

18 July 2017

**Indicators of the Information and Communication
Technology Sector (ICT)
Year 2015**

Main results

- Turnover for ICT sector companies reached 86,574.4 million euros in 2015, 6.1% more than the previous year.
- The number of companies in the ICT sector increases 5.8%, while the number of employed persons increased 6.7%.
- During the year 2015, 38.5% of the companies in the ICT sector carried out innovative activities. 15.9% carried out R&D activities.
- The ICT sector obtained a negative trade balance of 12,370.1 million euros in 2015, indicating an increase of 15.1% of the trade deficit as compared with that registered in the previous year.

Main variables in the ICT sector

Turnover for companies in the Information and Communication Technologies (ICT) sector stood at 86,574.4 million euros in the year 2015, which is, an increase of 6.1% with respect to the previous year. These companies generated an added value of 30,629.7 million euros, 3.1% more than in 2014.

The number of companies in the ICT sector stood at 55,254, indicating an increase of 5.8%. In turn, the number of persons employed increased 6.7%, standing at 423,391 persons.

Main variables in the ICT sector. Year 2015

Economic data in million euros

ICT sector (CNAE-2009)	2015	% annual variation
Number of companies	55,254	5.8
Turnover	86,574.4	6.1
Added value	30,629.7	3.1
Number of employed persons	423,391	6.7

Source: Structural Business Statistics: Industrial Sector and Services Sector
(new denomination of the former Industrial Companies Survey and Annual Services Survey)

Evolution of the number of companies and the number of employed persons in the ICT sector (2008 – 2015)¹

The number of companies of the ICT sector increased in 2015 for the sixth year in a row. In turn, the number of employed persons increased for the second consecutive year.

Evolution of the number of companies and employed persons in the ICT sector (2008-2015)¹

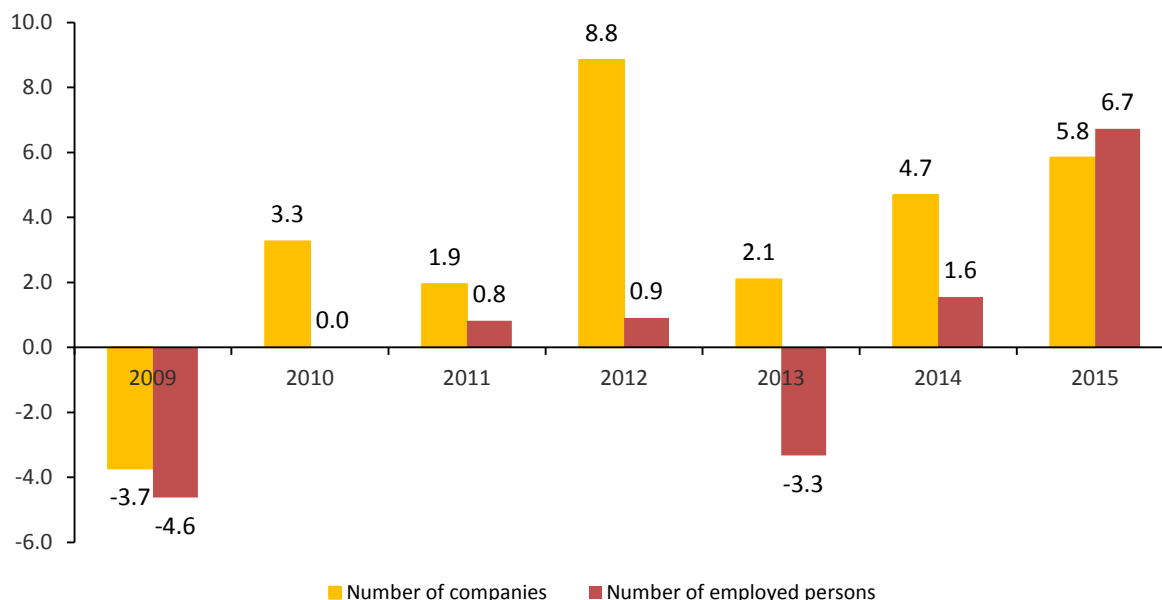
	2008	2009	2010	2011	2012	2013	2014	2015
Number of	43,708	42,078	43,451	44,298	48,218	49,863	52,204	55,254
Number of	415,605	396,395	396,543	399,783	403,422	390,638	396,706	423,391

Source: Structural Business Statistics: Industrial Sector and Services Sector
(new denomination of the former Industrial Companies Survey and Annual Services Survey)

In 2015, the annual variation rate of the number of companies of the sector was 5.8%, as compared with 4.7% in 2014.

