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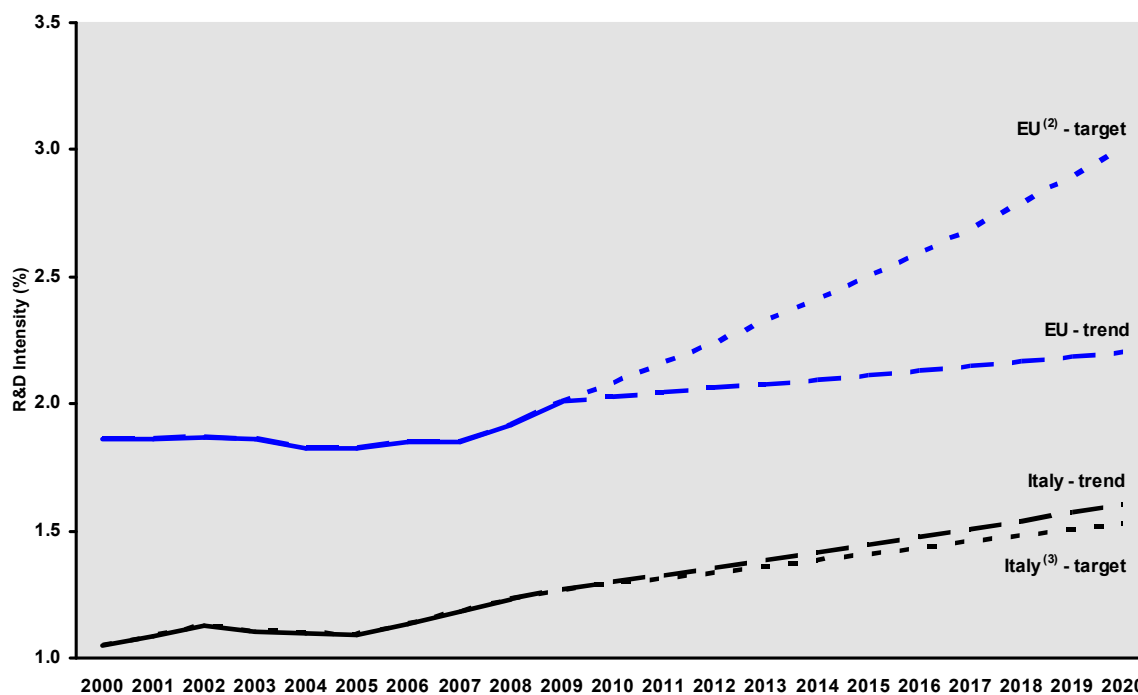
Innovation Union Competitiveness report 2011



Progress towards meeting the Europe 2020 R&D intensity target

R&D intensity in Italy increased around 2.3% annually over the 2000-2009 period, passing from 1.05% of GDP in 2000 to 1.27% in 2009. Both public and private R&D have grown during the period, but modestly. In 2009, public R&D intensity was 0.57% and private R&D intensity was 0.64%. Considering the 2020 R&D target, Italy set the value of 1.53%. Given the trend scenario presented below, this target is achievable but is not ambitious. The difference between Italy's R&D intensity (1.27%) and the EU-average (1.90%) is mainly due to lower industrial R&D (business R&D intensity in Italy is 0.64% of GDP compared to an EU-27 average of 1.25% of GDP).

Italy - 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 2000-2009.

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

(3) IT: This projection is based on a tentative R&D Intensity target of 1.53% for 2020.

