

9th pillar

Economic impacts

9.01 Impact of ICTs on new services and products

In your country, to what extent do ICTs enable new business models? [1 = not at all; 7 = to a great extent] | 2013–2014 weighted average

RANK	COUNTRY/ECONOMY	VALUE	1	MEAN: 4.3	7	RANK	COUNTRY/ECONOMY	VALUE	1	MEAN: 4.3	7
1	Finland	5.8				73	Burkina Faso	4.3			
2	United Arab Emirates	5.7				74	Kazakhstan	4.3			
3	Estonia	5.7				75	Brazil	4.2			
4	Qatar	5.6				76	Peru	4.2			
5	Netherlands	5.6				77	Montenegro	4.2			
6	Sweden	5.6				78	Barbados	4.2			
7	Luxembourg	5.6				79	Cambodia	4.2			
8	United Kingdom	5.5				80	Cameroon	4.2			
9	Singapore	5.5				81	Lao PDR	4.2			
10	Malaysia	5.5				82	Gambia, The	4.2			
11	Norway	5.5				83	Slovak Republic	4.1			
12	Korea, Rep.	5.5				84	Mongolia	4.1			
13	Switzerland	5.4				85	Paraguay	4.1			
14	Japan	5.4				86	Romania	4.1			
15	New Zealand	5.4				87	India	4.1			
16	Ireland	5.3				88	Morocco	4.1			
17	Portugal	5.3				89	Jamaica	4.1			
18	United States	5.3				90	Tajikistan	4.1			
19	Germany	5.2				91	Namibia	4.1			
20	Taiwan, China	5.1				92	Bulgaria	4.1			
21	Canada	5.1				93	Russian Federation	4.0			
22	Israel	5.1				94	Pakistan	4.0			
23	Iceland	5.1				95	Uganda	4.0			
24	Belgium	5.1				96	Ghana	4.0			
25	Hong Kong SAR	5.0				97	Guyana	4.0			
26	Spain	5.0				98	Poland	4.0			
27	Lithuania	5.0				99	Italy	4.0			
28	Rwanda	5.0				100	Côte d'Ivoire	4.0			
29	Chile	5.0				101	Georgia	3.9			
30	Saudi Arabia	5.0				102	Bolivia	3.9			
31	France	4.9				103	Seychelles	3.9			
32	Austria	4.9				104	Madagascar	3.8			
33	Indonesia	4.9				105	Zimbabwe	3.8			
34	Puerto Rico	4.9				106	Tunisia	3.8			
35	Panama	4.9				107	Egypt	3.8			
36	Australia	4.9				108	Iran, Islamic Rep.	3.8			
37	Malta	4.9				109	Serbia	3.8			
38	Bahrain	4.9				110	Argentina	3.8			
39	Kenya	4.8				111	Ukraine	3.8			
40	Guatemala	4.8				112	Bangladesh	3.7			
41	Jordan	4.8				113	Tanzania	3.7			
42	Azerbaijan	4.8				114	Bhutan	3.7			
43	Costa Rica	4.7				115	Moldova	3.7			
44	Turkey	4.7				116	Trinidad and Tobago	3.7			
45	Denmark	4.7				117	Botswana	3.7			
46	Thailand	4.7				118	Mozambique	3.6			
47	Czech Republic	4.7				119	Kyrgyz Republic	3.6			
48	Uruguay	4.7				120	Greece	3.6			
49	China	4.6				121	Malawi	3.6			
50	Philippines	4.6				122	Suriname	3.5			
51	Colombia	4.6				123	Gabon	3.5			
52	Macedonia, FYR	4.6				124	Albania	3.4			
53	Senegal	4.6				125	Nepal	3.4			
54	Vietnam	4.6				126	Ethiopia	3.3			
55	Dominican Republic	4.6				127	Kuwait	3.3			
56	Armenia	4.6				128	Swaziland	3.3			
57	Mali	4.5				129	Angola	3.3			
58	South Africa	4.5				130	Mauritania	3.3			
59	Mauritius	4.5				131	Lesotho	3.3			
60	Oman	4.5				132	Venezuela	3.3			
61	Latvia	4.5				133	Lebanon	3.3			
62	Hungary	4.5				134	Nicaragua	3.2			
63	Sri Lanka	4.5				135	Guinea	3.2			
64	Croatia	4.5				136	Myanmar	3.1			
65	El Salvador	4.5				137	Algeria	3.1			
66	Slovenia	4.4				138	Haiti	3.0			
67	Mexico	4.4				139	Timor-Leste	2.8			
68	Cyprus	4.4				140	Burundi	2.7			
69	Honduras	4.4				141	Yemen	2.7			
70	Cape Verde	4.4				142	Chad	2.7			
71	Nigeria	4.3				143	Libya	2.1			
72	Zambia	4.3									

