

**Public expenditure
on Research and Development
in the Community countries**

1974-1975

May 1976

P R E F A C E

In this pamphlet there are assembled "Selected Figures" on public expenditure on research and development in the countries of the Community, mainly for the years 1974 and 1975. In this context public expenditure means the sums allocated in the final budgets of Central Government, defined according to the rules of the European System of Integrated Economic Accounts (ESA). The budgets of the German Länder are included in this definition, but those of the autonomous Italian regions have been excluded until now. The budgets of public corporations, and nationalised industries are excluded.

The breakdown by the objectives of the R&D has been made, for the first time, by the 1975 version of the Nomenclature for the Analysis and Comparison of Science Programmes, and Budgets (NABS).

The methods and definitions used have been described in the previous publications (Cf. EUROSTAT Statistical Studies and Surveys 1/74 and 1/75). While the methods and definitions of the different Member States are still not strictly comparable, these differences are not big enough to have a significant effect on these figures.

Most of the data is expressed in terms of current prices, and current exchange rates. Because of the difficulty of finding an appropriate deflator, the presentation of data in constant prices has been limited to graphs of index numbers. The influence of increasing inflation, and of semi permanent changes in the monetary exchange rates must not be forgotten in the interpretation of the figures.

This pamphlet "Selected Figures" on public expenditure on R&D has been put together, and the commentary written by EUROSTAT.

Luxembourg, 24 May 1976.

NOTES

Total expenditure on R&D

Total appropriations for R&D in the final budgets of Member States, including revisions incorporated during the budgetary exercise.

Figures in current values

The money is expressed both in national currencies, and in Eur, i.e. units of account converted at either the central rates, or at the market rates according to the country (c.f. EUROSTAT, Monthly Bulletin of General Statistics). For the conversion into Eur, the annual averages of the current rate of exchanges have been used.

Figures in constant values

The figures in national current values have been deflated by the indices of consumer prices (c.f. EUROSTAT, Monthly Bulletin of General Statistics). The Community average has been calculated by weighting the index of each country by its 1970 expenditure.

Rates of growth

The rates of growth have been calculated in terms of current values of national currencies. For EUR 9 an average of these rates has been calculated weighted by the expenditures in the base year. The figure differs slightly from that which would be obtained from expenditure expressed in Eur.

Total budgets

The figures quotes are taken from the harmonised statistics prepared by DG II "Economic and Financial Affairs" of the Commission. The definitions correspond to those normally used in discussion of public financing of R&D, but are not always identical with those most commonly used in Member States.

Gross Domestic Product (GDP)

The figures for gross domestic product have been prepared following the European System of Integrated Economic Accounts (ESA) (c.f. EUROSTAT, National Accounts, Aggregates 1960-1974)

Comparison between the Community and the U.S.A.

The data has been taken from the National Science Foundation "An Analysis of Federal R&D Funding by Function" NSF 74-313.

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A GENERAL PICTURE OF THE DEVELOPMENT OF THE PUBLIC FINANCING OF R&D
IN THE EUROPEAN COMMUNITY

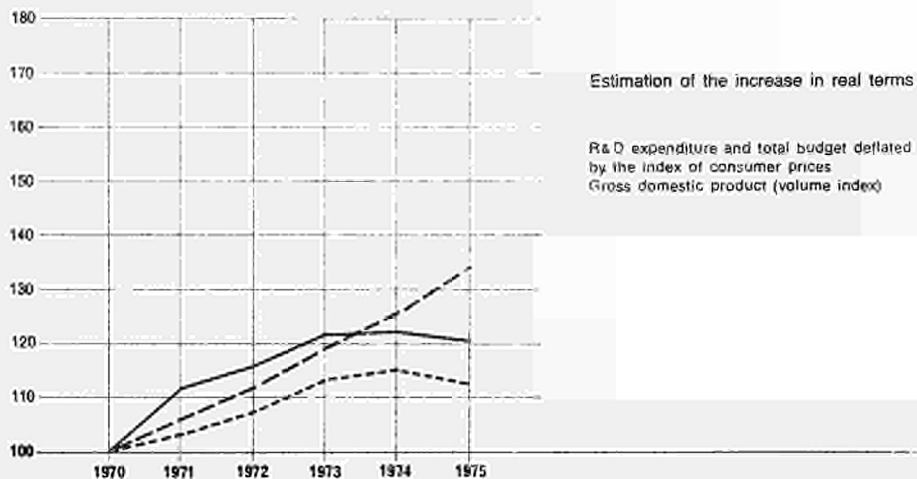
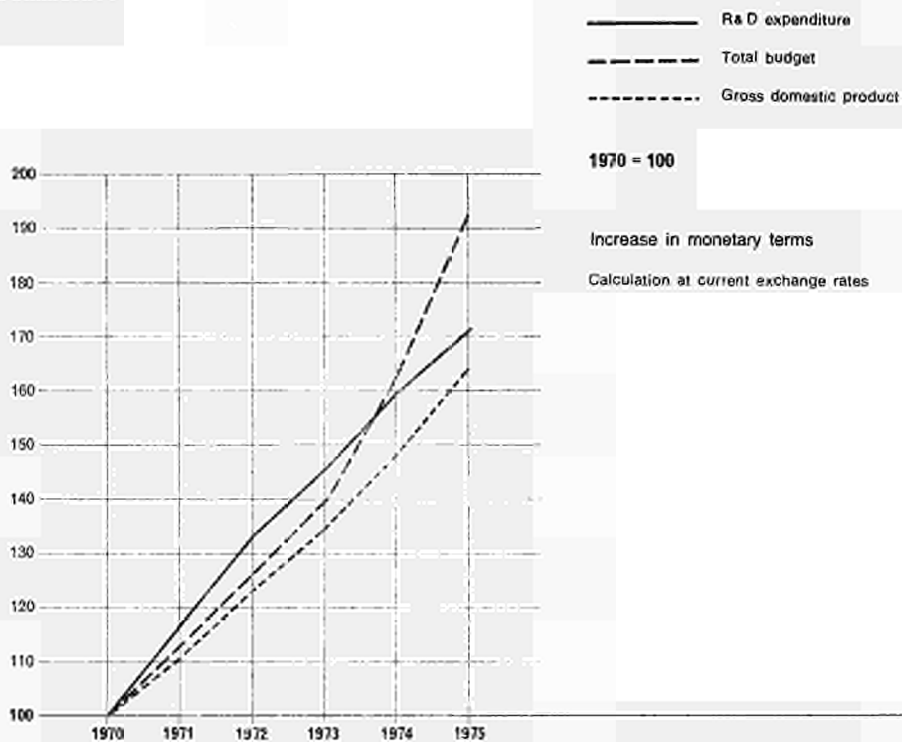
In the Member States' final budgets for 1975 a total of 10,600 million units of account (at 1975 rates of exchange) was provided for the public financing of R&D. At current prices this sum represented a rise of about 70 % by reference to 1970 but, because of the increasing rate of inflation, the real growth in funds made available for R&D amounted to only about 20 % in this period.

Between 1970 and 1975, the sums provided from public funds for R&D increased, in money terms, of about 12 % for a year (yearly average growth rate, calculated on the basis of national currency); excepted in Ireland, these rates were, in all Member States, included between 10 and 15 %. From 1970 to 1973, the public financing of R&D increased fairly steadily, both in money and real terms. Since 1973, the increase in the credits has continued, but at a slightly lower rate, in money terms; however, in real terms the sums available for R&D have remained practically constant.

In the last year, the increase in money terms was of 9,5 %, with national rates spread between 2 and 20 %. Nevertheless, in real terms, it seems that there appears a reduction of about 2 %.

Up to 1973 the public financing of R&D increased more rapidly than the total budgets but since then this trend has been reversed, both in money and in real terms, the total budgets rising faster than credits for R&D and the share of the total devoted to R&D declining from 3.8 % in 1970 to 3.5 % in 1975. However, there has been no significant change in proportion which credits for R&D represent of the Gross Domestic Product (1 %).

In 1975 the amount available from public funds for R&D in the Community was equivalent to 40 units of account per head of population while in 1970 the corresponding figure was 24.



		Deutschland	France
TOTAL EXPENDITURE ON R&D		(Mio DM)	(Mio FF)
In national currency			
	1970	6 502,3	9 695,2
	1971	8 441,0	11 172,8
	1972	9 602,5	12 208,7
	1973	11 295,6	13 356,7
	1974	11 917,1	14 991,6
	1975	12 738,3	16 875,2
At current exchange rates		Mio Eur	
	1970	1 776,6	1 745,6
	1971	2 309,3	2 011,6
	1972	2 744,6	2 198,1
	1973	3 394,0	2 404,8
	1974	3 701,2	2 494,4
	1975	3 956,3	2 971,0
EXPENDITURE FOR CIVIL R&D		(Mio DM)	(Mio FF)
In national currency			
	1970	5 351,4	6 895,2
	1971	7 262,1	7 273,2
	1972	8 583,9	8 308,5
	1973	9 943,6	8 956,7
	1974	10 506,0	9 891,6
	1975	11 333,4	11 875,2
At current exchange rates		Mio Eur	
	1970	1 462,1	1 241,4
	1971	1 986,8	1 309,5
	1972	2 453,4	1 495,9
	1973	2 987,8	1 612,6
	1974	3 263,0	1 645,9
	1975	3 519,9	2 090,7