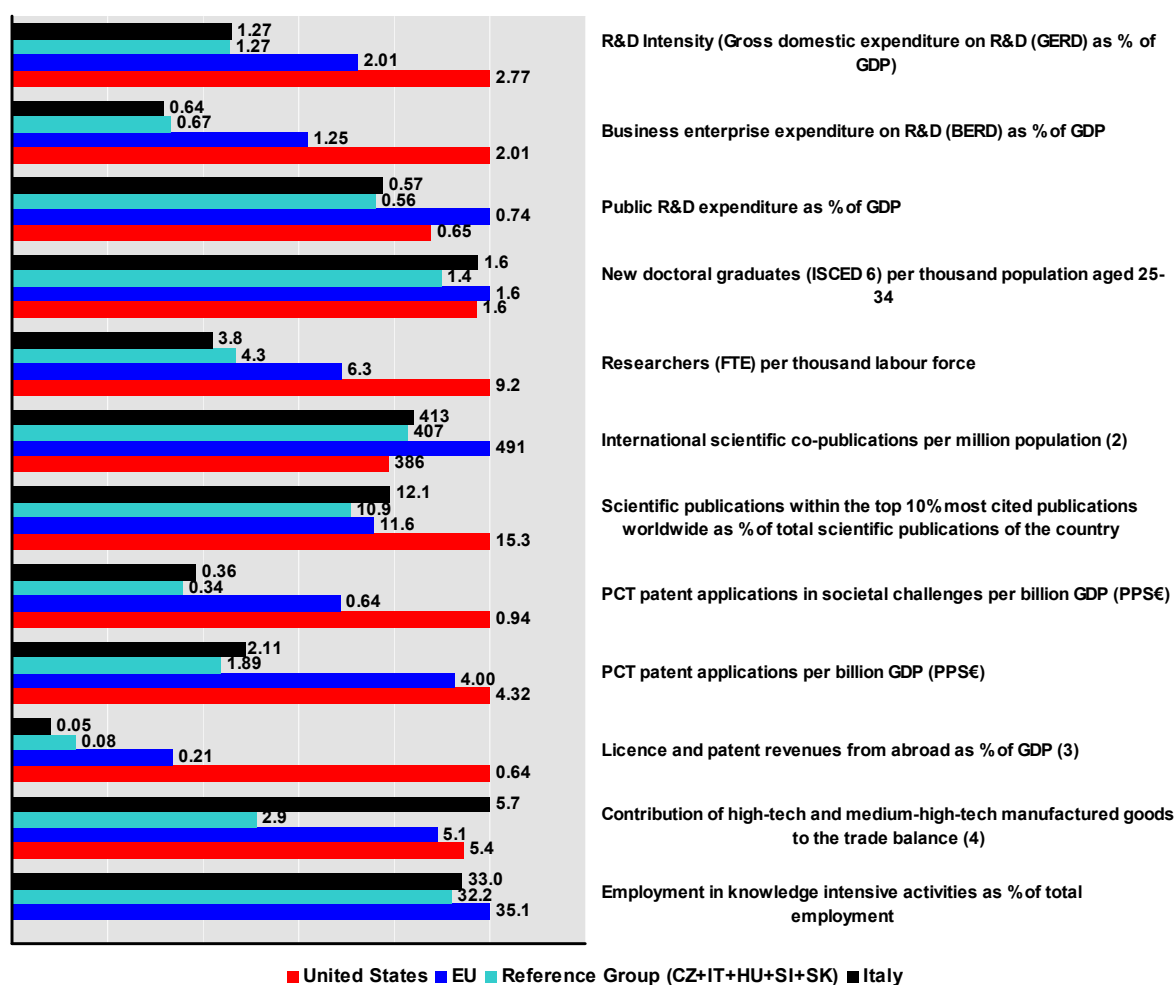
Research and Innovation Performance

The Italian R&D and innovation system shows positive and negative aspects. In innovation, Italy ranks below the EU average as a moderate innovator. Policy intervention has opened many possibilities which have not been completely exploited due to two types of structural weaknesses: inertia regarding modernisation within the public research system and the difficulty to realise growth and innovation within the industrial system, particularly with regard to the most high-tech sectors. The levels of population with tertiary education (11.6%)

and participation in life-long learning (6.8%) are below the EU averages of 22.8% and 9.8% respectively. The total number of researchers (FTE), had an annual average growth rate of almost 4% between 2000 and 2009, but is still well below the EU average (3.38 researchers versus 6.3 in 2009). The number of foreign researchers that choose Italy as a place to perform research is lower than the number of Italian researchers choosing to work abroad. However, the quality of the scientific base as measured by the scientific publications within the 10% most cited publications worldwide as a percentage of the total scientific publications of the country, is above the EU average. The positive contribution of high-tech and medium-high-tech manufactured goods to the trade balance also demonstrates the potential of the country to steer reforms of the R&I system and to derive economic benefits from future efforts.