In turn, the annual variation rate of the number of employed persons was 6.7%. In 2014, it was 1.6%.

Annual variation rate of the number of companies and employed persons in the ICT sector (2009-2015)¹



¹ Starting with the reference year 2013, the Industrial Companies Survey (denominated Structural Business Statistics: Industrial Sector since the reference year 2015), extends its population and territorial scope, including industrial companies with no wage earners and companies in Ceuta and Melilla. In order to allow the comparison with the year 2012, all annual variation rates of 2013 were calculated over the comparable scopes.

Wage costs in the ICT sector

The wage cost of the ICT sector stood at 2,427.9 euros per month in the fourth quarter of 2015. Within this sector, the wage cost of the *Manufacturing industry* was 2,872.3 euros and that of *ICT Services* was 2,418.9 euros.

With respect to the wage cost per hour, the highest figures were registered in the *Telecommunications* sector (24.8 euros), the *Manufacturing industry* (20,0 euros) and *Programming, Consultancy and other IT related activities* (18.9 euros).

Wage cost in the ICT sector. Fourth quarter of 2015

Euros

Fourth quarter of 2015. ICT sector (CNAE 2009)	Wage cost per hour	Wage cost per worker and month
1. ICT MANUFACTURING INDUSTRIES Manufacture of computer, electronic and optical products (CNAE 26)	20.0	2,872.3
2. SERVICES	16.8	2,418.9
2.a ICT TRADE INDUSTRIES: Wholesale trade and trade intermediaries, except for motor vehicles and motorcycles (CNAE 46)	15.5	2,221.6
2.b.1 ICT SERVICES INDUSTRIES: Edition (CNAE 58)	18.6	2,687.4
2.b.2 ICT SERVICES INDUSTRIES: Telecommunications (CNAE 61)	24.8	3,610.9
2.b.3 ICT SERVICES INDUSTRIES: Programming, consultancy and other computer-related activities (CNAE 62)	18.9	2,764.6
2.b.4 ICT SERVICES INDUSTRIES: Information Services (CNAE 63)	18.2	2,448.3
2.b.5 ICT SERVICES INDUSTRIES: Repair of computers, personal effects and articles for household use (CNAE 95)	13.2	1,837.3
TOTAL SECTOR ICT	16.9	2,427.9

The wage cost in the ICT sector increased 2.0% in the fourth quarter of 2015, with respect to the same period of the previous year. Nevertheless, in the Industry it fell 3.6%.

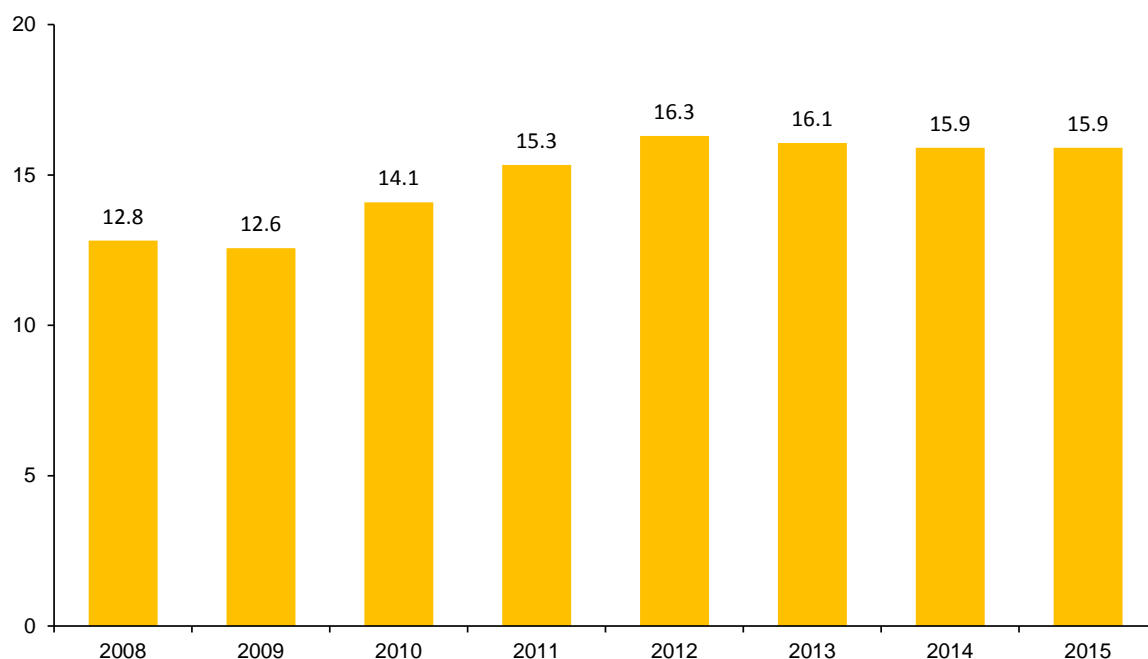
Wage cost by worker and month (2014-2015)

