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# PREDICT 2016 Country Factsheets: EU Member States – Benchmarking with Non-EU Countries

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# PREDICT 2016 Country Factsheets: EU Member States – Benchmarking with Non-EU Countries

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# PREDICT 2016 Country Factsheets: EU Member States – Benchmarking with Non-EU Countries

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## Foreword

### **PREDICT: Prospective Insights on R&D in ICT**

PREDICT produces statistics and analyses on ICT industries and their R&D in Europe since 2006. The project covers major world competitors including 40 advanced and emerging countries – the EU28 plus Norway, Russia and Switzerland in Europe, Canada, the United States and Brazil in the Americas, China, India, Japan, Korea and Taiwan in Asia, and Australia – as well as a growing array of indicators related to the ICT content of economic activities.

### **Rationale**

ICTs determine competitive power in the knowledge economy. The ICT sector alone originates almost one fourth of total Business expenditure in R&D (BERD) for the aggregate of the 40 economies under scrutiny in the project. It also has a huge enabling role for innovation in other technological domains, let aside the impact of ICT uptake in the organisation of businesses. This is reflected at the EU policy level, where the Digital Agenda for Europe in 2010 was identified as one of the seven pillars of the Europe 2020 Strategy for growth in the Union and the achievement of a [Digital Single Market](#) (DSM) is one of the 10 political priorities set by the Commission since 2015.

### **Statistics and indicators**

PREDICT provides indicators in a wide variety of topics, including value added, employment, labour productivity and BERD, distinguishing fine grain economic activities in ICT and media and content industries (up to 22 individual activities, 14 of which at the class level, i.e. at 4 digits in the ISIC classification) and at a higher level of aggregation for all the other industries in the economy. It also produces data on Government financing of R&D in ICTs, and total R&D expenditure at the country level. Now-casting of more relevant data in these domains is also being performed.

### **Team**

PREDICT is a collaboration between the JRC and the European Commission [Communications Networks, Content and Technology \(CNECT\) Directorate General](#). Since 2013 data collection and analysis has been carried out jointly by JRC and the Valencian Institute of Economic Research ([Instituto Valenciano de Investigaciones Económicas - Ivie](#)).

## Abstract

The PREDICT 2016 Factsheets present essential statistical data regarding the performance of the EU ICT sector. These Factsheets are the subject of three reports. The first report on 'Data in Current Prices', and the second on 'Purchasing Power Standard' present sets of Factsheets with data on each EU Member State, in comparison to the EU average. This third report presents Factsheets on the EU average and 12 non-EU countries: Australia, Brazil, Canada, China, India, Japan, Korea, Norway, Russia, Switzerland, Taiwan and the United States.

# PREDICT 2016 Country Factsheets: EU Member States – Benchmarking with Non-EU Countries

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## Reading Notes

The figures at the top of each Factsheet display the information presented in the statistical tables. The left-hand figure gives a snapshot of country performance in ICT specialisation (VA/GDP), ICT productivity and ICT R&D as compared to the EU (EU absolute values listed below = Index 100). The right-hand figure gives a dynamic image (evolution 2006-2013) of the country ICT VA and GDP, and also ICT BERD and Total BERD. In this figure, ICT data is also presented by subsector.

Together these 2 figures allow us to assess very rapidly:

- the ICT sector's profile in each country in Europe (2013) as regards value added, productivity, R&D intensity.
- the evolution of the ICT sector since 2006: i.e. whether the sector as a whole and also its subsectors have emerged or declined in terms of value added and R&D expenditures, as compared to the overall dynamics of each country's economy.

The statistical tables provide the full data on which these figures are based. They are divided into two main blocks:

- the first shows **Economic and Industry Trends**: Gross Value Added (GVA), Employment and Productivity.
- the second concentrates on **R&D performance** showing R&D expenditures in terms of both the actual spending and R&D intensity, calculated as the ratio of R&D spending to GVA.

Additionally, the horizontal reading of the tables conveys three further items of information:

- The time coverage (2006-2013) allows us to assess the progress of the variables during the pre and post-crisis years.
- The column headed '2013 vs EU-%shares' displays the relative performance of each variable (expressed as a proportion) as compared to the EU.
- The double column headed '2013 vs 2006 (=100)' offers indices comparing the 2013 performance of each variable with its initial level in 2006 (Index: 100) for each Member State and the EU.

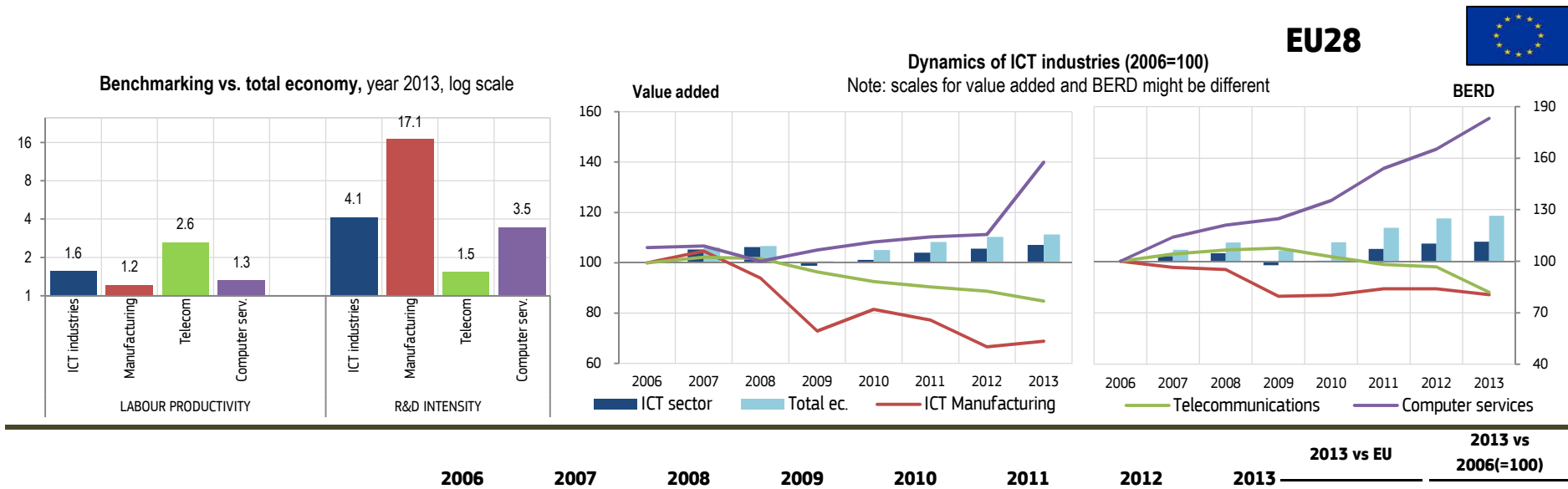
## Methodological Notes

These benchmarking Factsheets present essential statistical data regarding the performance of the EU ICT sector in EU and 12 non-EU countries: Australia, Brazil, Canada, China, India, Japan, Korea, Norway, Russia, Switzerland, Taiwan, and the United States. The data is presented in Purchasing Power Standard (PPS) to allow comparability.

The PPS is an artificial currency unit. Theoretically, one PPS can buy the same amount of goods and services in each country. PPS are derived by dividing any economic aggregate of a country in national currency by its respective purchasing power parities. PPS is the technical term used by Eurostat for the common currency in which national accounts aggregates are expressed when adjusted for price level differences. (See EUROSTAT – [Glossary: Purchasing power standard \(PPS\)](#)).

These Factsheets are based on the latest available official data from EUROSTAT. Data sources and methods are fully described in [the metadata](#) of PREDICT 2016.

The ICT sector is classified in four sub-categories to facilitate the reading: ICT manufacturing (NACE 261-264, 268), telecommunications (NACE 61), and computer services (5820, 62, 631, 951). The classification method follows [OECD \(2007\)](#).



### Economic and industry trends

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)
<b>Total economy (GDP)</b>	<b>12,177</b>	<b>12,909</b>	<b>12,994</b>	<b>12,250</b>	<b>12,794</b>	<b>13,177</b>	<b>13,429</b>	<b>13,542</b>		<b>111</b>
ICT sector	494	520	524	488	500	513	522	529		107
Manufacturing	72	75	68	52	59	56	48	50	0.4%	69
Telecommunications	201	206	205	194	186	182	179	171	1.3%	85
Computer services	220	239	252	241	255	276	295	308	2.3%	140
<b>ICT sector as a % of Total</b>	<b>4.1%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>4.0%</b>	<b>3.9%</b>	<b>3.9%</b>	<b>3.9%</b>	<b>3.9%</b>		<b>96.3</b>

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)
<b>Total economy</b>	<b>224,538</b>	<b>228,831</b>	<b>231,179</b>	<b>227,192</b>	<b>225,673</b>	<b>225,993</b>	<b>225,129</b>	<b>224,472</b>		<b>100</b>
ICT sector	5,200	5,397	5,511	5,417	5,360	5,489	5,576	5,651		109
Manufacturing	924	947	918	781	741	738	713	681	0.3%	74
Telecommunications	1,221	1,253	1,235	1,185	1,123	1,105	1,099	1,084	0.5%	89
Computer services	3,055	3,197	3,358	3,451	3,496	3,646	3,764	3,887	1.7%	127
<b>ICT sector as a % of Total</b>	<b>2.3%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.5%</b>	<b>2.5%</b>		<b>108.7</b>

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)
<b>Total economy</b>	<b>54</b>	<b>56</b>	<b>56</b>	<b>54</b>	<b>57</b>	<b>58</b>	<b>60</b>	<b>60</b>	<b>(1.00)</b>	<b>111</b>
ICT sector	95	96	95	90	93	94	94	94	(1.55)	99
Manufacturing	78	80	74	67	79	75	67	73	(1.21)	93
Telecommunications	165	164	166	164	166	165	162	158	(2.61)	96
Computer & information services	72	75	75	70	73	76	78	79	(1.32)	110

