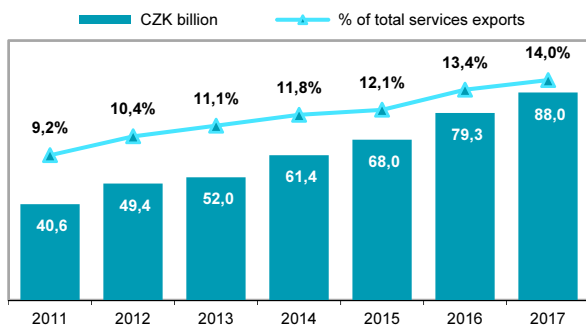### Figure D45 Total ICT services exports

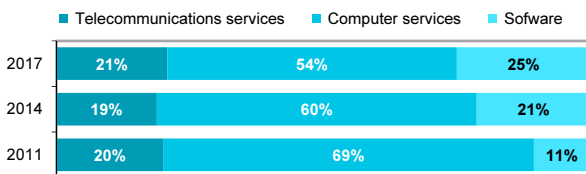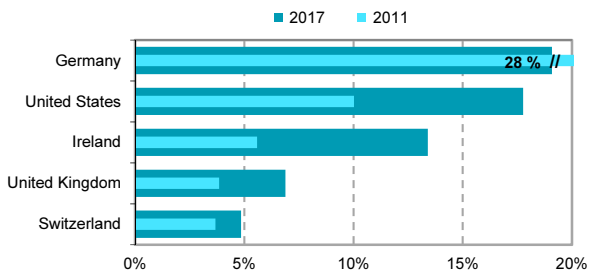### Figure D46 ICT services exports by type of service

Figure D47 ICT services exports by countries

Source: CZSO, Survey on exports and imports of services

D ICT external trade

Figure D48 ICT services exports
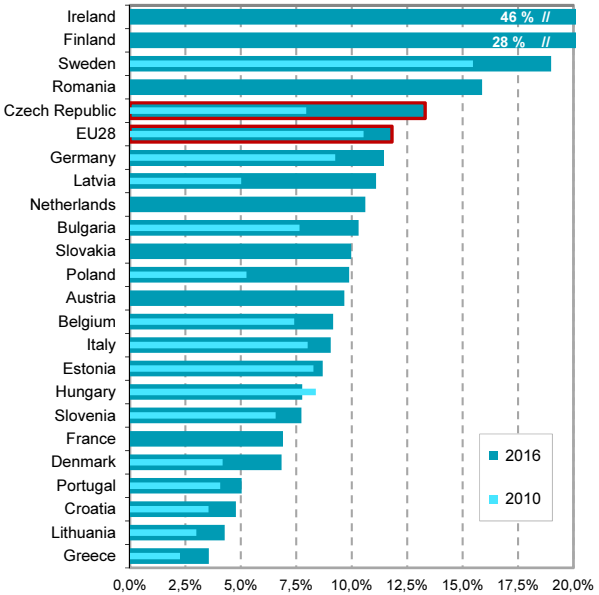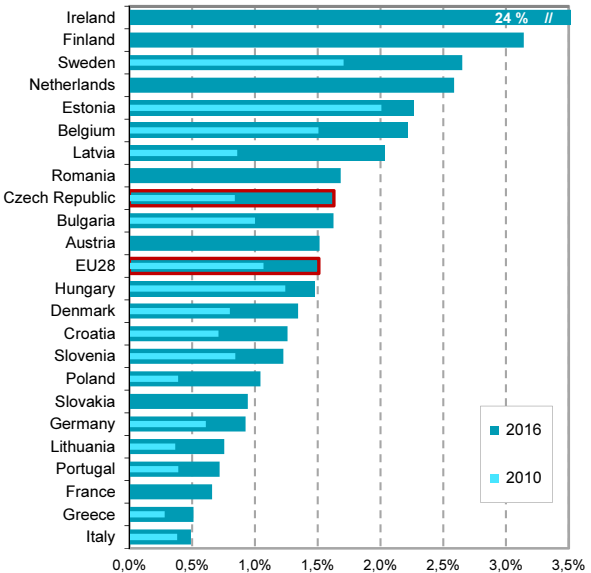### (% of total services exports)

