

1.4 Programme motivation and justification

1.4.1. Challenges and needs analysis

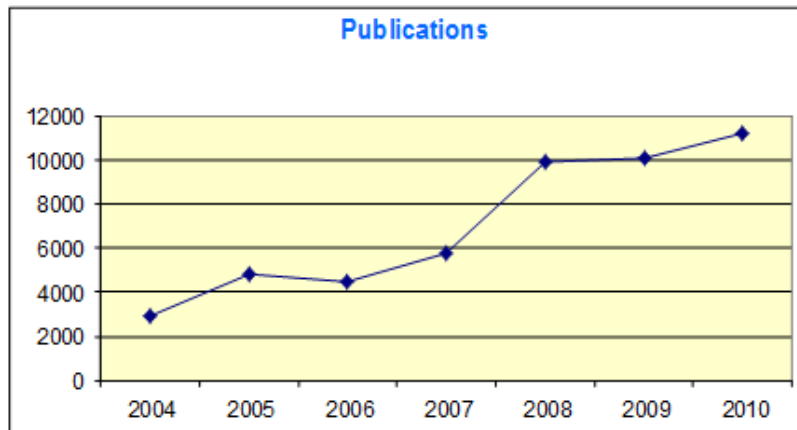
In the last years, Romania's researchers have substantially increased their publication activity in internationally recognized journals, notably by factor 2. At the same time, the Web of Science organization has reviewed its journals and adopted a substantial number of new journals. In the wake of this review, Romania successfully increased its number of reviewed journals from 8 in 2005 to 60 in 2010, thus an increase by factor 7.5. However, the Romania's researchers have not really changed their attitudes as they still publish their articles in "national international journals". (Source: Innovation Union Competitiveness Report, 2011, p139)

Publications and citations

	Total scientific publications ⁽¹⁾			Scientific publications within the 10% most cited scientific publications worldwide ⁽¹⁾		
	2000	2008	Average annual growth (%) 2000-2008	2000	2007	Average annual growth (%) 2000-2007
Belgium	11 820	20 285	7.0	1401	2787	10.3
Bulgaria	1925	2896	5.2	95	165	8.2
Czech Republic	5781	11 894	9.4	353	743	11.2
Denmark	8896	13 260	5.1	1327	2092	6.7
Germany	77 958	111 288	4.5	9085	13 576	5.9
Estonia	603	1392	11.0	41	132	18.2
Ireland	3178	7799	11.9	345	904	14.8
Greece	5924	13 855	11.2	459	1299	16.0
Spain	27 089	52 664	8.7	2347	5317	12.4
France	57 081	81 911	4.6	6049	9030	5.9
Italy	38 708	63 408	6.4	3816	6858	8.7
Cyprus	197	801	19.2	10	66	30.9
Latvia	359	613	6.9	18	16	-1.8
Lithuania	612	2065	16.4	42	96	12.6
Luxembourg	90	503	24.0	5	38	33.7
Hungary	5164	7419	4.6	335	560	7.6
Malta	50	223	20.5	3	15	25.6
Netherlands	22 181	35 425	6.0	3207	5383	7.7
Austria	7967	14 225	7.5	946	1754	9.2
Poland	13 022	24 121	8.0	609	1210	10.3
Portugal	3804	10 781	13.9	317	949	16.9
Romania	2456	6967	13.9	120	278	12.7
Slovenia	1926	3701	8.5	102	284	15.8
Slovakia	2405	3968	6.5	90	204	12.4
Finland	8358	12 606	5.3	1028	1471	5.2
Sweden	17 409	22 976	3.5	2259	3117	4.7
United Kingdom	84 422	117 742	4.2	10 512	15 691	5.9
EU	367 207	546 837	5.1	37 150	55 557	5.9
Iceland	322	759	11.3	47	106	12.4
Norway	5978	10 963	7.9	674	1368	10.6
Switzerland	16 027	26 009	6.2	2563	4236	7.4
Croatia	1884	3882	9.5	52	170	18.5
Turkey	7246	23 092	15.6	326	1475	24.1
Israel	10 709	15 279	4.5	1207	1862	6.4

Source: DG Research and Innovation
Data: Science Metrix / Scopus (Elsevier)
Note: (1) Full counting method.

Innovation Union Competitiveness Report 2011



Source: Web of Science

While Romania in general can be perceived as an entrepreneurial economy, the share of technology-based firms, and respective start-ups, is comparatively low. Multinationals are more or less disconnected from the national research system as they mainly import technologies; they are however interested in ensuring the recruitment of qualified young engineers and managers. Other larger national firms are widely absent when comes to collaboration with the public research sector. To the extent that private firms collaborate, they do it intermittently. Only a small portion (7%, 95 companies) has taken the initiative to coordinate a collaborative project.

Step by step the RDI system has tried to reduce the consequences of economic crisis by re-launching national competitions and improving international integration and cooperation with new partners (Romanian researchers mostly publish together with researchers from France, Germany, Italy, United Kingdom and Spain). Nowadays, Romania is involved in an active cooperation relation with Switzerland (through the Framework Agreement between the Swiss federal Council and the Government of Romania concerning the Implementation of the Swiss-Romanian Cooperation Programme to Reduce Economic and Social Disparities within the Enlarged European Union, signed on 7 September 2010) and with Norway, Iceland and Liechtenstein (through the Memorandum of Understanding of the Implementation of the EEA Financial Mechanism 2009-2014 between Iceland, The Principality of Liechtenstein, The Kingdom of Norway and the Government of Romania signed on 21st of March 2012).