### R&D performance

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)
<b>Total economy</b>	<b>129,584</b>	<b>138,256</b>	<b>143,659</b>	<b>137,675</b>	<b>143,986</b>	<b>154,838</b>	<b>161,939</b>	<b>163,866</b>	<b>100.0%</b>	<b>126</b>
ICT sector	23,617	24,311	24,727	23,057	23,698	25,297	26,052	26,295	16.0%	111
Manufacturing	12,720	12,267	12,100	10,118	10,210	10,672	10,687	10,237	6.2%	80
Telecommunications	3,854	4,017	4,106	4,151	3,958	3,783	3,730	3,159	1.9%	82
Computer services	7,042	8,027	8,521	8,788	9,530	10,842	11,635	12,899	7.9%	183
<b>ICT sector as a % of Total</b>	<b>18.2%</b>	<b>17.6%</b>	<b>17.2%</b>	<b>16.7%</b>	<b>16.5%</b>	<b>16.3%</b>	<b>16.1%</b>	<b>16.0%</b>		<b>88.0</b>

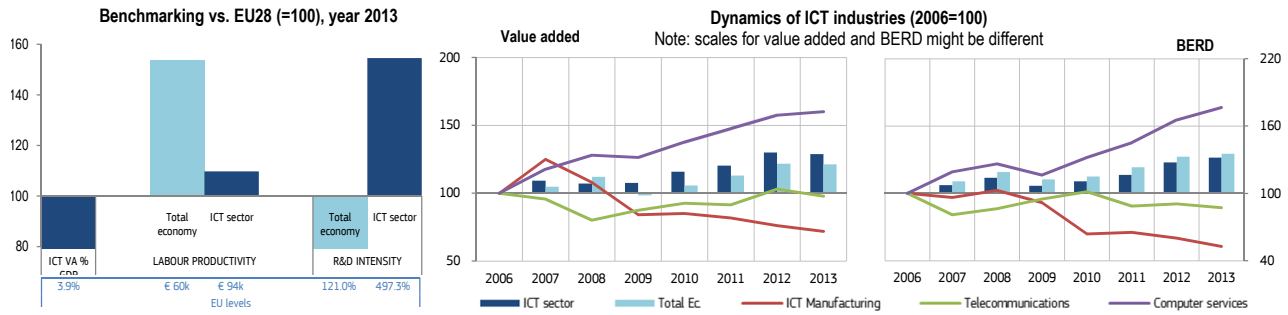
R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)
<b>Total economy (% GDP)</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.1</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>(1.00)</b>	<b>114</b>
ICT sector	4.8	4.7	4.7	4.7	4.7	4.9	5.0	5.0	(4.11)	104
Manufacturing	17.6	16.3	17.9	19.3	17.4	19.2	22.3	20.6	(17.05)	117
Telecommunications	1.9	2.0	2.0	2.1	2.1	2.1	2.1	1.9	(1.53)	97
Computer services	3.2	3.4	3.4	3.6	3.7	3.9	3.9	4.2	(3.46)	131
Rest of the economy	0.9	0.9	1.0	1.0	1.0	1.0	1.1	1.1	(0.87)	117

Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)

**NORWAY**



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Norway	EU
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**Economic and industry trends**

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Norway	EU
<b>Total economy (GDP)</b>	207	217	233	204	219	234	253	252	1.9%	121	111
ICT sector	5	6	6	6	6	6	7	7	1.3%	129	107
Manufacturing	0	0	0	0	0	0	0	0	0.5%	..	69
Telecommunications	2	2	2	2	2	2	2	2	1.2%	98	85
Computer services	3	3	4	4	4	4	4	5	1.5%	160	140
<b>ICT sector as a % of Total</b>	<b>2.6%</b>	<b>2.7%</b>	<b>2.5%</b>	<b>2.8%</b>	<b>2.8%</b>	<b>2.8%</b>	<b>2.8%</b>	<b>2.8%</b>			

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Norway	EU
<b>Total economy</b>	2,434	2,535	2,617	2,605	2,591	2,630	2,684	2,717	1.2%	112	100
ICT sector	59	61	63	64	65	66	67	68	1.2%	114	109
Manufacturing	6	5	5	5	5	4	4	3	0.5%	56	74
Telecommunications	12	13	13	13	13	13	13	13	1.2%	108	89
Computer services	41	43	45	46	47	48	50	51	1.3%	125	127
<b>ICT sector as a % of Total</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.4%</b>	<b>2.5%</b>	<b>2.5%</b>	<b>2.5%</b>	<b>2.5%</b>			

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Norway	EU
<b>Total economy</b>	85	86	89	78	85	89	94	93	(1.54)	109	111
ICT sector	91	97	92	91	97	99	105	103	(1.10)	113	99
Manufacturing	60	91	82	68	67	69	79	78	(1.07)	130	93
Telecommunications	182	160	134	147	155	153	173	164	(1.04)	90	96
Computer services	69	79	81	78	84	87	89	89	(1.12)	128	110

**R&D performance**

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Norway	EU
<b>Total economy</b>	1,614	1,786	1,923	1,814	1,855	1,991	2,140	2,185	1.3%	135	126
ICT sector	405	435	462	433	449	472	518	535	2.0%	132	111
Manufacturing	98	94	100	90	62	64	59	51	0.5%	53	80
Telecommunications	67	54	58	64	68	61	59	59	1.9%	87	82
Computer services	241	287	304	280	318	349	398	425	3.3%	177	183
<b>ICT sector as a % of Total</b>	<b>25.1%</b>	<b>24.4%</b>	<b>24.0%</b>	<b>23.9%</b>	<b>24.2%</b>	<b>23.7%</b>	<b>24.2%</b>	<b>24.5%</b>			

R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Norway	EU
<b>Total economy (% GDP)</b>	0.8	0.8	0.8	0.9	0.8	0.8	0.8	0.9	(0.72)	..	114
ICT sector	7.5	7.4	8.0	7.5	7.2	7.3	7.4	7.7	(1.55)	102	104
Manufacturing	26.3	20.3	25.0	28.7	19.7	21.0	20.8	19.3	(0.93)	73	117
Telecommunications	3.1	2.6	3.3	3.3	3.4	3.0	2.7	2.8	(1.49)	89	97
Computer services	8.5	8.6	8.3	7.8	8.1	8.3	8.9	9.3	(2.23)	110	131
Rest of the economy	0.6	0.6	0.6	0.7	0.7	0.7	0.7	0.7	(0.64)	..	117

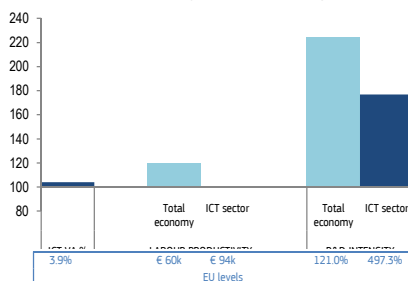
Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)

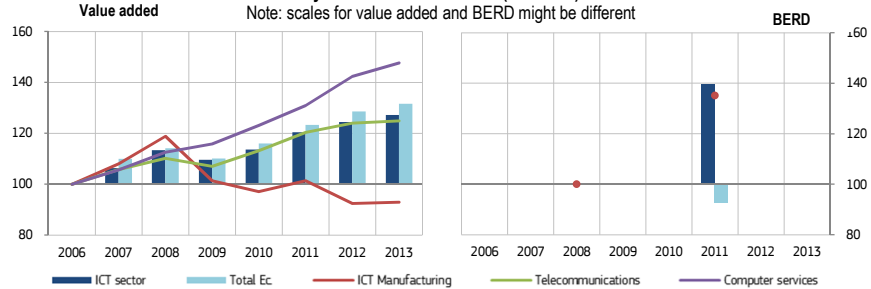
**SWITZERLAND**



Benchmarking vs. EU28 (=100), year 2011



Dynamics of ICT industries (2006=100)  
Note: scales for value added and BERD might be different



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
									Switzerland	EU

**Economic and industry trends**

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy (GDP)</b>	<b>264</b>	<b>290</b>	<b>301</b>	<b>291</b>	<b>307</b>	<b>326</b>	<b>340</b>	<b>348</b>	<b>2.6%</b>	<b>132</b>
ICT sector	11	12	13	12	13	13	14	14	2.7%	127
Manufacturing	3	3	3	3	3	3	3	3	5.1%	93
Telecommunications	3	4	4	4	4	4	4	4	2.5%	125
Computer services	5	5	6	6	6	7	7	7	2.4%	148
<b>ICT sector as a % of Total</b>	<b>4.2%</b>	<b>4.1%</b>	<b>4.2%</b>	<b>4.2%</b>	<b>4.1%</b>	<b>4.1%</b>	<b>4.1%</b>	<b>4.1%</b>		

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>4,328</b>	<b>4,440</b>	<b>4,548</b>	<b>4,568</b>	<b>4,593</b>	<b>4,705</b>	<b>4,776</b>	<b>4,837</b>	<b>2.2%</b>	<b>112</b>
ICT sector	127	130	134	138	138	145	149	152	2.7%	119
Manufacturing	30	31	32	34	31	30	30	30	4.5%	100
Telecommunications	26	26	25	24	24	27	28	28	2.6%	108
Computer services	70	74	77	80	83	88	91	93	2.4%	132
<b>ICT sector as a % of Total</b>	<b>2.9%</b>	<b>2.9%</b>	<b>2.9%</b>	<b>3.0%</b>	<b>3.0%</b>	<b>3.1%</b>	<b>3.1%</b>	<b>3.1%</b>		

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>61</b>	<b>65</b>	<b>66</b>	<b>64</b>	<b>67</b>	<b>69</b>	<b>71</b>	<b>72</b>	<b>(1.19)</b>	<b>118</b>
ICT sector	87	90	94	88	91	92	92	93	(0.99)	107
Manufacturing	91	96	103	82	85	92	84	84	(1.15)	93
Telecommunications	127	139	150	148	159	151	149	148	(0.94)	116
Computer services	71	71	73	73	74	75	78	79	(1.00)	112

**R&D performance**

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	-	-	<b>5,696</b>	-	-	<b>8,577</b>	-	-	<b>5.5%</b>	<b>151</b>
ICT sector	-	-	835	-	-	1,166	-	-	4.6%	140
Manufacturing	-	-	247	-	-	333	-	-	3.1%	135
Telecommunications	-	-	452	-	-	449	-	-	11.9%	99
Computer services	-	-	136	-	-	384	-	-	3.5%	282
<b>ICT sector as a % of Total</b>	-	-	<b>14.7%</b>	-	-	<b>13.6%</b>	-	-		