	2016	2010

Ireland — 46 % //
Finland — 28 % //
Sweden
Romania
Czech Republic
EU28
Germany
Latvia
Netherlands
Bulgaria
Slovakia
Poland
Austria
Belgium
Italy
Estonia
Hungary
Slovenia
France
Denmark
Portugal
Croatia
Lithuania
Greece

(x-axis: 0,0% 2,5% 5,0% 7,5% 10,0% 12,5% 15,0% 17,5% 20,0%)

Figure D49 ICT services exports (% of GDP)

Ireland — 24 % //
Finland
Sweden
Netherlands
Estonia
Belgium
Latvia
Romania
Czech Republic
Bulgaria
Austria
EU28
Hungary
Denmark
Croatia
Slovenia
Poland
Slovakia
Germany
Lithuania
Portugal
France
Greece
Italy

	2016	2010

(x-axis: 0,0% 0,5% 1,0% 1,5% 2,0% 2,5% 3,0% 3,5%)

Source: Eurostat

Table D14 Total ICT services imports to the Czech Republic

CZK million

	2015	2016	2017
Total	**40 080**	**45 268**	**50 976**
Telecommunication services	11 902	14 804	16 431
Computer services	21 566	22 606	25 425
Computer software	6 613	7 859	9 120
by selected countries			
EU28, total	27 255	31 023	33 897
of which from Germany	9 526	12 137	13 064
Other countries, total	12 826	14 246	17 079
of which from the United States	3 616	3 765	3 172

Figure D50 Total ICT services imports
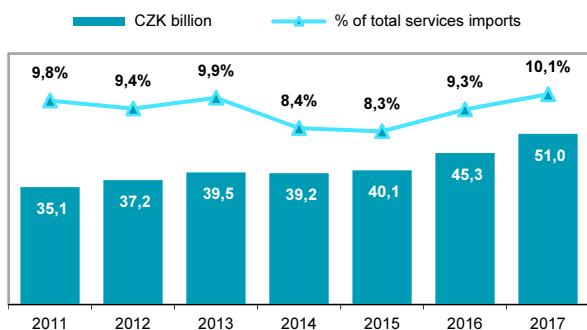

Figure D51 ICT services imports by type of service

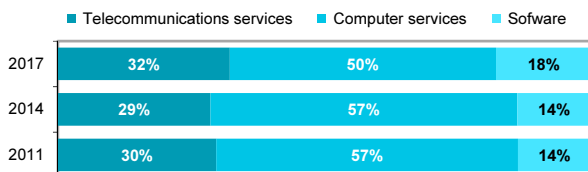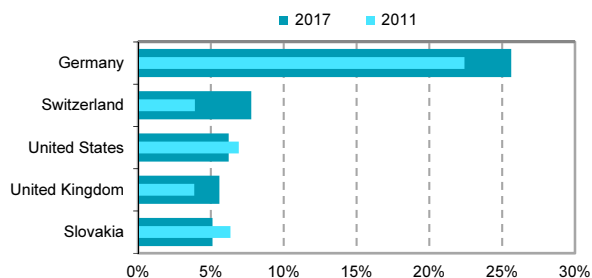## Figure D52 ICT services imports by countries

