



EUROPEAN COMMISSION

Brussels, 8.6.2011
SEC(2011) 739 final

25/41

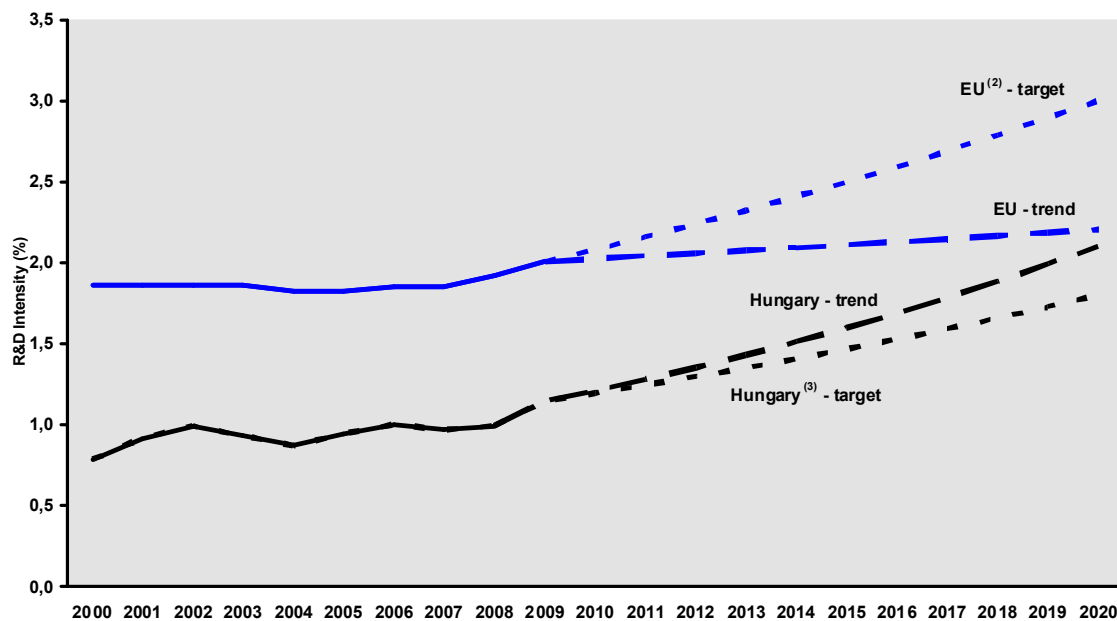
COMMISSION STAFF WORKING PAPER

Innovation Union Competitiveness report 2011

Progress towards meeting the Europe 2020 R&D intensity target

Over the period 2000-2009, Hungary's R&D intensity has had a cyclical evolution. Even if the business R&D intensity has grown, the low level of overall innovation activity in the private sector is a major challenge. The Hungarian government set a R&D intensity target of 1.8% of GDP by 2020.

Hungary - R&D Intensity projections, 2000-2020 ⁽¹⁾



Source: DG Research and Innovation

Innovation Union Competitiveness Report 2011

Data: DG Research and Innovation, Eurostat

Notes: (1) The R&D Intensity projections based on trends are derived from the average annual growth in R&D Intensity for 2000-2009 in the case of the EU and for 2004-2009 in the case of Hungary.

(2) EU: This projection is based on the R&D Intensity target of 3.0% for 2020.

(3) HU: This projection is based on a tentative R&D Intensity target of 1.8% for 2020.

(4) HU: There is a break in series between 2004 and the previous years.

Research and Innovation Performance

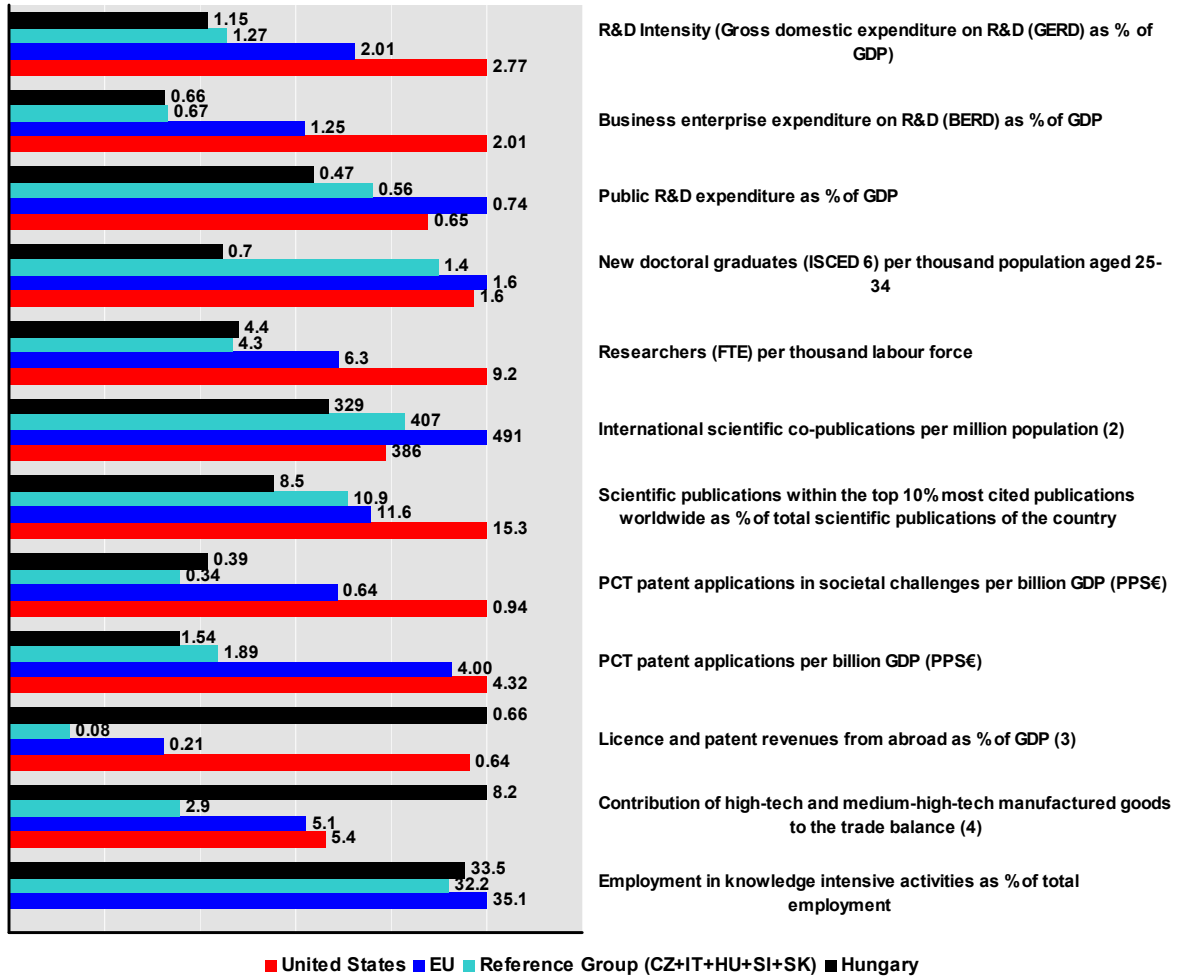
According to the Innovation Union Scoreboard 2010, Hungary belongs to the 'moderate innovators' group of countries, which means an improvement over the last decade although the research and innovation profile has remained mainly unchanged in the recent years. Research and innovation are rather concentrated in large foreign-owned enterprises and in a few sectors.