R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy (% GDP)</b>	-	-	<b>1.9</b>	-	-	<b>2.6</b>	-	-	<b>(2.24)</b>	<b>139</b>
ICT sector	-	-	6.6	-	-	8.7	-	-	(1.77)	131
Manufacturing	-	-	7.6	-	-	12.0	-	-	(0.63)	158
Telecommunications	-	-	12.2	-	-	11.1	-	-	(5.33)	91
Computer services	-	-	2.4	-	-	5.9	-	-	(1.49)	243
Rest of the economy	-	-	1.7	-	-	2.4	-	-	(2.32)	141

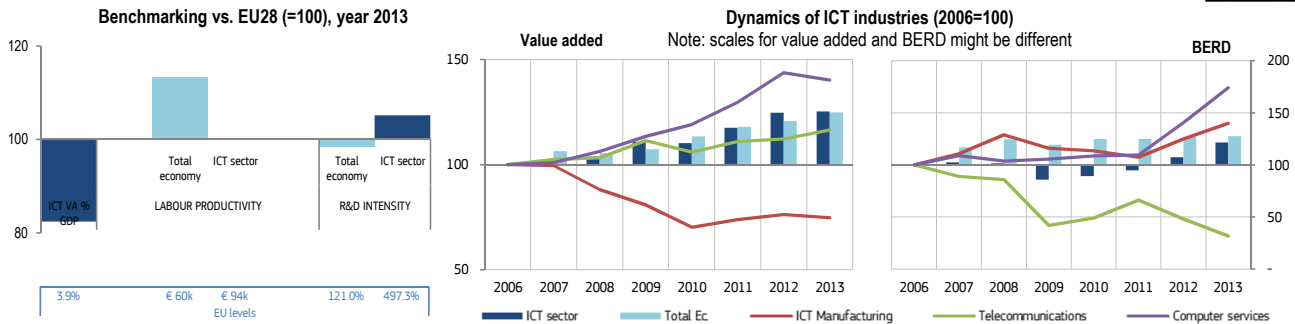
\*) Switzerland R&D data refers to 2011, comparison is performed between 2011 and 2008 figures.

Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)



## AUSTRALIA



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Australia	EU
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### Economic and industry trends

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Australia	EU
<b>Total economy (GDP)</b>	<b>629</b>	<b>670</b>	<b>664</b>	<b>675</b>	<b>714</b>	<b>743</b>	<b>760</b>	<b>786</b>	<b>5.8%</b>	<b>125</b>	<b>111</b>
ICT sector	20	21	21	22	22	24	25	25	4.8%	125	107
Manufacturing	1	1	1	1	1	1	1	1	1.5%	..	69
Telecommunications	10	10	10	11	11	11	11	12	6.8%	117	85
Computer services	9	9	10	10	11	12	13	13	4.2%	140	140
<b>ICT sector as a % of Total</b>	<b>3.2%</b>	<b>3.1%</b>	<b>3.2%</b>	<b>3.3%</b>	<b>3.1%</b>	<b>3.2%</b>	<b>3.3%</b>	<b>3.2%</b>			

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Australia	EU
<b>Total economy</b>	<b>10,249</b>	<b>10,564</b>	<b>10,758</b>	<b>10,846</b>	<b>11,115</b>	<b>11,249</b>	<b>11,389</b>	<b>11,482</b>	<b>5.1%</b>	<b>112</b>	<b>100</b>
ICT sector	237	230	236	241	252	259	269	270	4.8%	114	109
Manufacturing	18	20	17	16	14	13	13	13	1.9%	70	74
Telecommunications	65	60	61	61	63	61	61	64	5.9%	98	89
Computer services	153	150	158	164	175	184	194	193	5.0%	126	127
<b>ICT sector as a % of Total</b>	<b>2.3%</b>	<b>2.2%</b>	<b>2.2%</b>	<b>2.2%</b>	<b>2.3%</b>	<b>2.3%</b>	<b>2.4%</b>	<b>2.3%</b>			

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Australia	EU
<b>Total economy</b>	<b>61</b>	<b>63</b>	<b>62</b>	<b>62</b>	<b>64</b>	<b>66</b>	<b>67</b>	<b>68</b>	<b>(1.13)</b>	<b>111</b>	<b>111</b>
ICT sector	85	89	89	93	88	92	94	94	(1.00)	110	99
Manufacturing	55	49	53	51	50	55	57	58	(0.80)	106	93
Telecommunications	153	170	168	182	167	182	182	182	(1.16)	119	96
Computer services	60	62	62	64	62	65	68	67	(0.84)	111	110

### R&D performance

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Australia	EU
<b>Total economy</b>	<b>7,319</b>	<b>8,551</b>	<b>9,133</b>	<b>8,736</b>	<b>9,135</b>	<b>9,149</b>	<b>9,282</b>	<b>9,351</b>	<b>5.7%</b>	<b>128</b>	<b>126</b>
ICT sector	1,088	1,115	1,104	933	973	1,031	1,169	1,322	5.0%	122	111
Manufacturing	162	180	209	188	184	174	203	227	2.2%	140	80
Telecommunications	364	324	313	152	178	241	175	116	3.7%	32	82
Computer services	562	612	582	592	610	616	791	979	7.6%	174	183
<b>ICT sector as a % of Total</b>	<b>14.9%</b>	<b>13.0%</b>	<b>12.1%</b>	<b>10.7%</b>	<b>10.6%</b>	<b>11.3%</b>	<b>12.6%</b>	<b>14.1%</b>			

R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Australia	EU
<b>Total economy (% GDP)</b>	<b>1.2</b>	<b>1.3</b>	<b>1.4</b>	<b>1.3</b>	<b>1.3</b>	<b>1.2</b>	<b>1.2</b>	<b>1.2</b>	<b>(0.98)</b>	<b>102</b>	<b>114</b>
ICT sector	5.4	5.4	5.3	4.2	4.4	4.3	4.6	5.2	(1.05)	97	104
Manufacturing	16.2	18.0	23.6	23.2	26.2	23.5	26.5	30.3	(1.47)	187	117
Telecommunications	3.6	3.2	3.0	1.4	1.7	2.2	1.6	1.0	(0.54)	27	97
Computer services	6.1	6.6	6.0	5.7	5.6	5.2	6.0	7.6	(1.81)	124	131
Rest of the economy	1.0	1.1	1.2	1.2	1.2	1.1	1.1	1.1	(1.00)	103	117

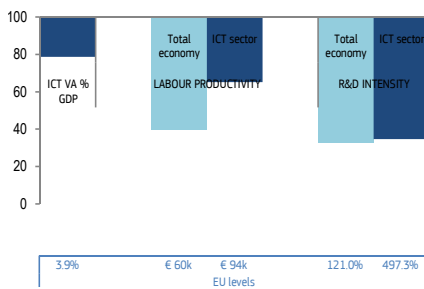
Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x<sub>i</sub>/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)

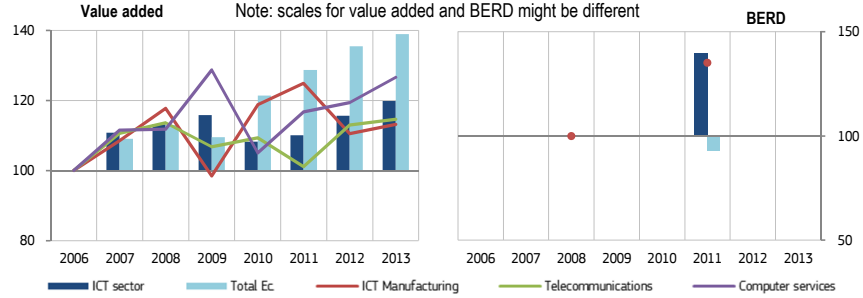
**BRAZIL**



Benchmarking vs. EU28 (=100), year 2013



Dynamics of ICT industries (2006=100)  
Note: scales for value added and BERD might be different



	2006	2007	2008	2009	2010	2011	2012	2013	2011 vs EU % shares (levels)	2011 vs 2006(=100) Brazil	EU
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### Economic and industry trends

Value added (€ bn)

<b>Total economy (GDP)</b>	<b>1,742</b>	<b>1,901</b>	<b>1,969</b>	<b>1,909</b>	<b>2,116</b>	<b>2,244</b>	<b>2,362</b>	<b>2,421</b>	<b>17.9%</b>	<b>139</b>	<b>111</b>
ICT sector	62	69	70	72	67	68	72	74	14.1%	120	107
Manufacturing	5	6	6	5	6	7	6	6	12.1%	113	69
Telecommunications	29	32	33	31	32	29	33	33	19.5%	115	85
Computer services	28	31	31	36	29	32	33	35	11.4%	127	140
<b>ICT sector as a % of Total</b>	<b>3.6%</b>	<b>3.6%</b>	<b>3.6%</b>	<b>3.8%</b>	<b>3.2%</b>	<b>3.0%</b>	<b>3.0%</b>	<b>3.1%</b>			

Employment (thousands)

<b>Total economy</b>	<b>92,191</b>	<b>93,732</b>	<b>94,903</b>	<b>95,758</b>	<b>98,116</b>	<b>99,560</b>	<b>101,143</b>	<b>101,783</b>	<b>45.3%</b>	<b>110</b>	<b>100</b>
ICT sector	951	998	1,044	1,136	1,091	1,173	1,211	1,221	21.6%	128	109
Manufacturing	112	121	122	125	135	143	151	146	21.5%	131	74
Telecommunications	184	191	198	199	201	225	226	231	21.3%	126	89
Computer services	655	686	723	811	755	805	834	843	21.7%	129	127
<b>ICT sector as a % of Total</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.1%</b>	<b>1.2%</b>	<b>1.1%</b>	<b>1.2%</b>	<b>1.2%</b>	<b>1.2%</b>			

Productivity of labour (€ thous./person employed)

<b>Total economy</b>	<b>19</b>	<b>20</b>	<b>21</b>	<b>20</b>	<b>22</b>	<b>23</b>	<b>23</b>	<b>24</b>	<b>(0.39)</b>	<b>126</b>	<b>111</b>
ICT sector	65	69	67	63	62	58	59	61	(0.65)	93	99
Manufacturing	47	47	51	42	46	46	39	41	(0.56)	87	93
Telecommunications	157	168	166	155	158	130	145	144	(0.91)	91	96
Computer services	42	45	43	44	39	40	40	42	(0.53)	98	110