SOURCE: World Economic Forum, Executive Opinion Survey, 2013 and 2014 editions

9.02 PCT ICT patent applications

Number of applications for information and communication technology–related patents filed under the Patent Cooperation Treaty (PCT) per million population | 2011–2012 average

RANK	COUNTRY/ECONOMY	VALUE	RANK	COUNTRY/ECONOMY	VALUE
1	Finland	157.4	73	Oman	0.2
2	Sweden	152.5	74	Jamaica	0.2
3	Japan	141.9	75	Colombia	0.2
4	Israel	109.9	76	Thailand	0.2
5	Korea, Rep.	105.7	77	Sri Lanka	0.2
6	Barbados	79.4	78	Gambia, The	0.1
7	Switzerland	76.7	79	Kazakhstan	0.1
8	United States	64.8	80	Philippines	0.1
9	Netherlands	60.3	81	Macedonia, FYR	0.1
10	Singapore	57.2	82	Kuwait	0.1
11	Germany	52.6	83	Peru	0.1
12	Denmark	42.1	84	Kenya	0.1
13	Canada	37.5	85	Nicaragua	0.1
14	Ireland	37.2	86	Namibia	0.1
15	Austria	36.0	87	Algeria	0.1
16	France	33.8	88	Dominican Republic	0.0
17	Norway	32.2	89	Vietnam	0.0
18	Belgium	29.4	90	Iran, Islamic Rep.	0.0
19	Luxembourg	29.0	91	Pakistan	0.0
20	United Kingdom	28.9	92	Venezuela	0.0
21	Australia	23.0	93	Senegal	0.0
22	Iceland	18.1	94	Indonesia	0.0
23	New Zealand	13.5	95	Nigeria	0.0
24	Qatar	12.3	96	Bangladesh	0.0
25	Slovenia	10.3	97	Uganda	0.0
26	Spain	10.0	98	Ethiopia	0.0
27	Italy	9.3	99	Albania	0.0
28	Hungary	8.5	99	Angola	0.0
29	Estonia	8.5	99	Bhutan	0.0
30	China	8.5	99	Bolivia	0.0
31	Malaysia	6.0	99	Botswana	0.0
32	Malta	3.6	99	Burkina Faso	0.0
33	Latvia	3.5	99	Burundi	0.0
34	Portugal	3.4	99	Cambodia	0.0
35	Czech Republic	3.1	99	Cameroon	0.0
36	Lithuania	2.8	99	Cape Verde	0.0
37	Greece	2.4	99	Chad	0.0
38	Russian Federation	2.4	99	Côte d'Ivoire	0.0
39	Saudi Arabia	2.1	99	El Salvador	0.0
40	Bulgaria	1.9	99	Gabon	0.0
41	Croatia	1.8	99	Ghana	0.0
42	Panama	1.7	99	Guatemala	0.0
43	Poland	1.6	99	Guinea	0.0
44	United Arab Emirates	1.6	99	Guyana	0.0
45	South Africa	1.6	99	Haiti	0.0
46	Slovak Republic	1.5	99	Honduras	0.0
47	Serbia	1.3	99	Kyrgyz Republic	0.0
48	Cyprus	1.2	99	Lao PDR	0.0
49	Turkey	1.2	99	Lesotho	0.0
50	Romania	1.2	99	Libya	0.0
51	Ukraine	1.1	99	Madagascar	0.0
52	Puerto Rico	1.0	99	Malawi	0.0
53	Lebanon	0.9	99	Mali	0.0
54	Chile	0.8	99	Mauritania	0.0
55	Mauritius	0.8	99	Montenegro	0.0
56	Uruguay	0.8	99	Mozambique	0.0
57	Georgia	0.7	99	Myanmar	0.0
58	India	0.5	99	Nepal	0.0
59	Brazil	0.5	99	Paraguay	0.0
60	Bahrain	0.5	99	Rwanda	0.0
61	Armenia	0.5	99	Seychelles	0.0
62	Moldova	0.4	99	Suriname	0.0
63	Jordan	0.4	99	Swaziland	0.0
64	Mongolia	0.4	99	Tajikistan	0.0
65	Costa Rica	0.3	99	Tanzania	0.0
66	Argentina	0.3	99	Trinidad and Tobago	0.0
67	Timor-Leste	0.3	99	Yemen	0.0
68	Mexico	0.3	99	Zambia	0.0
69	Tunisia	0.2	99	Zimbabwe	0.0
70	Morocco	0.2	n/a	Hong Kong SAR	n/a
71	Azerbaijan	0.2	n/a	Taiwan, China	n/a
72	Egypt	0.2			