Source: CZSO, Survey on exports and imports of services

**Figure D53 ICT services imports
(% of total services imports)**

Legend: 2016, 2010
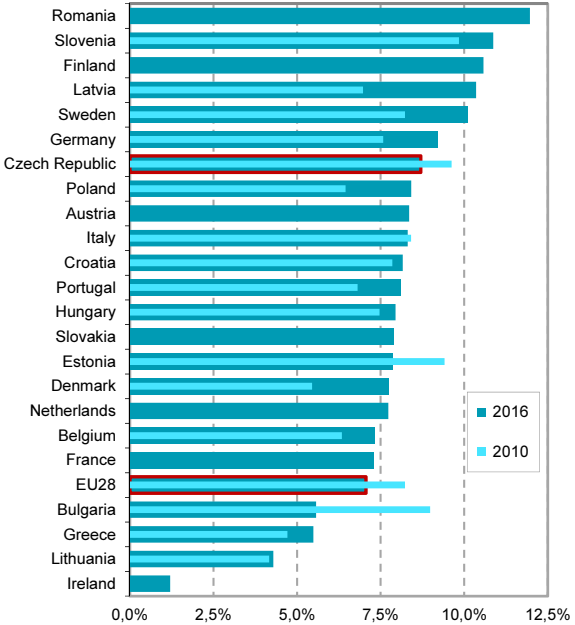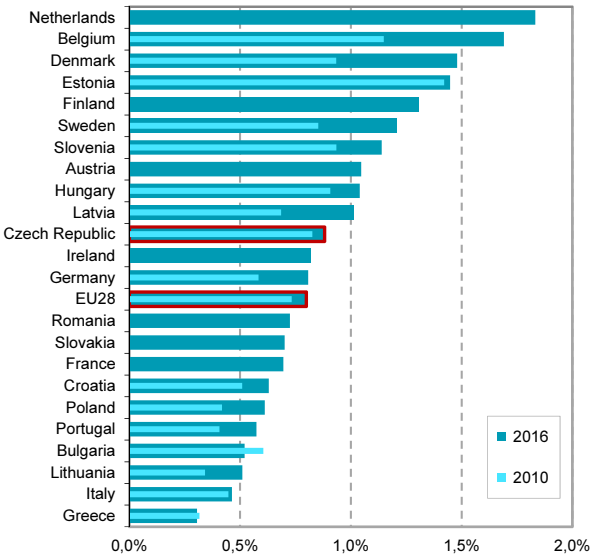
Countries (top to bottom): Romania, Slovenia, Finland, Latvia, Sweden, Germany, Czech Republic, Poland, Austria, Italy, Croatia, Portugal, Hungary, Slovakia, Estonia, Denmark, Netherlands, Belgium, France, EU28, Bulgaria, Greece, Lithuania, Ireland

X-axis: 0,0% 2,5% 5,0% 7,5% 10,0% 12,5%

Figure D54 ICT services imports (% of GDP)

Legend: 2016, 2010

Countries (top to bottom): Netherlands, Belgium, Denmark, Estonia, Finland, Sweden, Slovenia, Austria, Hungary, Latvia, Czech Republic, Ireland, Germany, EU28, Romania, Slovakia, France, Croatia, Poland, Portugal, Bulgaria, Lithuania, Italy, Greece

X-axis: 0,0% 0,5% 1,0% 1,5% 2,0%

Source: Eurostat

D ICT external trade

Table D15 Computer services and software exports from the Czech Republic

CZK million

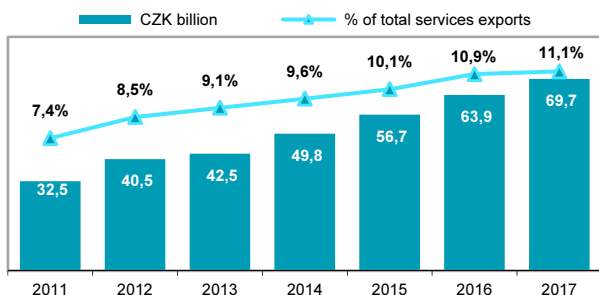|	2015	2016	2017
Total	**56 690**	**63 867**	**69 698**
Computer services	39 502	43 899	47 747
Computer software	17 188	19 968	21 952
by selected countries			
EU28, total	38 564	41 536	44 148
of which to Germany	10 345	11 818	13 289
Other countries, total	18 126	22 331	25 550
of which to the United States	10 958	13 606	14 927

Figure D55 Computer services and software exports

CZK billion   % of total services exports

2011	2012	2013	2014	2015	2016	2017
32,5	40,5	42,5	49,8	56,7	63,9	69,7
7,4%	8,5%	9,1%	9,6%	10,1%	10,9%	11,1%

