
ANNEX I

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CROATIAN S&T POTENTIALS:
SOME COMPARATIVE FACTS
AND FIGURES

Table 1

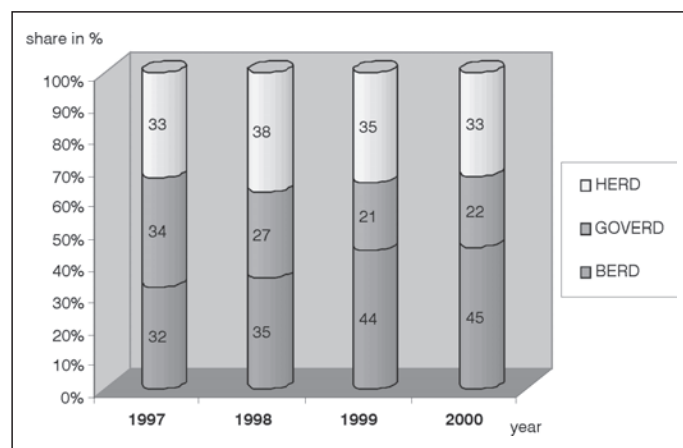
Total expenditure on R&D in Croatia

Expenditure on R&D in Croatia	1997	1998	1999	2000
BERD Expenditure on R&D in the Business Enterprise Sector				
% of GDP	0,25%	0,25%	0,43%	0,54%
GOVERD Government Intramural Expenditure on R&D				
% of GDP	0,26%	0,19%	0,21%	0,26%
HERD Expenditure on R&D in the Higher Education Sector				
% of GDP	0,26%	0,27%	0,34%	0,40%
GERD Gross Domestic Expenditure on R&D				
% of GDP	0,77%	0,71%	0,98%	1,19%
GDP at market prices (current)				
USD mln	20.108,6	21.628,0	20.031,1	19.030,0

Source: Central Bureau of Statistics

Figure 1

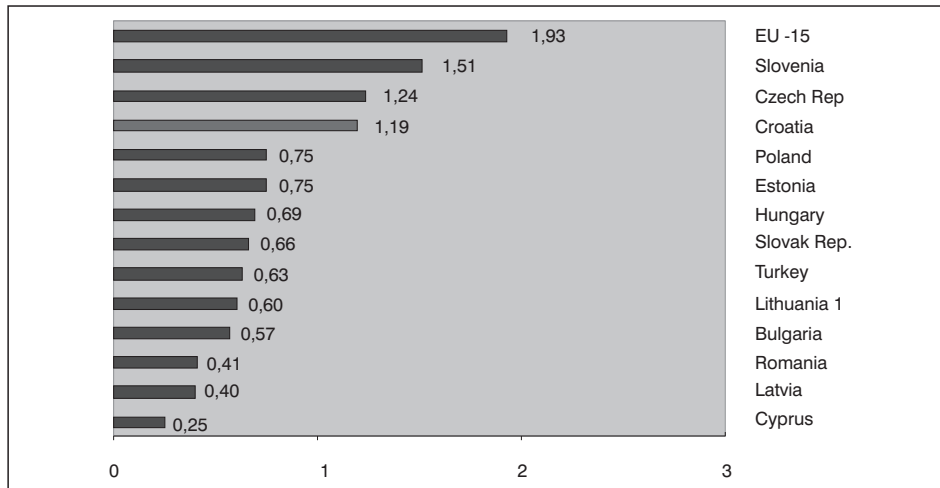
Sectors performing R&D as % of GERD in Croatia



Source: CBS of Croatia

Figure 2

R&D intensity (GERD as % GDP) in Candidate countries – comparing Croatia (1)