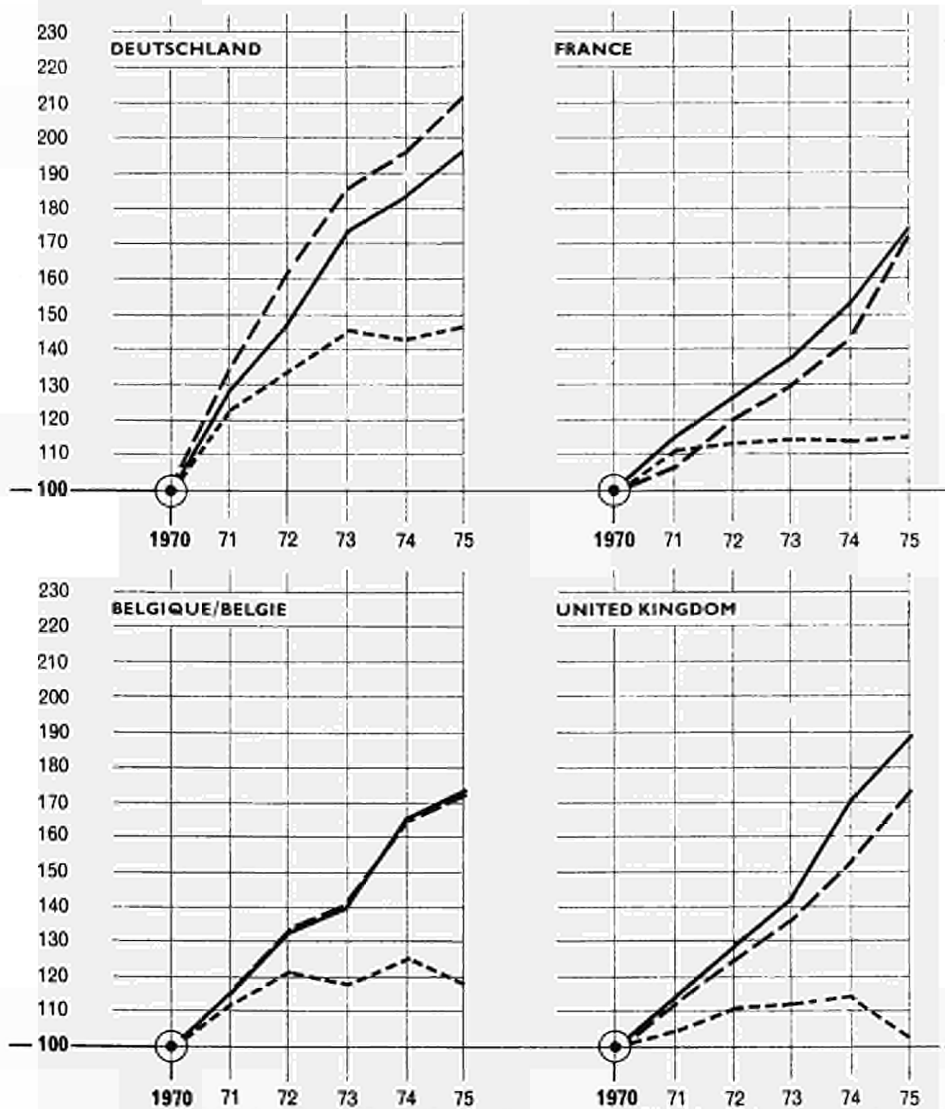
Italia	Nederland	Belgique/ België	United Kingdom	Ireland	Danmark	EUR 9
(Mrd Lit)	(Mio Fl)	(Mio FB)	(Mio £)	(Mio £)	(Mio Dkr)	
268,7	1 070,8	9 707,0	627,7	5,6	642,0	.
284,3	1 205,6	11 316,1	722,5	6,3	779,4	.
279,0	1 339,2	12 943,9	813,9	7,7	925,7	.
341,1	1 556,9	13 601,6	899,7	11,0	1 002,2	.
358,3	1 692,0	16 270,6	1 075,4	12,1	1 099,7	.
453,2	1 972,8	16 567,3	1 192,6	16,1	1 273,0	.
Mio Eur						
429,9	295,8	194,1	1 506,7	13,4	85,6	6 047,7
454,7	333,3	226,5	1 734,0	15,1	103,9	7 188,5
441,9	380,2	266,0	1 953,5	18,4	122,2	8 124,9
467,9	448,2	279,5	1 760,7	21,5	132,3	8 908,9
440,7	504,3	334,4	2 013,9	22,7	145,1	9 656,7
525,1	588,0	340,5	1 907,7	27,0	168,0	10 573,6
(Mrd Lit)	(Mio Fl)	(Mio FB)	(Mio £)	(Mio £)	(Mio Dkr)	
257,4	1 020,3	9 664,1	370,3	5,6	639,9	.
271,4	1 149,2	11 266,1	420,0	6,3	777,1	.
264,6	1 281,0	12 888,9	466,0	7,7	923,3	.
323,9	1 498,0	13 585,2	505,3	11,0	999,5	.
339,9	1 629,1	16 165,3	572,3	12,1	1 092,6	.
338,0	1 902,7	16 453,3	639,1	16,1	1 263,9	.
Mio Eur						
411,8	281,8	193,3	888,7	13,4	85,3	4 577,8
434,2	317,7	225,5	1 007,9	15,1	103,6	5 400,4
419,1	363,6	264,9	1 119,5	18,4	121,8	6 256,6
444,3	431,2	279,2	988,8	21,5	131,9	6 897,3
418,1	485,6	332,2	1 071,7	22,7	144,2	7 383,4
507,6	567,1	338,1	1 070,5	27,0	166,8	8 287,6

B

Public expenditure on R&D

— Total expenditure on R&D

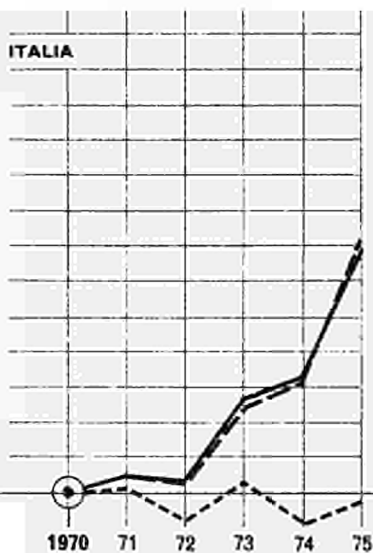
1970 – 1975



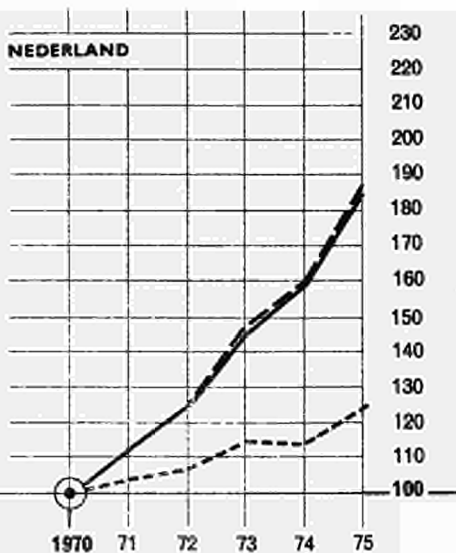
----- Expenditure on civil R&D

----- Deflated total expenditure on R&D

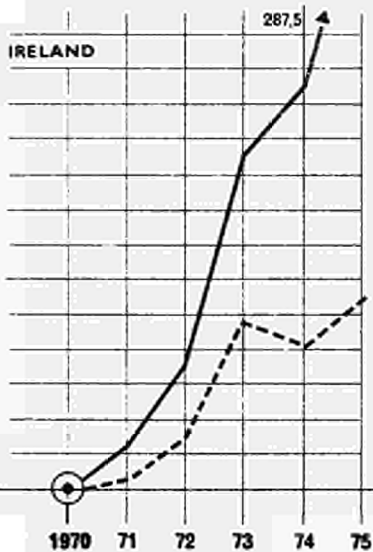
ITALIA



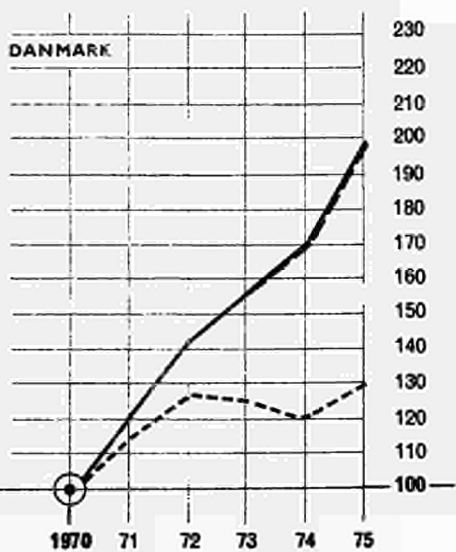
NEDERLAND



IRELAND



DANMARK



**2 Expenditure on R&D by NABS objective
in national currencies**

1974

OBJECTIVES NABS		DEUTSCH- LAND BR 1000 DM	FRANCE 1000 FF
1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	C1CO	201980	441700
2 PLANNING OF HUMAN ENVIRONMENTS	C2CO	307405	647300
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	C3CC	451957	675400
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	C4CC	1281520	1139200
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	C5CC	202129	523300
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	C6CO	898477	1852500
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	C7CC	483571	162400
8 EXPLORATION AND EXPLOITATION OF SPACE	C8CO	490369	870500
9 DEFENCE	C9CC	1411054	5100000
10 GENERAL PROMOTION OF KNOWLEDGE	10CO	6188597	3512400
EXPENDITURE NOT ITEMIZED	50CC	0	66800
TOTAL EXPENDITURE	59CO	11917059	14991600