Wage cost by worker and month (2014-2015)	IV quarter 2014	IV quarter 2015	annual variation
1. ICT MANUFACTURING INDUSTRIES	2,978.8	2,872.3	-3.6
2. ICT SERVICES	2,366.5	2,418.9	2.2
TOTAL ICT SECTOR	2,379.2	2,427.9	2.0

Companies in the ICT sector which carried out R&D activities

The number of companies which carried out R&D activities in 2015 was 1,597, which supposed 15.9% of the total business sector which carried out this type of activities. This percentage is the same as that registered in 2014.

Percentage of companies of the ICT sector that carried out R&D with respect to the total number of companies that carried out R&D



Within the ICT sector, in 2015 there were 2.3% less companies which carried out R&D than the previous year.

Evolution of the number of companies that carried out R&D activities (2008-2015)

	2008	2009	2010	2011	2012	2013	2014	2015
Total ICT sector	1,929	1,709	1,618	1,714	1,828	1,707	1,634	1,597
Total business sector	15,049	13,603	11,481	11,178	11,213	10,627	10,275	10,041

Source: Statistics on Scientific Research and Technological Development Activities.

Internal R&D expenditure of ICT sector companies

Companies in the ICT sector invested a total of 955.5 million euros in R&D in 2015. This figure accounted for 13.8% of the total business expenditure in R&D activities.

Within the ICT services industries, the industry with the greatest expenditure in R&D was *Programming, consultancy and other activities related to IT*, with 578.5 million euros.

Current expenditure accounted for 95.2% of the total expenditure in R&D by companies in the ICT sector. Capital expenditure represented the remaining 4.8%.

Internal R&D expenditure in the ICT sector. Year 2015

Data in million euros

ICT sector (CNAE 2009)	Current expenditure		Capital expenditure		TOTAL
	re	%	re	%	
1. Manufacturing	96.6	93.8	6.3	6.2	103.0
2. Services	812.6	95.3	39.9	4.7	852.5
a. ICT trade industries	73.5	98.8	0.9	1.2	74.4
b. ICT services industries	739.0	95.0	39.1	5.0	778.1
- Software publishing	17.3	97.6	0.4	2.4	17.7
- Telecommunications	123.8	90.5	13.0	9.5	136.8
- Computer programming, consultancy and other activities related to IT	553.6	95.7	25.0	4.3	578.5
- Web portals, data processing, hosting	39.8	99.3	0.3	0.7	40.1
- Repair of computer and communication equipment	4.6	92.3	0.4	7.7	5.0
TOTAL ICT sector	909.2	95.2	46.3	4.8	955.5
TOTAL business sectors	6,409.0	92.6	511.0	7.4	6,920.0

Source: Statistics on Scientific Research and Technological Development Activities.

Personnel employed in R&D in the ICT sector

In 2015, the ICT sector concentrated 18.6% of the total personnel dedicated to R&D tasks in the business sector, and 17.5% of the total researchers.

The personnel employed in R&D tasks, on Full-Time Equivalent (FTE), were 16,286.5. Of these, 22.9% of them were women.

The number of researchers dedicated to R&D, on FTE was 7,884.1, 21.8% of which were women.