There are some improvement in human resources in science and technology such as the employment rate in knowledge intensive activities as percentage of total employment which is very close to the EU average. Also noticeable is the excellent performance of Hungary as regards the licence and patent revenues from abroad and the contribution of high-tech and medium-high-tech manufactured goods to the trade balance. This demonstrates a good positioning in new sectors as well as a progressive structural change towards more knowledge-intensive sectors, as illustrated in the last graph of the present profile..

Overall review of EU Member States and Associated countries

Hungary

R&D profile, 2009 ⁽¹⁾



Source: DG Research and Innovation

Innovation Union Competitiveness report 2011

Data: Eurostat, OECD, Science Metrix / Scopus (Elsevier)

Notes: (1) The values refer to 2009 or to the latest available year.

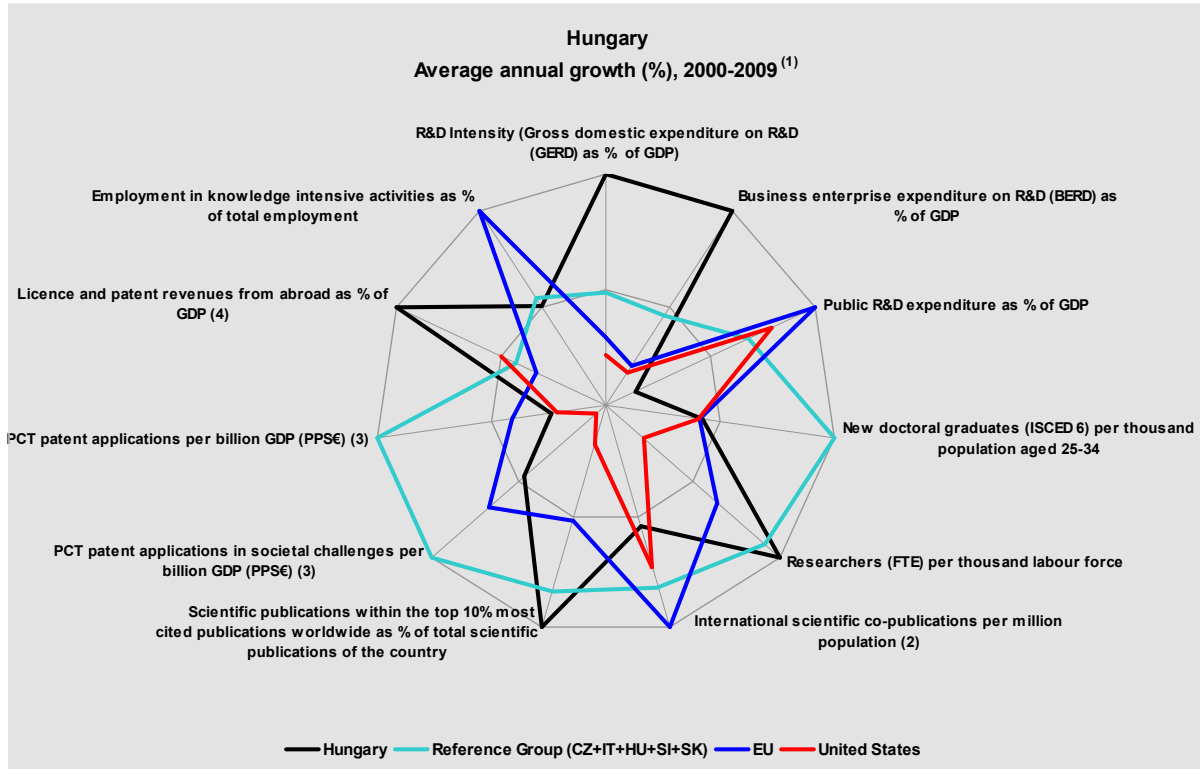
(2) The EU value refers to the median rather than to the average.

(3) EU refers to extra-EU.

(4) (i) EU does not include BG, CY, LV, LT, MT, RO; (ii) EU refers to extra-EU.

(5) Elements of estimation were involved in the compilation of the data.

In dynamic terms, the Hungarian research and innovation system is improving private sector financial input and overall R&D intensity, alongside scientific quality and patent revenues. However, public sector R&D intensity and the internationalisation of science is less dynamic than the EU average or countries with a similar industrial structure and knowledge capacity as Hungary.



Source: DG Research and Innovation

Innovation Union Competitiveness report 2011

Data: Eurostat, OECD, Science Metrix / Scopus (Elsevier)

Notes: (1) Growth rates which do not refer to 2000-2009 refer to growth between the earliest available year and the latest available year over the period 2000-2010.

(2) The EU value refers to the median rather than to the average.

(3) Average annual growth refers to real growth.

(4) EU refers to extra-EU.