1975

1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	C1CO	227496	508700
2 PLANNING OF HUMAN ENVIRONMENTS	0200	326515	753900
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	C300	542133	822600
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	C400	1342905	1453000
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	C5CO	23916C	651400
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	0600	936310	2415400
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	07CO	621234	186300
8 EXPLORATION AND EXPLOITATION OF SPACE	D8CO	939892	942200
9 DEFENCE	0900	1404565	5000000
10 GENERAL PROMOTION OF KNOWLEDGE	10CO	6557704	4072200
EXPENDITURE NOT ITEMIZED	50CO	0	69500
TOTAL EXPENDITURE	5900	12738310	16875200

1974

ITALIA MILIT	NEDERLAND 1000 FL	BELGIE/ BELGIE 1000 FB	UNITED KINGDOM 1000 PSTERL	IRELAND 1000 ISTERL	DANMARK 1000 DKR	E U R 9 1000 Eur	
5889	17044	356841	6400	397	17891	171793.4	0100
4285	80620	276849	20800	873	18945	281252.7	0200
14373	113703	761207	27700	700	80462	383761.2	0300
63074	65771	2430180	68500	45	31566	867407.6	0400
10560	124460	721637	42200	4700	105563	316521.1	0500
21397	106781	1626948	161200	3043	106028	1000426.8	0600
5524	107013	817150	8000	584	44740	254671.8	0700
30990	41803	418814	22500	0	30133	402436.0	0800
18310	62854	105258	573100	0	7070	2273307.0	0900
183854	941216	8715688	214900	1789	657301	3684811.0	1000
0	30700	0	0	0	0	20265.1	9000
358256	1691965	16270572	1075400	12131	1099699	9656658.0	9900

1975

5029	21118	410452	8047	459	21548	197863.6	0100
5748	118127	239633	29477	1216	19362	334858.1	0200
12005	130776	637765	38346	1130	96644	458072.3	0300
79815	43084	2182356	87033	109	35682	973743.3	0400
13473	153089	731262	53039	6552	123460	381339.1	0500
46781	94900	2209724	147650	3519	120604	1113079.0	0600
6467	144990	808142	11410	1077	52929	320960.0	0700
38681	48919	592371	26963	0	46316	456438.1	0800
15185	70101	113572	553471	0	9149	2285756.0	0900
230028	1095858	8641608	237112	2008	747153	4023522.0	1000
0	51806	0	0	0	0	27677.0	9000
453212	1972768	16567289	1192548	16070	1273047	10573354.0	9900

3 Expenditure on R&D by NABS objective
in 1 000 Eur

1974

OBJECTIVES NABS		DEUTSCH- LAND BR	FRANCE
1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	01CC	62730.9	73494.0
2 PLANNING OF HUMAN ENVIRONMENTS	02CC	95473.8	107703.6
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	03CC	140368.8	112379.1
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	04CC	398014.4	189550.3
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	05CC	62777.2	87071.3
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	06CC	279048.9	308235.6
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	07CC	150187.4	27021.6
8 EXPLORATION AND EXPLOITATION OF SPACE	08CC	152298.8	144861.6
9 DEFENCE	09CC	438245.1	849583.8
10 GENERAL PROMOTION OF KNOWLEDGE	10CC	1922054.0	584441.3
EXPENDITURE NOT ITEMIZED	90CC	0.0	11114.8
TOTAL EXPENDITURE	99CC	3701195.0	2494437.0

1975

1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	01CC	70655.7	89559.6
2 PLANNING OF HUMAN ENVIRONMENTS	02CC	101409.0	132728.6
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	03CC	168375.6	144823.6
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	04CC	417080.6	255809.3
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	05CC	74278.3	114682.8
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	06CC	250795.1	425245.6
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	07CC	192542.8	32795.2
8 EXPLORATION AND EXPLOITATION OF SPACE	08CC	167679.6	165879.9
9 DEFENCE	09CC	436353.9	880279.8
10 GENERAL PROMOTION OF KNOWLEDGE	10CC	2036691.0	716935.1
EXPENDITURE NOT ITEMIZED	90CC	0.0	12235.9
TOTAL EXPENDITURE	99CC	3956266.0	2970979.0

1974

ITALIA	NORVEGE	BELGIQUE / BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R 9	
7243.5	5080.1	8155.8	11985.0	743.4	2360.8	171793.4	0100
5270.6	24029.3	5685.8	38951.1	1634.8	2499.9	281252.7	0200
17678.9	33889.9	15644.2	51872.4	1310.9	10617.4	383761.2	0300
77581.6	19603.4	49944.8	128463.7	84.3	4165.3	867407.6	0400
12988.9	37096.0	14831.0	79025.8	9801.4	13929.6	316521.1	0500
26318.5	31826.7	33436.9	301871.0	5698.5	13990.9	1000426.8	0600
6794.6	31895.9	16794.0	14981.2	1093.6	5903.7	254671.8	0700
38118.0	12459.6	8607.4	42134.8	0.0	3976.2	402436.0	0800
22571.5	18734.0	2163.3	942129.8	0.0	932.9	2273307.0	0900
276142.1	280535.0	179123.9	402432.3	3350.2	86734.1	3694811.0	1000
0.0	9150.3	0.0	0.0	0.0	0.0	20265.1	9000
442658.1	504300.2	334391.1	2013846.0	22717.1	145110.7	9656658.0	9900

1975

5827.4	6294.3	8435.6	13479.0	768.8	2843.4	197863.6	0100
6660.5	35208.5	4924.9	49375.1	2036.8	2554.9	334898.1	0200
13910.8	38578.6	13107.4	64231.1	1652.8	12752.7	458072.3	0300
92485.6	12841.4	44851.8	145783.7	182.6	4708.4	973743.3	0400
15611.8	45629.1	15028.9	88842.4	10974.9	16291.2	381339.1	0500
54207.5	28285.5	45414.2	247315.5	5894.5	15914.3	1113079.0	0600
7493.6	43215.1	16608.9	19112.2	1804.0	6984.2	320960.0	0700
44821.6	14580.6	12174.4	45164.1	0.0	6138.0	456438.1	0800
17595.6	20894.0	2342.4	927085.6	0.0	1207.3	2285756.0	0900
266544.8	326626.9	177602.3	397171.9	3363.5	98590.5	4023522.0	1000
0.0	15441.1	0.0	0.0	0.0	0.0	27677.0	9000
525159.2	587995.2	340490.5	1997564.0	26917.9	167984.9	10573354.0	9900

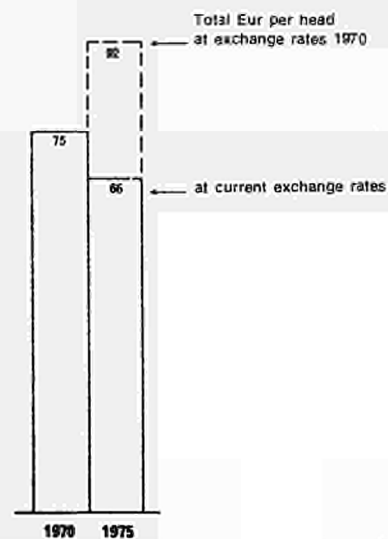
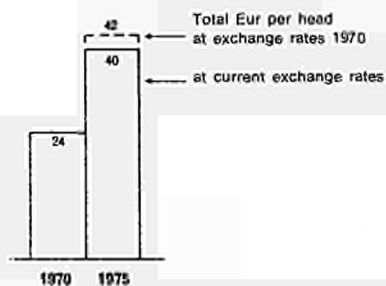
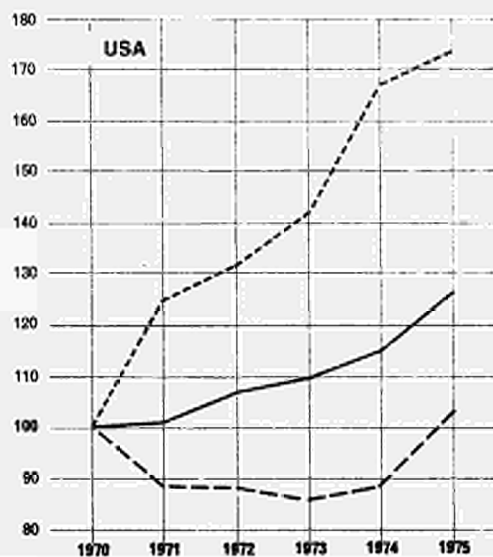
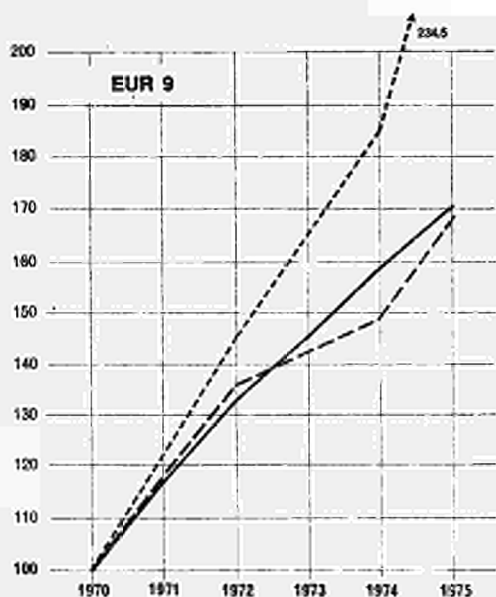
TRENDS IN THE PUBLIC FINANCING OF R&D IN THE EC AND THE U.S.A.

A comparison of the objectives of the public financing of research in the Community and in the U.S.A. reveals a similar development in each case, despite the different initial situations. In the U.S.A. as in Europe, the volume of research of a human and social character has risen steadily since 1970. Technological research, which diminished between 1972 and 1974 in the Community, had shown a decline from 1970 in the U.S.A., principally on account of the big reduction in space exploration research. However, the energy crisis led, in the U.S.A. as in Europe, to a relative growth in research in this area in 1974.