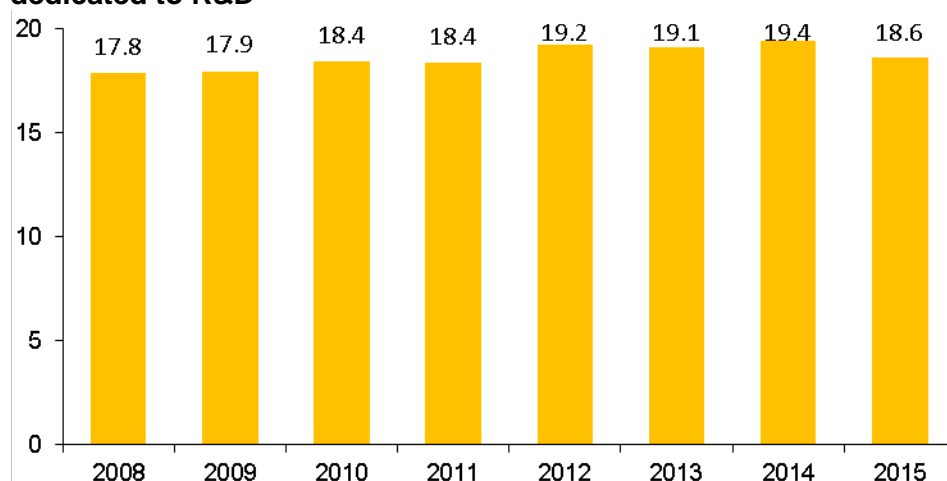
Within the *ICT services industries, Programming, consultancy and other activities related to IT* was the industry that employed most workers, with a total of 10,703.8 on FTE. Of this figure, 5,255.2 were researchers.

R&D Personnel (on FTE). Year 2015

ICT sector (CNAE 2009)	Total Personnel			Researchers		
	Women	%	TOTAL	Women	%	TOTAL
1. Manufacturing	312.9	16.2	1,927.6	179.8	15.9	1,130.2
2. Market	3,423.1	23.8	14,358.9	1,535.8	22.7	6,753.9
a. ICT trade industries	88.9	15.0	593.9	66.4	15.7	423.2
b. ICT services industries	3,334.1	24.2	13,764.8	1,469.4	23.2	6,330.6
- Software publishing	60.9	14.6	415.7	20.0	11.9	168.3
- Telecommunications	447.6	26.9	1,666.0	160.0	25.9	617.0
- Computer programming, consultancy and other activities related to IT	2,582.4	24.1	10,703.8	1,220.8	23.2	5,255.2
- Web portals, data processing, hosting	221.7	26.0	851.5	65.0	24.4	266.2
- Repair of computer and communication equipment	21.5	16.8	127.8	3.6	15.1	23.9
TOTAL ICT sector	3,735.9	22.9	16,286.5	1,715.6	21.8	7,884.1
TOTAL business sectors	27,436.7	31.4	87,431.5	13,984.0	31.0	45,151.0

Source: Statistics on Scientific Research and Technological Development Activities.

Percentage of the ICT sector dedicated to R&D with respect to the total personnel dedicated to R&D



The personnel employed in the ICT sector registered a decrease of 4.1% in 2015, after having increased by 0.3% in 2014.

Companies in the ICT sector carrying out innovative activities

During the year 2015, 38.5% of the companies in the ICT sector carried out innovative activities. By sector, 54.9% of manufacturing companies and 37.3% of companies in the services sector carried out innovative activities.

The expenditure in innovative activities of the ICT manufacturing industries stood at 126.7 million euros. In the ICT services companies, the expenditure in those activities was 1,976.1 million euros.

The ICT sector expenditure accounted for 15.4% of the total business expenditure on innovative activities.