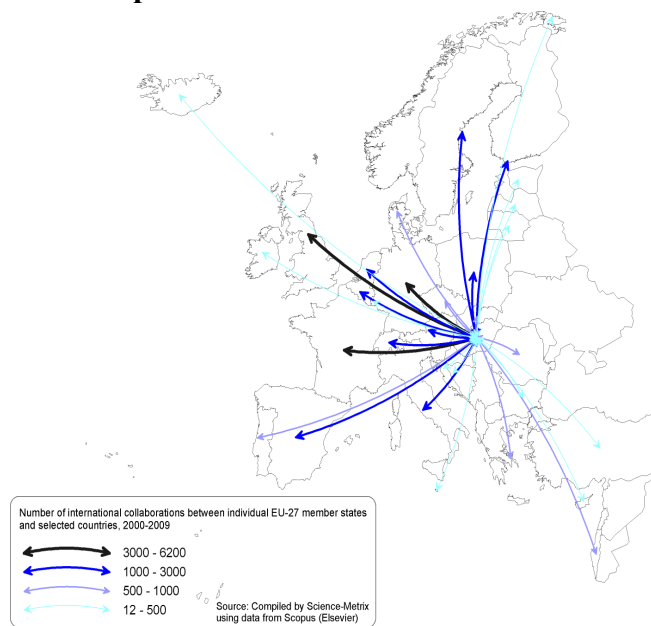
(5) Elements of estimation were involved in the compilation of the data.

Participation in the European Research Area: Scientific and Technological collaborations

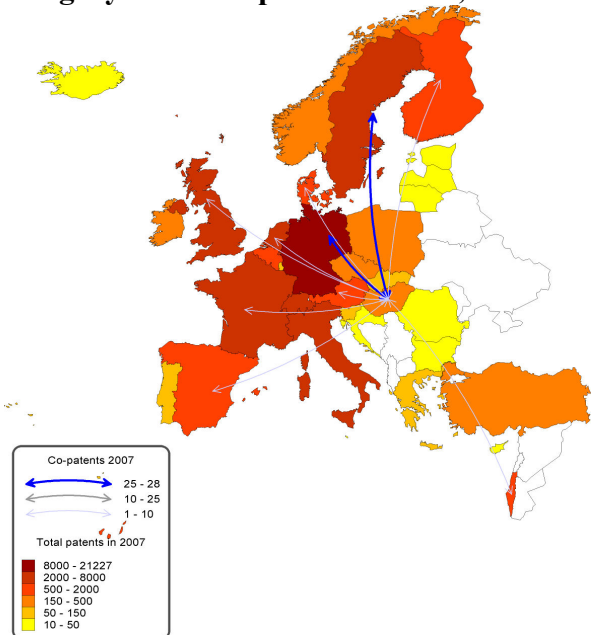
Hungary is rather well interconnected in terms of co-publications with Germany, the United Kingdom and France. Its interconnections in terms of co-invented patent applications are much more limited, with links notably with Germany and Sweden, but at a low level.

Moreover, as seen in the report, Hungary's share of international scientific co-publications per million population, and respectively the PCT patent applications per billion GDP, are under the EU average.

Co-publications between Hungary and European countries in 2000-2009



Co-invented patent applications between Hungary and European countries, 2007

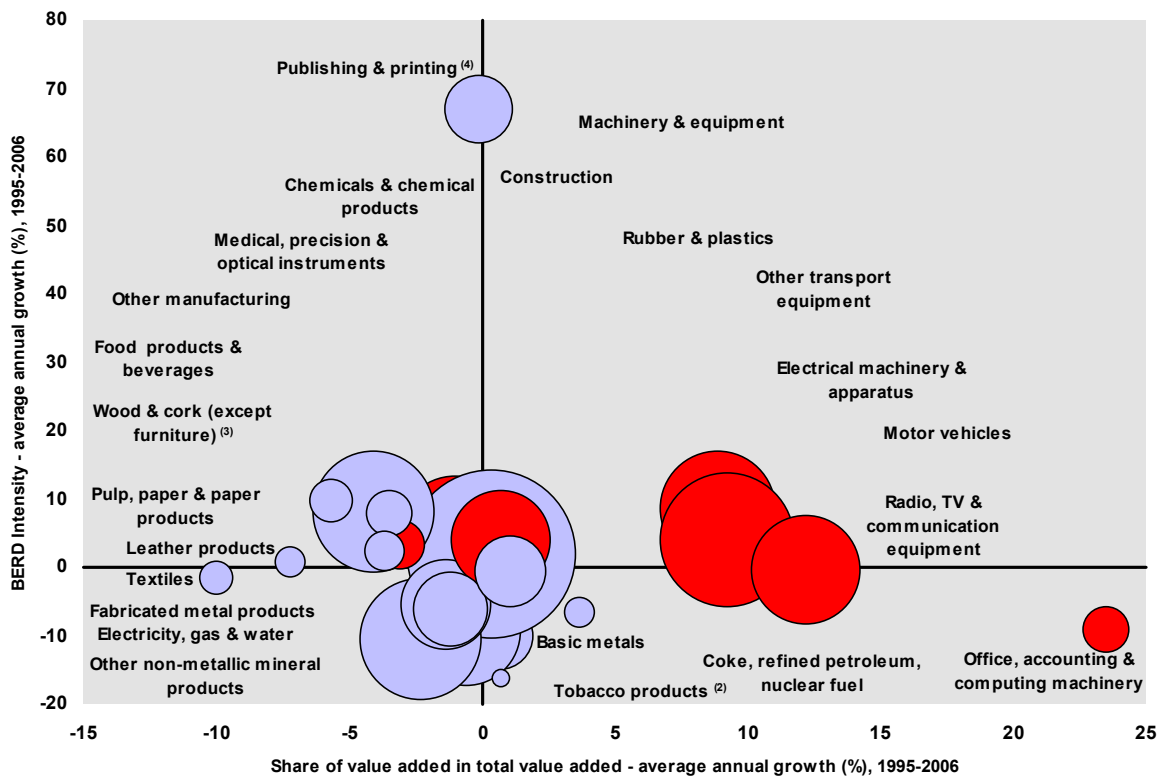


Source: DG Research and Innovation
Data: Scopus/ Science Metrix and Eurostat

Structural change towards a more knowledge-intensive economy

Manufacturing is important for Hungary with a percentage of value added in 2008 of 21%, superior to the average EU level of 17% for the same year. Hungary is specialised in sectors demanding low skills but it also counts on a growing and promising trend of specialisation in high-tech sectors. Among the medium-low-tech sector, the speed of increase of R&D intensity of the publishing and printing sector is particularly noticeable. The key challenge for the Hungarian authorities is how to support structural changes towards a more research and innovation intensive business sector. Private investments in R&D are primarily carried out by a small number of big foreign-owned enterprises making the growth relatively vulnerable. By the renewal and the implementation of the research and innovation strategies until the end of 2011, the government is planning measures to encourage SMEs participation in innovation activities, including non-technological innovation, to reduce the relative high level of administrative burden and to strengthen the links and networks between public and private research.