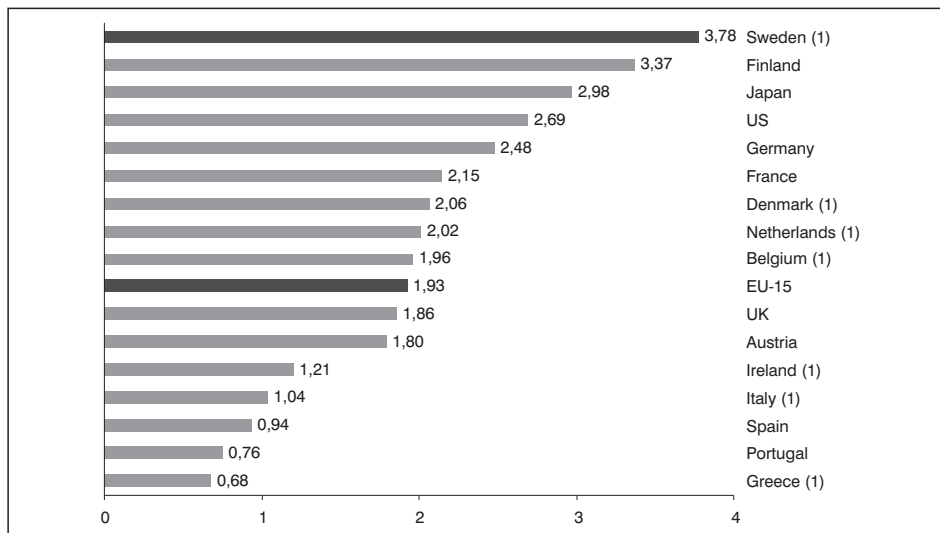
Source: Eurostat

Notes: (1) EU-15: estimate, LT and CRO: 2000

All other countries 1999

Figure 3

R&D intensity (GERD as % GDP) 1999 (1)



Source: Eurostat, OECD

Notes: (1) EL, IRL, I, B, NL, DK, S: 1999

All other countries and EU: 2000

Table 2

Financing R&D in Croatia, by sources and sectors performing R&D

Sources of funds for R&D	Sectors performing R&D			All sectors total GERD
	Business BERD	Government GOVERD	Higher education HERD	
1997 total, HRK 000	311.182	326.218	320.951	958.351
Own resources	89,6%	14,6%	20,7%	41,0%
Central and local government	1,6%	71,0%	65,7%	46,7%
Private and public enterprises	6,9%	2,2%	9,6%	6,2%
Other domestic resources	0,8%	1,3%	1,9%	1,3%
Foreign investors	1,1%	10,9%	2,2%	4,8%
1998 total, HRK 000	343.540	260.683	376.992	981.215
Own resources	88,1%	13,1%	20,5%	42,2%
Central and local government	0,4%	79,2%	65,0%	46,2%
Private and public enterprises	10,7%	5,2%	13,2%	10,2%
Other domestic resources	0,3%	1,7%	0,3%	0,7%
Foreign investors	0,6%	0,9%	1,1%	0,8%
1999 total, HRK 000	609.337	298.602	489.822	1.397.761
Own resources	83,1%	14,6%	20,0%	46,4%
Central and local government	2,4%	80,4%	69,6%	42,6%
Private and public enterprises	11,4%	2,7%	7,7%	8,2%
Other domestic resources	2,5%	1,0%	2,0%	2,0%
Foreign investors	0,6%	1,3%	0,8%	0,8%
2000 total, HRK 000	847.874	405.382	628.583	1.881.839
Own resources	72,6%	15,8%	15,2%	41,2%
Central and local government	2,0%	80,0%	77,5%	44,0%
Private and public enterprises	10,7%	2,9%	6,2%	7,5%
Other domestic resources	3,9%	0,9%	0,1%	2,0%
Foreign investors	10,8%	0,4%	1,0%	5,3%

Source: Central Bureau of Statistics

- The business sector financed cca 90% for its R&D activity through its own resources in 1997, and 73% in 2000. The amount of BERD doubled in the same period, with internal business sector financial sources being replaced by financing from other private and public enterprises and by foreign investors.
- The government sector is 80% financed by central and local government funds with a constant source of financing derived from its desire to provide R&D as a social and economic service.
- Higher education R&D is also financed mostly by government (70%)

Table 3

R&D Investment in human resources in S&T in Candidate countries-comparing Croatia, 1999