Innovative activities in the ICT sector. Year 2015

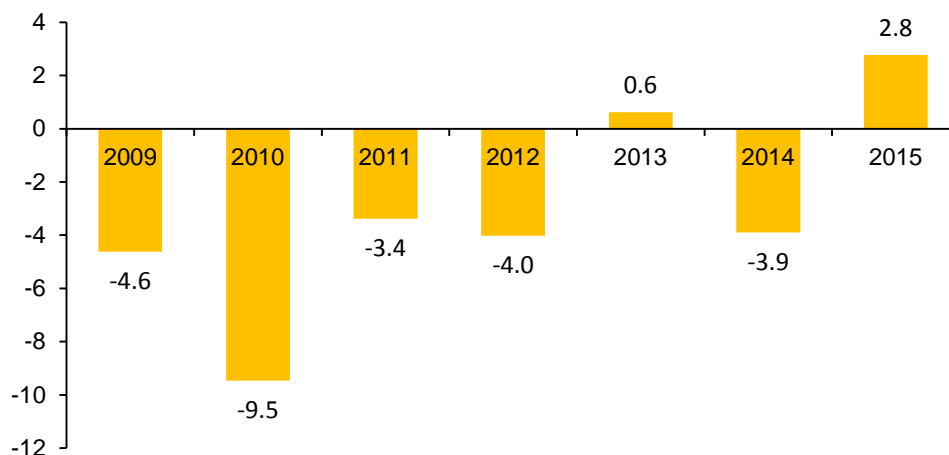
Data in million euros

ICT sector (CNAE 2009)	% of companies with innovative activities	Expenditure on innovative activities	Expenditure over the ICT sector	Expenditure over the total
Manufacturing	54.9	126.7	6.0	0.9
Services	37.3	1,976.1	94.0	14.5
Total ICT sector	38.5	2,102.8	100.0	15.4
Total business sector	11.0	13,674.2		100.0

Source: Innovation in Companies Survey

The annual variation of the number of companies in the ICT sector which carried out innovative activities in 2015 was 2.8%.

Evolution of the annual variation of companies which carried out innovative activities. (2009-2015). Percentage

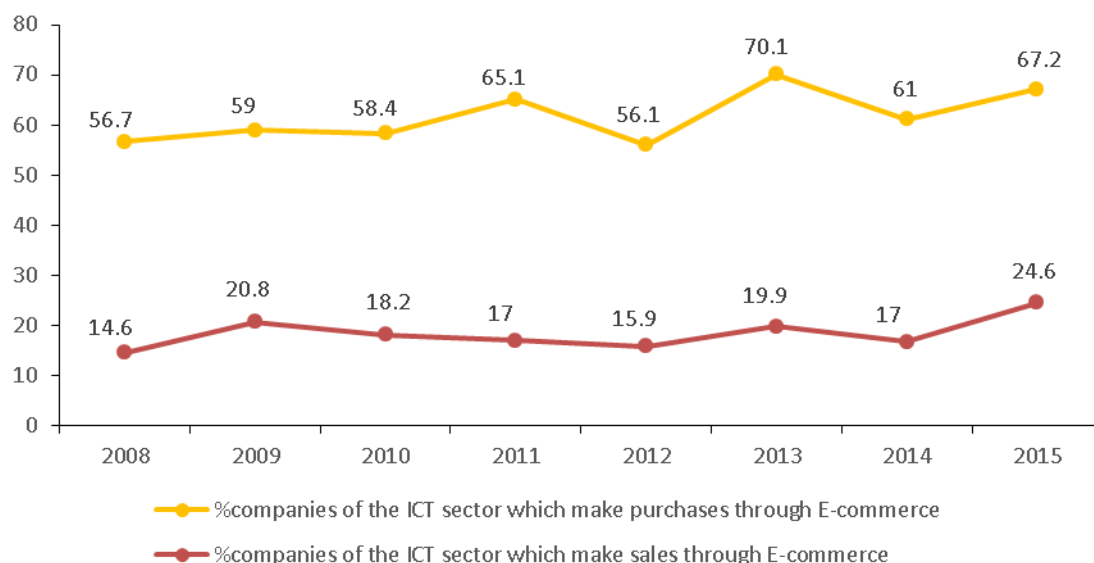


Companies of the ICT sector which used E-commerce

In 2015, 67.2% of the companies of the ICT sector with 10 or more employees made purchases through E-commerce in comparison to 32.1% of the total of the business sector.

On the other hand, 24.6% of the companies of the ICT sector with 10 or more employees carried out sales through E-commerce, while the total business percentage increased to 20.1%.

Evolution of E-commerce in ICT sector companies (2008-2015)



Production value of ICT goods

According to the Industrial Products Survey, the production value of ICT goods was 2,851.0 million euros in 2015, with an increase of 9.2% compared to the previous year.

All the groups of products increased the value of their production of ICT goods in 2015. The greatest variation was experienced by *Audio and video equipment* (18.6%).

