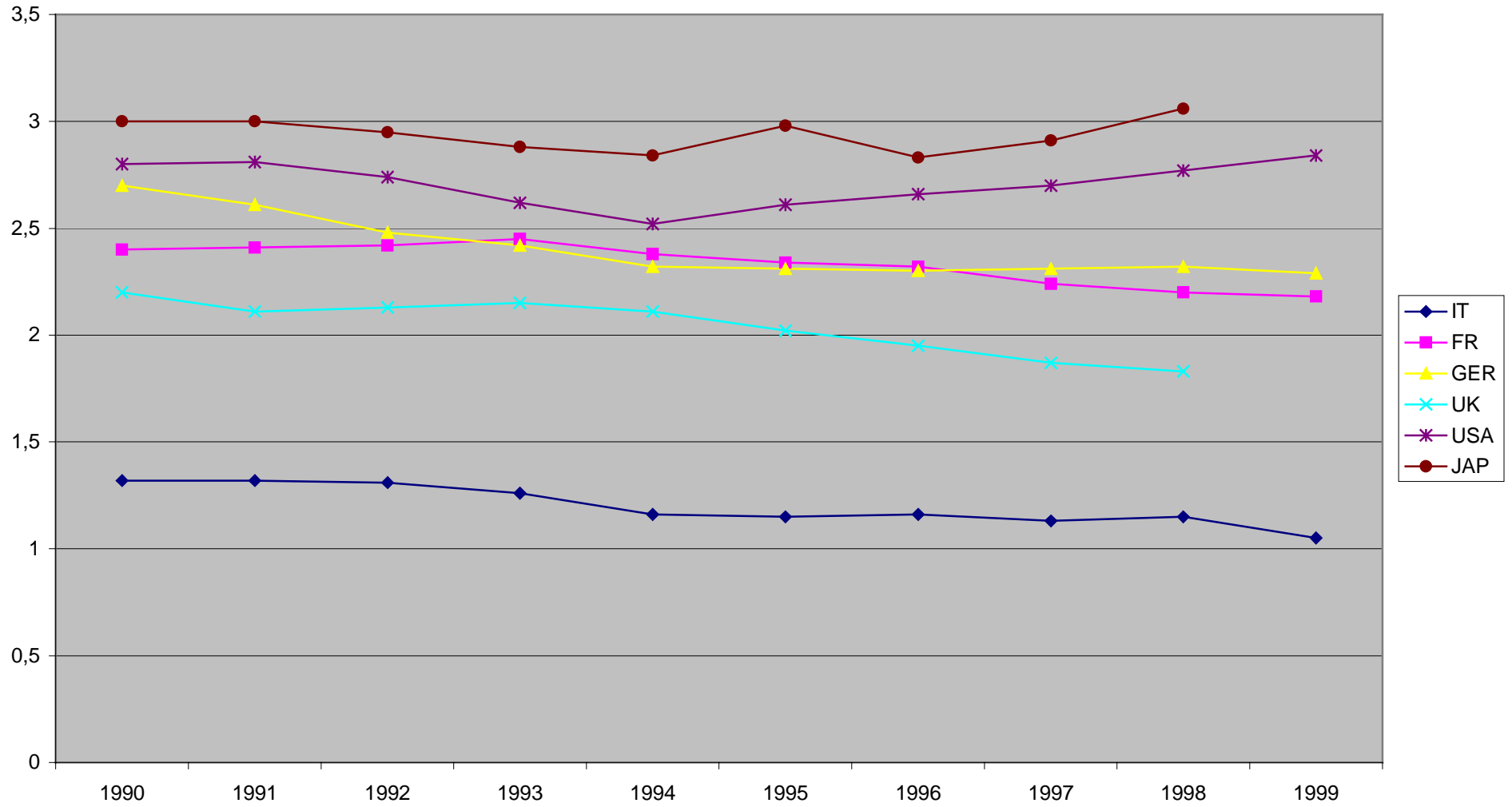