### R&D performance

Business expenditure in R&D (BERD - € mln)

<b>Total economy</b>	-	-	<b>5,696</b>	-	-	<b>8,577</b>	-	-	<b>5.5%</b>	<b>151</b>	<b>126</b>
ICT sector	-	-	835	-	-	1,166	-	-	4.6%	140	111
Manufacturing	-	-	247	-	-	333	-	-	3.1%	135	80
Telecommunications	-	-	452	-	-	449	-	-	11.9%	99	82
Computer services	-	-	136	-	-	384	-	-	3.5%	282	183
<b>ICT sector as a % of Total</b>	-	-	<b>14.7%</b>	-	-	<b>13.6%</b>	-	-			

R&D Intensity (BERD as a % of value added)

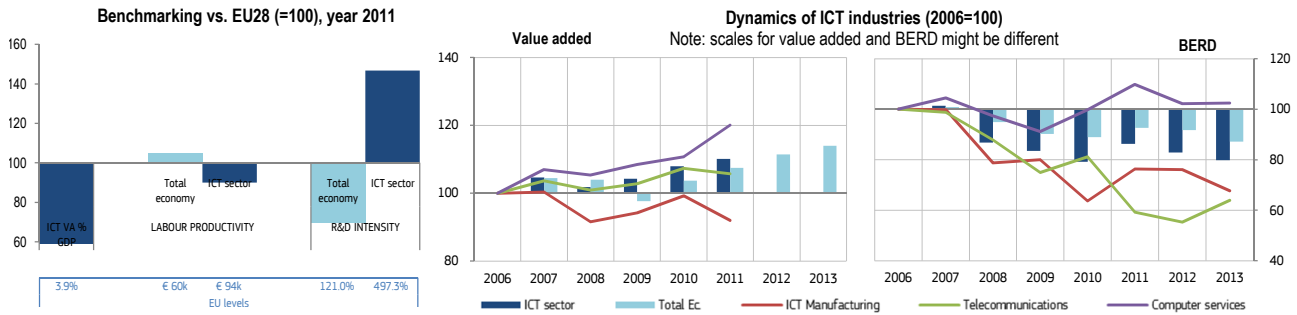
<b>Total economy (% GDP)</b>	-	-	<b>0.3</b>	-	-	<b>0.4</b>	-	-	<b>(0.33)</b>	<b>..</b>	<b>114</b>
ICT sector	-	-	1.2	-	-	1.7	-	-	(0.35)	144	104
Manufacturing	-	-	4.0	-	-	5.0	-	-	(0.26)	127	117
Telecommunications	-	-	1.4	-	-	1.5	-	-	(0.74)	112	97
Computer services	-	-	0.4	-	-	1.2	-	-	(0.30)	..	131
Rest of the economy	-	-	0.3	-	-	0.3	-	-	(0.33)	..	117

\*) Brazil data refers to 2011, comparison is performed between 2011 and 2008 figures

Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x<sub>i</sub>/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)

**CANADA**



	2006	2007	2008	2009	2010	2011	2012	2013	2011 vs EU	2013 vs 2006(=100)
									% shares (levels)	Canada EU

**Economic and industry trends**

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2011 vs EU	2013 vs 2006(=100)
<b>Total economy (GDP)</b>	<b>1,002</b>	<b>1,047</b>	<b>1,042</b>	<b>979</b>	<b>1,040</b>	<b>1,077</b>	<b>1,117</b>	<b>1,142</b>	<b>8.4%</b>	<b>114</b> <b>111</b>
ICT sector	36	37	36	37	39	39	-	-	7.7%	110 107
Manufacturing	3	3	3	3	3	3	-	-	5.4%	92 69
Telecommunications	18	19	19	19	20	19	-	-	10.7%	106 85
Computer services	14	15	15	15	16	17	-	-	6.1%	120 140
<b>ICT sector as a % of Total</b>	<b>3.6%</b>	<b>3.6%</b>	<b>3.5%</b>	<b>3.8%</b>	<b>3.7%</b>	<b>3.7%</b>				

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2011 vs EU	2013 vs 2006(=100)
<b>Total economy</b>	<b>16,702</b>	<b>17,077</b>	<b>17,363</b>	<b>17,067</b>	<b>17,372</b>	<b>17,661</b>	<b>17,829</b>	<b>18,045</b>	<b>8.0%</b>	<b>108</b> <b>100</b>
ICT sector	432	437	446	441	450	468	460	469	8.3%	109 109
Manufacturing	58	55	50	47	43	43	41	41	6.0%	70 74
Telecommunications	126	129	134	128	135	132	132	137	12.6%	109 89
Computer services	248	253	261	265	272	292	287	292	7.5%	118 127
<b>ICT sector as a % of Total</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.6%</b>	<b>2.6%</b>		

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2011 vs EU	2013 vs 2006(=100)
<b>Total economy</b>	<b>60</b>	<b>61</b>	<b>60</b>	<b>57</b>	<b>60</b>	<b>61</b>	<b>63</b>	<b>63</b>	<b>(1.05)</b>	<b>106</b> <b>111</b>
ICT sector	83	85	82	85	86	84	-	-	(0.90)	102 99
Manufacturing	57	60	60	66	76	71	-	-	(0.93)	124 93
Telecommunications	146	147	138	147	145	147	-	-	(0.89)	101 96
Computer services	57	60	57	58	57	58	-	-	(0.77)	102 110

**R&D performance**

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2011 vs EU	2013 vs 2006(=100)
<b>Total economy</b>	<b>11,103</b>	<b>11,201</b>	<b>10,533</b>	<b>10,021</b>	<b>9,881</b>	<b>10,281</b>	<b>10,188</b>	<b>9,672</b>	<b>5.9%</b>	<b>87</b> <b>126</b>
ICT sector	3,300	3,344	2,865	2,754	2,613	2,847	2,733	2,636	10.0%	80 111
Manufacturing	1,651	1,647	1,301	1,322	1,051	1,261	1,256	1,117	10.9%	68 80
Telecommunications	443	437	389	332	359	262	245	283	9.0%	64 82
Computer services	1,206	1,260	1,175	1,100	1,203	1,324	1,232	1,235	9.6%	102 183
<b>ICT sector as a % of Total</b>	<b>29.7%</b>	<b>29.9%</b>	<b>27.2%</b>	<b>27.5%</b>	<b>26.4%</b>	<b>27.7%</b>	<b>26.8%</b>	<b>27.3%</b>		

R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2011 vs EU	2013 vs 2006(=100)
<b>Total economy (% GDP)</b>	<b>1.1</b>	<b>1.1</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>0.9</b>	<b>0.8</b>	<b>(0.70)</b>	<b>..</b> <b>114</b>
ICT sector	9.2	8.9	7.9	7.4	6.8	7.2	-	-	(1.47)	78 104
Manufacturing	50.2	49.9	43.2	42.7	32.2	41.7	-	-	(2.17)	83 117
Telecommunications	2.4	2.3	2.1	1.8	1.8	1.4	-	-	(0.65)	56 97
Computer services	8.6	8.4	7.9	7.2	7.7	7.8	-	-	(1.99)	91 131
Rest of the economy	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.6	(0.58)	.. 117

India data refers to 2013 or 2011 whenever the last data is available

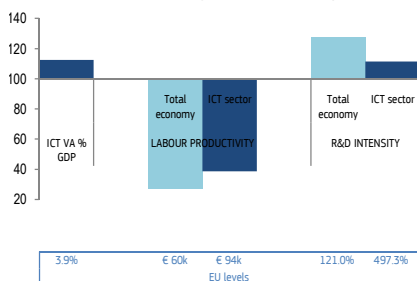
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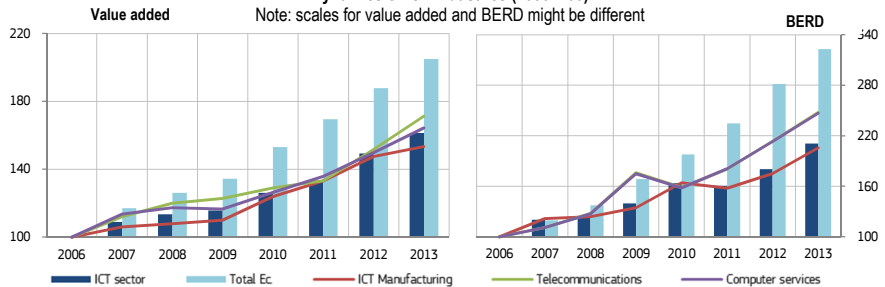
P.R. OF CHINA



Benchmarking vs. EU28 (=100), year 2013



Dynamics of ICT industries (2006=100)



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
										China EU

Economic and industry trends

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy (GDP)</b>	<b>6,150</b>	<b>7,205</b>	<b>7,756</b>	<b>8,261</b>	<b>9,413</b>	<b>10,420</b>	<b>11,556</b>	<b>12,612</b>	<b>93.1%</b>	<b>205</b> <b>111</b>
ICT sector	343	374	389	397	433	457	512	554	104.7%	161 107
Manufacturing	184	195	198	202	228	245	271	282	567.9%	153 69
Telecommunications	146	163	175	179	188	194	221	249	146.1%	171 85
Computer services	14	16	16	16	17	19	21	23	7.4%	164 140
<b>ICT sector as a % of Total</b>	<b>5.6%</b>	<b>5.2%</b>	<b>5.0%</b>	<b>4.8%</b>	<b>4.6%</b>	<b>4.4%</b>	<b>4.4%</b>	<b>4.4%</b>		

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>749,780</b>	<b>753,210</b>	<b>755,639</b>	<b>758,280</b>	<b>761,049</b>	<b>764,200</b>	<b>767,040</b>	<b>769,770</b>	<b>342.9%</b>	<b>103</b> <b>100</b>
ICT sector	10,645	11,722	12,457	12,709	13,535	14,552	14,912	15,287	270.5%	144 109
Manufacturing	6,170	7,137	7,663	7,769	8,635	8,904	9,180	9,152	1344.2%	148 74
Telecommunications	4,266	4,321	4,505	4,643	4,592	5,343	5,423	5,804	535.6%	136 89
Computer services	209	263	289	297	309	305	309	331	8.5%	159 127
<b>ICT sector as a % of Total</b>	<b>1.4%</b>	<b>1.6%</b>	<b>1.6%</b>	<b>1.7%</b>	<b>1.8%</b>	<b>1.9%</b>	<b>1.9%</b>	<b>2.0%</b>		