	R&D personnel FTE per thousand labour force	Total R&D personnel FTE ¹	Researchers by sector			
			Total FTE ¹	Government sector %	Business sector %	Higher education sector %
Bulgaria	:	16.087	10.580	66,7	11,8	20,9
Cyprus	:	681	278	29,7	23,1	42,7
Czech Rep.	4,7 ³	24.106	13.535	31,6	42,9	25,0
Estonia	:	4.545	3.002	20,7	12,6	66,3
Hungary	5,7	21.329	12.579	36,2	25,9	37,9
Latvia	:	4.301	2.626	28,6	7,3	64,1
Lithuania	:	11.791	7.777	32,9	3,7	63,4
Poland	3,3 ³	82.368	56.433	19,2	18,3	62,5
Romania	2,9 ³	44.091	23.473	24,3	65,8	9,9
Slovak Rep.	5,8 ³	14.849	9.204	26,4	27,4	46,2
Slovenia	8,9 ³	8.495	4.427	34,1	34,8	29,5
Turkey	1,0	24.267	20.065	10,9	16,2	72,9
EU-15²	9,9	1.689.490	919.796	14,2	50,0	34,3
Croatia³	3,2	8.827	5.523	30,3	17,3	52,4

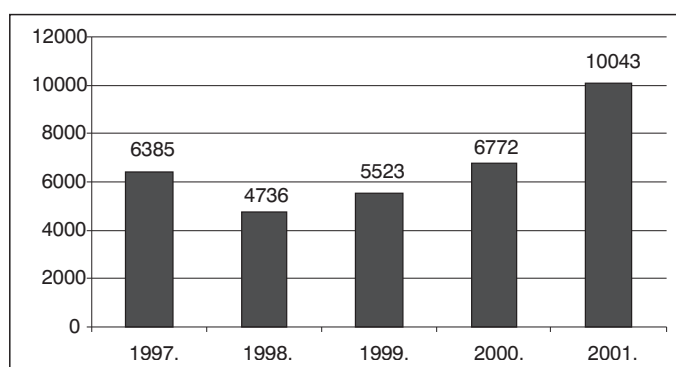
Source: Eurostat, OECD MSTI (5) CBS of Croatia