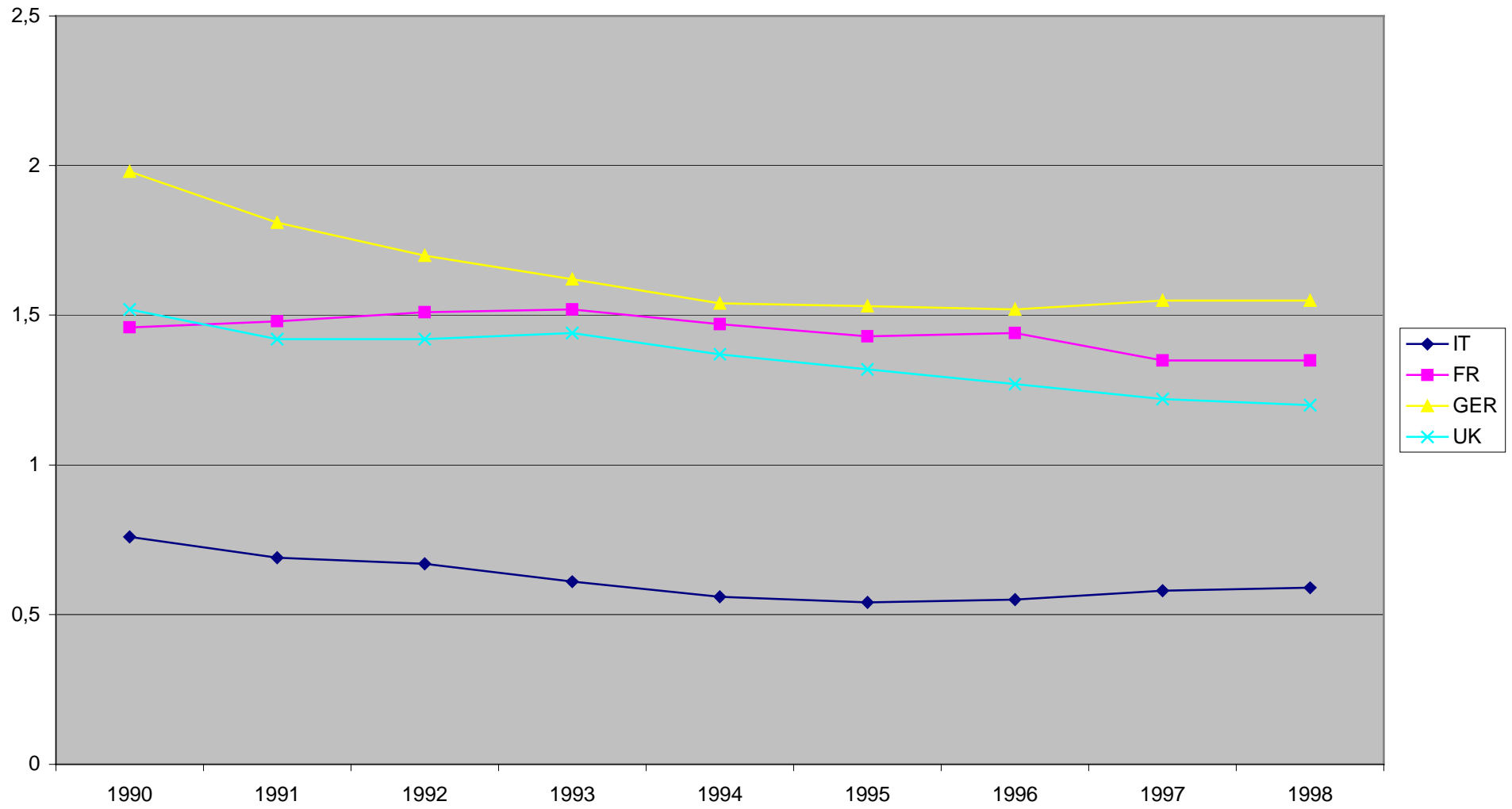