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>8</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>12</b>	<b>14</b>	<b>15</b>	<b>16</b>	<b>(0.27)</b>	<b>200</b> <b>111</b>
ICT sector	32	32	31	31	32	31	34	36	(0.39)	112 99
Manufacturing	30	27	26	26	26	27	30	31	(0.42)	103 93
Telecommunications	34	38	39	39	41	36	41	43	(0.27)	126 96
Computer services	66	60	56	54	57	62	67	69	(0.86)	104 110

R&D performance

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>60,317</b>	<b>72,093</b>	<b>82,805</b>	<b>101,552</b>	<b>119,374</b>	<b>141,616</b>	<b>169,672</b>	<b>194,660</b>	<b>118.8%</b>	<b>323</b> <b>126</b>
ICT sector	14,573	17,526	18,119	20,343	23,804	23,396	26,250	30,704	116.8%	211 111
Manufacturing	12,727	15,478	15,768	17,112	20,885	20,063	22,312	26,145	255.4%	205 80
Telecommunications	527	584	673	927	835	950	1,126	1,307	41.4%	248 82
Computer services	1,319	1,464	1,679	2,304	2,084	2,382	2,812	3,252	25.2%	247 183
<b>ICT sector as a % of Total</b>	<b>24.2%</b>	<b>24.3%</b>	<b>21.9%</b>	<b>20.0%</b>	<b>19.9%</b>	<b>16.5%</b>	<b>15.5%</b>	<b>15.8%</b>		

R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy (% GDP)</b>	<b>1.0</b>	<b>1.0</b>	<b>1.1</b>	<b>1.2</b>	<b>1.3</b>	<b>1.4</b>	<b>1.5</b>	<b>1.5</b>	<b>(1.28)</b>	<b>..</b> <b>114</b>
ICT sector	4.2	4.7	4.7	5.1	5.5	5.1	5.1	5.5	(1.11)	131 104
Manufacturing	6.9	7.9	8.0	8.5	9.2	8.2	8.2	9.3	(0.45)	134 117
Telecommunications	0.4	0.4	0.4	0.5	0.4	0.5	0.5	0.5	(0.28)	- 97
Computer services	9.5	9.3	10.4	14.3	11.9	12.7	13.6	14.3	(3.42)	150 131
Rest of the economy	0.8	0.8	0.9	1.0	1.1	1.2	1.3	1.4	(1.29)	- 117

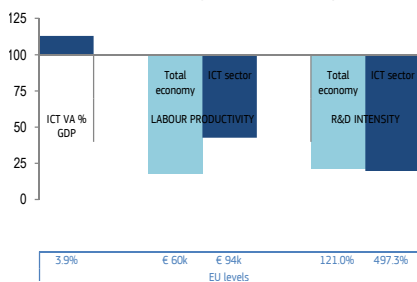
Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)

**INDIA**

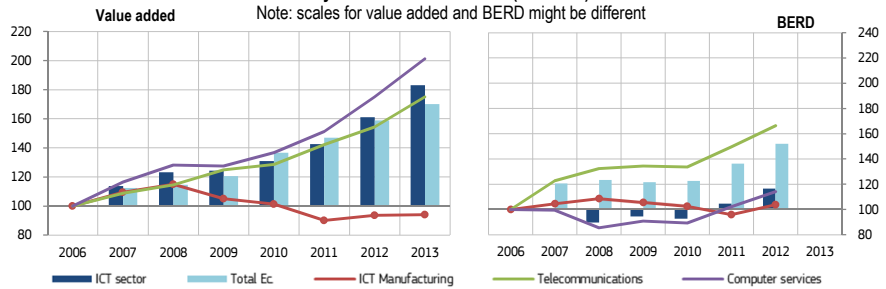


Benchmarking vs. EU28 (=100), year 2012



Dynamics of ICT industries (2006=100)

Note: scales for value added and BERD might be different



	2006	2007	2008	2009	2010	2011	2012	2013	2012 vs EU % shares (levels)	2013 vs 2006(=100)
										India EU

**Economic and industry trends**

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2012 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy (GDP)</b>	<b>3,003</b>	<b>3,376</b>	<b>3,443</b>	<b>3,623</b>	<b>4,103</b>	<b>4,411</b>	<b>4,772</b>	<b>5,111</b>	<b>37.7%</b>	<b>170</b> <b>111</b>
<b>ICT sector</b>	<b>123</b>	<b>140</b>	<b>152</b>	<b>153</b>	<b>161</b>	<b>176</b>	<b>198</b>	<b>226</b>	<b>42.7%</b>	<b>183</b> <b>107</b>
Manufacturing	13	14	15	14	13	12	12	12	24.9%	94 69
Telecommunications	32	35	36	40	41	45	49	56	32.6%	175 85
Computer services	78	91	100	100	107	119	137	158	51.1%	201 140
<b>ICT sector as a % of Total</b>	<b>4.1%</b>	<b>4.2%</b>	<b>4.4%</b>	<b>4.2%</b>	<b>3.9%</b>	<b>4.0%</b>	<b>4.2%</b>	<b>4.4%</b>		

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2012 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>471,768</b>	<b>460,230</b>	<b>463,379</b>	<b>465,828</b>	<b>475,087</b>	<b>480,303</b>	<b>466,260</b>	<b>471,805</b>	<b>210.2%</b>	<b>100</b> <b>100</b>
<b>ICT sector</b>	<b>3,301</b>	<b>3,541</b>	<b>3,888</b>	<b>4,258</b>	<b>4,762</b>	<b>5,269</b>	<b>5,328</b>	<b>5,664</b>	<b>100.2%</b>	<b>172</b> <b>109</b>
Manufacturing	293	315	290	285	332	409	356	371	54.5%	127 74
Telecommunications	1,676	1,779	1,881	1,980	1,891	1,783	1,837	1,839	169.7%	110 89
Computer services	1,332	1,447	1,717	1,993	2,538	3,077	3,135	3,455	88.9%	259 127
<b>ICT sector as a % of Total</b>	<b>0.7%</b>	<b>0.8%</b>	<b>0.8%</b>	<b>0.9%</b>	<b>1.0%</b>	<b>1.1%</b>	<b>1.1%</b>	<b>1.2%</b>		

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2012 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>6</b>	<b>7</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>(0.18)</b>	<b>170</b> <b>111</b>
<b>ICT sector</b>	<b>37</b>	<b>40</b>	<b>39</b>	<b>36</b>	<b>34</b>	<b>33</b>	<b>37</b>	<b>40</b>	<b>(0.43)</b>	<b>107</b> <b>99</b>
Manufacturing	45	46	52	48	40	29	34	33	(0.46)	74 93
Telecommunications	19	19	19	20	22	25	27	30	(0.19)	160 96
Computer services	59	63	58	50	42	39	44	46	(0.58)	78 110

**R&D performance**

Business expenditure in R&D (BERD - € mn)

	2006	2007	2008	2009	2010	2011	2012	2013	2012 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>8,045</b>	<b>9,696</b>	<b>9,916</b>	<b>9,773</b>	<b>9,859</b>	<b>10,969</b>	<b>12,227</b>	<b>-</b>	<b>7.6%</b>	<b>152</b> <b>126</b>
<b>ICT sector</b>	<b>1,665</b>	<b>1,684</b>	<b>1,493</b>	<b>1,570</b>	<b>1,544</b>	<b>1,743</b>	<b>1,940</b>	<b>-</b>	<b>7.4%</b>	<b>117</b> <b>111</b>
Manufacturing	103	108	112	109	105	99	107	-	1.0%	104 80
Telecommunications	100	123	133	134	134	150	166	-	4.5%	166 82
Computer services	1,462	1,453	1,249	1,327	1,305	1,494	1,667	-	14.3%	114 183
<b>ICT sector as a % of Total</b>	<b>20.7%</b>	<b>17.4%</b>	<b>15.1%</b>	<b>16.1%</b>	<b>15.7%</b>	<b>15.9%</b>	<b>15.9%</b>	<b>-</b>		

R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2012 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy (% GDP)</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>-</b>	<b>(0.21)</b>	<b>..</b> <b>114</b>
<b>ICT sector</b>	<b>1.4</b>	<b>1.2</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>1.0</b>	<b>-</b>	<b>(0.20)</b>	<b>..</b> <b>104</b>
Manufacturing	0.8	0.8	0.7	0.8	0.8	0.8	0.9	-	(0.04)	.. 117
Telecommunications	0.3	0.4	0.4	0.3	0.3	0.3	0.3	-	(0.16)	.. 97
Computer services	1.9	1.6	1.2	1.3	1.2	1.3	1.2	-	(0.31)	65 131
Rest of the economy	0.2	0.2	0.3	0.2	0.2	0.2	0.2	-	(0.21)	.. 117

India data refers to 2013 or 2012 whenever the last data is available

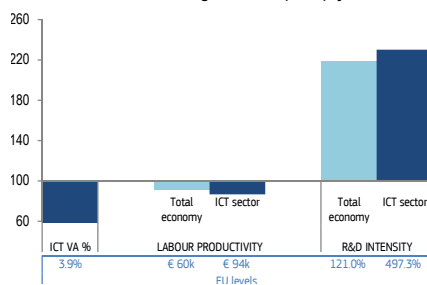
Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)

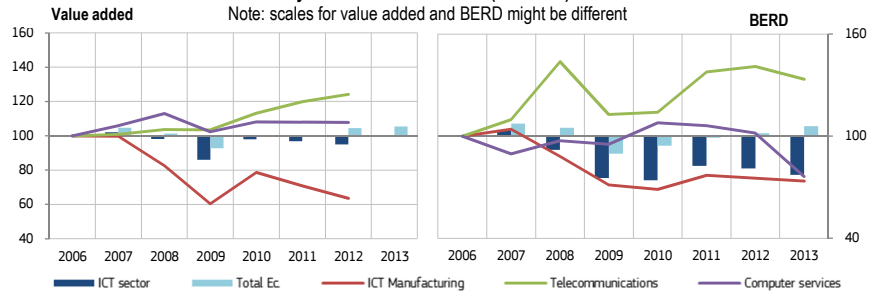
**JAPAN**



Benchmarking vs. EU28 (=100), year 2012



Dynamics of ICT industries (2006=100)