Hungary - Share of value added versus BERD Intensity - average annual growth, 1995-2006



Source: DG Research and Innovation

Innovation Union Competitiveness report 2011

Data: OECD

Notes: (1) High-Tech and Medium-High-Tech sectors are shown in red. 'Other transport equipment' includes High-Tech, Medium-High-Tech and Medium-Low-Tech.

(2) 'Tobacco products': average annual growth refers to 1995-2005.

(3) 'Wood and cork (except furniture)': average annual growth refers to 1999-2006.

(4) 'Publishing and printing': average annual growth refers to 1996-2006.

(5) 'Wearing apparel and fur' and 'Recycling' are not included on the graph.

Overall review of EU Member States and Associated countries

FP7 Key facts and figures

Applications:

As of 2011/03/16, a total of

- 3.491 eligible proposals were submitted in response to 248 FP7 calls for proposals
- involving 4.436 applicants from Hungary (1,66% of EU-27*) and
- requesting EUR 1.001,20m of EC contribution (1,13% of EU-27*)

Among the EU-27* Hungary (HU) ranks:

- 15th in terms of number of applicants and
- 16th in terms of requested EC contribution

Success rates:

- The HU applicant success rate of 20,7% is similar to the EU-27* applicant success rate of 21,6%.
- The HU EC financial contribution success rate of 14,4% is lower than the EU-27* rate of 20,7%.

Specifically, following evaluation and selection, a total of

- 726 proposals were retained for funding (20,8%)
- involving 917 (20,7%) successful applicants from Hungary and
- requesting EUR 144,05m (14,4%) of EC financial contribution

Among the EU-27*, Hungary (HU) ranks:

- 14th in terms of applicants success rate and
- 17th in terms of EC financial contribution success rate

Signed grant agreements

As of 2011/03/16, Hungary (HU) participates in

- 638 signed grant agreements
- involving 8.596 participants of which 788 (9,17%) are from Hungary
- benefiting from a total of EUR 2.079,19m of EC financial contribution of which EUR 133,04m (6,40%) is dedicated to participants from Hungary.

Among the EU-27* in all FP7 signed grant agreements, Hungary (HU) ranks:

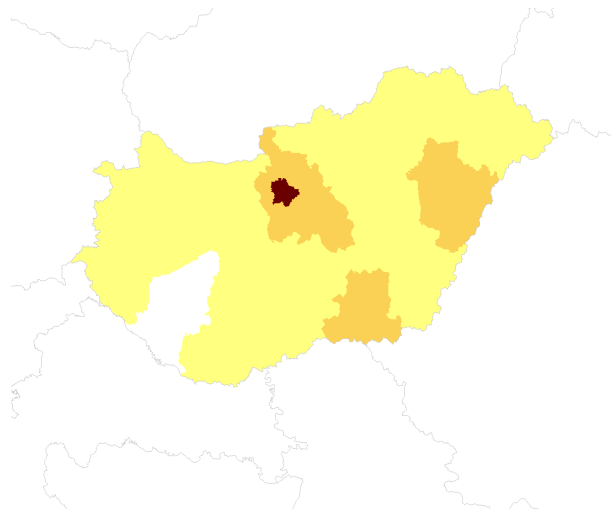
- 15th in number of participations and
- 16th in budget share

SME performance and participation

- The HU SME applicant success rate of 17,08% is lower than the EU-27* SME applicant success rate of 19,33%.
- The HU SME EC financial contribution success rate of 12,79% is lower than the corresponding EU-27* rate of 18,26%.

Specifically,

**Nr. of Researchers as % of population	N/A	0,40%
Rank in EU-27*		
Innovation scoreboard (2008)	- 22nd	
- Below EU-27 average		
- Moderate Innovator		
Nr. of FP7 applicants (% EU-27*)	4.436	
(1,66%)	266.507	
Req. EC contribution by FP7 applicants in EUR million		
(% EU-27*)	1.001,20	
(1,13%)	88.295	
Nr. of successful FP7 applicants (% EU-27*)	917	
(1,55%)	59.199	
Req. EC contribution by successful FP7 applicants in EUR million		
(% EU-27*)	144,05	
(0,79%)	18.262,02	
Success rate FP7 applicants	20,7%	21,6%
Success rate		
FP7 EC contribution	14,4%	20,7%
Nr. of FP7 grant holders (% EU-27*)	788	
(1,54%)	51.279	
EC contribution to FP7 grant holders in EUR million		
(% EU-27*)	133,04	
(0,80%)	16.578,15	
Nr. of FP7 coordinators (% of grant holders)	98	
(12,44%)	9.383	
(18,30%)		
Nr. of FP7 SME grant holders (% grant holders)	182	
(23,10%)	8.845	
(17,25%)		
EC contribution to FP7 SME grant holders in EUR million		
(% of grant holders)	31,07	
(23,35%)	2.207,73	
(13,32%)		



Overall review of EU Member States and Associated countries

- 1.546 HU SME applicants requesting EUR 314,73m 331 - 2000
 - 264 (17,08%) successful SMEs requesting EUR 40,24m (12,79%) 171 - 330
- 71 - 170
 21 - 70
 1 - 20

In signed grant agreements, as of 2011/03/16,

- 182 HU SME grant holders, i.e., 23,10% of total HU participation
- EUR 31,07m, i.e., 23,35% of total HU budget share

Top 3 collaborative links with:

- DE - Germany (1.025)
- UK - United Kingdom (742)
- FR - France (701)

HU - Hungary - most active FP7 research priority areas by number of applicants applying for the research projects						
FP7 priority area	Nr. of applicants	Requested EC contribution by applicants (M euro)	Nr. of mainlisted applicants	Success Rate (applicants)	Requested EC contribution by mainlisted applicants (M euro)	Success Rate (requested EC contribution)
Information and Communication Technologies	797	223,08	104	13,05 %	26,08	11,69 %
Research for the benefit of SMEs	465	51,38	86	18,49 %	9,20	17,90 %
Marie-Curie Actions	444	n/a	170	38,29 %	n/a	n/a
Socio-economic sciences and Humanities	429	63,96	43	10,02 %	5,53	8,64 %
Health	417	154,35	57	13,67 %	11,77	7,62 %
Environment (including Climate Change)	291	54,46	47	16,15 %	6,15	11,29 %