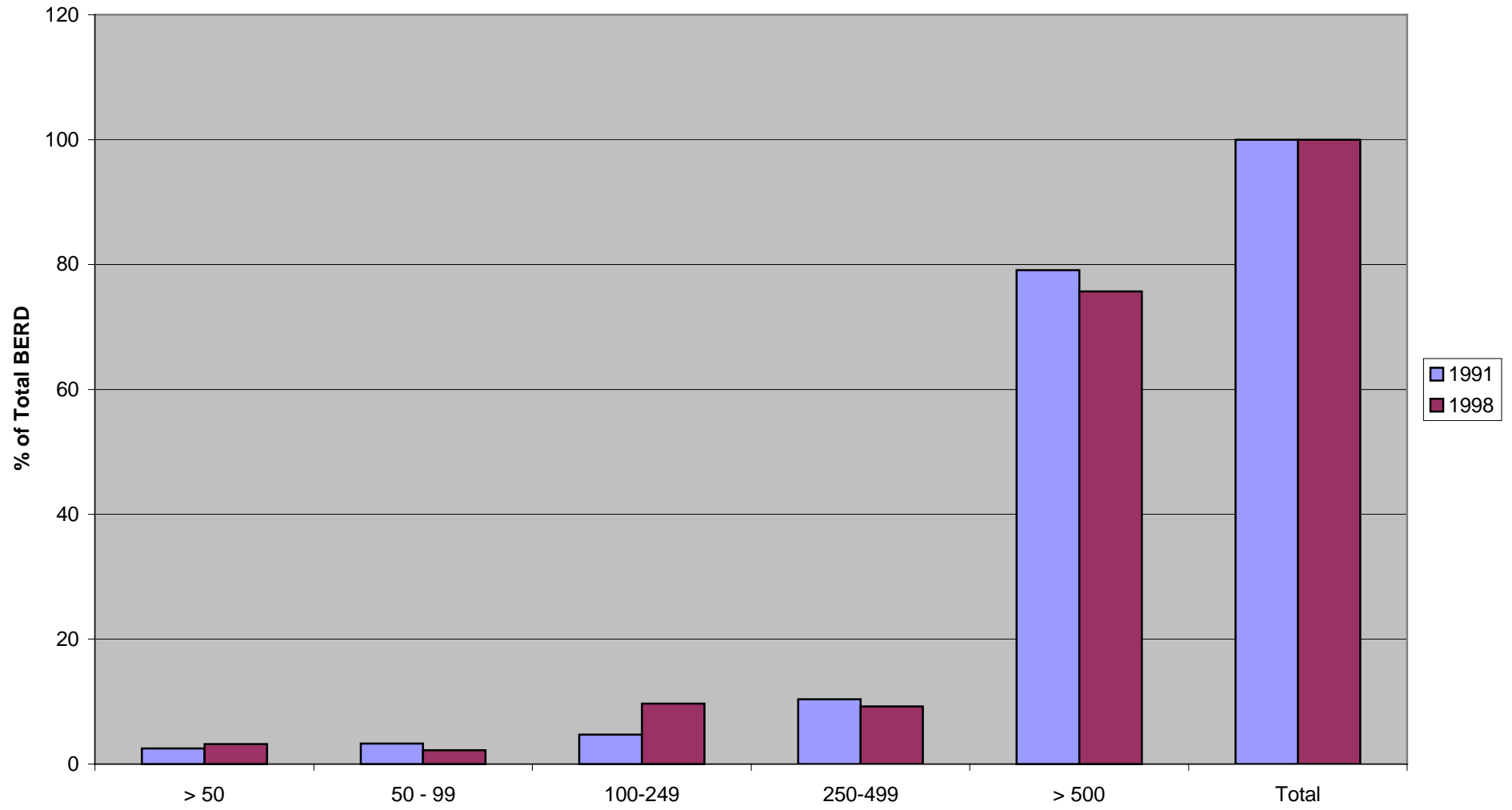
R&D in % of GDP



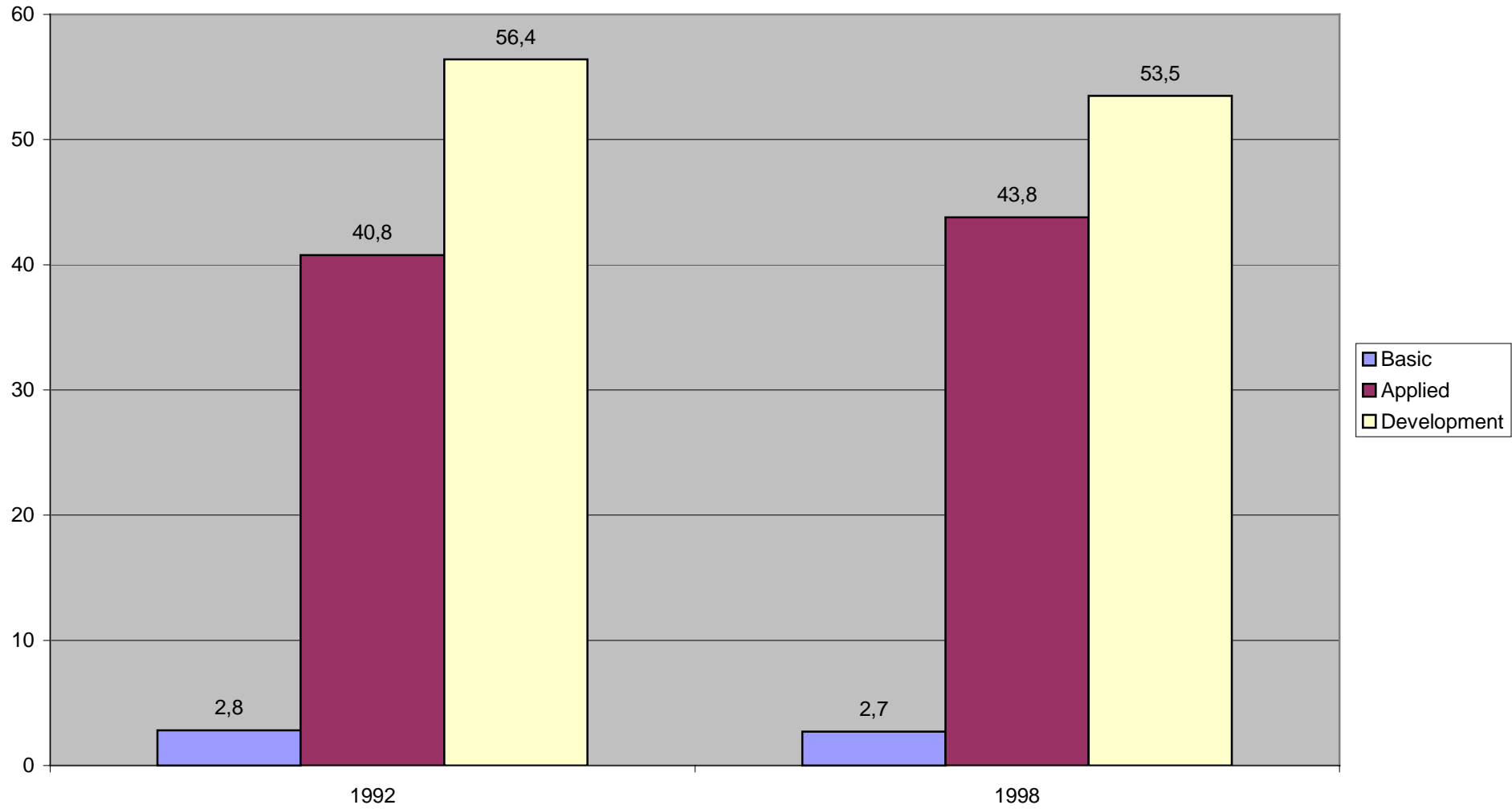
**BERD as % of GDP**



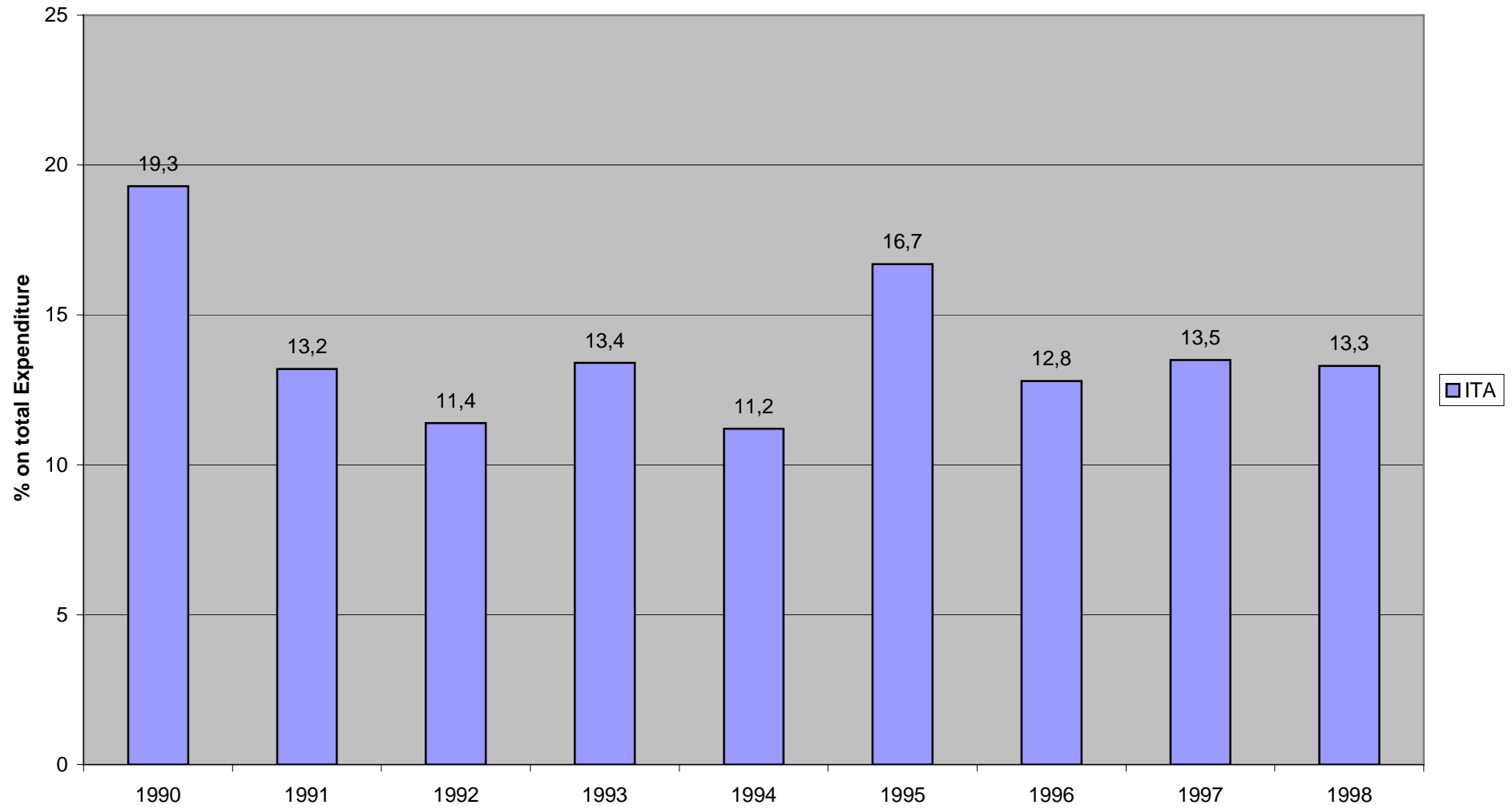
### R&S of Small Firms



### Basic Research of Firms



### Public Financing to Firms



## SCENARIO OF ITALIAN R&D SYSTEM

- A low expenditure level both in the public and private sector
- Low level of basic research, concentrated in Universities
- Concentration of R&D in few large firms
- Low competitiveness in H-T sectors
- Low quality of university and public research
- Substantial persistence of this model