Italy

R&D profile, 2009 ⁽¹⁾



Source: DG Research and Innovation

Data: Eurostat, OECD, Science Matrix / 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.

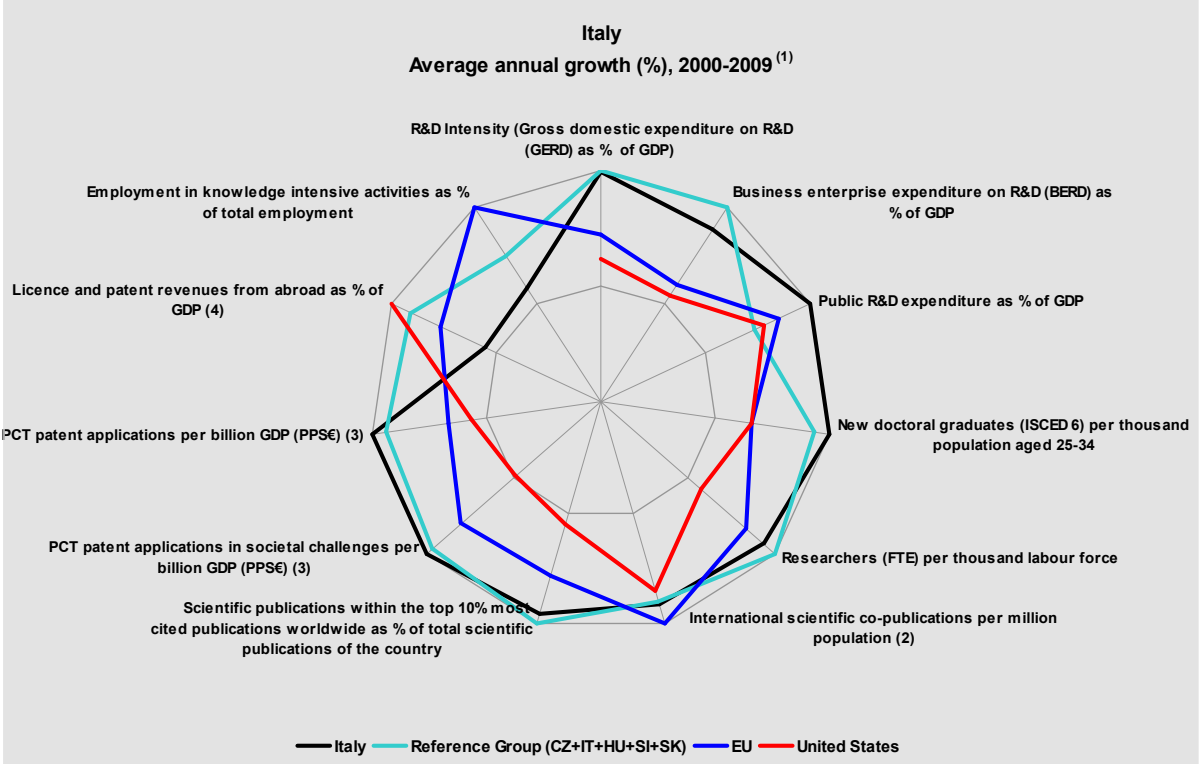
(3) EU refers to extra-EU.

(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.

Innovation Union Competitiveness report 2011

The business sector in Italy is characterised by a large number of small and medium-sized firms, specialised in products that require high-quality design and engineering, whose average size is significantly lower than the EU average. Italy scores clearly above the EU average concerning the share of high-growth enterprises and slightly above average concerning time required to start a business, the enterprise survival rate after two years and bank loan conditions deemed acceptable by companies. However, it scores clearly below the average concerning early stage financing and the business churn.



