

TOBACCO CONSUMPTION 1970-1994

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Tobacco consumption 1970-1994 in the member states of the European Union and in Norway and Iceland

Summary of results

The principal findings of the tobacco study for the period 1970-1994 are summarised below. These findings should be considered to be estimations only, since they are based on different sources of information which, in most cases, not yet are harmonised.

- Compared to total household consumption, tobacco consumption has decreased in almost all West-European countries.
- In most of the countries studied, the cost of tobacco products has increased more than the general cost of living.
- The prices on tobacco products are high relative to other prices in the Nordic countries, Ireland and United Kingdom.
- An overwhelming percentage of overall tobacco consumption is attributable to cigarettes.
- Cigarette consumption/capita has decreased considerably (>20%) in Finland, W. Germany, Norway, Sweden and United Kingdom. In the other countries, with the exception of Portugal, consumption has remained relatively stable or has increased by less than 20%.
- The general trend in smoking prevalence is downwards in all countries. This trend is noticeable more among men than among women.
- Smoking among young people (age group 15/16-24) has decreased.
- Among young people, the heaviest smokers are to be found in Denmark, France, the Netherlands, Spain and United Kingdom.
- Young women smoke less than young men except in Sweden (where the young men may take moist snuff instead of smoking).
- The unemployed seem to smoke more than other occupational groups (applies to Austria, Finland, France, Italy and Sweden).
- Most countries have taken steps to tighten legislation on the control of tobacco consumption.
- All countries require that cigarette packets carry a governmental health warning.

1.1. Introduction

In 1995-1996 a study has been carried out on tobacco consumption during 1970-1994 by Statistics Sweden (SCB). The project has received financial support from the European Commission, the "Aid against Cancer Program" and it covers all the member states of the EU and also the two non-member states Norway and Iceland.

The main goal of the project has been to show the trends in tobacco consumption and smoking habits in these countries. Besides describing the trends over time by sex, age and occupational/socio-economic groups, this report will put the focus on data quality and harmonisation.

This study is an extended pilot study following a Nordic study published in 1992. Primarily it uses a descriptive approach to estimate changes in tobacco usage. It can also be regarded as a test case to assess data quality and degree of harmonisation within the EU. The material does not allow extensive analyses, but it might serve as a source of information for forthcoming studies. The same questionnaire as in the Nordic study has been used, and it has been addressed to the National Statistical Offices in the countries concerned.

The plan of the study has not permitted later changes in the questionnaire.

The work was started by Mr. Brian Wicklin, Statistician, SCB, who had carried out the Nordic study. Due to different administrative reasons, there has been some interruptions and later the work was completed by Ms. Kerstin Hellström, Senior Statistician, SCB.

A Swedish reference group was set up, as is common in cases, where Statistics Sweden does not have all the necessary expertise in the subject-matter area. The members have been: Dr. Maria Gerhardsson de Verdier, Ass. Prof., National Board of Health and Welfare; Mr. Paul Nordgren, Principal Administrative Officer, National Institute of Public Health; Mr. Urban Aspén, Senior Statistician, SCB; Mr. Lars Lundgren, Head of the Consumption Program, SCB, Chairman of the reference group.

1.2. General technical remarks

The questionnaire, a pre-printed form, was sent to the national statistical office of each country, specifying the required data. Only a few countries sent back the questionnaire, more or less completely filled in. Instead, following later contacts, they have sent material in form of reports, excerpts from reports and other specially compiled information.

Efforts were made to complete missing data from other sources, i.e. national statistical yearbooks, international yearbooks and databases etc.

This review focuses the two major domains: Consumption data and Smoking prevalence. These are also the domains recommended by WHO for monitoring the tobacco use. The reason for monitoring tobacco use is the "prominent role of tobacco as a major health hazard".

Data from national Household Budget Surveys are not included in this report since different types of households can not be compared due to the lack of information about the number of adults in each category. It is also well known that alcohol and tobacco consumption is severely under-estimated in Household Budget Surveys.

As measure of consumption, the figures on household expenditure, in the OECD National Accounts, Volume II, were chosen. Not all of the countries had reported household expenditure or consumption data, and the advantage of using the OECD data is that they are already harmonized to a big extent since all the countries follow the UN System of National Accounts, SNA. There was an almost complete correspondence between the OECD figures and the data reported by those countries who had directly responded that question.