Production value of ICT goods. Year 2015

Data in million euros

Groups of products (PRODCOM 2010)	Production value	% over the ICT sector total	% over the industry sector	% Variation as compared
1. Telecommunication equipments	512.8	18.0	0.1	11.5
2. Computer equipment	140.5	4.9	0.0	12.4
3. Electronic components	820.7	28.8	0.2	7.3
4. Audio and video equipment	211.5	7.4	0.1	18.6
5. Other ICT products	1,165.5	40.9	0.3	7.8
TOTAL ICT sector	2,851.0	100.0	0.7	9.2
TOTAL industrial production	381,663.2	...	100.0	2.7

Source: Industrial Products Survey

Evolution of the production value of ICT goods (2008 – 2015)

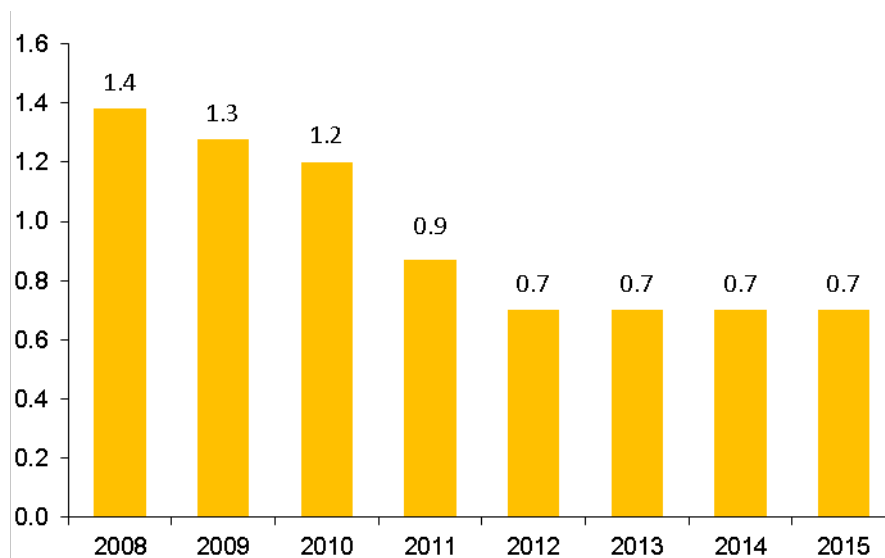
Million euros

	2008	2009	2010	2011	2012	2013	2014	2015
Total ICT sector	5,948.4	4,283.6	4,319.7	3,324.3	2,825.5	2,531.2	2,609.7	2,851.0
Total industrial production	431,191.1	335,854.4	359,807.1	382,380.8	377,949.1	369,629.5	371,771.9	381,663.2

Source: Industrial Products Survey

The production value of ICT goods accounted for 0.7% of the total value of the industrial production in 2015. This percentage has not changed in the last four years.

Production value of ICT goods with respect to the total industrial production value.
Percentage



Foreign trade of ICT products

The trade balance of ICT products in 2015 registered a negative balance of 12,370.1 million euros. This amount supposes an increase of the trade deficit for the sector of 15.1%, with respect to the previous year.

Total ICT sector exports reached 5,233.5 million euros, while imports reached 17,603.6 million euros.

By group of products, worth noting were exports of *Telecommunications equipment*, which represented 28.5% of total exports and 36.5% of the total imports of the ICT sector.