HU - Hungary - most active FP7 research priority areas by EC contribution granted to the research projects				
FP7 Priority Area	Number of grant holders	% of all HU grant holders	EC contribution (EUR million)	% of total EC contribution to HU
Information and Communication Technologies	107	13,58%	23,09	17,36 %
ERC	18	2,28%	18,16	13,65 %
Marie-Curie Actions	117	14,85%	15,32	11,51 %
Health	55	6,98%	9,42	7,08 %
Research Infrastructures	52	6,60%	8,85	6,65 %
Energy	25	3,17%	7,68	5,77 %

HU - Hungary - participation in the FP7 research projects by organisation activity type									
Activity Type	Nr. of applicants	Requested EC contribution by applicants (M euro)	Nr. of mainlisted applicants	Success rate (applicants)	Requested EC contribution by mainlisted applicants (M euro)	Success rate (requested contribution)	Nr. of grant holders	EC contribution to grant holders	% of total EC contribution to grant holders
HES	1.602	304,86	295	18,41%	34,07	11,18%	292	49,50	37,21%
PRC	1.115	235,90	204	18,30%	32,37	13,72%	205	33,66	25,30%
REC	871	161,05	218	25,03%	27,68	17,19%	192	34,21	25,71%
OTH	398	67,25	82	20,60%	12,04	17,91%	19	2,21	1,66%
PUB	283	41,47	98	34,63%	12,48	30,09%	80	13,47	10,12%

SME	1.546	314,73	264	17,08%	40,24	12,79%	182	31,07	23,35%
-----	-------	--------	-----	--------	-------	--------	-----	-------	--------

HES - Higher or secondary education, PRC - Private for profit (excl. education), REC - Research organisations, OTH - Others, PUB - Public body (excl. research and education),

Overall review of EU Member States and Associated countries

HU - Hungary - the most active NUTS3 regions, by EC contribution granted to the FP7 research projects				
HU - Hungary region	Number of grant holders	% of all HU - Hungary grant holders	EC contribution (M euro)	% of total EC contribution to HU
Budapest (HU101)	528	67,01%	91,42	68,72%
Pest (HU102)	52	6,60%	12,17	9,14%
Hajdu-Bihar (HU321)	51	6,47%	8,36	6,28%
Csongrad (HU333)	35	4,44%	7,80	5,86%
Gyor-Moson-Sopron (HU221)	18	2,28%	1,55	1,16%

HU - Hungary - most active organisations in terms of EC contribution granted to the FP7 research projects				
Legal Name	Number of Participations	% of all HU grant holders	EC contribution	% of total EC contribution to HU grant holders
			(M euro)	
BUDAPESTI MUSZAKI ES GAZDASAGTUDOMANYI EGYETEM (BME)	64	8,12%	12,83	9,64%
EÖTVÖS LORÁND TUDOMÁNYEGYETEM (ELTE)	23	2,92%	6,65	5,00%
NEMZETI INNOVACIOS HIVATAL (NIH)	28	3,55%	5,78	4,34%
MAGYAR TUDOMANYOS AKADEMIA SZAMITASTECHNIKAI ES AUTOMATIZALASI KUTATO INTEZET	18	2,28%	5,70	4,29%
DEBRECENI EGYETEM	28	3,55%	5,22	3,93%

NOTES:

Report generated on: 2011/03/25,04:39 PM

FP7 proposal and application figures are valid as of the 2011/03/16

FP7 grant agreements and participation figures are valid as of the 2011/03/16

*EU-27 includes the 27 country-members and JRC as a separate entity

**E-STAT Reference year: 2007

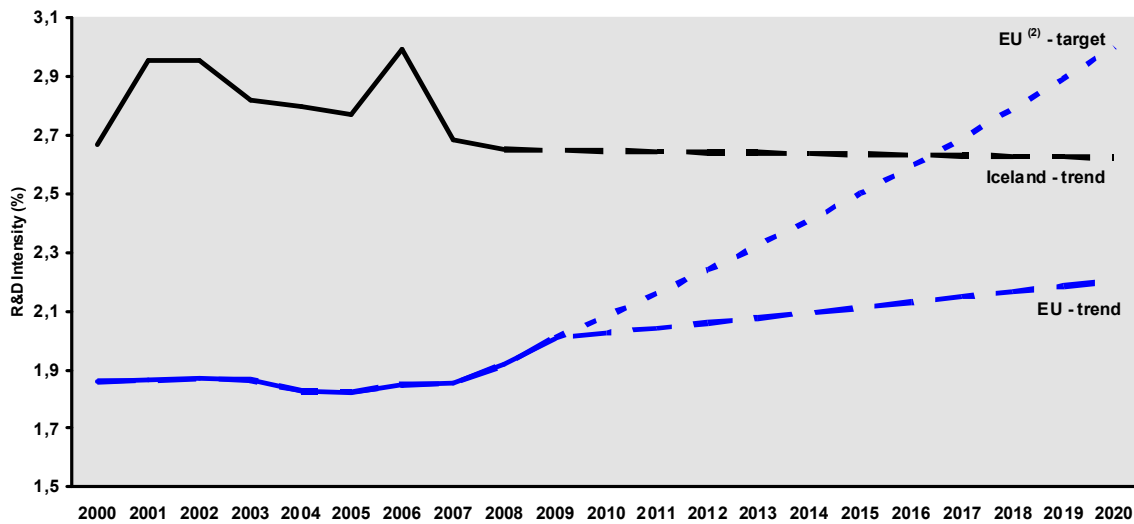
**European Innovation Scoreboard is available at the website of [DG Enterprise and Industry](#)

COUNTRY PROFILE
IS - Iceland

Progress towards increasing the R&D intensity

The most recent national figures for Iceland on R&D intensity are 3.1% for 2009 (of which 1.25% public and 1.51% private - apart from abroad sources). The figure in the R&D profile below shows Eurostat data, which are slightly below the data in national statistics. Comparing to other European countries, the most noticeable is Iceland's very high public expenditure on R&D. Even if Iceland as an associated country to the European research cooperation does not form part of the Europe 2020 strategy of the European Union, certain associated countries do envisage fixing an objective for research investment and initiatives for fast growing innovative enterprises. This is the case for Iceland, which have set an R&D intensity target of 4% of GDP for 2020.