Occupational-socio-economic classification poses problems in the study since the classification differs among countries. An effort was made to adapt the classifications to the groups listed in the questionnaire after the "most-criterion" principle, but there might be certain inconsistencies. On the European level the ISCO-88 is now recommended for classification of occupations in the Labour Force Surveys, which can be an opening to coordination in the future. To that comes classification of economically inactive, students, housewives and unemployed etc, most important for social surveys.

1.3 Experiences from the data collection

This European pilot study was addressed to the EU-countries plus Norway and Iceland, 17 countries altogether. The questionnaire, which was originally designed for the Nordic study, has not worked out well. Only 5 countries have answered more or less completely. No country was able to submit all the requested data. Questions on taxes, advertising and export-import have been answered in a very few cases. Data on smoking habits were mostly delivered in form of copies of report pages, in some cases as entire reports.

The countries which did not fill in the questionnaire at all, have sent reports, excerpts of reports and other information. The conclusion to be drawn is that this questionnaire was not fitted for this type of study.

It has been a time-consuming procedure to collect the material, necessitating many contacts by phone, fax and letter. It has also been a time-consuming compile the data, deriving from many different sources and expressed in many languages.

The questionnaire is enclosed as Annex.

2. Tobacco consumption

2.1. Private final consumption of tobacco and total household expenditure of resident households

Table 1 shows the expenditure on tobacco and the total expenditure of resident households in fixed prices with 1970 as base year. Diagram I shows the volume development in the form of an index-like measure (expenditure in fixed prices divided by the expenditure of the base year, both with 1970 as base year). Tobacco refers to consumption in the domestic market, the Total refers to Final Consumption of resident households incl. direct purchases abroad. The tobacco figure therefore can be subject of some over- or underestimation, depending upon the domestic price situation, volume of tourist purchases etc.

The diagram indicates that the volume of tobacco consumption has decreased relative to the total household consumption during the observation period, in all countries except Greece and Luxembourg (see comment above). (For some countries values are missing, due to lack of CPI data in suitable series)

Private final consumption expenditure of resident households. Fixed prices. (1970 = 100).							
<i>Country</i>		<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1994</i>
<i>Millions of schillings</i>							
Austria	Tobacco	6 235	7 024	7 850	8 062	7 694	7 736
	Total	205 290	259 632	299 200	326 266	380 315	409 871
<i>Millions of francs</i>							
Belgium	Tobacco	..	..	..	..	..	..
	Total	769 013	953 769	1 064 661	1 093 342	1 259 124	1 350 656
<i>Millions of kroner</i>							
Denmark	Tobacco	3 247	3 433	3 411	3 605	3 255	3 134
	Total	67 800	76 400	80 878	89 356	90 995	99 994
<i>Millions of markkaa</i>							
Finland	Tobacco	714	935	834	828	886	695
	Total	24 958	31 273	34 554	39 902	47 082	44 348
<i>Millions of francs</i>							
France	Tobacco	6 862	8 532	9 766	11 381	11 903	11 254
	Total	457 196	561 384	654 625	719 817	835 061	874 373
<i>Millions of DM</i>							
W. Germany	Tobacco	9 830	10 511	11 353	11 095	11 263	10 727
	Total	363 130	428 811	500 116	510 433	606 488	653 324
<i>Millions of drachmae</i>							
Greece	Tobacco	7 277	10 146	13 792	19 543	20 295	20 191
	Total	206 813	266 884	319 341	358 671	403 194	426 893
<i>Millions of kronur</i>							
Iceland¹⁾	Tobacco	8.1	9.2	9.0	9.5	9.5	9.2
	Total	269.3	355.3	489.9	556.7	640.6	619.7