Foreign trade of the ICT sector, by group of products. Year 2015

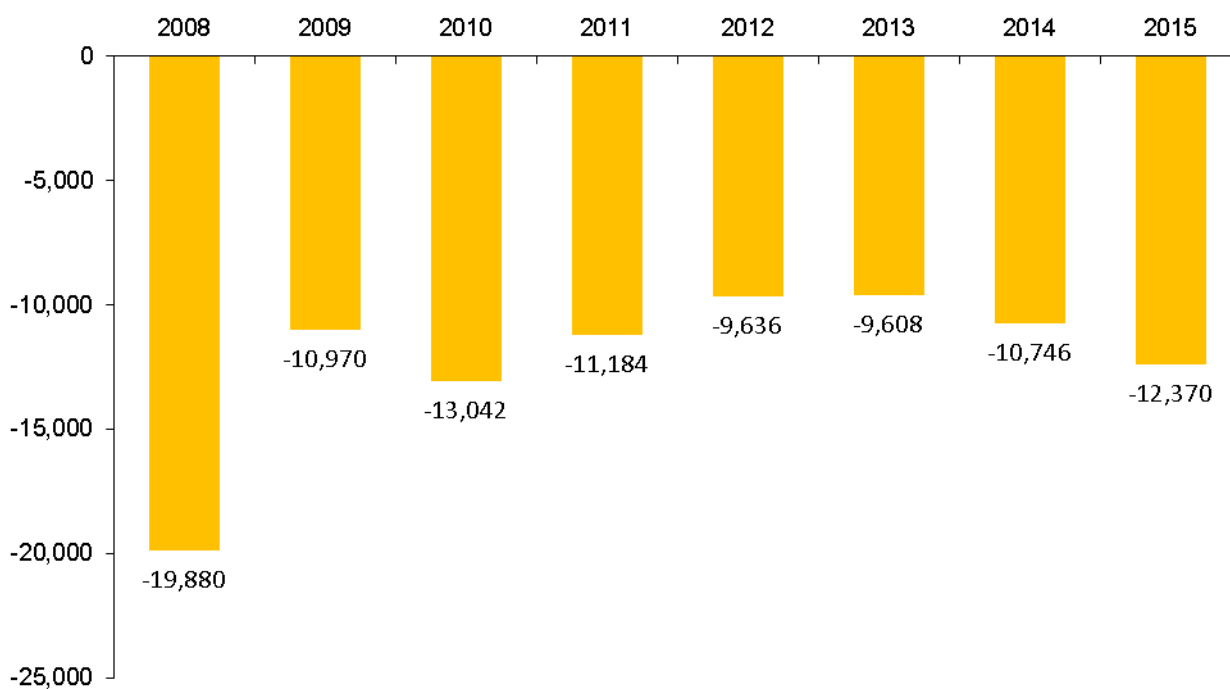
Data in million euros

Groups of products (CN [*])	Exports	Imports	Trade balance	Coverage rate	% Trade balance. Variation as compared to 2014
1. Telecommunication equipments	1,489.9	6,431.1	-4,941.3	23.2	-12.3
2. Computer equipment	811.5	4,049.1	-3,237.6	20.0	-9.6
3. Electronic components	850.1	1,745.6	-895.5	48.7	-35.1
4. Audio and video equipment	668.7	2,498.9	-1,830.2	26.8	-7.3
5. Other ICT products	1,413.4	2,879.0	-1,465.6	49.1	-43.5
TOTAL ICT sector	5,233.5	17,603.6	-12,370.1	29.7	-15.1
TOTAL	249,794.4	274,772.3	-24,977.9	90.9	0.0

Source: Own compilation with data from the State Tax Administration Agency

(*) Combined Nomenclature

Evolution of the trade balance of the ICT sector. Million euros



Evolution of exports in the ICT sector (2008-2015). Million euros

	2008	2009	2010	2011	2012	2013	2014	2015
Total ICT sector	5,996.3	4,716.2	5,538.9	5,244.5	4,699.5	4,344.8	4,655.9	5,233.5
Total foreign trade of ICT goods	189,227.9	159,889.6	186,780.1	215,230.4	226,114.6	235,814.1	240,581.8	249,794.4

Source: Own compilation with data from the State Tax Administration Agency

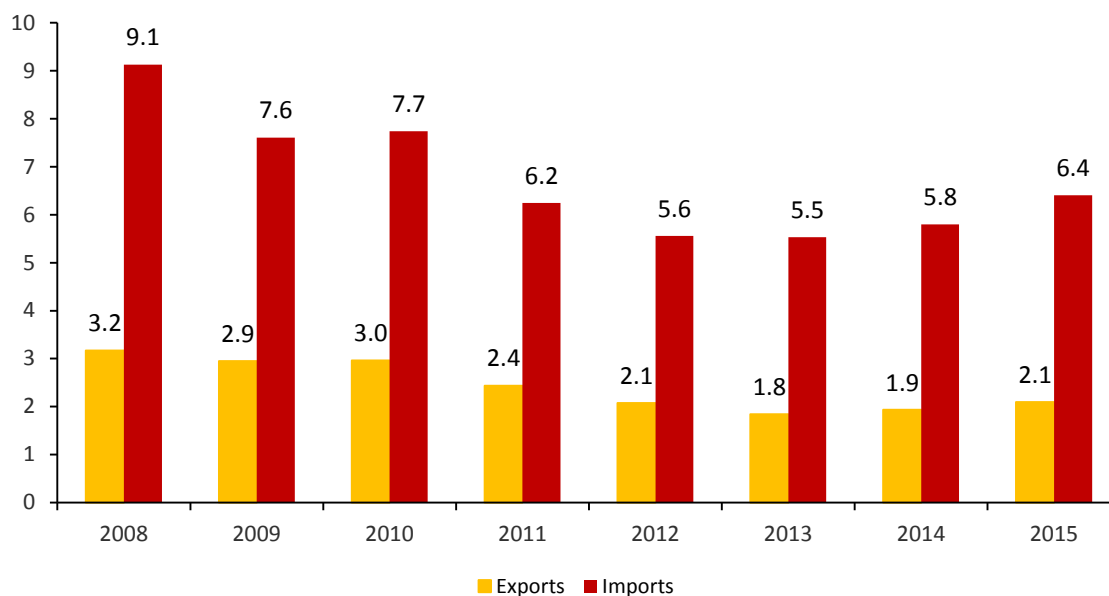
Evolution of imports in the ICT sector (2008-2015). Million euros