Iceland - R&D Intensity projections 2000-2020 ⁽¹⁾



Source: DG Research and Innovation

Innovation Union Competitiveness Report 2011

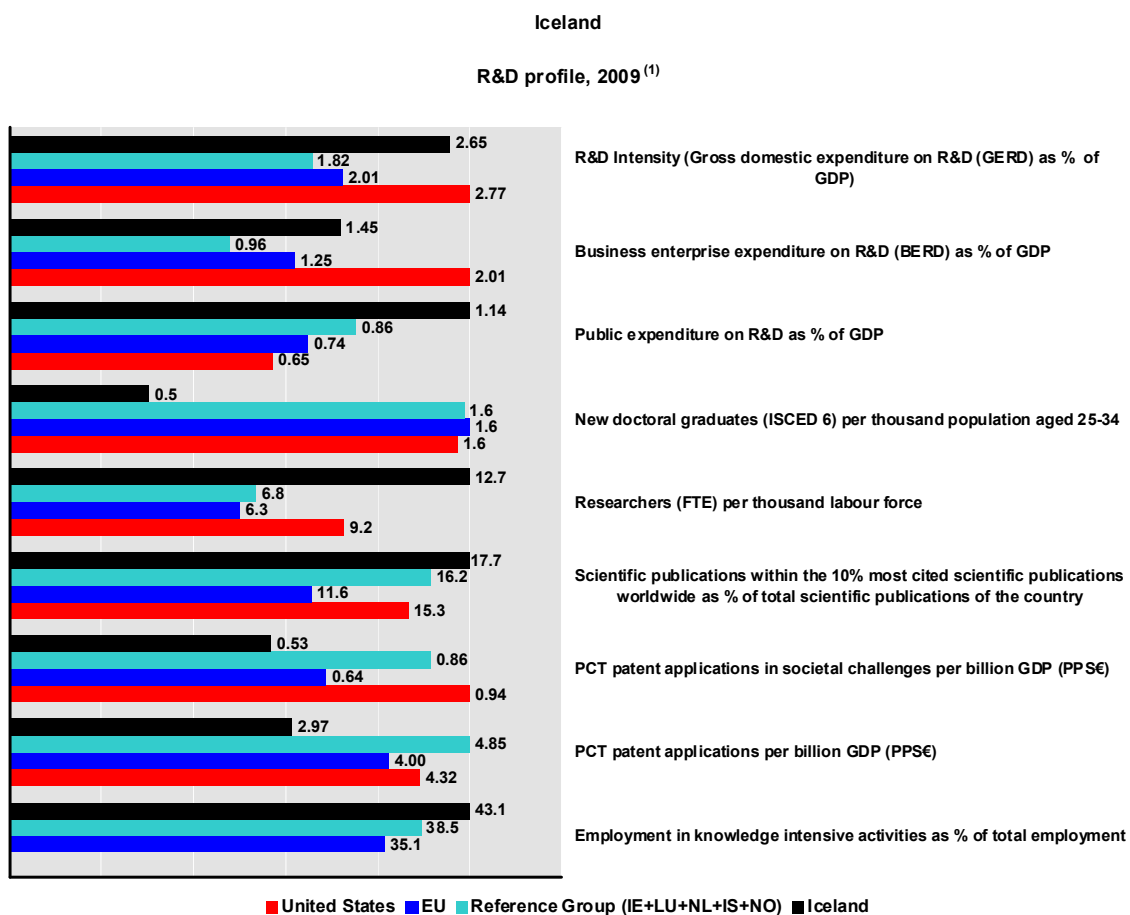
Data: DG Research and Innovation, Eurostat

Notes: (1) The R&D Intensity projections based on trends are derived from the average annual growth in R&D Intensity for 2000-2009 in the case of the EU and for 2000-2008 in the case of Iceland.

(2) EU: This projection is based on the R&D Intensity target of 3.0% for 2020.

Research and Innovation Performance

Iceland has a very knowledge-intensive country, with over 43% of employment in knowledge-intensive activities and R&D intensity far above other countries with a comparable industrial structure and knowledge capacity (see reference group). Iceland counts on a strong public science system with high funding and excellent research quality (17.7% of Iceland's scientific articles are among the 10% most cited articles in the world, which is one of the highest ratios in the world). Iceland also has achieved remarkably high researcher intensity in the labour force. However, a challenge is maintain this strength, given a relatively low level of new doctoral graduates per thousand population. A relative weakness comparing to the other countries is the patenting activity, measured by PCT patent intensity. The report shows that also for EPO patent application per billion GDP, Iceland is well below the EU average with a decreasing trend over the period 2000-2007.



Source: DG Research and Innovation

Data: Eurostat, OECD, Science Metrix / Scopus (Elsevier)

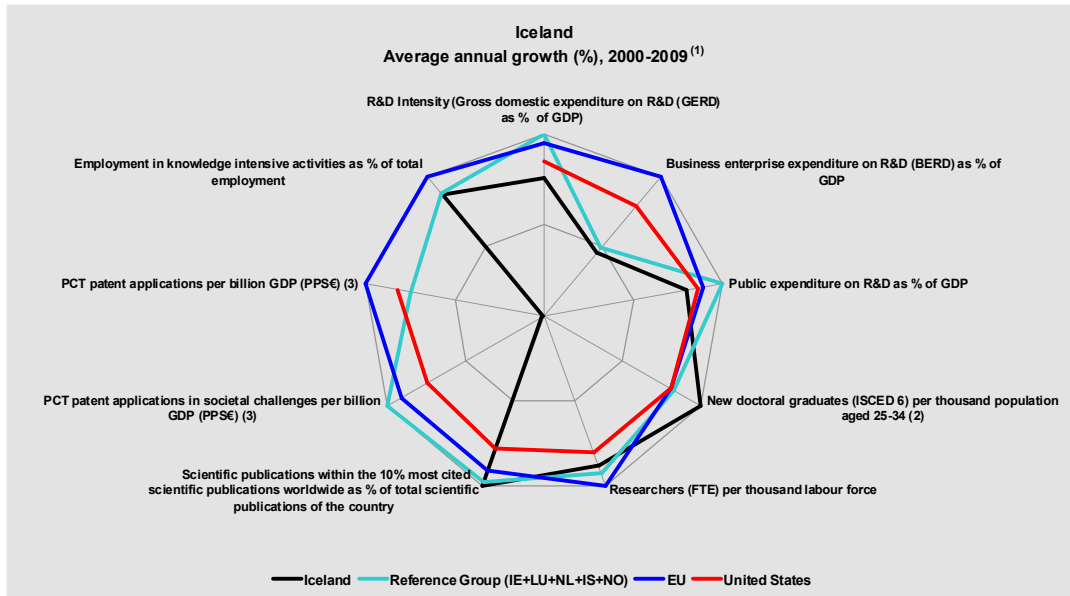
Innovation Union Competitiveness Report 2011

Notes: (1) The values refer to 2009 or to the latest available year.