SOURCES: Organisation for Economic Co-operation and Development (OECD), *Patent Database*, January 2015; World Bank, *World Development Indicators* (retrieved November 26, 2014)

9.03 Impact of ICTs on new organizational models

In your country, to what extent do ICTs enable new organizational models (e.g., virtual teams, remote working, telecommuting) within businesses? [1 = not at all; 7 = to a great extent] | 2013–2014 weighted average

RANK	COUNTRY/ECONOMY	VALUE	1	MEAN: 4.1	7	RANK	COUNTRY/ECONOMY	VALUE	1	MEAN: 4.1	7
1	Finland	5.8				73	Peru	4.1			
2	Estonia	5.7				74	Slovak Republic	4.1			
3	Norway	5.5				75	Hungary	4.1			
4	Malaysia	5.5				76	Brazil	4.0			
5	United Arab Emirates	5.5				77	Guyana	4.0			
6	Netherlands	5.5				78	Russian Federation	4.0			
7	Qatar	5.5				79	Cape Verde	4.0			
8	United Kingdom	5.5				80	Lao PDR	4.0			
9	United States	5.4				81	Zambia	4.0			
10	Sweden	5.4				82	Cameroon	3.9			
11	Singapore	5.3				83	Gambia, The	3.9			
12	Canada	5.2				84	Tajikistan	3.9			
13	Ireland	5.2				85	Montenegro	3.9			
14	Taiwan, China	5.2				86	Côte d'Ivoire	3.9			
15	Iceland	5.2				87	Romania	3.9			
16	New Zealand	5.2				88	Nigeria	3.9			
17	Luxembourg	5.2				89	India	3.9			
18	Australia	5.2				90	Paraguay	3.9			
19	Portugal	5.1				91	Bulgaria	3.9			
20	Korea, Rep.	5.1				92	Poland	3.9			
21	Hong Kong SAR	5.1				93	Namibia	3.9			
22	Germany	5.0				94	Trinidad and Tobago	3.8			
23	Lithuania	5.0				95	Bolivia	3.8			
24	Belgium	5.0				96	Egypt	3.8			
25	Puerto Rico	4.9				97	Argentina	3.8			
26	Saudi Arabia	4.8				98	Madagascar	3.8			
27	Switzerland	4.8				99	Uganda	3.8			
28	Azerbaijan	4.8				100	Morocco	3.7			
29	Israel	4.7				101	Ukraine	3.7			
30	Guatemala	4.7				102	Tanzania	3.7			
31	Jordan	4.7				103	Mongolia	3.6			
32	Bahrain	4.7				104	Pakistan	3.6			
33	Denmark	4.7				105	Tunisia	3.6			
34	China	4.7				106	Moldova	3.6			
35	Indonesia	4.7				107	Georgia	3.6			
36	Spain	4.7				108	Seychelles	3.6			
37	Latvia	4.6				109	Serbia	3.6			
38	Costa Rica	4.6				110	Bangladesh	3.6			
39	Japan	4.6				111	Iran, Islamic Rep.	3.5			
40	Philippines	4.6				112	Ghana	3.5			
41	Malta	4.6				113	Burkina Faso	3.5			
42	Chile	4.6				114	Malawi	3.5			
43	Panama	4.6				115	Bhutan	3.5			
44	Czech Republic	4.6				116	Zimbabwe	3.5			
45	Uruguay	4.6				117	Venezuela	3.5			
46	Armenia	4.6				118	Suriname	3.4			
47	Rwanda	4.5				119	Italy	3.4			
48	France	4.5				120	Greece	3.4			
49	Austria	4.5				121	Kyrgyz Republic	3.4			
50	Dominican Republic	4.5				122	Kuwait	3.4			
51	Sri Lanka	4.5				123	Mozambique	3.4			
52	Croatia	4.5				124	Nepal	3.3			
53	Honduras	4.5				125	Botswana	3.3			
54	Colombia	4.5				126	Nicaragua	3.3			
55	Mauritius	4.4				127	Swaziland	3.3			
56	Slovenia	4.4				128	Mauritania	3.3			
57	Kenya	4.4				129	Ethiopia	3.2			
58	Turkey	4.4				130	Algeria	3.1			
59	South Africa	4.4				131	Albania	3.1			
60	Cambodia	4.3				132	Lesotho	3.0			
61	El Salvador	4.3				133	Haiti	3.0			
62	Macedonia, FYR	4.3				134	Timor-Leste	2.9			
63	Mexico	4.3				135	Yemen	2.9			
64	Senegal	4.2				136	Myanmar	2.9			
65	Kazakhstan	4.2				137	Lebanon	2.9			
66	Cyprus	4.2				138	Gabon	2.8			
67	Jamaica	4.2				139	Guinea	2.7			
68	Thailand	4.2				140	Angola	2.7			
69	Mali	4.1				141	Chad	2.5			
70	Barbados	4.1				142	Burundi	2.4			
71	Vietnam	4.1				143	Libya	2.4			
72	Oman	4.1									

SOURCE: World Economic Forum, Executive Opinion Survey, 2013 and 2014 editions

9.04 Share of workforce employed in knowledge-intensive activities (%)

Share of workforce employed in knowledge intensive activities (%) | 2013 or most recent