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)	Japan	EU
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**Economic and industry trends**

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)	Japan	EU
<b>Total economy (GDP)</b>	<b>3,306</b>	<b>3,460</b>	<b>3,351</b>	<b>3,068</b>	<b>3,298</b>	<b>3,310</b>	<b>3,452</b>	<b>3,483</b>	<b>25.7%</b>	<b>105</b>	<b>111</b>	
<b>ICT sector</b>	<b>190</b>	<b>194</b>	<b>187</b>	<b>164</b>	<b>186</b>	<b>184</b>	<b>181</b>	-	<b>34.7%</b>	<b>95</b>	<b>107</b>	
Manufacturing	75	75	62	46	59	53	48	-	99.7%	63	69	
Telecommunications	56	57	59	58	64	68	70	-	39.2%	124	85	
Computer services	58	62	66	60	63	63	63	-	21.4%	108	140	
<b>ICT sector as a % of Total</b>	<b>5.8%</b>	<b>5.6%</b>	<b>5.6%</b>	<b>5.3%</b>	<b>5.7%</b>	<b>5.6%</b>	<b>5.2%</b>					

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)	Japan	EU
<b>Total economy</b>	<b>64,198</b>	<b>64,439</b>	<b>64,210</b>	<b>63,274</b>	<b>62,989</b>	<b>62,858</b>	<b>62,668</b>	<b>63,078</b>	<b>28.1%</b>	<b>98</b>	<b>100</b>	
<b>ICT sector</b>	<b>2,438</b>	<b>2,402</b>	<b>2,375</b>	<b>2,295</b>	<b>2,307</b>	<b>2,307</b>	<b>2,231</b>	<b>2,247</b>	<b>39.8%</b>	<b>92</b>	<b>109</b>	
Manufacturing	1,137	1,086	1,034	947	950	940	858	846	124.2%	74	74	
Telecommunications	208	200	189	181	179	177	149	159	14.7%	76	89	
Computer services	1,092	1,117	1,153	1,167	1,178	1,189	1,224	1,243	32.0%	114	127	
<b>ICT sector as a % of Total</b>	<b>3.8%</b>	<b>3.7%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>3.7%</b>	<b>3.7%</b>	<b>3.6%</b>	<b>3.6%</b>				

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)	Japan	EU
<b>Total economy</b>	<b>52</b>	<b>54</b>	<b>52</b>	<b>48</b>	<b>52</b>	<b>53</b>	<b>55</b>	<b>55</b>	<b>(0.92)</b>	<b>107</b>	<b>111</b>	
<b>ICT sector</b>	<b>78</b>	<b>81</b>	<b>79</b>	<b>71</b>	<b>81</b>	<b>80</b>	<b>81</b>	-	<b>(0.87)</b>	<b>104</b>	<b>99</b>	
Manufacturing	66	69	60	48	62	57	56	-	(0.83)	84	93	
Telecommunications	271	285	310	322	357	382	469	-	(2.89)	173	96	
Computer services	54	55	57	51	54	53	51	-	(0.66)	96	110	

**R&D performance**

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)	Japan	EU
<b>Total economy</b>	<b>86,964</b>	<b>93,281</b>	<b>91,157</b>	<b>78,045</b>	<b>82,118</b>	<b>86,172</b>	<b>88,438</b>	<b>92,071</b>	<b>56.2%</b>	<b>106</b>	<b>126</b>	
<b>ICT sector</b>	<b>25,661</b>	<b>26,539</b>	<b>23,588</b>	<b>19,336</b>	<b>18,988</b>	<b>21,196</b>	<b>20,790</b>	<b>19,829</b>	<b>75.4%</b>	<b>77</b>	<b>111</b>	
Manufacturing	22,396	23,310	19,705	15,960	15,373	17,250	16,871	16,472	160.9%	74	80	
Telecommunications	1,523	1,671	2,188	1,717	1,738	2,097	2,147	2,032	64.3%	133	82	
Computer services	1,741	1,559	1,695	1,659	1,876	1,848	1,772	1,326	10.3%	76	183	
<b>ICT sector as a % of Total</b>	<b>29.5%</b>	<b>28.5%</b>	<b>25.9%</b>	<b>24.8%</b>	<b>23.1%</b>	<b>24.6%</b>	<b>23.5%</b>	<b>21.5%</b>				

R&D Intensity (BERD as a % of value added)

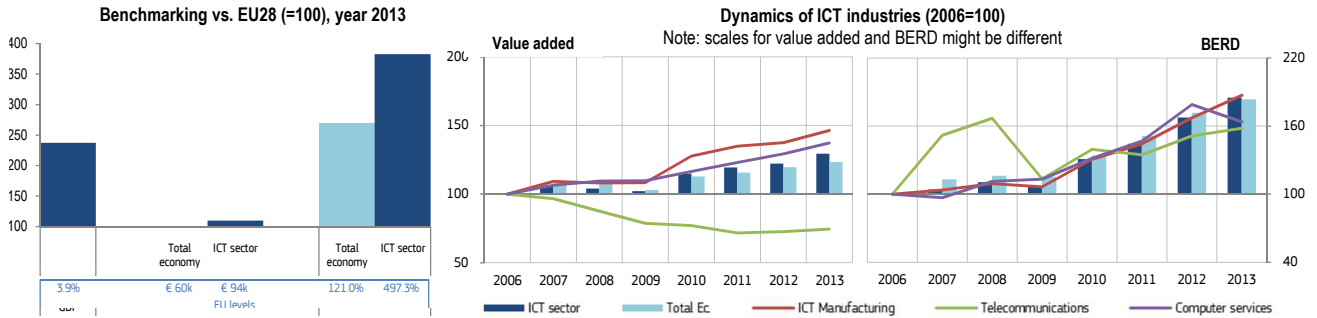
	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)	Japan	EU
<b>Total economy (% GDP)</b>	<b>2.6</b>	<b>2.7</b>	<b>2.7</b>	<b>2.5</b>	<b>2.5</b>	<b>2.6</b>	<b>2.6</b>	<b>2.6</b>	<b>(2.18)</b>	<b>101</b>	<b>114</b>	
<b>ICT sector</b>	<b>13.5</b>	<b>13.7</b>	<b>12.6</b>	<b>11.8</b>	<b>10.2</b>	<b>11.5</b>	<b>11.5</b>	-	<b>(2.30)</b>	<b>85</b>	<b>104</b>	
Manufacturing	29.7	31.0	31.7	35.0	25.9	32.3	35.3	-	(1.58)	119	117	
Telecommunications	2.7	2.9	3.7	2.9	2.7	3.1	3.1	-	(1.47)	114	97	
Computer services	3.0	2.5	2.6	2.8	3.0	2.9	2.8	-	(0.71)	94	131	
Rest of the economy	2.0	2.0	2.1	2.0	2.0	2.1	2.1	2.1	(1.96)	105	117	

Japan data refers to 2013 or 2012 whenever the last data is available

Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x<sub>i</sub>/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)

## SOUTH KOREA



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Korea	EU
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### Economic and industry trends

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Korea	EU
<b>Total economy (GDP)</b>	<b>1,018</b>	<b>1,099</b>	<b>1,098</b>	<b>1,050</b>	<b>1,149</b>	<b>1,177</b>	<b>1,217</b>	<b>1,255</b>	<b>9.3%</b>	<b>123</b>	<b>111</b>
ICT sector	90	95	93	92	103	107	110	116	22.0%	130	107
Manufacturing	56	62	61	61	72	76	78	83	166.7%	146	69
Telecommunications	19	19	17	15	15	14	14	14	8.4%	74	85
Computer services	14	15	15	15	16	17	18	19	6.2%	137	140
<b>ICT sector as a % of Total</b>	<b>8.8%</b>	<b>8.7%</b>	<b>8.5%</b>	<b>8.7%</b>	<b>9.0%</b>	<b>9.1%</b>	<b>9.0%</b>	<b>9.3%</b>			

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Korea	EU
<b>Total economy</b>	<b>23,151</b>	<b>23,433</b>	<b>23,577</b>	<b>23,506</b>	<b>23,829</b>	<b>24,244</b>	<b>24,681</b>	<b>25,066</b>	<b>11.2%</b>	<b>108</b>	<b>100</b>
ICT sector	1,146	1,073	1,048	1,052	1,103	1,147	1,139	1,133	20.0%	99	109
Manufacturing	662	603	575	562	594	607	604	604	88.7%	91	74
Telecommunications	175	161	145	146	150	155	141	131	12.1%	75	89
Computer services	309	308	328	344	359	386	394	398	10.2%	129	127
<b>ICT sector as a % of Total</b>	<b>4.9%</b>	<b>4.6%</b>	<b>4.4%</b>	<b>4.5%</b>	<b>4.6%</b>	<b>4.7%</b>	<b>4.6%</b>	<b>4.5%</b>			

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Korea	EU
<b>Total economy</b>	<b>44</b>	<b>47</b>	<b>47</b>	<b>45</b>	<b>48</b>	<b>49</b>	<b>49</b>	<b>50</b>	<b>(0.83)</b>	<b>114</b>	<b>111</b>
ICT sector	78	89	89	87	94	93	96	103	(1.10)	131	99
Manufacturing	85	102	106	109	121	126	129	137	(1.88)	161	93
Telecommunications	111	116	117	104	99	89	99	110	(0.70)	99	96
Computer services	45	48	47	45	45	44	46	48	(0.61)	107	110