## WHERE DOES THIS MODEL COME FROM?

- Low level public funding of R&S in civil sector
- Low level of private funding
- Losted opportunities
- Lack of a S&T long run policy
- Low level of education
- Lack of a S&T culture
- A rigid labor market
- Small dimension of domestic market
- Low level of competition

***AUTO***

	<b><i>Period</i></b>	<b><i>Rank</i></b>	<b><i>Npat</i></b>	<b><i>CII</i></b>	<b><i>TS</i></b>	<b><i>TCT</i></b>	<b><i>SL</i></b>	<b><i>SS</i></b>
General Motors	1990-1994	2	7,82	1,01	8,01	0,94	7,13	30,68
	1995-1999	1	6,86	1,08	7,18	0,88	3,53	14,34
Ford Motor	1990-1994	4	4,46	1,12	5,03	0,95	4,05	9,94
	1995-1999	3	5,9	1,13	6,41	0,96	2,26	7,89
Fiat	1990-1994	19	2,45	0,61	1,51	1,18	0,43	0,58
	1995-1999	26	1,47	0,65	0,92	1,25	1,39	1,21

**CHEMICALS**

	<i>Period</i>	<i>Rank</i>	<i>Npat</i>	<i>CII</i>	<i>TS</i>	<i>TCT</i>	<i>SL</i>	<i>SS</i>
Procter & Gam	1990-1994	3	2,96	2,12	6,36	1,1	2,38	5,51
	1995-1999	1	7,24	2,7	18,3	1,03	1,46	7,94
Du Pont	1990-1994	1	9,35	1,16	11,02	0,99	2,43	17,78
	1995-1999	2	8,59	1,11	8,9	1,01	2,99	19,29
Montedison	1990-1994	46	1,36	0,78	1,08	1	1,07	1,14
	1995-1999	55	0,79	1,11	0,82	1,15	0,62	0,37
Pirelli	1990-1994	89	0,41	1,06	0,44	0,97	0,88	0,28
	1995-1999	82	0,44	1,19	0,49	0,81	1,27	0,42
Enichem	1990-1994	88	0,92	0,49	0,46	1,05	0,58	0,42
	1995-1999	100	0,62	0,55	0,31	0,85	0,72	0,33

**COMPUTER**

	<i>Period</i>	<i>Rank</i>	<i>Npat</i>	<i>CII</i>	<i>TS</i>	<i>TCT</i>	<i>SL</i>	<i>SS</i>
IBM	1990-1994	1	13,67	1,08	14,47	0,99	1,48	20,06
	1995-1999	1	15,78	1,04	18,47	0,93	0,84	18,86
NEC	1990-1994	2	9,41	0,85	7,89	0,81	0,64	5,93
	1995-1999	2	10,7	0,61	7,35	0,79	0,48	7,31
Olivetti	1990-1994	42	0,2	0,61	0,12	1,13	0,05	0,01
	1995-1999	68	0,06	0,54	0,03	1,06	0,04	0

**MECHANICALS**

	<i>Period</i>	<i>Rank</i>	<i>Npat</i>	<i>CII</i>	<i>TS</i>	<i>TCT</i>	<i>SL</i>	<i>SS</i>
Hyundai	1990-1994	8	1,6	1,82	2,96	0,51	1,83	2,77
	1995-1999	1	7,27	1,83	12	0,55	0,6	3,18
Applied Materials	1990-1994	11	1,2	2,24	2,73	0,65	7,05	7,99
	1995-1999	2	3,74	2,78	9,35	0,66	4,68	12,9
GD	1990-1994	66	0,83	0,64	0,54	0,99	0	0
	1995-1999	67	0,83	0,54	0,4	1,12	0,05	0,03
Danieli	1990-1994	102	0,46	0,44	0,2	1,15	0,38	0,17
	1995-1999	77	0,65	0,53	0,32	1,25	0,76	0,36