RANK	COUNTRY/ECONOMY	VALUE	RANK	COUNTRY/ECONOMY	VALUE
1	Luxembourg	59.1	73	Tunisia ¹²	20.9
2	Singapore	52.7	74	Mauritius ¹²	20.4
3	Switzerland	51.0	75	Jamaica ⁸	20.1
4	Iceland	49.3	76	Bangladesh ¹¹	20.0
5	Sweden	48.5	77	Pakistan ⁸	19.5
6	United Kingdom	47.7	78	Timor-Leste ¹⁰	19.3
7	Norway	46.8	79	Venezuela	19.2
8	Israel	46.5	80	Turkey	19.2
9	Netherlands	46.4	81	Mexico	19.1
10	Denmark	45.5	82	Paraguay	18.9
11	Finland	44.7	83	Kuwait ⁵	18.7
12	Belgium	44.4	84	Qatar	18.2
13	France	44.3	85	Botswana ¹⁰	17.9
14	Canada	44.2	86	Algeria	17.6
15	Australia	43.8	87	Kyrgyz Republic	17.3
16	Russian Federation	43.6	88	Dominican Republic	17.2
17	New Zealand ⁸	42.9	89	Yemen ⁵	17.0
18	Germany	42.9	90	Colombia ¹⁰	16.8
19	Lithuania	42.8	91	Bhutan	16.5
20	Slovenia	42.2	92	Albania	16.1
21	Estonia	41.8	93	Iran, Islamic Rep. ¹⁰	16.0
22	Malta	40.6	94	Sri Lanka	15.7
23	Ireland	40.5	95	Bolivia ⁹	15.3
24	Austria	39.8	96	Peru	15.0
25	Latvia	39.2	97	Nicaragua ⁶	14.8
26	United States	38.0	98	Namibia	14.6
27	Czech Republic	37.8	99	Thailand	13.9
28	Hong Kong SAR	37.3	100	Guyana ⁹	12.7
29	Montenegro ¹²	37.2	101	El Salvador	12.1
30	Egypt	36.3	102	Guatemala	10.8
31	United Arab Emirates ⁸	36.1	103	Vietnam	10.0
32	Poland	35.9	104	Indonesia	8.9
33	Hungary	35.6	105	Ghana ¹⁰	8.6
34	Italy	35.1	106	China ⁵	7.4
35	Cyprus	35.1	107	Zambia ¹⁰	7.3
36	Croatia	35.1	108	Morocco ⁸	6.8
37	Ukraine	33.7	109	Lesotho	6.8
38	Taiwan, China	33.3	110	Zimbabwe ¹¹	6.6