(2) Elements of estimation were involved in the compilation of the data.

The dynamic picture below shows that over the period 2000-2009, Iceland has reinforced its strengths and weaknesses in its research and innovation system with a stable and strong public research system and human resources, but with a business dynamics showing lower average

annual growth in R&D investment and lower patenting intensity growth than comparable countries and the EU on average.



Source: DG Research and Innovation

Innovation Union Competitiveness Report 2011

Data: Eurostat, OECD, Science Metrix / Scopus (Elsevier)

Notes: (1) Growth rates which do not refer to 2000-2009 refer to growth between the earliest available year and the latest available year over the period 2000-2010.

(2) LU is not included in the Reference Group.

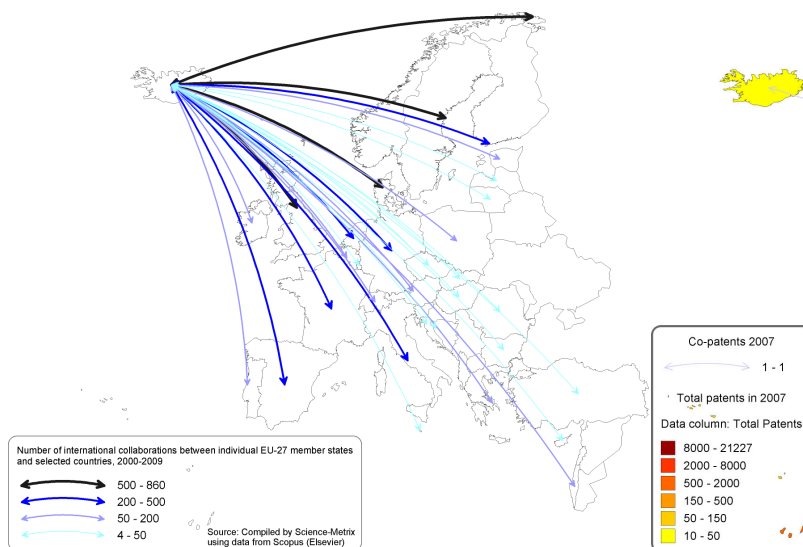
(3) Average annual growth refers to real growth.

(4) Elements of estimation were involved in the compilation of the data.

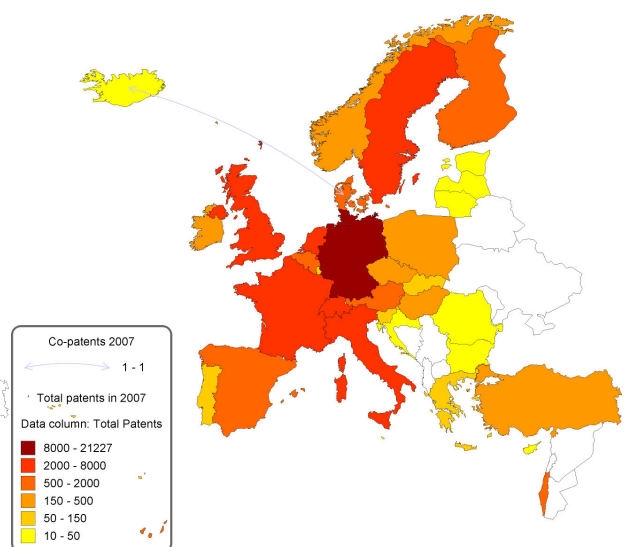
Participation in the European Research Area: Scientific and Technological collaborations

Iceland's scientific cooperation (measured by co-publications) with other European countries is much broader and more intense than its technological cooperation (measured by co-patents). This reflects the strong public research base and the excellent science output in Iceland and it provide a potential for growing internationalisation also of the technology cooperation. The main scientific partner countries are the Nordic neighbours and the United Kingdom. As a difference from the technological cooperation, co-publications are intensive with almost all EU Member States and with associated countries to the European Research Area. However, overall network maps in the report shows that while Iceland do count on relatively well distributed scientific cooperation, the scale is too small to be visible in the dominant European scientific co-publication networks.

Co-publications between Iceland and European countries in 2000-2009



Co-invented patent applications between Iceland and European countries, 2007



Source: DG Research
Data: Scopus/ Science Metrix and Eurostat

Overall review of EU Member States and Associated countries

FP7 Key facts and figures

Applications:

As of 2011/03/16, a total of

- 423 eligible proposals were submitted in response to 248 FP7 calls for proposals
- involving 570 applicants from Iceland (9,25% of Candidate Countries) and
- requesting EUR 162,75m of EC contribution (7,83% of Candidate Countries)

Among the Candidate Countries Iceland (IS) ranks:

- 3rd in terms of number of applicants and
- 3rd in terms of requested EC contribution

Success rates:

- The IS applicant success rate of 22,8% is higher than the Candidate Countries applicant success rate of 17,9%.
- The IS EC financial contribution success rate of 16,1% is higher than the Candidate Countries rate of 7,3%.

Specifically, following evaluation and selection, a total of

- 112 proposals were retained for funding (26,5%)
- involving 130 (22,8%) successful applicants from Iceland and
- requesting EUR 26,22m (16,1%) of EC financial contribution

Among the Candidate Countries, Iceland (IS) ranks:

- 2nd in terms of applicants success rate and
- 1st in terms of EC financial contribution success rate

Signed grant agreements

As of 2011/03/16, Iceland (IS) participates in

- 97 signed grant agreements
- involving 1.464 participants of which 105 (7,17%) are from Iceland
- benefiting from a total of EUR 288,61m of EC financial contribution of which EUR 22,56m (7,82%) is dedicated to participants from Iceland.