¹⁾ Source: National Economic Institute

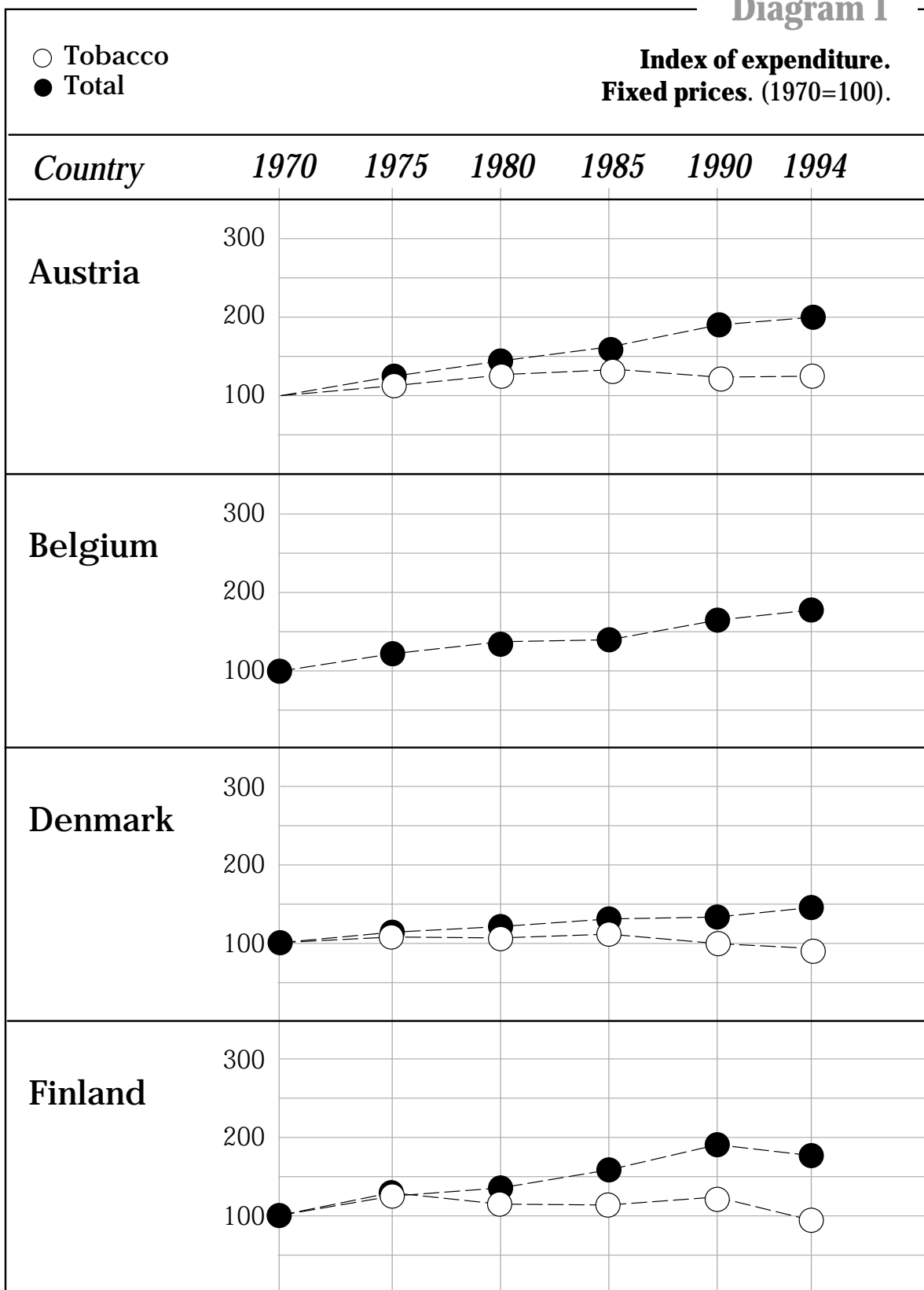
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Table 1