### R&D performance

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Korea	EU
<b>Total economy</b>	<b>22,255</b>	<b>25,140</b>	<b>25,851</b>	<b>25,687</b>	<b>29,787</b>	<b>33,713</b>	<b>38,200</b>	<b>40,870</b>	<b>24.9%</b>	<b>184</b>	<b>126</b>
ICT sector	11,957	12,450	13,220	12,806	15,664	17,263	20,043	22,131	84.2%	185	111
Manufacturing	10,964	11,363	11,990	11,679	14,340	15,832	18,329	20,518	200.4%	187	80
Telecommunications	226	343	377	256	315	304	342	357	11.3%	158	82
Computer services	768	744	854	870	1,010	1,128	1,373	1,256	9.7%	164	183
<b>ICT sector as a % of Total</b>	<b>53.7%</b>	<b>49.5%</b>	<b>51.1%</b>	<b>49.9%</b>	<b>52.6%</b>	<b>51.2%</b>	<b>52.5%</b>	<b>54.1%</b>			

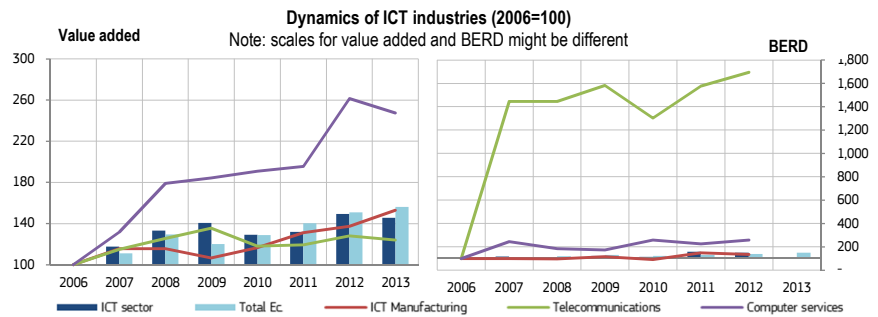
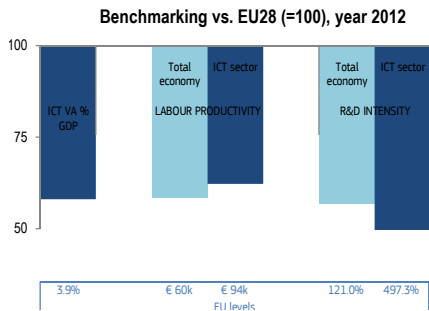
R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Korea	EU
<b>Total economy (% GDP)</b>	<b>2.2</b>	<b>2.3</b>	<b>2.4</b>	<b>2.4</b>	<b>2.6</b>	<b>2.9</b>	<b>3.1</b>	<b>3.3</b>	<b>(2.69)</b>	<b>149</b>	<b>114</b>
ICT sector	13.3	13.1	14.2	14.0	15.2	16.1	18.3	19.0	(3.83)	143	104
Manufacturing	19.4	18.4	19.6	19.1	19.9	20.8	23.6	24.8	(1.20)	128	117
Telecommunications	1.2	1.8	2.2	1.7	2.1	2.2	2.4	2.5	(1.34)	212	97
Computer services	5.5	5.0	5.6	5.7	6.2	6.6	7.6	6.6	(1.57)	119	131
Rest of the economy	1.1	1.3	1.3	1.3	1.4	1.5	1.6	1.6	(1.56)	148	117

Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x<sub>i</sub>/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to (1.00)

**RUSSIA**



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
										Russia EU

**Economic and industry trends**

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy (GDP)</b>	<b>1,736</b>	<b>1,929</b>	<b>2,248</b>	<b>2,082</b>	<b>2,235</b>	<b>2,435</b>	<b>2,620</b>	<b>2,713</b>	<b>20.0%</b>	<b>156</b> <b>111</b>
<b>ICT sector</b>	<b>42</b>	<b>50</b>	<b>56</b>	<b>59</b>	<b>55</b>	<b>56</b>	<b>63</b>	<b>61</b>	<b>11.6%</b>	<b>146</b> <b>107</b>
<i>Manufacturing</i>	4	4	4	4	4	5	5	5	10.9%	153 69
<i>Telecommunications</i>	32	37	40	44	38	38	41	40	23.4%	124 85
<i>Computer services</i>	7	9	12	12	12	13	17	16	5.2%	248 140
<b>ICT sector as a % of Total</b>	<b>2.4%</b>	<b>2.6%</b>	<b>2.5%</b>	<b>2.9%</b>	<b>2.4%</b>	<b>2.3%</b>	<b>2.4%</b>	<b>2.3%</b>		

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>77,376</b>	<b>78,352</b>	<b>78,688</b>	<b>75,717</b>	<b>76,568</b>	<b>76,402</b>	<b>77,145</b>	<b>76,979</b>	<b>34.3%</b>	<b>99</b> <b>100</b>
<b>ICT sector</b>	<b>1,088</b>	<b>1,059</b>	<b>1,049</b>	<b>1,018</b>	<b>1,031</b>	<b>1,012</b>	<b>1,047</b>	<b>1,056</b>	<b>18.7%</b>	<b>97</b> <b>109</b>
<i>Manufacturing</i>	221	217	214	198	190	195	196	196	28.8%	89 74
<i>Telecommunications</i>	568	557	547	516	517	502	525	527	48.6%	93 89
<i>Computer services</i>	299	285	287	304	323	315	326	333	8.6%	111 127
<b>ICT sector as a % of Total</b>	<b>1.4%</b>	<b>1.4%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>1.4%</b>		

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>22</b>	<b>25</b>	<b>29</b>	<b>27</b>	<b>29</b>	<b>32</b>	<b>34</b>	<b>35</b>	<b>(0.58)</b>	<b>157</b> <b>111</b>
<b>ICT sector</b>	<b>39</b>	<b>47</b>	<b>54</b>	<b>58</b>	<b>53</b>	<b>55</b>	<b>60</b>	<b>58</b>	<b>(0.62)</b>	<b>150</b> <b>99</b>
<i>Manufacturing</i>	16	19	19	19	22	24	25	28	(0.38)	173 93
<i>Telecommunications</i>	57	66	74	84	73	76	78	76	(0.48)	134 96
<i>Computer services</i>	22	30	41	40	39	41	52	49	(0.61)	222 110

**R&D performance**

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy</b>	<b>12,412</b>	<b>13,831</b>	<b>14,773</b>	<b>16,259</b>	<b>15,285</b>	<b>16,186</b>	<b>17,204</b>	<b>18,623</b>	<b>11.4%</b>	<b>150</b> <b>126</b>
<b>ICT sector</b>	<b>177</b>	<b>210</b>	<b>192</b>	<b>221</b>	<b>202</b>	<b>282</b>	<b>268</b>	<b>-</b>	<b>1.0%</b>	<b>151</b> <b>111</b>
<i>Manufacturing</i>	156	155	151	181	145	232	210	-	2.0%	135 80
<i>Telecommunications</i>	0	2	2	2	2	2	2	-	0.1%	.. 82
<i>Computer services</i>	21	53	40	37	55	48	56	-	0.5%	259 183
<b>ICT sector as a % of Total</b>	<b>1.4%</b>	<b>1.5%</b>	<b>1.3%</b>	<b>1.4%</b>	<b>1.3%</b>	<b>1.7%</b>	<b>1.6%</b>			

R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)
<b>Total economy (% GDP)</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.8</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>0.7</b>	<b>(0.57)</b>	<b>..</b> <b>114</b>
<b>ICT sector</b>	<b>0.4</b>	<b>0.4</b>	<b>0.3</b>	<b>0.4</b>	<b>0.4</b>	<b>0.5</b>	<b>0.4</b>	<b>-</b>	<b>(0.09)</b>	<b>..</b> <b>104</b>
<i>Manufacturing</i>	4.4	3.8	3.7	4.8	3.5	5.0	4.3	-	(0.19)	98 117
<i>Telecommunications</i>	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-	(0.00)	.. 97
<i>Computer services</i>	0.3	0.6	0.3	0.3	0.4	0.4	0.3	-	(0.08)	.. 131
Rest of the economy	0.7	0.7	0.7	0.8	0.7	0.7	0.7	0.7	(0.63)	.. 117

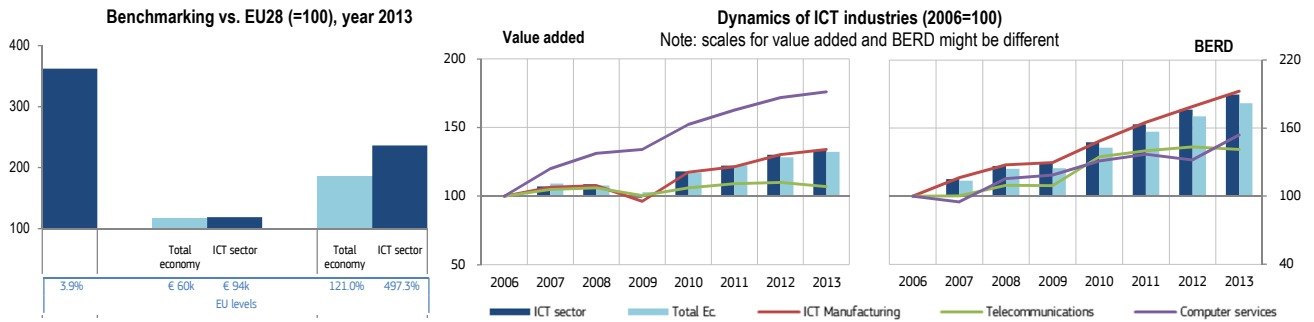
Russian data refers to 2013 or 2012 whenever the last data is available

Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x<sub>i</sub>/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to 1.00



## TAIWAN (ROC)



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Taiwan	EU
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### Economic and industry trends

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Taiwan	EU
<b>Total economy (GDP)</b>	<b>583</b>	<b>636</b>	<b>629</b>	<b>600</b>	<b>682</b>	<b>715</b>	<b>748</b>	<b>771</b>	<b>5.7%</b>	<b>132</b>	<b>111</b>
<b>ICT sector</b>	<b>82</b>	<b>88</b>	<b>89</b>	<b>81</b>	<b>97</b>	<b>100</b>	<b>107</b>	<b>109</b>	<b>20.6%</b>	<b>133</b>	<b>107</b>
Manufacturing	67	71	72	65	79	81	87	90	181.3%	134	69
Telecommunications	10	11	11	10	11	11	11	11	6.4%	107	85
Computer services	5	6	6	6	7	7	8	8	2.6%	176	140
<b>ICT sector as a % of Total</b>	<b>14.0%</b>	<b>13.8%</b>	<b>14.2%</b>	<b>13.5%</b>	<b>14.2%</b>	<b>14.0%</b>	<b>14.2%</b>	<b>14.1%</b>			