In 1975, the U.S.A. devoted 66 Eur per head (at current exchange rates) to research from public money, and the Community only 40 Eur. At 1970 exchange rates, the EC devoted in 1970 24 dollars (=Eur) per head to publically financed R&D, and in 1975 42 dollars. For the USA the figures are 42 dollars in 1970 and 92 dollars in 1975.

In both the EC and the U.S.A. the proportion of GDP used for publically financed R&D has remained relatively constant, with the proportion for the U.S.A. (1.6%) higher than that for the EC (about 1%).

Comparison of trends EC - USA



INDICATORS FOR THE PUBLIC FINANCING OF R&D

Whereas in the years 1970-1974 the funds allocated for R&D in the Community increased at a somewhat higher rate than the total public budget, in 1975 the total budget increased for the first time at a higher rate than the R&D expenditure included in it. Thus in 1975 the proportion of the total budget allocated to R&D expenditure, which for the Community had remained more or less constant at 3.8 % since 1970, fell to 3.5 %.

The trends in the scale of public R&D expenditure were very similar to the trends in the gross domestic product; R&D expenditure as a proportion of the gross domestic product amounted to just under 1 %, in 1970, and a little over 1 % in 1974 and 1975.

The Member States have naturally contributed in varying degrees to the increase in public R&D funds in the Community. Germany and France, with respect to both their share of the total budget in the Community and their share of the gross domestic product, had a greater than average contribution to R&D in the Community in 1975. The United Kingdom's contribution to R&D was higher than its share of the gross domestic product but lower than its share of the budget. Italy's contribution to R&D was again considerably less than its share of the total budget or the gross domestic product.

In comparison to their share in the Community population again Germany and France have contributed more to public R&D funding than should be expected. This is true also for the Netherlands in a somewhat reduced form. For the United Kingdom, Denmark, Ireland and Belgium the share of R&D expenditure in the Community was only a little smaller than their percentage in the population. For Italy there was no correspondence between the two parts.

Contribution of the Member States to R&D expenditure in the Community

4

(Calculated at current exchange rates)

	1970	1974	1975
Analysis of total R&D expenditure by country (%)			
Deutschland	29,4	38,4	37,4
France	28,9	25,9	28,1
Italia	7,1	4,6	5,0
Nederland	4,9	5,2	5,6
Belgique/België	3,2	3,5	3,2
United Kingdom	21,9	20,8	18,9
Ireland	0,2	0,2	0,3
Danmark	1,4	1,5	1,6
EUR 9	100,0	100,0	100,0
Analysis of total budget by country (%)			
Deutschland	27,1	30,7	30,6
France	18,9	16,1	16,3
Italia	13,1	12,4	12,3
Nederland	5,1	6,1	6,5
Belgique/België	4,4	4,8	5,0
United Kingdom	27,3	25,8	25,2
Ireland	1,0	0,9	1,0
Danmark	3,1	3,1	3,1
EUR 9	100,0	100,0	100,0
Analysis of gross domestic product by country (%)			
Deutschland	30,1	33,5	32,2
France	22,9	23,3	24,2
Italia	15,0	13,0	12,8
Nederland	5,1	6,0	6,1
Belgique/België	4,1	4,6	4,7
United Kingdom	19,5	16,3	16,7
Ireland	0,6	0,6	0,6
Danmark	2,5	2,7	2,7
EUR 9	100,0	100,0	100,0
Analysis of population by country (%)			
Deutschland	24,2	24,1	24,0
France	20,2	20,4	20,5
Italia	21,4	21,5	21,6
Nederland	5,2	5,3	5,3
Belgique/België	3,8	3,8	3,8
United Kingdom	22,1	21,8	21,7
Ireland	1,2	1,2	1,2
Danmark	2,0	2,0	2,0
EUR 9	100,0	100,0	100,0

**5 R&D expenditure in Eur per head of the population
by NABS objective**

1974

OBJECTIVES NABS		DEUTSCH- LAND BR	FRANCE
1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	C1CC	1.01	1.40
2 PLANNING OF HUMAN ENVIRONMENTS	C2CC	1.54	2.05
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	C3CC	2.26	2.14
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	C4CC	6.41	3.61
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	C5CC	1.01	1.66
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	C6CC	4.50	5.87
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	C7CC	2.42	0.51
8 EXPLORATION AND EXPLOITATION OF SPACE	C8CC	2.45	2.76
9 DEFENCE	C9CC	7.06	16.16
10 GENERAL PROMOTION OF KNOWLEDGE	10CC	30.97	11.13
EXPENDITURE NOT ITEMIZED	90CC	0.00	0.21
TOTAL EXPENDITURE	99CC	59.64	47.51

1975

1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	0100	1.14	1.70
2 PLANNING OF HUMAN ENVIRONMENTS	0200	1.64	2.52
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0300	2.72	2.75
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	0400	6.75	4.85
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	0500	1.20	2.17
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	0600	4.70	8.06
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	0700	3.12	0.62
8 EXPLORATION AND EXPLOITATION OF SPACE	0800	2.71	3.15
9 DEFENCE	0900	7.06	16.69
10 GENERAL PROMOTION OF KNOWLEDGE	1000	32.94	13.59
EXPENDITURE NOT ITEMIZED	9000	0.00	0.23
TOTAL EXPENDITURE	9900	63.98	56.33

1974

ITALIA	VEDERLAND	BELGIE/ BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R 9	
0.13	0.38	0.83	0.21	0.24	0.47	0.67	0100
0.10	1.77	0.58	0.69	0.53	0.50	1.09	0200
0.32	2.50	1.60	0.93	0.42	2.10	1.49	0300
1.40	1.45	5.11	2.29	0.03	0.83	3.37	0400
0.23	2.74	1.52	1.41	2.85	2.76	1.23	0500
0.47	2.35	3.42	5.38	1.85	2.77	3.89	0600
0.12	2.35	1.72	0.27	0.35	1.17	0.99	0700
0.69	0.92	0.88	0.75	0.03	0.79	1.56	0800
0.41	1.38	0.22	16.80	0.00	0.18	8.83	0900
4.08	20.71	18.34	7.18	1.09	17.19	14.31	1000
0.00	0.68	0.00	0.00	0.00	0.00	0.08	9000
7.95	37.23	34.23	35.91	7.36	28.76	37.50	9900

1975

0.10	0.46	0.86	0.24	0.25	0.56	0.77	0100
0.12	2.58	0.50	0.88	0.65	0.51	1.30	0200
0.25	2.85	1.34	1.15	0.61	2.52	1.77	0300
1.66	0.94	4.58	2.60	0.06	0.93	3.77	0400
0.28	3.34	1.53	1.58	3.51	3.22	1.48	0500
0.97	2.07	4.63	4.41	1.89	3.15	4.31	0600
0.13	3.17	1.69	0.34	0.58	1.38	1.24	0700
0.80	1.07	1.24	0.81	0.00	1.21	1.77	0800
0.32	1.53	0.24	16.54	0.00	0.24	8.86	0900
4.78	23.92	18.12	7.09	1.08	19.49	15.59	1000
0.00	1.13	0.00	0.00	0.00	0.00	0.11	9000
9.41	43.06	34.74	35.64	8.61	33.21	40.97	9900

6 R&D expenditure per 10 000 units of GDP

1974

C O B S		DEUTSCH- LAND BR	FRANCE
1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	0100	2.05	3.45
2 PLANNING OF HUMAN ENVIRONMENTS	0200	3.12	5.05
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0300	4.59	5.27
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	0400	13.01	8.90
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	0500	2.05	4.09
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	0600	9.12	14.47
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	0700	4.91	1.27
8 EXPLORATION AND EXPLOITATION OF SPACE	0800	4.98	6.80
9 DEFENCE	0900	14.32	39.82
10 GENERAL PROMOTION OF KNOWLEDGE	1000	62.82	27.43
EXPENDITURE NOT ITEMIZED	9000	0.00	0.52
TOTAL EXPENDITURE	9900	120.98	117.06

1975

1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	0100	2.19	3.49
2 PLANNING OF HUMAN ENVIRONMENTS	0200	3.14	5.17
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0300	5.21	5.64
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	0400	12.91	9.97
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	0500	2.30	4.47
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	0600	9.00	16.57
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	0700	5.97	1.28
8 EXPLORATION AND EXPLOITATION OF SPACE	0800	5.19	6.46
9 DEFENCE	0900	13.50	34.30
10 GENERAL PROMOTION OF KNOWLEDGE	1000	63.03	27.94
EXPENDITURE NOT ITEMIZED	9000	0.00	0.48
TOTAL EXPENDITURE	9900	122.44	115.77

1974

ITALIA	NEDERLAND	BELGICQ / BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R 9	
0.61	0.92	1.95	0.80	1.40	0.96	1.88	0100
3.44	4.36	1.36	2.61	3.09	1.02	3.08	0200
1.49	6.15	3.75	3.49	2.48	4.33	4.20	0300
6.52	3.56	11.97	8.62	0.16	1.70	9.49	0400
1.09	6.73	3.55	5.30	16.62	5.68	3.46	0500
2.21	5.77	8.01	20.26	10.76	5.70	10.95	0600
0.57	5.79	4.02	1.01	2.07	2.41	2.79	0700
3.20	2.26	2.06	2.83	0.90	1.62	4.40	0800
1.89	3.40	0.52	63.24	0.00	0.38	24.68	0900
19.01	50.89	42.92	27.01	6.33	35.36	40.33	1000
0.00	1.66	0.00	0.00	0.00	0.00	0.22	9000
37.04	91.49	80.13	135.17	42.90	59.16	105.69	9900