Private final consumption expenditure of resident households.							
Fixed prices. (1970 = 100)							
<i>Country</i>		<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1994</i>
<i>Millions of Irish pounds</i>							
Ireland	Tobacco	78,0	89,6	91,3	77,2	71,0	77,7
	Total	1 116,0	1 256,7	1 676,7	1 618,9	1 290,6	2 286,8
<i>Billions of lire</i>							
Italy	Tobacco	1 125	1 682	1 881	2 274	2 088	..
	Total	39 057	46 701	64 608	71 463	87 859	91 129
<i>Millions of francs</i>							
Luxembourg	Tobacco	600	1 345	2 033	2 717	2 670	..
	Total	27 802	35 373	41 056	44 867	56 885	..
<i>Millions of guilders</i>							
Netherlands	Tobacco	..	..	2 244	1 770	1 778	1 712
	Total	..	..	100 234	100 079	115 160	124 847
<i>Millions of kroner</i>							
Norway	Tobacco	1 261	1 278	1 342	1 241	1 367	* 1993 1 310*
	Total	43 047	51 951	60 484	71 286	72 101	74 960*
<i>Millions of pounds sterling</i>							
Sweden	Tobacco	2 663	2 824	2 840	2 734	2 611	2 255
	Total	91 176	105 314	110 195	116 547	134 436	133 965
<i>Millions of pounds sterling</i>							
United Kingdom	Tobacco	1 462	1 519	1 593	1 261	1 210	1 040
	Total	31 171	36 890	40 342	44 434	54 276	53 560