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.

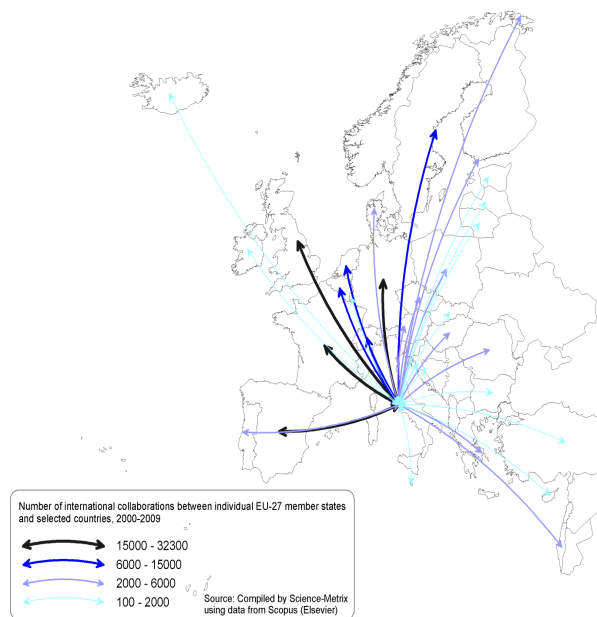
Participation in the European Research Area: Scientific and Technological collaborations

Italy is well integrated in the European research and innovation system. Together with Germany, France and the United Kingdom, Italy is among the highest producers of overall publications and of cross-border co-publications. The preferred partners for scientific collaboration with Italy are among these three countries plus Spain and Switzerland.

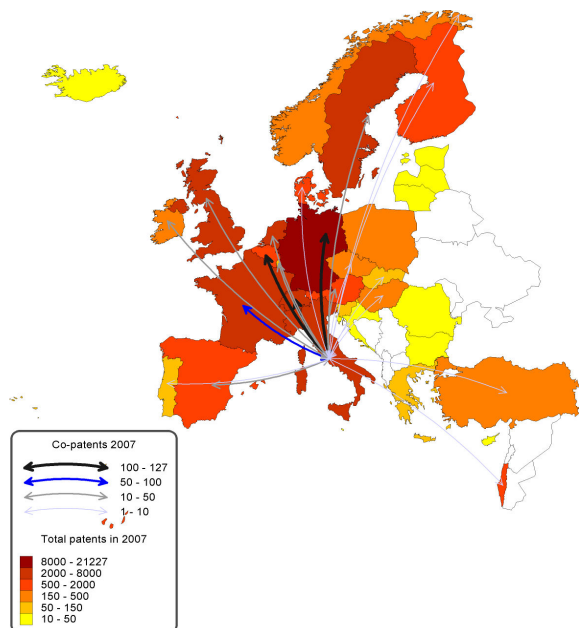
The same partnerships are verified in the technological cooperation, co-patents being mainly with the same countries. However, Italy is in general less international in technological cooperation, since co-patents are only half of all the Italian patents (the EU average share of co-patents in the total patent applications is around 64%). The level of co-patents applications with third countries (non EU) also represents a very small share with 5.1% of total.

In the context of the EU Framework Programmes Italy has built a solid position and in the networking constitutes one of the central links, together with Germany, the United Kingdom and France.