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Taiwan	EU
<b>Total economy</b>	<b>10,113</b>	<b>10,292</b>	<b>10,404</b>	<b>10,279</b>	<b>10,493</b>	<b>10,710</b>	<b>10,858</b>	<b>10,966</b>	<b>4.9%</b>	<b>108</b>	<b>100</b>
<b>ICT sector</b>	<b>917</b>	<b>913</b>	<b>932</b>	<b>889</b>	<b>925</b>	<b>988</b>	<b>995</b>	<b>983</b>	<b>17.4%</b>	<b>107</b>	<b>109</b>
Manufacturing	756	752	769	722	758	813	815	799	117.4%	106	74
Telecommunications	43	43	45	48	47	44	43	41	3.8%	94	89
Computer services	118	118	118	119	119	131	137	143	3.7%	121	127
<b>ICT sector as a % of Total</b>	<b>9.1%</b>	<b>8.9%</b>	<b>9.0%</b>	<b>8.6%</b>	<b>8.8%</b>	<b>9.2%</b>	<b>9.2%</b>	<b>9.0%</b>			

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Taiwan	EU
<b>Total economy</b>	<b>58</b>	<b>62</b>	<b>60</b>	<b>58</b>	<b>65</b>	<b>67</b>	<b>69</b>	<b>70</b>	<b>(1.17)</b>	<b>122</b>	<b>111</b>
<b>ICT sector</b>	<b>89</b>	<b>96</b>	<b>96</b>	<b>91</b>	<b>105</b>	<b>101</b>	<b>107</b>	<b>111</b>	<b>(1.18)</b>	<b>124</b>	<b>99</b>
Manufacturing	89	95	94	89	104	100	107	113	(1.54)	127	93
Telecommunications	236	250	241	214	231	254	262	267	(1.69)	113	96
Computer services	39	47	51	52	59	57	57	57	(0.71)	145	110

### R&D performance

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Taiwan	EU
<b>Total economy</b>	<b>9,559</b>	<b>10,868</b>	<b>11,874</b>	<b>11,923</b>	<b>13,654</b>	<b>14,997</b>	<b>16,295</b>	<b>17,395</b>	<b>10.6%</b>	<b>182</b>	<b>126</b>
<b>ICT sector</b>	<b>6,751</b>	<b>7,775</b>	<b>8,555</b>	<b>8,680</b>	<b>9,958</b>	<b>11,034</b>	<b>11,895</b>	<b>12,800</b>	<b>48.7%</b>	<b>190</b>	<b>111</b>
Manufacturing	6,314	7,352	8,058	8,174	9,380	10,431	11,302	12,145	118.6%	192	80
Telecommunications	139	139	152	152	187	194	199	196	6.2%	141	82
Computer services	298	283	344	354	391	409	393	459	3.6%	154	183
<b>ICT sector as a % of Total</b>	<b>70.6%</b>	<b>71.5%</b>	<b>72.0%</b>	<b>72.8%</b>	<b>72.9%</b>	<b>73.6%</b>	<b>73.0%</b>	<b>73.6%</b>			

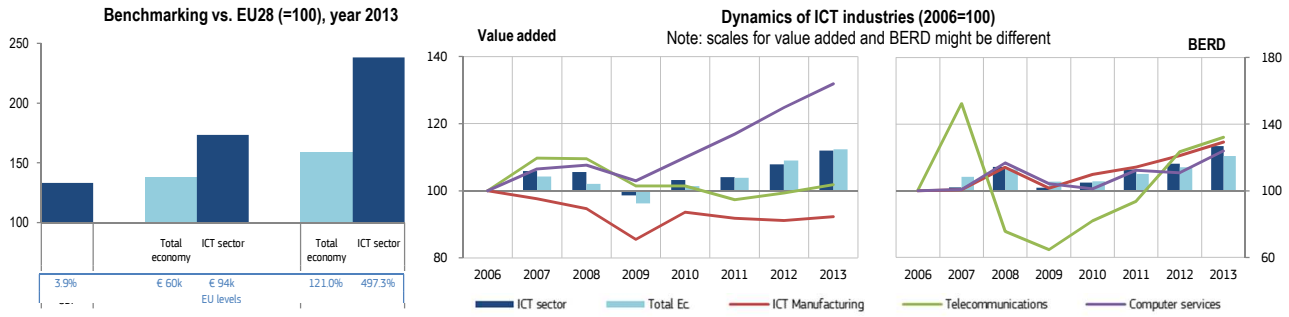
R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100) Taiwan	EU
<b>Total economy (% GDP)</b>	<b>1.6</b>	<b>1.7</b>	<b>1.9</b>	<b>2.0</b>	<b>2.0</b>	<b>2.1</b>	<b>2.2</b>	<b>2.3</b>	<b>(1.86)</b>	<b>138</b>	<b>114</b>
<b>ICT sector</b>	<b>8.2</b>	<b>8.9</b>	<b>9.6</b>	<b>10.7</b>	<b>10.3</b>	<b>11.0</b>	<b>11.2</b>	<b>11.7</b>	<b>(2.36)</b>	<b>143</b>	<b>104</b>
Manufacturing	9.4	10.3	11.2	12.7	11.9	12.8	12.9	13.5	(0.65)	143	117
Telecommunications	1.4	1.3	1.4	1.5	1.7	1.7	1.8	1.8	(0.97)	132	97
Computer services	6.5	5.1	5.7	5.8	5.6	5.5	5.0	5.7	(1.36)	87	131
Rest of the economy	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.7	(0.66)	-	117

Note: all monetary variables are expressed in euros at current prices and exchange rates.

% shares and (levels) correspond to the (%) ratio between the value of a variable (x) in country (i) and in the EU economy [= x<sub>i</sub>/x<sub>EU</sub>]. Percentage shares portray the weight of each country in the EU aggregate, the EU being equal to 100%. Levels, computed for productivity and R&D intensity, portray the performance vs. the EU aggregate, and are expressed as a simple ratio, the EU level being equal to 1.00

**UNITED STATES**



	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU % shares (levels)	2013 vs 2006(=100)	US	EU
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**Economic and industry trends**

Value added (€ bn)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)	US	EU
<b>Total economy (GDP)</b>	11,271	11,747	11,498	10,845	11,422	11,709	12,289	12,662	93.5%	112	111	
<b>ICT sector</b>	588	622	621	580	607	612	634	658	124.5%	112	107	
<i>Manufacturing</i>	125	122	119	107	118	115	114	116	233.4%	92	69	
<i>Telecommunications</i>	225	246	246	228	228	219	223	229	134.0%	102	85	
<i>Computer services</i>	238	253	256	245	261	278	297	314	101.7%	132	140	
<b>ICT sector as a % of Total</b>	5.2%	5.3%	5.4%	5.3%	5.3%	5.2%	5.2%	5.2%				

Employment (thousands)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)	US	EU
<b>Total economy</b>	152,833	154,194	153,346	146,932	145,483	146,849	149,503	151,685	67.6%	99	100	
<b>ICT sector</b>	3,946	4,014	4,058	3,862	3,818	3,878	3,973	4,059	71.8%	103	109	
<i>Manufacturing</i>	825	797	777	694	673	683	676	654	96.1%	79	74	
<i>Telecommunications</i>	1,009	1,052	1,031	984	926	900	875	871	80.4%	86	89	
<i>Computer services</i>	2,112	2,166	2,250	2,183	2,219	2,295	2,421	2,533	65.2%	120	127	
<b>ICT sector as a % of Total</b>	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.7%	2.7%				

Productivity of labour (€ thous./person employed)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)	US	EU
<b>Total economy</b>	74	76	75	74	79	80	82	83	(1.38)	113	111	
<b>ICT sector</b>	149	155	153	150	159	158	160	162	(1.73)	109	99	
<i>Manufacturing</i>	152	154	153	155	175	169	169	177	(2.43)	116	93	
<i>Telecommunications</i>	223	234	239	231	246	243	255	262	(1.67)	118	96	
<i>Computer services</i>	113	117	114	112	118	121	123	124	(1.56)	110	110	

**R&D performance**

Business expenditure in R&D (BERD - € mln)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)	US	EU
<b>Total economy</b>	201,462	218,474	227,082	212,408	212,939	221,906	229,797	243,541	148.6%	121	126	
<b>ICT sector</b>	61,514	62,800	70,301	62,606	64,519	69,344	71,536	77,976	296.5%	127	111	
<i>Manufacturing</i>	30,791	30,950	35,141	31,255	33,796	35,156	37,299	39,811	388.9%	129	80	
<i>Telecommunications</i>	1,738	2,648	1,316	1,125	1,426	1,628	2,147	2,296	72.7%	132	82	
<i>Computer services</i>	28,985	29,202	33,844	30,226	29,297	32,560	32,089	35,869	278.1%	124	183	
<b>ICT sector as a % of Total</b>	30.5%	28.7%	31.0%	29.5%	30.3%	31.2%	31.1%	32.0%				

R&D Intensity (BERD as a % of value added)

	2006	2007	2008	2009	2010	2011	2012	2013	2013 vs EU	2013 vs 2006(=100)	US	EU
<b>Total economy (% GDP)</b>	1.8	1.9	2.0	2.0	1.9	1.9	1.9	1.9	(1.59)	108	114	
<b>ICT sector</b>	10.5	10.1	11.3	10.8	10.6	11.3	11.3	11.8	(2.38)	113	104	
<i>Manufacturing</i>	24.5	25.3	29.6	29.1	28.8	30.5	32.6	34.4	(1.67)	140	117	
<i>Telecommunications</i>	0.8	1.1	0.5	0.5	0.6	0.7	1.0	1.0	(0.54)	..	97	
<i>Computer services</i>	12.2	11.5	13.2	12.3	11.2	11.7	10.8	11.4	(2.73)	94	131	
Rest of the economy	1.3	1.4	1.4	1.5	1.4	1.4	1.4	1.4	(1.30)	105	117	

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## **References**

The 2016 PREDICT Report

Both the report and the database can be accessed through the following web page:  
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