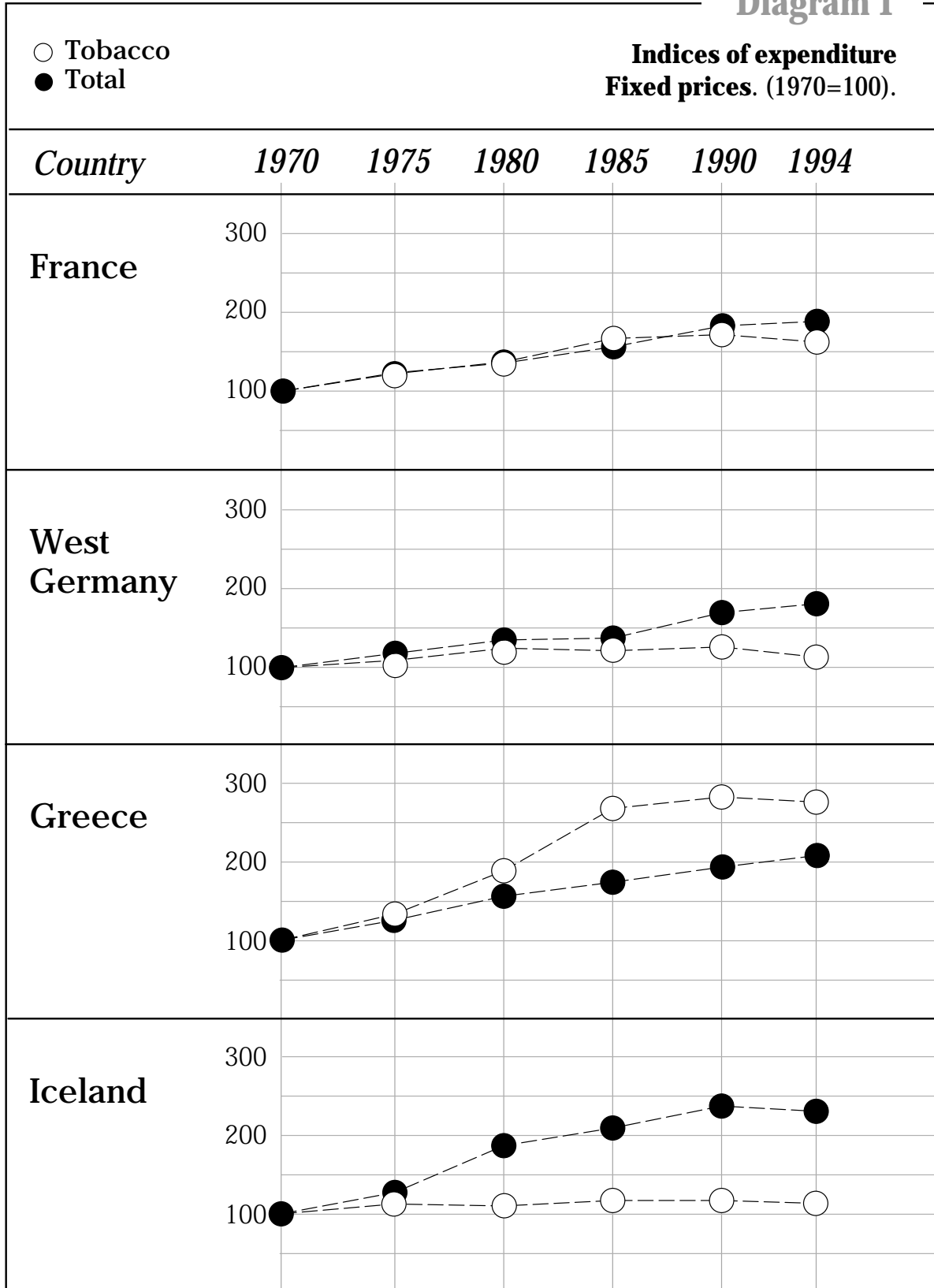
Diagram 1



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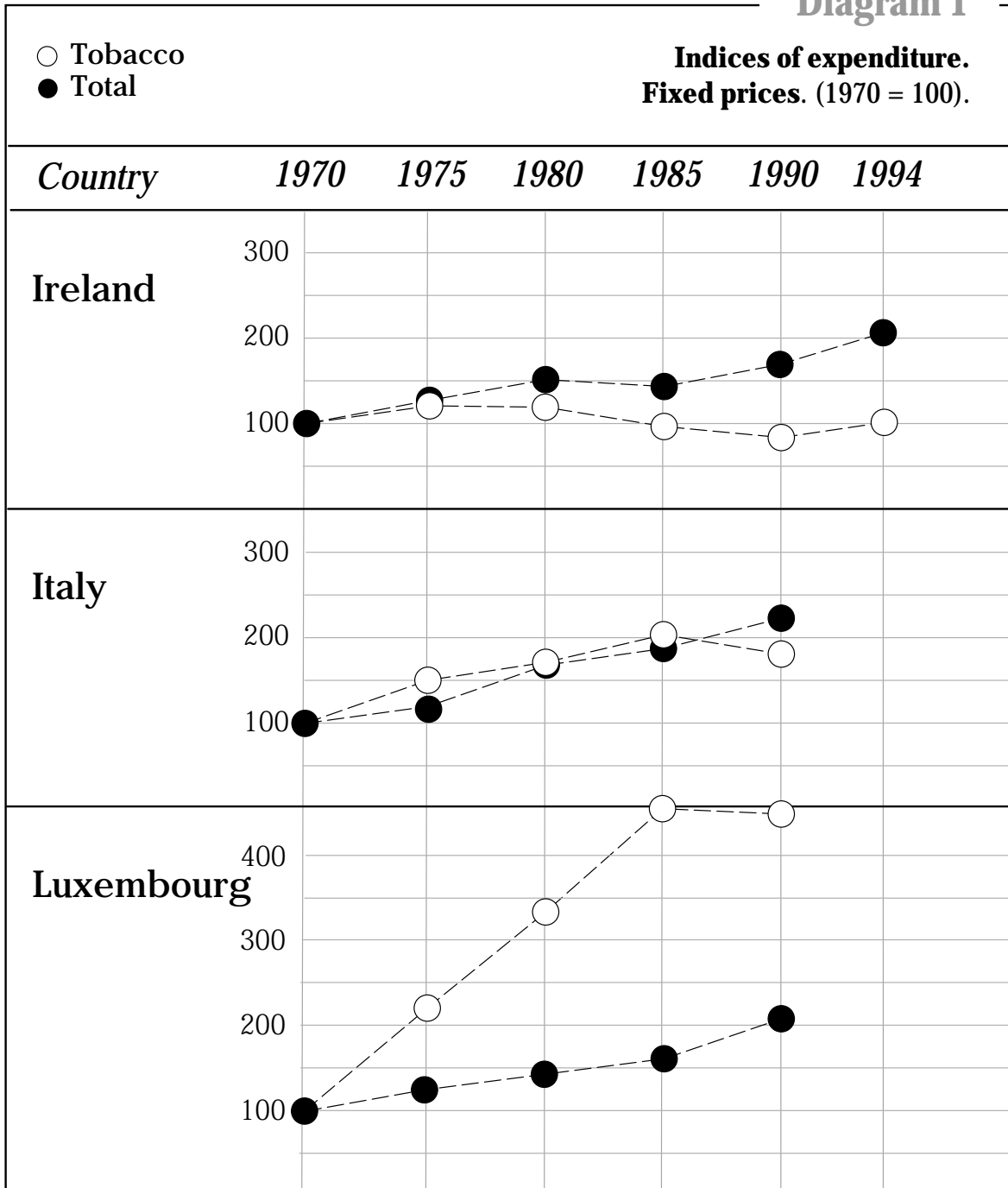
Diagram 1