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



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

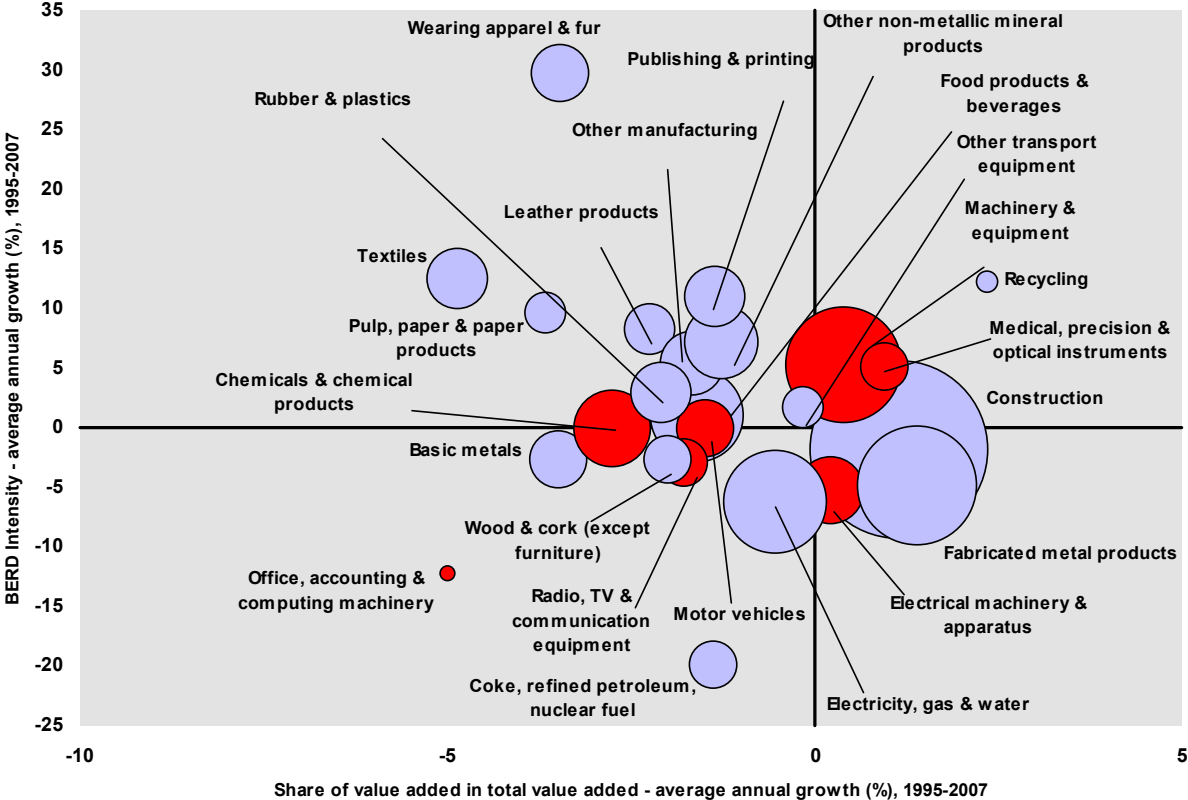


Source: DG Research and Innovation
Data: Scopus/ Science Metrix and Eurostat

Structural change towards a more knowledge-intensive economy

Manufacturing accounts for a larger share in the economy in Italy than in the EU in 2009 (19.3% of total employment versus 15.7% for the EU). This is mainly due to the specialisation in some traditional sectors such as footwear, textiles and clothing and to a lesser extent, other machinery, basic metal products and non-metallic mineral products. These sectors have lower R&D intensities when compared with similar sectors in other countries (see for example, the box on the textile sector in chapter 3, Part III of this report). Thus the potential to incorporate additional knowledge in the relevant sectors is considerable, if facilitated by a structural change in the traditional sectors and a supply of high and high-intermediate skills. In services, Italy's sectoral composition follows the EU picture, with a share slightly smaller than the average. Over the period 2000-2009 the R&D intensity increased moderately reaching 1.27% in 2009, with equally modest contributions from both the public and the private sectors. Overall, the R&D intensity of existing sectors increased in the last decade, but only to reach levels that remain very far from the countries at the technology frontier, thus suggesting a trend towards a specialisation in lower technology intensive products. The BERD intensity has slightly increased in the period 1995-2007 mainly due to increases in the BERD sectoral intensities without changes in the research orientation of the economy.

Italy - Share of value added versus BERD Intensity - average annual growth, 1995-2007



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' is not included on the graph.