## ***PHARMACEUTICALS***

	<b><i>Period</i></b>	<b><i>Rank</i></b>	<b><i>Npat</i></b>	<b><i>CII</i></b>	<b><i>TS</i></b>	<b><i>TCT</i></b>	<b><i>SL</i></b>	<b><i>SS</i></b>
Roche	1990-1994	3	5,17	0,98	5,05	0,98	1,45	10,1
	1995-1999	1	5,21	1,03	5,69	1,01	1,72	9,77
Merck & Co	1990-1994	2	4,65	1,21	5,63	0,81	0,92	5,76
	1995-1999	2	3,98	1,13	4,73	0,77	0,72	3,13
Farmitalia	1990-1994	49	0,41	0,56	0,23	0,76	0,76	0,42
	1995-1999	63	0,2	0,74	0,15	0,33	0,33	0,07
Sigma Tau	1990-1994	71	0,15	0,26	0,04	0,25	0,25	0,05
	1995-1999	66	0,22	0,58	0,14	0,14	0,14	0,03

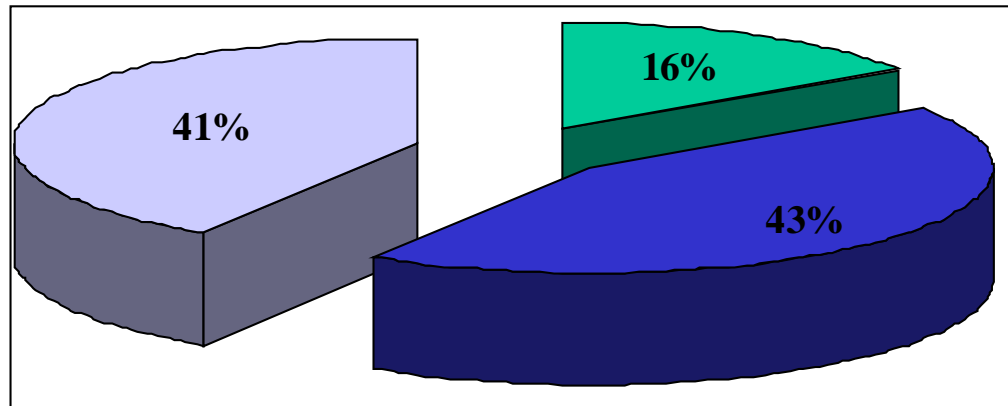
## ***EMICONDUCTORS***

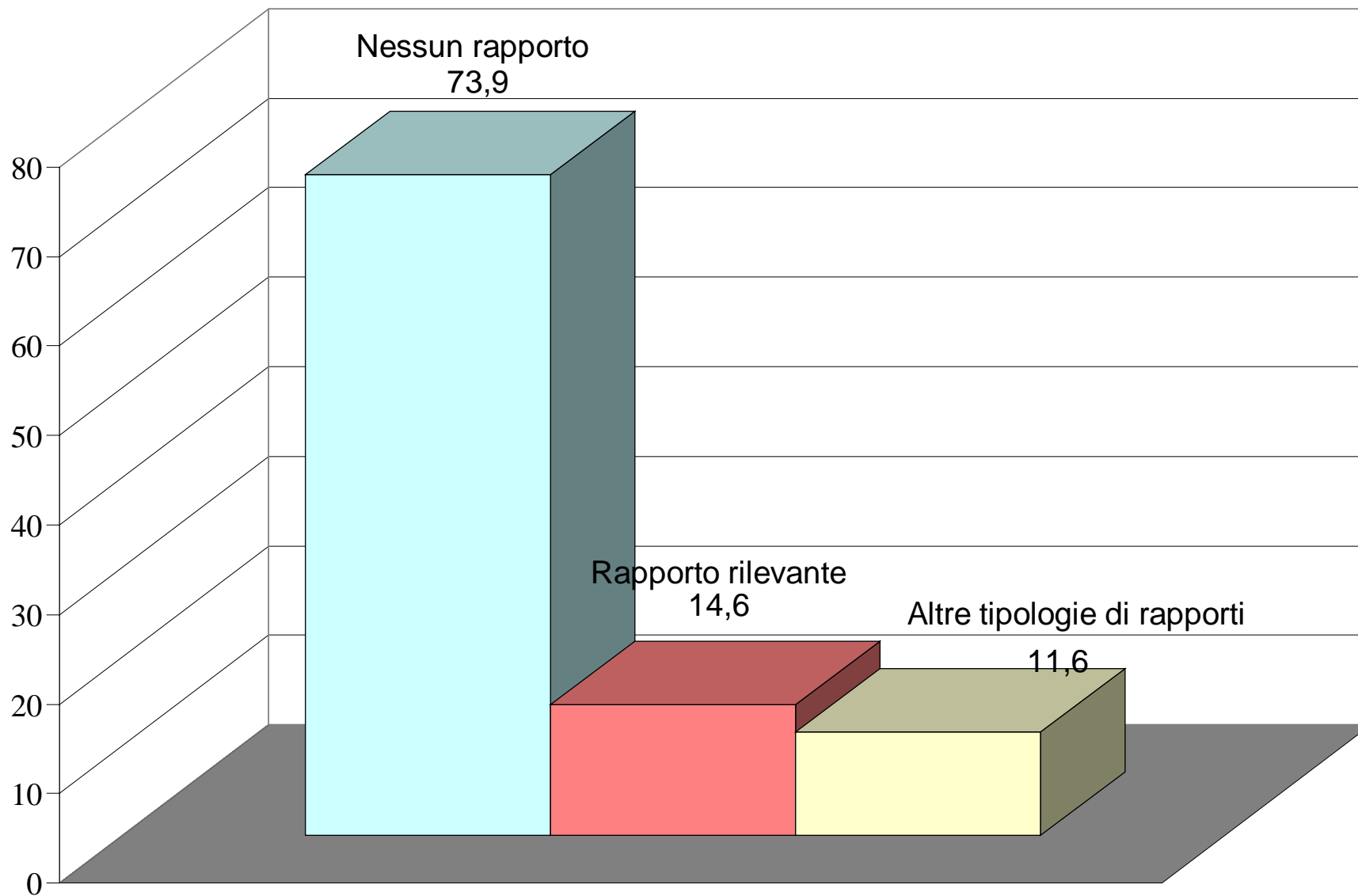
	<b><i>Period</i></b>	<b><i>Rank</i></b>	<b><i>Npat</i></b>	<b><i>CII</i></b>	<b><i>TS</i></b>	<b><i>TCT</i></b>	<b><i>SL</i></b>	<b><i>SS</i></b>
Intel	1990-1994	3	1,6	1,05	2,13	0,98	0,58	1,14
	1995-1999	1	2,34	1,16	3,34	0,87	0,69	2,29
Micron Technology	1990-1994	4	1,9	0,83	1,99	1,04	0,92	2,16
	1995-1999	2	2,27	1,08	3,02	0,94	0,96	3,09
STMicroelectronics	1990-1994	6	2,09	0,56	1,48	1,14	0,77	1,99

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# *Innovative Capacity*

■ Competenti   ■ Intermedie   ■ Marginali





# Road Map for Italy

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## Absorbing Capacity

<i>Rapporti con le Università</i>	<i>Struttura tecnica</i>	
	Presente	Assente
<b>Nessun rapporto</b>	65,6	88,7
<b>Rapporto rilevante</b>	19,5	5,6
<b>Altri rapporti</b>	14,8	5,6
<b>Totale</b>	100,0	100,0

## CONCLUSIONS

- A new model of R&D: not so evident
- Collaboration with universities and PRC is improving,  
but results still do not emerge
- Policy is starting to look at the problem of cooperation
- Science is increasingly important to firms
- Key factor is the capacity of rapidly transferring science to  
technology
- Key role of relationship firms–universities
- Excellence remains the critical factor