	2008	2009	2010	2011	2012	2013	2014	2015
Total ICT sector	25,875.8	15,686.7	18,580.7	16,428.7	14,335.7	13,953.0	15,402.1	17,603.6
Total foreign trade of ICT goods	283,387.8	206,116.2	240,055.9	263,140.7	257,945.6	252,346.8	265,556.6	274,772.3

Source: Own compilation with data from the State Tax Administration Agency

The exports of the ICT sector represented 2.1% of the Spanish exports in 2015, compared to 1.9% in 2014. The imports represented 6.4% of the national imports, compared with 5.8% the previous year.

Percentage of exports and imports of the ICT sector with respect to the total national exports and imports



The exports of the ICT sector in 2015 registered an increase of 12.4% with respect to the previous year. In turn, the imports increased 14.3%.

Methodological Annex

The so-called ICT Sector is comprised of the manufacturing and services industries whose main activity is related to the development, production, commercialisation and intensive use of Information and Communications Technologies. The ICT Sector is characterised by high rates of innovation, technological progress and productivity.

In statistical terms, the definition of the ICT Sector is developed through a comprehensive listing of the branches of activity corresponding to ICT companies (**focus by sector**) and ICT products (**focus by product**).

In order to determine the list of activities and products in the ICT sector, we have begun with the methodological work carried out by the Organisation for Economic Cooperation and Development (OECD) on the subject.

Information sources

The statistical information on the ICT Sector has been obtained from the following INE statistical operations:

Structural Business Statistics: Industrial Sector and Services Sector (new denominations given to the previous Industrial Companies Survey and Annual Services Survey); Statistics on R&D Activities; Technological Innovation in Companies Survey; Quarterly Labour Cost Survey; Industrial Products Survey and Survey on the Use of Information and Communications Technologies and Electronic Commerce in Companies.

Starting in reference year 2013, the Industrial Companies Survey extended its population and territorial scope to cover industrial companies without wage earners and incorporating the companies of Ceuta and Melilla, reason why the rates of variation with respect to 2012 were calculated without taking into account this scope, even though the extended scope is used starting 2014.

Information has also been obtained from the Foreign Trade Statistics of the Spanish Tax Agency.

List of branches of the ICT sector according to CNAE 2009

ICT manufacturing industries

CNAE 2611	Manufacture of electronic components
CNAE 2612	Manufacture of assembled printed circuits
CNAE 2620	Manufacture of computers and peripheral equipment
CNAE 2630	Manufacture of telecommunications equipment
CNAE 2640	Manufacture of consumer electronics
CNAE 2680	Manufacture of magnetic and optical supports

ICT trade industries

CNAE 4651	Wholesale of computers, computer peripheral equipment and software
CNAE 4652	Wholesale of electronic and telecommunications equipment and parts

ICT services industries

SOFTWARE PUBLISHING

CNAE 5821	Publishing of computer games
CNAE 5829	Other software publishing

TELECOMMUNICATIONS

CNAE 6110	Wired telecommunications activities
CNAE 6120	Wireless telecommunications activities
CNAE 6130	Satellite telecommunications activities
CNAE 6190	Other telecommunications activities

COMPUTER PROGRAMMING, CONSULTANCY AND OTHER ACTIVITIES RELATED TO IT

CNAE 6201	Computer programming activities
CNAE 6202	Computer consultancy activities
CNAE 6203	Computer facilities management activities
CNAE 6209	Other information technology and computer service activities

WEB PORTALS, DATA PROCESSING, HOSTING AND RELATED ACTIVITIES

CNAE 6311	Data processing, hosting and related activities
CNAE 6312	Web portals

REPAIR OF COMPUTERS AND COMMUNICATION EQUIPMENT

CNAE 9511	Repair of computers and peripheral equipment
CNAE 9512	Repair of communication equipment