FP7 Key facts and figures

Applications:

As of 2011/03/16, a total of

- 18.053 eligible proposals were submitted in response to 248 FP7 calls for proposals
- involving 33.015 applicants from Italy (12,39% of EU-27*) and
- requesting EUR 11.009,55m of EC contribution (12,47% of EU-27*)

Among the EU-27* Italy (IT) ranks:

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

Success rates:

- The IT applicant success rate of 18,3% is lower than the EU-27* applicant success rate of 21,6%.
- The IT EC financial contribution success rate of 15,9% is lower than the EU-27* rate of 20,7%.

Specifically, following evaluation and selection, a total of

- 3.342 proposals were retained for funding (18,5%)
- involving 6.057 (18,3%) successful applicants from Italy and
- requesting EUR 1.750,61m (15,9%) of EC financial contribution

Among the EU-27*, Italy (IT) ranks:

- 22nd in terms of applicants success rate and
- 14th in terms of EC financial contribution success rate

Signed grant agreements

As of 2011/03/16, Italy (IT) participates in

- 2.875 signed grant agreements
- involving 32.340 participants of which 5.321 (16,45%) are from Italy
- benefiting from a total of EUR 9.177,46m of EC financial contribution of which EUR 1.533,27m (16,71%) is dedicated to participants from Italy.

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

- 4th in number of participations and
- 4th in budget share

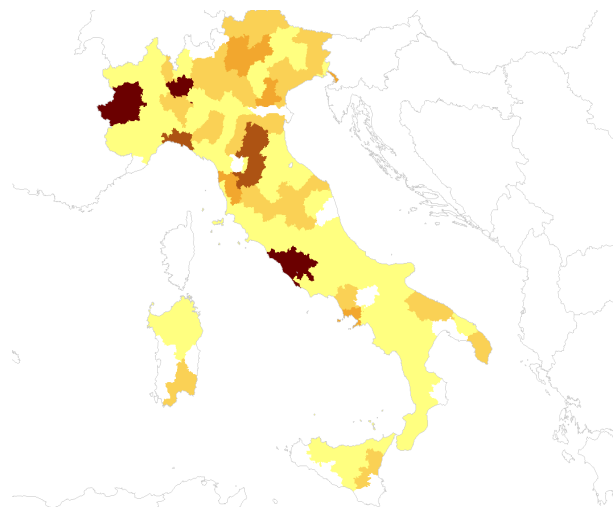
SME performance and participation

- The IT SME applicant success rate of 15,73% is lower than the EU-27* SME applicant success rate of 19,33%.
- The IT SME EC financial contribution success rate of 13,93% is lower than the corresponding EU-27* rate of 18,26%.

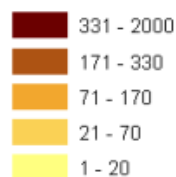
Specifically,

- 8.655 IT SME applicants requesting EUR 2.243,88m

**Nr. of Researchers as % of population	N/A	0,40%
Rank in EU-27*		
Innovation scoreboard (2008)	- 19th	
- Below EU-27 average		
- Moderate Innovator		
Nr. of FP7 applicants (% EU-27*)	33.015	
(12,39%)	266.507	
Req. EC contribution by FP7 applicants in EUR million		
(% EU-27*)	11.009,55	
(12,47%)	88.295	
Nr. of successful FP7 applicants (% EU-27*)	6.057	
(10,23%)	59.199	
Req. EC contribution by successful FP7 applicants in EUR million		
(% EU-27*)	1.750,61	
(9,59%)	18.262,02	
Success rate FP7 applicants	18,3%	21,6%
Success rate		
FP7 EC contribution	15,9%	20,7%
Nr. of FP7 grant holders (% EU-27*)	5.321	
(10,38%)	51.279	
EC contribution to FP7 grant holders in EUR million		
(% EU-27*)	1.533,27	
(9,25%)	16.578,15	
Nr. of FP7 coordinators (% of grant holders)	871	
(16,37%)	9.383	
(18,30%)		
Nr. of FP7 SME grant holders (% grant holders)	959	
(18,02%)	8.845	
(17,25%)		
EC contribution to FP7 SME grant holders in EUR million		
(% of grant holders)	218,67	
(14,26%)	2.207,73	
(13,32%)		