Note: 1) All values for Lithuania from year 2000

2) FTE = full-time equivalent

3) values for year 1998

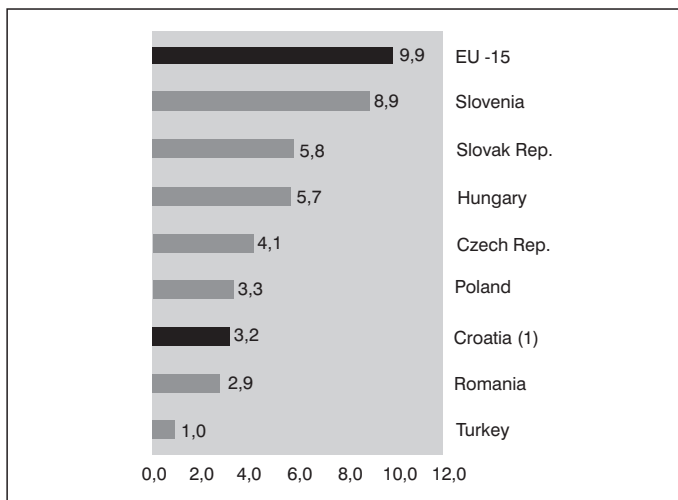
4) Czech Rep. 2000

Figure 4
Total number of
researchers (FTE)
in Croatia

Source: CBS of Croatia

Figure 5

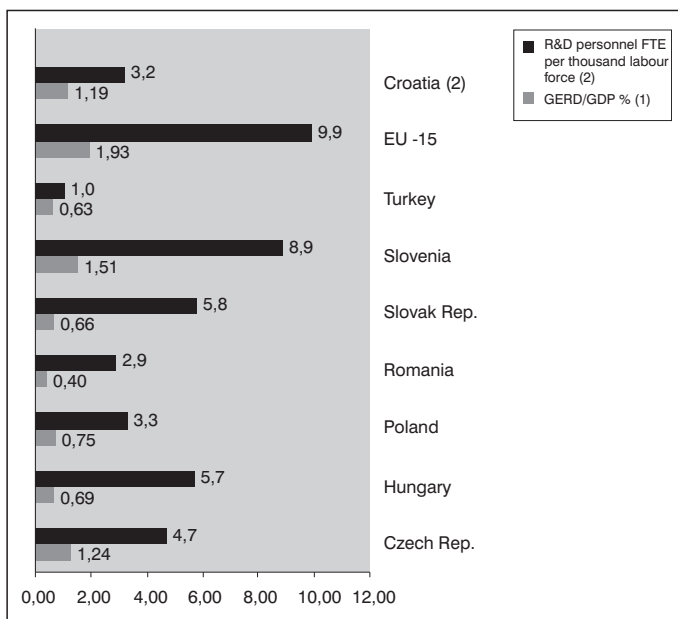
Total researches (FTE) per 000 labour force – comparing Croatia, 2000



Source: Eurostat, (1) CBS of Croatia

Figure 6

Total researchers

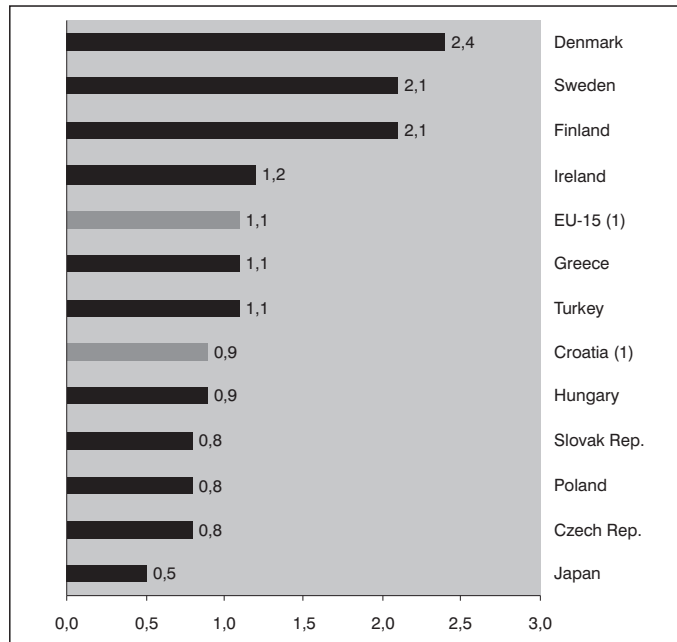


Source: Eurostat; CBS of Croatia

Notes: FTE = full-time equivalent; (1) 1999; (2) 2000

Figure 7

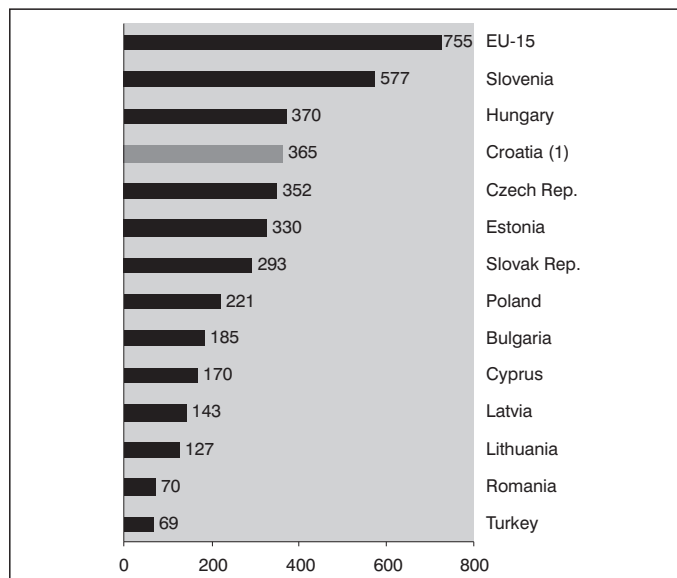
Public expenditure on tertiary education: % of GDP 1999