Among the Candidate Countries in all FP7 signed grant agreements, Iceland (IS) ranks:

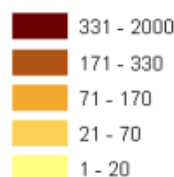
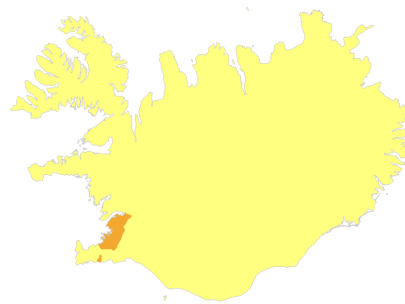
- 3rd in number of participations and
- 3rd in budget share

SME performance and participation

- The IS SME applicant success rate of 19,81% is higher than the Candidate Countries SME applicant success rate of 15,12%.
- The IS SME EC financial contribution success rate of 16,66% is higher than the corresponding Candidate Countries rate of 10,71%.

Specifically,

Nr. of FP7 applicants (% Candidate Countries)	570 6.161	
Req. EC contribution by FP7 applicants in EUR million (% Candidate Countries)	162,75 2.079	
Nr. of successful FP7 applicants (% Candidate Countries)	130 1.072	
Req. EC contribution by successful FP7 applicants in EUR million (% Candidate Countries)	26,22 152,58	
Success rate FP7 applicants	22,8%	17,9%
Success rate FP7 EC contribution	16,1%	7,3%
Nr. of FP7 grant holders (% Candidate Countries)	105 873	
EC contribution to FP7 grant holders in EUR million (% Candidate Countries)	22,56 135,27	
Nr. of FP7 coordinators (% of grant holders)	23 195	
Nr. of FP7 SME grant holders (% grant holders)	20 131	
EC contribution to FP7 SME grant holders in EUR million (% of grant holders)	9,38 30,20	
	(15,01%)	(22,32%)



Overall review of EU Member States and Associated countries

- 207 IS SME applicants requesting EUR 50,28m
- 41 (19,81%) successful SMEs requesting EUR 8,38m (16,66%)

In signed grant agreements, as of 2011/03/16,

- 20 IS SME grant holders, i.e., 19,05% of total IS participation
- EUR 9,38m, i.e., 41,58% of total IS budget share

Top 3 collaborative links with:

- UK - United Kingdom (159)
- FR - France (97)
- DE - Germany (95)

IS - Iceland - most active FP7 research priority areas by number of applicants applying for the research projects						
FP7 priority area	Nr. of applicants	Requested EC contribution by applicants (M euro)	Nr. of mainlisted applicants	Success Rate (applicants)	Requested EC contribution by mainlisted applicants (M euro)	Success Rate (requested EC contribution)
Research for the benefit of SMEs	104	14,99	21	20,19 %	2,79	18,64 %
Marie-Curie Actions	87	n/a	26	29,89 %	n/a	n/a
Information and Communication Technologies	71	21,39	5	7,04 %	1,12	5,24 %
Health	56	31,09	17	30,36 %	9,40	30,23 %
Food, Agriculture and Fisheries, and Biotechnology	52	16,24	10	19,23 %	2,34	14,38 %
Environment (including Climate Change)	49	12,43	14	28,57 %	3,10	24,89 %

IS - Iceland - most active FP7 research priority areas by EC contribution granted to the research projects				
FP7 Priority Area	Number of grant holders	% of all IS grant holders	EC contribution (EUR million)	% of total EC contribution to IS
Health	13	12,38%	5,94	26,32 %
Marie-Curie Actions	20	19,05%	5,10	22,63 %
Environment (including Climate Change)	14	13,33%	2,44	10,81 %
ERC	1	0,95%	2,40	10,64 %
Food, Agriculture and Fisheries, and Biotechnology	9	8,57%	2,08	9,22 %
Information and Communication Technologies	5	4,76%	1,06	4,69 %

IS - Iceland - participation in the FP7 research projects by organisation activity type									
Activity Type	Nr. of applicants	Requested EC contribution by applicants (M euro)	Nr. of mainlisted applicants	Success rate (applicants)	Requested EC contribution by mainlisted applicants (M euro)	Success rate (requested contribution)	Nr. of grant holders	EC contribution to grant holders	% of total EC contribution to grant holders
HES	198	42,02	35	17,68%	4,91	11,68%	30	7,84	34,73%
PRC	164	47,32	31	18,90%	9,77	20,64%	23	9,64	42,72%
REC	84	18,92	26	30,95%	3,30	17,44%	19	3,68	16,29%
PUB	66	9,68	26	39,39%	2,35	24,27%	33	1,41	6,26%
OTH	37	6,24	11	29,73%	2,41	38,63%	0	0,00	0,00%
SME	207	50,28	41	19,81%	8,38	16,66%	20	9,38	41,58%

Overall review of EU Member States and Associated countries

HES - Higher or secondary education, PRC - Private for profit (excl. education), REC - Research organisations, PUB - Public body (excl. research and education), OTH - Others,

IS - Iceland - the most active NUTS3 regions, by EC contribution granted to the FP7 research projects				
IS - Iceland region	Number of grant holders	% of all IS - Iceland grant holders	EC contribution (M euro)	% of total EC contribution to IS
Hafnarbyggð borgarsvæði (IS001)	100	95,24%	22,15	98,16%
Landsbyggð (IS002)	3	2,86%	0,18	0,82%

IS - Iceland - most active organisations in terms of EC contribution granted to the FP7 research projects				
Legal Name	Number of Participations	% of all IS grant holders	EC contribution (M euro)	% of total EC contribution to IS grant holders
ISLENSK ERF DAGREINING EHF (DECODE)	14	13,33%	8,60	38,10%
HASKOLI ISLANDS	21	20,00%	6,14	27,21%
HAFRANNSOKNASTOFNUNIN	6	5,71%	1,66	7,34%
THE ICELANDIC CENTRE FOR RESEARCH (RANNIS)	29	27,62%	1,27	5,63%
HASKOLINN I REYKJAVIK EHF	5	4,76%	1,27	5,61%

NOTES:

Report generated on: 2011/03/28,11:32 AM

FP7 proposal and application figures are valid as of the 2011/03/16

FP7 grant agreements and participation figures are valid as of the 2011/03/16

**E-STAT Reference year: 2007

**European Innovation Scoreboard is available at the website of [DG Enterprise and Industry](#)