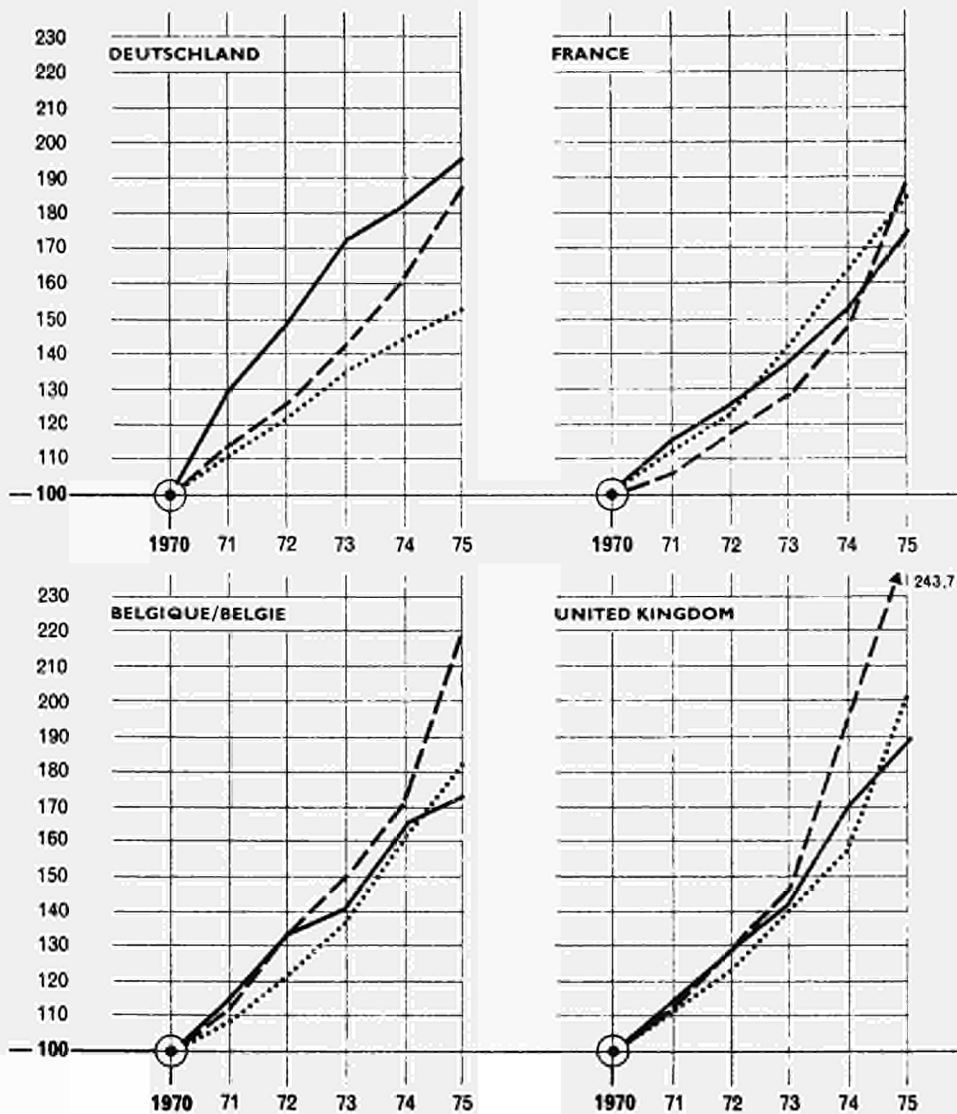
1975

0.45	1.04	1.79	0.80	1.32	1.04	1.95	0100
0.51	5.80	1.04	2.92	3.50	0.94	3.41	0200
1.06	6.43	2.77	3.80	3.25	4.67	4.62	0300
7.07	2.12	5.49	8.63	0.31	1.73	10.05	0400
1.19	7.52	3.18	5.26	18.84	5.97	4.12	0500
4.14	4.66	5.61	14.64	10.12	5.83	11.90	0600
0.57	7.12	3.51	1.13	3.10	2.56	3.01	0700
3.42	2.40	2.58	2.67	0.00	2.25	4.66	0800
1.34	3.44	0.50	54.89	0.00	0.44	26.06	0900
20.36	53.85	37.55	23.51	5.78	36.13	39.61	1000
0.00	2.55	0.00	0.00	0.00	0.00	0.26	9000
40.12	96.94	72.06	118.27	46.22	61.56	109.65	9900

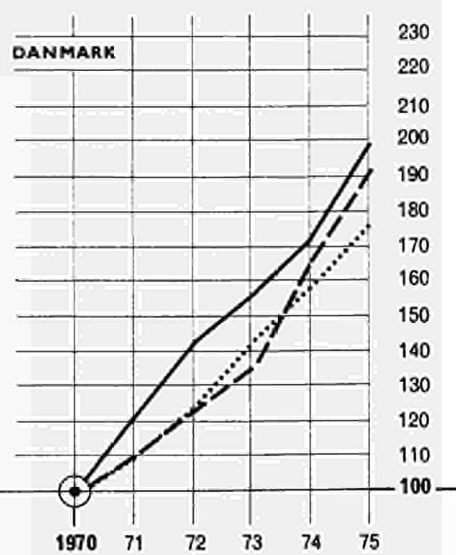
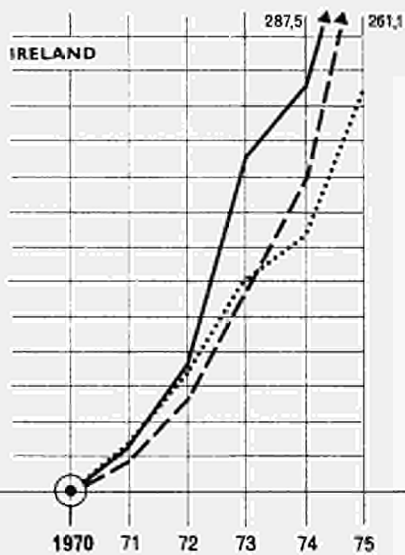
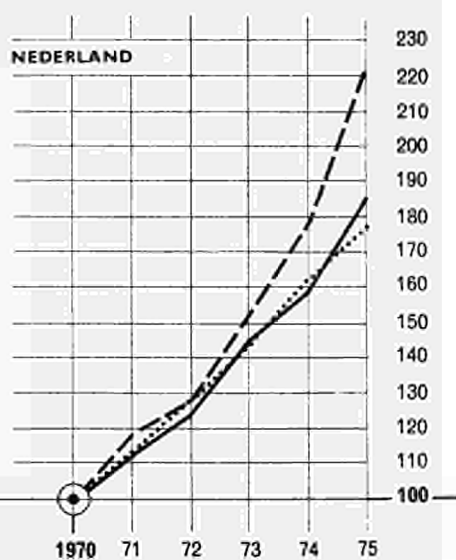
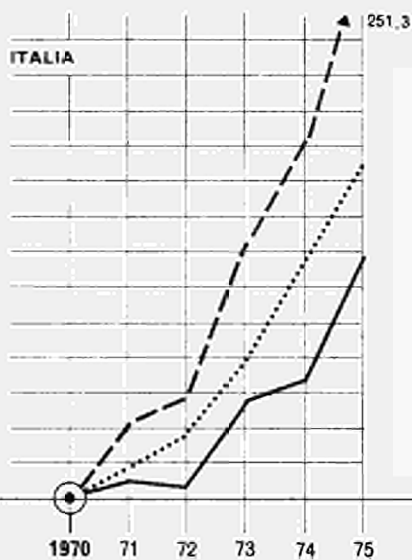
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Public expenditure on R&D, total public budget and gross domestic product

1970 - 1975



..... Gross domestic product - - - - - Total budget ——— Expenditure on R&D



TRENDS IN PUBLICALLY FINANCED R&D BY NABS OBJECTIVES

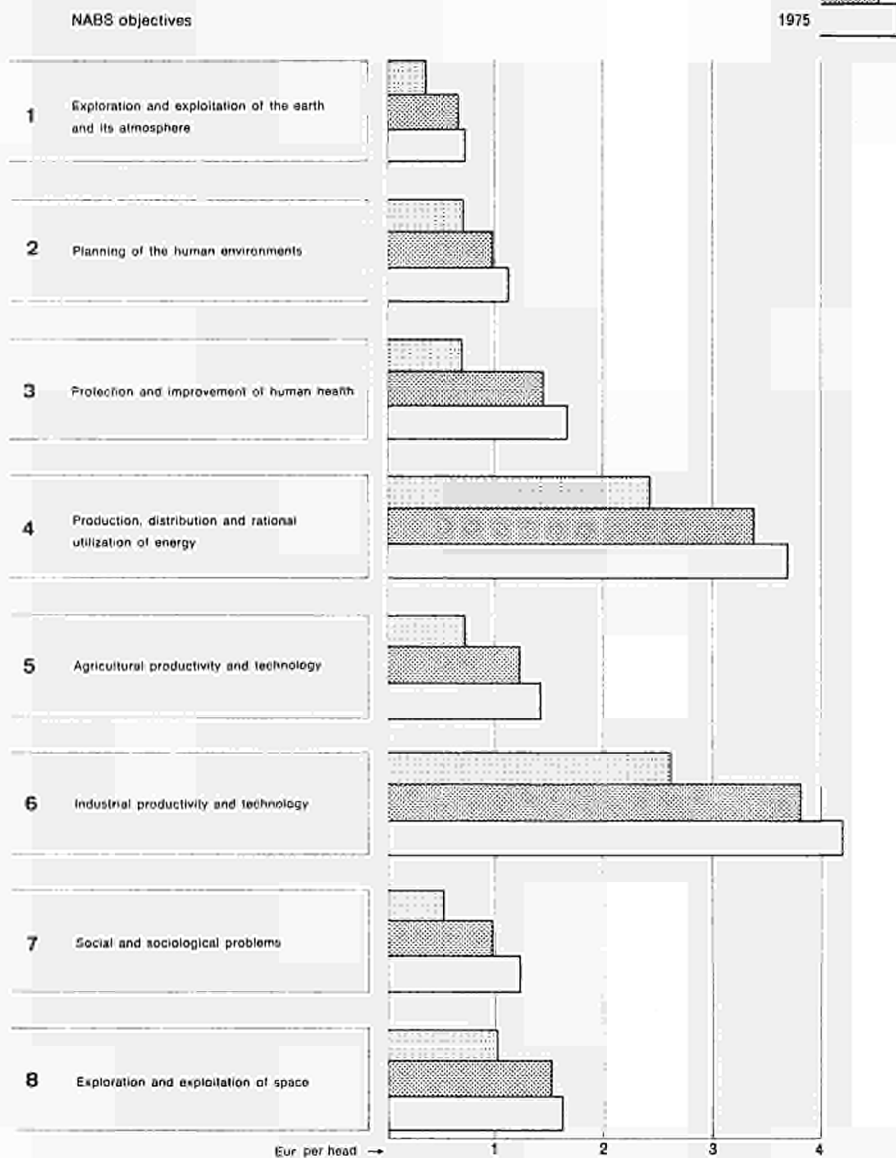
The objectives of the public financing of R&D have not undergone any fundamental changes:

- Since 1970 the share of civil research in the total of public funds devoted to R&D has risen, slowly but steadily (1970: 75 %, 1975: 78 %).
- As previously, almost half of the funds devoted to civil R&D are directed towards the "General promotion of knowledge".
- There is a slight reduction in the level of research of a mainly technological character (connected with the exploration and exploitation of the earth and its atmosphere, energy, industrial productivity and technology and space exploration).
- Objectives of a primarily human and social character (the improvement of the human environment, the protection of health and the problems of life in society) appear to be receiving greater importance in the public credits for R&D.
- The relative importance of research in the field of agricultural productivity and technology has increased slightly.

In the Community 32 Eur per head were devoted in 1975 to Civil R&D, of which 11 Eur were for research with technological objectives, and 4 for research on human and social problems.

Expenditure on R&D in Eur per head

(estimation for 1970)



7 Analysis of R&D expenditure by NABS objective (%)

1974

OBJECTIVES NABS		DEUTSCH- LAND BR	FRANCE
1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	0100	1.69	2.95
2 PLANNING OF HUMAN ENVIRONMENTS	0200	2.58	4.32
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0300	3.79	4.51
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	0400	10.75	7.60
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	0500	1.70	3.49
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	0600	7.54	12.36
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	0700	4.06	1.08
8 EXPLORATION AND EXPLOITATION OF SPACE	0800	4.11	5.81
9 DEFENCE	0900	11.84	34.02
10 GENERAL PROMOTION OF KNOWLEDGE	1000	51.93	23.43
EXPENDITURE NOT ITEMIZED	5000	0.00	0.45
TOTAL EXPENDITURE	9900	100.00	100.00

1975

1 EXPLORATION AND EXPLOITATION OF THE EARTH AND ITS ATMOSPHERE	0100	1.79	3.01
2 PLANNING OF HUMAN ENVIRONMENTS	0200	2.56	4.47
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0300	4.26	4.87
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	0400	10.54	8.61
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	0500	1.88	3.86
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	0600	7.35	14.31
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	0700	4.88	1.10
8 EXPLORATION AND EXPLOITATION OF SPACE	0800	4.24	5.58
9 DEFENCE	0900	11.03	29.63
10 GENERAL PROMOTION OF KNOWLEDGE	1000	51.48	24.13
EXPENDITURE NOT ITEMIZED	9000	0.00	0.41
TOTAL EXPENDITURE	9900	100.00	100.00

1974

ITALIA	NEDERLAND	BELGIQUE / BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R 9	
1.64	1.01	2.44	0.60	3.27	1.63	1.78	0100
1.20	4.76	1.70	1.93	7.27	1.72	2.91	0200
4.01	6.72	4.68	2.58	5.77	7.32	3.57	0300
17.61	3.89	14.54	6.39	0.37	2.87	8.98	0400
2.95	7.36	4.44	3.92	38.74	9.60	3.28	0500
5.97	6.31	10.00	14.99	25.08	9.64	10.36	0600
1.54	6.32	5.02	0.74	4.81	4.07	2.64	0700
8.65	2.47	2.57	2.09	0.00	2.74	4.17	0800
5.11	3.71	0.65	46.78	0.00	0.64	23.54	0900
51.32	55.63	53.57	19.98	14.75	59.77	38.16	1000
0.00	1.81	0.00	0.00	0.00	0.00	0.21	9000
100.00	100.00	100.00	100.00	100.00	100.00	100.00	9900

1975

1.11	1.07	2.48	0.67	2.86	1.69	1.87	0100
1.27	5.99	1.45	2.47	7.57	1.52	3.17	0200
2.65	6.63	3.85	3.22	7.03	7.59	4.33	0300
17.61	2.18	13.17	7.30	0.68	2.80	9.21	0400
2.97	7.76	4.41	4.45	40.77	9.70	3.61	0500
10.32	4.81	13.34	12.38	21.90	9.47	10.53	0600
1.43	7.35	4.88	0.96	6.70	4.16	3.04	0700
8.53	2.48	3.58	2.26	0.00	3.65	4.32	0800
3.35	3.55	0.69	46.41	0.00	0.72	21.62	0900
50.76	55.55	52.16	19.88	12.50	58.69	38.05	1000
0.00	2.63	0.00	0.00	0.00	0.00	0.26	9000
100.00	100.00	100.00	100.00	100.00	100.00	100.00	9900

8 The main objectives of R&D

Civil R&D as a proportion of the total expenditure on R&D (%)

	1974	1975
Deutschland	88,2	89,0
France	66,0	70,4
Italia	94,9	96,6
Nederland	96,3	96,4
Belgique/België	99,3	93,1
United Kingdom	53,0	53,6
Ireland	100,0	100,0
Danmark	99,4	99,3
EUR 9	76,4	78,4

Expenditure as a proportion of the civil R&D expenditure (%)

	1974	1975
Expenditure for the general promotion of knowledge		
Deutschland	58,9	57,9
France	35,5	35,1
Italia	54,1	55,3
Nederland	57,8	55,8
Belgique/België	53,9	52,5
United Kingdom	36,9	37,2
Ireland	14,7	13,3
Danmark	60,2	59,3
EUR 9	49,8	49,1

	1974	1975
R&D expenditure with predominantly technological objectives		
Deutschland	27,3	26,9
France	43,5	43,6
Italia	35,7	35,6
Nederland	14,2	13,2
Belgique/België	30,1	32,8
United Kingdom	44,6	41,3
Ireland	28,6	27,3
Danmark	17,0	17,7
EUR 9	33,0	32,4
R&D expenditure with predominantly human and social objectives		
Deutschland	11,8	13,2
France	15,0	15,2
Italia	7,1	5,8
Nederland	15,5	20,1
Belgique/België	11,5	10,2
United Kingdom	6,7	8,6
Ireland	17,6	19,7
Danmark	13,2	13,3
EUR 9	12,0	13,0
R&D expenditure for the agricultural productivity and technology		
Deutschland	1,9	2,1
France	5,3	5,4
Italia	2,1	3,2
Nederland	7,6	8,1
Belgique/België	4,5	4,4
United Kingdom	7,6	8,5
Ireland	33,7	39,6
Danmark	9,7	9,7
EUR 9	4,3	4,6

9 Analysis of R&D expenditure for
technological objectives (%)

1975

OBJECTIVES N A B S		DEUTSCH- LAND BR	FRANCE
1 EXPLORATION AND EXPLGITATION OF THE EARTH AND ITS ATMOSPHERE	0100	100.00	100.00
10 RESEARCH OF A GENERAL NATURE	0108	22.30	1.10
11 SOIL AND SUBSTRATUM	0110	40.90	52.62
111 OIL AND MINERAL PROSPECTING	0111	8.13	2.71
112 EXPLORATION AND EXPLOITATION OF SUBMARINE SHELVES	0112	5.13	6.57
12 LANDHYDROLOGY	0120	4.33	1.32
13 SEAS AND OCEANS	0130	14.76	31.85
14 ATMOSPHERE	0140	17.71	13.11
141 METEOROLOGY	0141	0.45	6.31
142 AERONOMY	0142	17.26	.
19 OTHER RESEARCH	0190	—	—
4 PRODUCTION, DISTRIBUTION AND RATIONAL UTILIZATION OF ENERGY	0400	100.00	100.00
40 RESEARCH OF A GENERAL NATURE	0408	—	3.63
41 PRIMARY ENERGY PRODUCTS AND ASSOCIATED PRODUCTS	0410	23.33	22.28
410 RESEARCH OF A GENERAL NATURE	0418	—	0.00
411 SOLID FOSSIL FUELS AND THEIR DERIVATIVES	0411	1.08	0.00
412 LIQUID AND GASEOUS FOSSIL FUELS, THEIR DERIVATIVES AND INDUSTRIAL GASSES	0412	4.56	0.00
413 NUCLEAR FUELS	0413	17.69	22.28
419 OTHER PRIMARY ENERGY PRODUCTS AND ASSOCIATED PRODUCTS	0419	—	0.00
42 PRIMARY ENERGY CONVERSION	0420	72.35	69.99
420 RESEARCH OF A GENERAL NATURE	0428	—	0.09
421 CONVERSION OF NON-NUCLEAR FUELS	0421	1.08	0.00
422 NUCLEAR FISSION	0422	67.92	66.05
423 THERMONUCLEAR FUSION	0423	3.35	2.77
429 CONVERSION OF OTHER ENERGY SOURCES	0429	—	1.08
43 PRODUCTION, STORAGE, TRANSP. AND DISTRIBUTION OF ELECTRICITY, GAS, STEAM AND HOT WATER	0430	4.32	2.96
431 ELECTRICITY	0431	4.32	.
432 GAS	0432	—	.
433 HEAT (STEAM AND HOT WATER)	0433	—	.
434 HYDROGEN (H2)	0434	—	.
44 ENERGY CONSERVATION	0440	—	1.14
49 OTHER RESEARCH	0490	—	—