- 1.361 (15,73%) successful SMEs requesting EUR 312,47m (13,93%)



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

- 959 IT SME grant holders, i.e., 18,02% of total IT participation
- EUR 218,67m, i.e., 14,26% of total IT budget share

Top 3 collaborative links with:

- DE - Germany (4.229)
- UK - United Kingdom (3.310)
- FR - France (3.100)

IT - Italy - 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	8.234	2.986,57	1.198	14,55 %	423,31	14,17 %
Marie-Curie Actions	3.230	n/a	749	23,19 %	n/a	n/a
Health	3.051	1.380,21	519	17,01 %	205,80	14,91 %
Research for the benefit of SMEs	3.000	421,49	485	16,17 %	69,31	16,44 %
Transport (including Aeronautics)	2.487	711,36	594	23,88 %	182,41	25,64 %
Environment (including Climate Change)	2.148	570,57	341	15,88 %	78,00	13,67 %

IT - Italy - most active FP7 research priority areas by EC contribution granted to the research projects				
FP7 Priority Area	Number of grant holders	% of all IT grant holders	EC contribution (EUR million)	% of total EC contribution to IT
Information and Communication Technologies	1.205	22,65%	397,18	25,90 %
Health	511	9,60%	181,19	11,82 %
Nanosciences, Nanotechnologies, Materials and new Production Technologies - NMP	471	8,85%	145,01	9,46 %
ERC	127	2,39%	135,45	8,83 %
Transport (including Aeronautics)	455	8,55%	124,89	8,15 %
Marie-Curie Actions	558	10,49%	107,19	6,99 %

IT - Italy - 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	10.914	3.081,59	1.975	18,10%	486,27	15,78%	1.784	542,98	35,41%
PRC	10.106	2.836,29	1.845	18,26%	511,56	18,04%	1.708	441,95	28,82%
REC	6.439	2.062,99	1.458	22,64%	431,75	20,93%	1.514	489,06	31,90%
OTH	2.096	509,18	359	17,13%	89,26	17,53%	112	20,46	1,33%
PUB	1.448	303,50	294	20,30%	51,62	17,01%	203	38,82	2,53%
SME	8.655	2.243,88	1.361	15,73%	312,47	13,93%	959	218,67	14,26%

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

IT - Italy - the most active NUTS3 regions, by EC contribution granted to the FP7 research projects				
IT - Italy region	Number of grant holders	% of all IT - Italy grant holders	EC contribution (M euro)	% of total EC contribution to IT
Roma (ITE43)	1.380	25,93%	393,61	25,67%
Milano (ITC45)	826	15,52%	277,18	18,08%
Torino (ITC11)	417	7,84%	111,73	7,29%
Genova (ITC33)	248	4,66%	74,73	4,87%
Firenze (ITE14)	232	4,36%	62,91	4,10%

IT - Italy - most active organisations in terms of EC contribution granted to the FP7 research projects				
Legal Name	Number of Participations	% of all IT grant holders	EC contribution (M euro)	% of total EC contribution to IT grant holders
CONSIGLIO NAZIONALE DELLE RICERCHE (CNR)	338	6,35%	116,14	7,57%
POLITECNICO DI MILANO (POLIMI)	106	1,99%	37,85	2,47%
UNIVERSITA DEGLI STUDI DI ROMA LA SAPIENZA	106	1,99%	37,14	2,42%
ALMA MATER STUDIORUM-UNIVERSITA DI BOLOGNA (UNIBO)	118	2,22%	35,14	2,29%
CENTRO RICERCHE FIAT SCPA (CENTRO RICERCHE FIAT)	88	1,65%	33,57	2,19%

NOTES:

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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](#)