Fig. D56 Computer services and SW exports by type of service

Computer services   Computer software

	Computer services	Computer software
2017	69%	31%
2014	74%	26%
2011	87%	13%
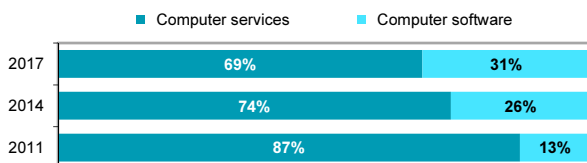
Figure D57 Computer services and SW exports by countries
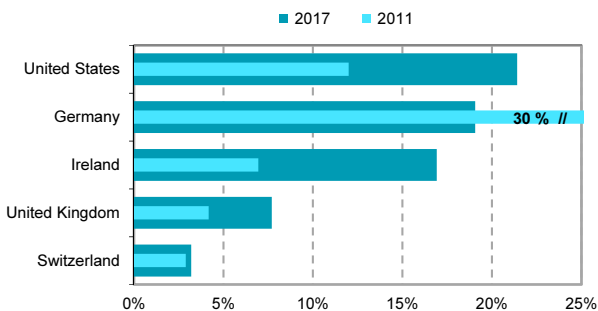
2017   2011

United States, Germany (30 % //), Ireland, United Kingdom, Switzerland

Source: CZSO, Survey on exports and imports of services

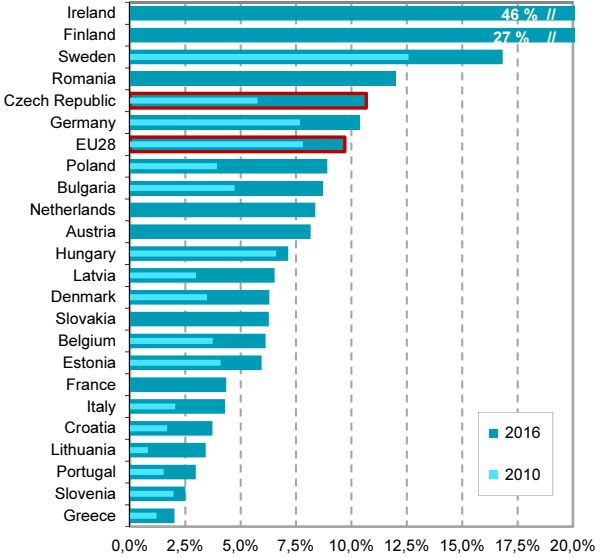## Figure D58 Computer services and software exports (% of total services exports)

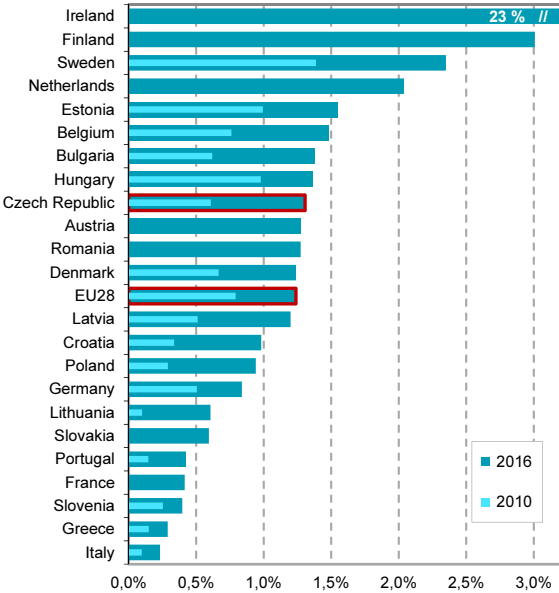## Figure D59 Computer services and software exports (% of GDP)

Source: Eurostat

Table D16 Computer services and software imports to the Czech Republic

CZK million

	2015	2016	2017
Total	**28 178**	**30 465**	**34 545**
Computer services	21 566	22 606	25 425
Computer software	6 613	7 859	9 120
by selected countries			
EU28, total	20 219	22 256	24 726
of which from Germany	6 554	8 026	8 935
Other countries, total	7 959	8 209	9 819
of which from the United States	3 358	3 312	2 873