1975

ITALIA	NEDERLAND	BELGIQUE/ BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R S	
100.00	100.00	100.00	100.00	100.00	100.00	100.00	0100
3.98	—	35.83	0.88	0.00	—	10.17	010E
24.62	8.69	17.10	56.51	58.39	66.82	45.15	0110
.	—	0.32	5.08	24.62	.	4.59	0111
5.23	3.79	—	44.70	.	.	8.12	0112
7.38	—	0.46	10.71	8.28	.	3.14	0120
45.14	66.75	7.21	31.90	22.88	.	25.71	0130
18.89	24.56	21.57	—	10.46	33.18	15.03	0140
14.73	24.56	14.41	—	10.46	.	4.89	0141
1.37	—	—	—	.	.	6.20	0142
—	—	17.83	—	—	—	0.76	0150
100.00	100.00	100.00	100.00	100.00	100.00	100.00	0400
0.42	—	3.29	0.09	32.11	—	1.17	040E
27.91	—	14.04	13.35	.	21.41	21.25	0410
.	—	—	0.00	.	.	0.00	041E
0.01	—	0.83	0.11	.	.	0.52	0411
.	—	—	3.91	.	.	2.54	0412
22.48	—	13.21	9.13	—	.	17.54	0413
.	—	—	0.04	.	.	0.01	0419
52.90	100.00	12.36	85.40	.	78.59	69.46	0420
.	.	.	—	.	.	0.02	042E
.	.	.	—	.	.	0.46	0421
43.30	.	.	79.39	—	.	62.44	0422
3.87	.	.	5.32	—	.	3.33	0423
0.31	.	.	0.69	—	.	0.42	0429
0.98	—	52.02	0.91	.	—	5.25	0430
0.98	—	48.45	0.23	.	—	4.21	0431
.	—	.	—	.	—	.	0432
.	—	.	—	.	—	.	0433
.	—	.	—	.	—	.	0434
.	—	—	0.25	42.20	—	0.34	0440
17.79	—	18.30	—	25.69	—	2.54	0490

1975

OBJECTIVES NABS		DEUTSCH- LAND BR	FRANCE
6 INDUSTRIAL PRODUCTIVITY AND TECHNOLOGY	0600	100.00	100.00
60 RESEARCH OF A GENERAL NATURE	0608	36.33	17.78
61 METALLIFEROUS ORES AND PRELIMINARY PROCESS- ING OF METALS	0610	3.20	0.75
610 RESEARCH OF A GENERAL NATURE	0618	—	.
611 EXTRACTION AND DRESSING OF METALLIFEROUS ORES	0611	—	.
612 PRODUCT OF THE IRON AND STEEL INDUSTRY	0612	3.20	.
613 NON-FERROUS METALS	0613	—	.
62 OTHER MINERALS NOT USED FOR ENERGY PRODUC- TION AND THEIR PROCESSING	0620	—	0.38
63 PRODUCTS OF THE CHEMICAL INDUSTRY (INCL. SYNTHETIC AND MAN-MADE FIBRES)	0630	—	3.14
631 PETROCHEMICALS AND COAL BY-PRODUCTS	0631	—	.
632 PHARMACEUTICAL PRODUCTS	0632	—	.
64 METAL ARTICLES, MECHANICAL MACHINERY AND EQUIPMENT	0640	—	0.82
65 ELECTRICAL, ELECTROMECHANICAL AND ELECTRONIC ENGINEERING	0650	28.32	38.08
650 RESEARCH OF A GENERAL NATURE	0658	—	0.05
651 OFFICE MACHINERY AND DATA-PROCESSING EQUIPMENT	0651	21.57	24.77
652 TELECOMMUNICATIONS EQUIPMENT, ELECTRONIC COMPONENTS AND OTHER APPARATUS	0652	6.75	11.90
659 MANUFACTURE OF OTHER ELECTRICAL PRODUCTS AND EQUIPMENT	0659	—	1.35
66 PRECISION AND OPTICAL INSTRUMENTS	0660	0.78	.
67 CIVIL TRANSPORT EQUIPMENT	0670	23.56	36.01
670 RESEARCH OF A GENERAL NATURE	0678	—	0.00
671 AERONAUTICAL ENGINEERING	0671	22.54	35.68
672 ROAD TRANSPORT EQUIPMENT	0672	0.05	0.10
673 RAIL TRANSPORT EQUIPMENT	0673	—	0.00
674 MARINE TRANSPORT EQUIPMENT	0674	0.97	0.24
679 OTHER TRANSPORT EQUIPMENT	0679	—	—
68 PRODUCTS OF OTHER INDUSTRIES	0680	3.78	3.03
680 RESEARCH OF A GENERAL NATURE	0688	—	0.16
681 FOOD, DRINK AND TOBACCO	0681	3.77	2.87
682 TEXTILE PRODUCTS	0682	0.01	0.00
683 RUBBER PRODUCTS	0683	—	0.00
684 PLASTIC PRODUCTS	0684	—	0.30
686 UTILIZATION OF INDUSTRIAL, AGRICULTURAL AND DOMESTIC WASTE FOR NON-ENERGY PURPOSES	0686	—	0.00
689 MISCELLANEOUS PRODUCTS	0689	—	0.00
69 OTHER RESEARCH	0690	4.02	—
8 EXPLORATION AND EXPLOITATION OF SPACE	0800	100.00	100.00
80 RESEARCH OF A GENERAL NATURE	0808	5.00	—
81 RESEARCH ON LAUNCHERS AND SATELLITES	0810	90.59	95.75
811 LAUNCHING SYSTEMS	0811	10.52	.
812 SCIENTIFIC EXPLORATION	0812	25.50	.
813 APPLICATIONS	0813	48.64	.
814 MIXED SYSTEMS	0814	2.13	.
89 OTHER RESEARCH	0890	4.41	4.25

1975

ITALIA	NEDERLAND	BELGIQUE/ BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R 9	
100.00	100.00	100.00	100.00	100.00	100.00	100.00	0600
2.23	.	0.45	9.98	28.53	91.99	20.10	0608
5.85	.	17.70	0.55	.	—	2.25	0610
.	.	—	—	.	—	.	0616
0.57	.	—	0.31	.	—	0.10	0611
.	.	15.60	0.17	.	—	1.51	0612
1.21	.	2.10	0.08	.	—	0.16	0613
4.08	.	4.61	—	.	—	0.53	0620
15.97	.	28.85	0.72	9.21	—	3.36	0630
.	.	0.69	—	.	—	0.03	0631
7.26	.	8.00	—	.	—	0.68	0632
2.84	.	9.91	1.41	17.93	—	1.27	0640
47.61	.	15.36	9.16	.	—	26.93	0650
0.00	.	.	0.59	.	—	0.15	0658
18.40	.	.	7.24	.	—	17.60	0651
23.59	.	.	0.04	.	—	7.47	0652
6.05	.	.	1.30	.	—	1.10	0655
.	.	0.45	0.20	3.61	—	0.29	0660
3.62	.	9.68	75.06	.	—	37.16	0670
.	.	3.36	0.86	.	—	0.33	0678
0.03	20.00	5.18	70.83	.	—	35.98	0671
2.36	.	0.01	0.26	.	—	0.23	0672
0.05	.	.	1.13	.	—	0.25	0673
0.52	.	1.07	1.34	.	—	0.71	0674
.	.	0.06	0.32	.	—	0.07	0675
12.52	.	9.15	2.33	30.66	8.01	3.92	0680
0.00	.	.	—	.	.	0.06	0688
3.22	9.44	2.54	0.47	.	.	2.69	0681
2.14	.	1.53	0.33	.	.	0.24	0682
0.60	.	.	—	.	.	0.03	0683
.	.	.	0.08	.	.	0.02	0684
.	.	.	0.17	.	.	0.04	0686
1.40	.	1.18	1.27	.	.	0.40	0685
5.28	.	3.83	0.59	10.06	—	1.65	0690
100.00	100.00	100.00	100.00	—	100.00	100.00	0800
1.00	8.27	7.49	0.00	—	19.99	2.67	0808
99.00	91.73	86.83	100.00	—	80.01	94.02	0810
16.44	—	40.94	2.48	—	.	6.82	0811
34.13	64.14	45.82	18.84	—	.	17.85	0812
21.82	—	0.02	72.71	—	.	27.21	0813
18.07	—	.	5.96	—	.	3.15	0814
.	0.00	5.69	—	—	—	3.31	0890