Source: (1) OECD, CBS of Croatia

Figure 8

Number of Publications (2) per million population – comparing Croatia, 1999

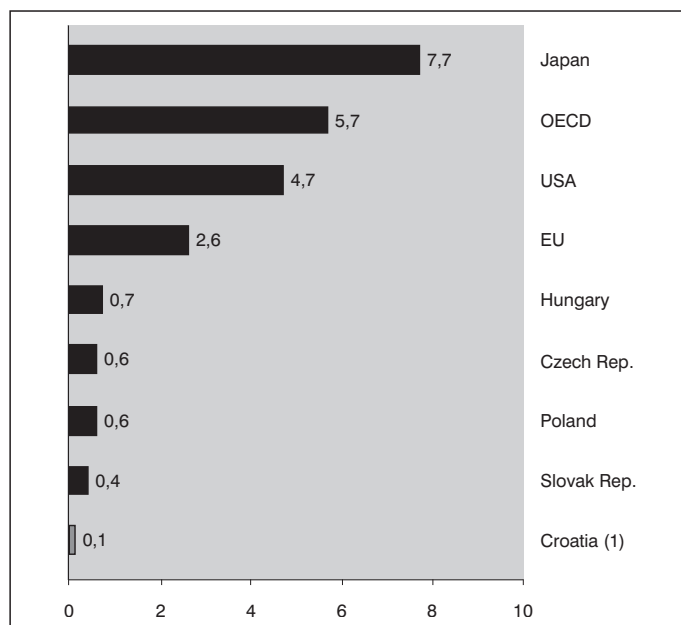


Source: Eurostat; (1) CBS of Croatia

Notes: (2) Publications from 11 fields

Figure 9

Number of patents per 10000 population, average 1996-1998



Source: OECD MSTI, (1) Croatian Patent office

Table 3

R&D investment and human resources in S&T in candidate countries – comparing Croatia, 1999

	GERD		R&D		Total R&D personnel FTE ¹	Researchers by sector				
	GERD/GDP %	BERD/GDP %	Financed by Government %	Financed by Business %		personnel FTE per thousand labour force	Total FTE ¹	Government sector %	Business sector %	Higher education sector %
Bulgaria	0,57	1,16	69,7	22,8	:	16.087	10.580	66,7	11,8	20,9
Cyprus	0,25	0,50	68,5	17,4	:	681	278	29,7	23,1	42,7
Czech Rep.	1,24	7,81	42,6	52,6	4,7 ³	24.106	13.535	31,6	42,9	25,0
Estonia	0,75	1,79	64,8	24,2	:	4.545	3.002	20,7	12,6	66,3
Hungary	0,69	2,76	53,2	38,5	5,7	21.329	12.579	36,2	25,9	37,9
Latvia	0,41	0,70	55,6	15,7	:	4.301	2.626	28,6	7,3	64,1
Lithuania	0,60	1,29	:	:	:	11.791	7.777	32,9	3,7	63,4
Poland	0,75	3,08	58,5	38,1	3,3 ³	82.368	56.433	19,2	18,3	62,5
Romania	0,40	2,99	46,7	50,2	2,9 ³	44.091	23.473	24,3	65,8	9,9
Slovak Rep.	0,66	4,16	47,9	49,9	5,8 ³	14.849	9.204	26,4	27,4	46,2
Slovenia	1,51	8,32	36,8	56,9	8,9 ³	8.495	4.427	34,1	34,8	29,5
Turkey	0,63	2,40	47,7	43,3	1,0	24.267	20.065	10,9	16,2	72,9
EU-15 ²	1,93	12,63	34,2	56,3	9,9	1.689.490	919.796	14,2	50,0	34,3
Croatia ³	1,19	0,54	21,5	45,1	3,2	8.827	5.523	30,3	17,3	52,4

Source: Eurostat, CBS of Croatia

Notes: 1) FTE = Full time equivalent

2) 2000 and estimate

3) 2000 and estimate

FOOTNOTE

- * The data are presented within a paper "S&T Indicators: an overview of Croatia" prepared by Emira Bečić, senior consultant at the Ministry of Science, Education and Sport of Croatia, at the international workshop "S&T Indicators and Statistics for S&T Policy Making in South-East European Countries (SEECs)", 15-18 November, 2003, Sofia.