39	Spain	33.2	111	Uganda ⁹	4.4
40	Portugal	32.5	112	Nepal ⁸	4.3
41	Greece	32.3	113	Cambodia ¹⁰	4.1
42	Kazakhstan	32.3	114	Ethiopia	3.8
43	Puerto Rico ⁸	31.9	115	Rwanda ¹²	3.8
44	Lebanon ⁷	31.8	116	Madagascar ¹⁰	2.9
45	Slovak Republic	31.8	117	Tanzania ⁶	2.6
46	Bulgaria	31.0	118	Guinea ¹⁰	0.7
47	Barbados	30.9	n/a	Angola	n/a
48	Moldova	30.0	n/a	Burkina Faso	n/a
49	Jordan ⁴	28.2	n/a	Burundi	n/a
50	Serbia	28.1	n/a	Cameroon	n/a
51	Macedonia, FYR	27.9	n/a	Cape Verde	n/a
52	Trinidad and Tobago	27.0	n/a	Chad	n/a
53	Armenia ¹¹	26.9	n/a	Côte d'Ivoire	n/a
54	Saudi Arabia	26.6	n/a	Gabon	n/a
55	Seychelles ¹¹	26.3	n/a	Gambia, The	n/a
56	South Africa	25.5	n/a	Haiti	n/a
57	Costa Rica	25.0	n/a	Honduras	n/a
58	Malaysia	24.7	n/a	India	n/a
59	Argentina ¹²	24.6	n/a	Kenya	n/a
60	Panama ¹²	24.4	n/a	Lao PDR	n/a
61	Chile	24.3	n/a	Libya	n/a
62	Mongolia ¹²	24.3	n/a	Malawi	n/a
63	Japan	24.3	n/a	Mali	n/a
64	Oman ¹	24.3	n/a	Mauritania	n/a
65	Philippines	23.7	n/a	Mozambique	n/a
66	Azerbaijan	23.4	n/a	Myanmar	n/a
67	Bahrain ²	23.1	n/a	Nigeria	n/a
68	Uruguay ¹¹	23.1	n/a	Senegal	n/a
69	Georgia ⁷	22.2	n/a	Suriname	n/a
70	Korea, Rep.	21.4	n/a	Swaziland	n/a
71	Romania	21.2	n/a	Tajikistan	n/a
72	Brazil	21.0			

SOURCE: International Labour Organization (ILO), ILOSTAT Database (retrieved November 28, 2014), www.ilo.org/ilostat

¹ 2000 ² 2001 ³ 2002 ⁴ 2004 ⁵ 2005 ⁶ 2006 ⁷ 2007 ⁸ 2008 ⁹ 2009 ¹⁰ 2010 ¹¹ 2011 ¹² 2012