OBJECTIVES NABS		DEUTSCH- LAND BR	FRANCE
2 PLANNING OF THE HUMAN ENVIRONMENT	0200	100.00	100.00
20 RESEARCH OF A GENERAL NATURE	0208	4.89	0.44
21 LAND DEVELOPMENT	0210	8.24	13.32
210 RESEARCH OF A GENERAL NATURE	0218	4.12	4.23
211 URBAN DEVELOPMENT	0211	2.87	4.47
212 RURAL DEVELOPMENT	0212	0.15	4.62
219 DEVELOPMENT OF OTHER AREAS	0219	-	0.00
22 CONSTRUCTION AND PLANNING OF BUILDINGS	0220	8.15	6.46
220 RESEARCH OF A GENERAL NATURE	0228	4.59	-
221 RESIDENTIAL BUILDINGS	0221	0.31	-
229 NON-RESIDENTIAL BUILDINGS	0229	1.56	-
23 CIVIL ENGINEERING	0230	17.87	11.88
24 TRANSPORT SYSTEMS	0240	56.18	8.83
25 TELECOMMUNICATIONS SYSTEMS	0250	0.01	57.87
26 WATER SUPPLY	0260	4.31	1.19
260 RESEARCH OF A GENERAL NATURE	0268	4.31	-
261 DRINKING WATER SUPPLY	0261	-	-
269 WATER SUPPLY FOR THE ENERGY SECTOR AND FOR INDUSTRIAL AND AGRICULTURAL USE	0269	-	-
29 OTHER RESEARCH	0290	0.34	-
3 PROTECTION AND IMPROVEMENT OF HUMAN HEALTH	0300	100.00	100.00
30 RESEARCH OF A GENERAL NATURE	0308	37.76	-
31 MEDICAL RESEARCH	0310	29.17	82.45
32 RESEARCH ON FOOD HYGIENE AND NUTRITION	0320	6.45	0.00
321 RESEARCH ON FOOD HYGIENE	0321	6.11	0.00
322 RESEARCH ON NUTRITION	0322	0.19	0.00
33 RESEARCH ON POLLUTION	0330	23.53	17.31
330 RESEARCH OF A GENERAL NATURE	0338	2.95	7.65
331 WATER POLLUTION	0331	3.68	1.30
332 AIR POLLUTION	0332	7.76	0.77
333 POLLUTION OF THE SOIL AND SUBSTRATUM	0333	0.83	0.33
334 NOISE ABATEMENT	0334	1.15	0.49
335 RADIOACTIVE POLLUTION	0335	1.05	6.78
339 OTHER POLLUTION	0339	1.55	-
39 OTHER RESEARCH	0390	3.10	0.24
7 SOCIAL AND SOCIOLOGICAL PROBLEMS	0700	100.00	100.00
70 RESEARCH OF A GENERAL NATURE	0708	33.73	33.17
71 SYSTEMS ANALYSIS AND PLANNING	0710	9.90	28.82
72 EDUCATION, VOCATIONAL TRAINING AND RETRAINING	0720	19.91	11.00
73 CULTURAL QUESTIONS	0730	5.14	6.60
74 MANAGEMENT AND ORGANIZATION IN BUSINESS AND ADMINISTRATION	0740	2.06	0.54
741 HOSPITAL MANAGEMENT AND ORGANIZATION	0741	-	-
75 IMPROVEMENT OF WORKING CONDITIONS	0750	13.31	10.36
76 SOCIAL ACTION	0760	0.64	0.32
77 SOCIAL RELATIONSHIPS AND CONFLICTS	0770	7.62	8.59
78 ORGANIZATION OF LEISURE	0780	-	0.43
79 OTHER RESEARCH	0790	7.68	0.16

ITALIA	NEDERLAND	BELGIQUE/ BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R 9	
100.00	100.00	100.00	100.00	100.00	100.00	100.00	0200
3.48	14.25	0.00	5.58	18.59	—	4.16	0208
4.42	5.96	4.01	11.53	4.28	20.12	10.42	0210
0.84	.	.	8.59	.	.	4.21	0218
.	.	.	2.00	.	.	2.94	0211
.	.	.	0.95	.	.	2.01	0212
.	.	.	—	.	.	0.00	0219
13.41	19.86	56.31	19.03	33.47	41.15	11.53	0220
13.41	—	.	8.19	.	.	2.86	0228
.	5.57	.	3.83	.	.	1.24	0221
.	2.31	32.24	7.01	.	.	2.22	0229
12.02	26.44	12.13	25.79	3.29	18.53	17.28	0230
0.24	29.18	10.25	30.11	26.32	6.00	28.38	0240
27.97	—	6.00	2.50	0.33	14.20	24.06	0250
27.94	4.32	11.30	5.37	13.73	—	3.83	0260
18.86	—	11.18	4.44	.	—	2.50	0268
9.08	4.32	0.11	0.06	.	—	0.65	0261
.	—	—	0.04	.	—	0.01	0265
10.51	0.00	—	0.09	.	—	0.33	0290
100.00	100.00	100.00	100.00	100.00	100.00	100.00	0300
11.00	40.80	0.00	4.45	13.72	—	18.36	0308
30.20	11.35	36.42	53.94	40.71	66.97	49.31	0310
10.78	—	7.33	5.80	1.50	8.29	3.96	0320
2.50	—	.	4.88	1.50	.	3.01	0321
6.66	—	.	0.22	.	.	0.30	0322
20.82	37.62	47.13	17.06	44.07	24.74	22.57	0320
.	.	6.82	3.06	3.54	.	4.14	0338
12.14	.	12.46	5.51	19.82	.	3.34	0331
3.08	0.92	12.81	2.67	3.98	.	4.02	0332
.	.	0.76	0.05	7.61	.	0.46	0333
0.49	.	0.81	2.57	1.77	.	0.98	0334
.	.	13.35	0.70	.	.	3.01	0335
0.37	.	0.13	0.07	7.35	.	0.62	0335
27.21	10.23	9.12	18.75	—	—	5.80	0350
100.00	100.00	100.00	100.00	100.00	100.00	100.00	0700
12.17	13.83	65.74	1.05	33.98	—	29.47	0708
41.44	6.29	9.22	3.77	9.56	23.83	11.99	0710
7.19	35.87	4.33	18.62	26.18	15.25	19.90	0720
0.29	18.34	1.28	—	.	28.67	6.93	0730
10.65	9.89	1.40	14.93	10.68	7.56	4.06	0740
6.80	—	.	13.52	.	.	0.96	0741
2.03	2.10	.	0.90	.	—	9.44	0750
1.70	5.90	.	8.97	2.14	0.09	1.80	0760
0.51	4.77	12.12	29.37	.	24.61	9.03	0770
0.70	1.46	.	0.47	8.54	—	0.33	0780
23.32	1.54	5.91	21.91	8.91	—	7.05	0790

11 Analysis of R&D expenditure for agriculture

1975

OBJECTIVES N A B S		DEUTSCH- LAND BR	FRANCE
5 AGRICULTURAL PRODUCTIVITY AND TECHNOLOGY	0500	100.00	100.00
50 RESEARCH OF A GENERAL NATURE	0502	47.26	44.37
51 DOMESTIC AND WILD ANIMAL PRODUCTS	0510	4.94	17.75
511 VETERINARY MEDICINE	0511	0.31	-
52 CROPS (INCLUDING FORESTRY) AND WINE	0520	39.96	30.92
53 FISHING AND FISHERY PRODUCTS	0530	6.65	6.97
59 OTHER RESEARCH	0590	1.18	-

12 Analysis of R&D expenditure for the general promotion of knowledge (%)

1975

OBJECTIVES N A B S		DEUTSCH- LAND BR	FRANCE
10 GENERAL PROMOTION OF KNOWLEDGE	1000	100.00	100.00
100 RESEARCH OF A GENERAL NATURE	1008	2.13	1.77
101 RESEARCH IN THE EXACT AND NATURAL SCIENCES	1010	40.08	82.61
1010 RESEARCH OF A GENERAL NATURE	1018	26.61	32.89
1011 LOGIC, MATHEMATICS AND PHYSICS	1011	7.85	31.89
1012 ASTRONOMY AND ASTROPHYSICS, EARTH SCIENCES AND CHEMISTRY	1012	1.68	8.49
1013 BIOSCIENCES	1013	3.74	9.34
1019 OTHER DISCIPLINES	1019	0.19	-
102 AGRONOMIC RESEARCH	1020	5.02	0.00
103 MEDICAL RESEARCH	1030	24.46	8.23
104 ENGINEERING RESEARCH	1040	14.95	-
105 RESEARCH IN THE SOCIAL SCIENCES AND HUMANITIES	1050	13.33	7.40
109 OTHER DISCIPLINES	1090	0.02	-

1975

ITALIA	NEDERLAND	BELGIQUE/ BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R 9	
100.00	100.00	100.00	100.00	100.00	100.00	100.00	0500
6.12	55.65	—	16.06	11.11	24.63	34.57	0508
9.80	15.74	29.62	33.35	49.74	38.13	20.58	0510
2.68	5.12	3.95	5.22	16.19	-	2.62	0511
63.91	24.58	60.42	39.72	27.35	34.48	36.54	0520
6.30	4.03	3.86	7.06	5.40	2.77	6.20	0530
13.87	—	6.09	3.82	6.39	—	2.11	0590

12

1975

ITALIA	NEDERLAND	BELGIQUE/ BELGIE	UNITED KINGDOM	IRELAND	DANMARK	E U R 9	
100.00	100.00	100.00	100.00	100.00	100.00	100.00	1000
0.07	—	25.03	34.83	2.14	13.02	6.26	1008
46.35	36.17	2.18	41.19	58.57	32.67	46.02	1010
0.23	—	-	39.67	-	-	23.26	1018
24.83	5.11	9.21	0.73	-	-	12.19	1011
14.48	0.32	6.99	—	-	-	3.66	1012
6.81	—	3.45	0.64	-	-	4.22	1013
-	—	-	—	-	-	0.10	1019
4.52	6.31	2.70	5.52	3.19	6.06	4.17	1020
15.65	22.30	23.62	11.72	9.81	17.21	19.33	1030
10.51	16.18	9.80	3.27	2.99	8.80	10.55	1040
22.90	19.05	18.77	2.96	23.36	22.23	12.82	1050
0.00	—	0.15	0.51	-	—	0.07	1090

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