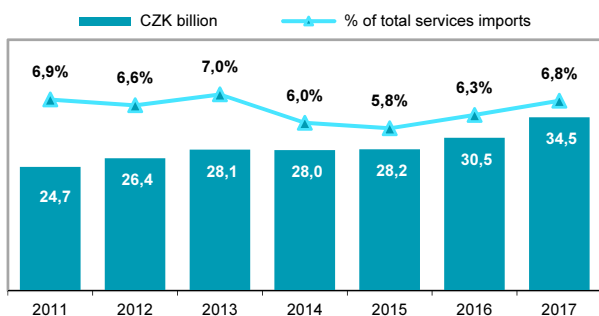**Figure D60 Computer services and software imports**

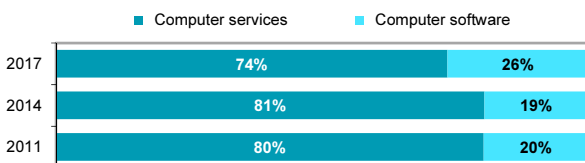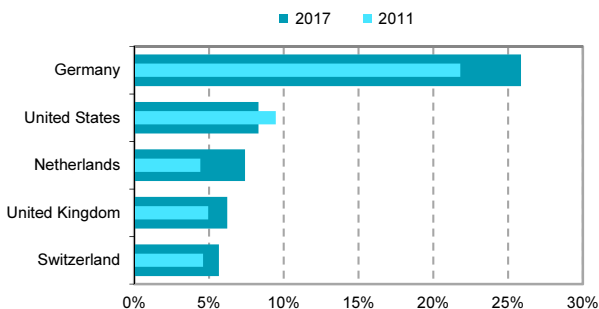**Figure D61 Computer services & SW imports by type of service**

Figure D62 Computer services & SW imports by countries

Source: CZSO, Survey on exports and imports of services

Figure D63 Computer services and software imports (% of total services imports)

■	2016
■	2010

Countries (top to bottom): Finland, Germany, Sweden, Romania, Austria, Poland, Denmark, Hungary, Netherlands, Croatia, Czech Republic, Slovakia, EU28, Belgium, France, Estonia, Italy, Latvia, Portugal, Bulgaria, Slovenia, Greece, Lithuania, Ireland

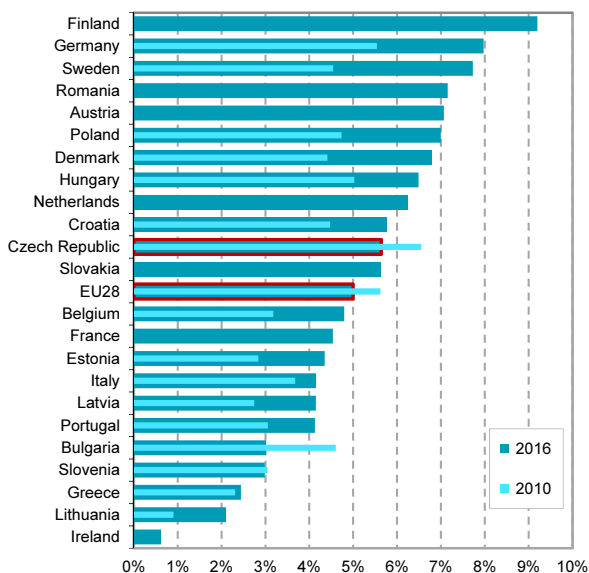X-axis: 0%, 1%, 2%, 3%, 4%, 5%, 6%, 7%, 8%, 9%, 10%

Figure D64 Computer services and software imports (% of GDP)

■	2016
■	2010

Countries (top to bottom): Netherlands, Denmark, Finland, Belgium, Sweden, Austria, Hungary, Estonia, Germany, Czech Republic, EU28, Poland, Slovakia, Croatia, Romania, France, Ireland, Latvia, Slovenia, Portugal, Bulgaria, Lithuania, Italy, Greece

X-axis: 0,0%, 0,3%, 0,6%, 0,9%, 1,2%, 1,5%

Source: Eurostat