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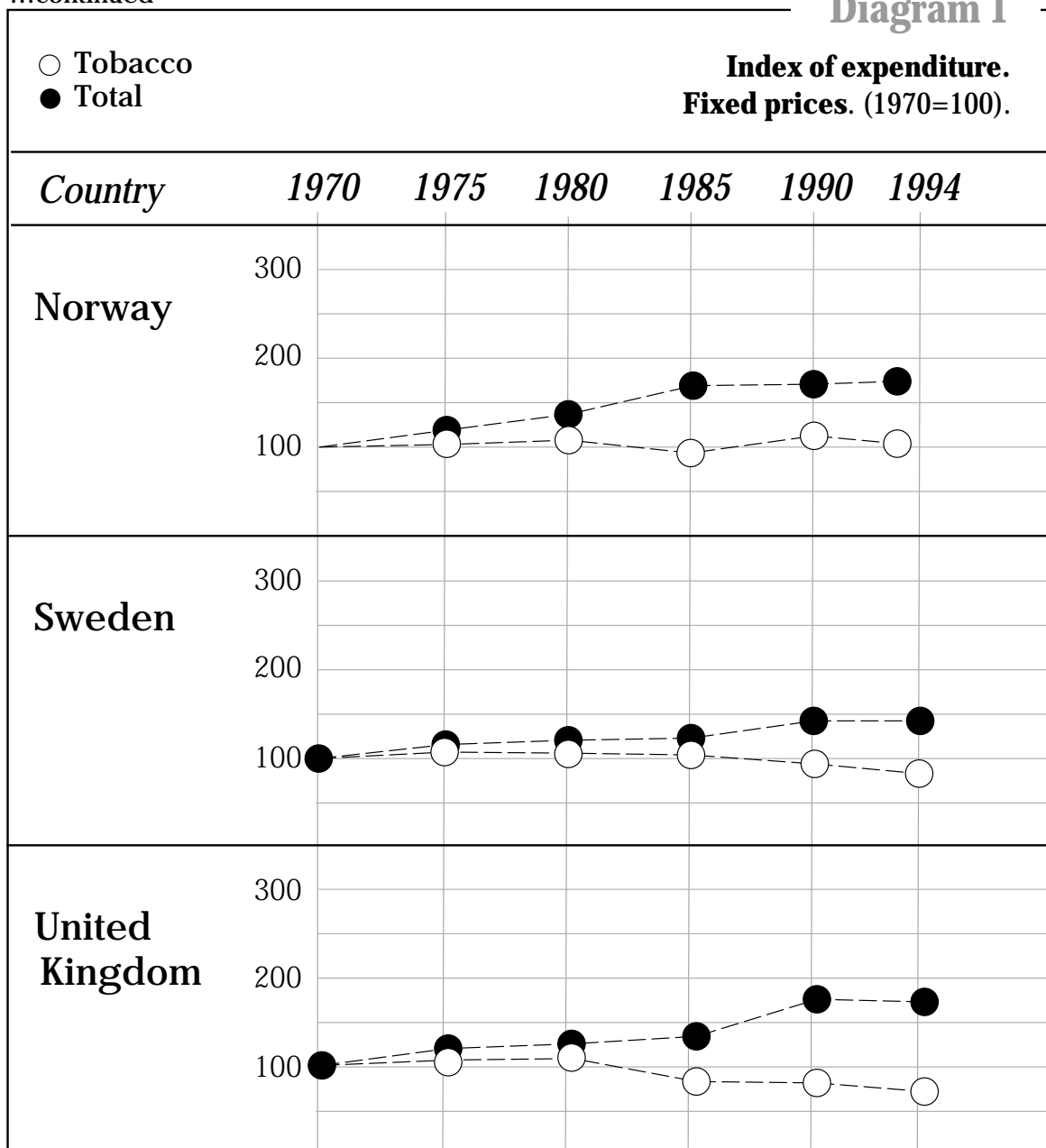
Diagram 1



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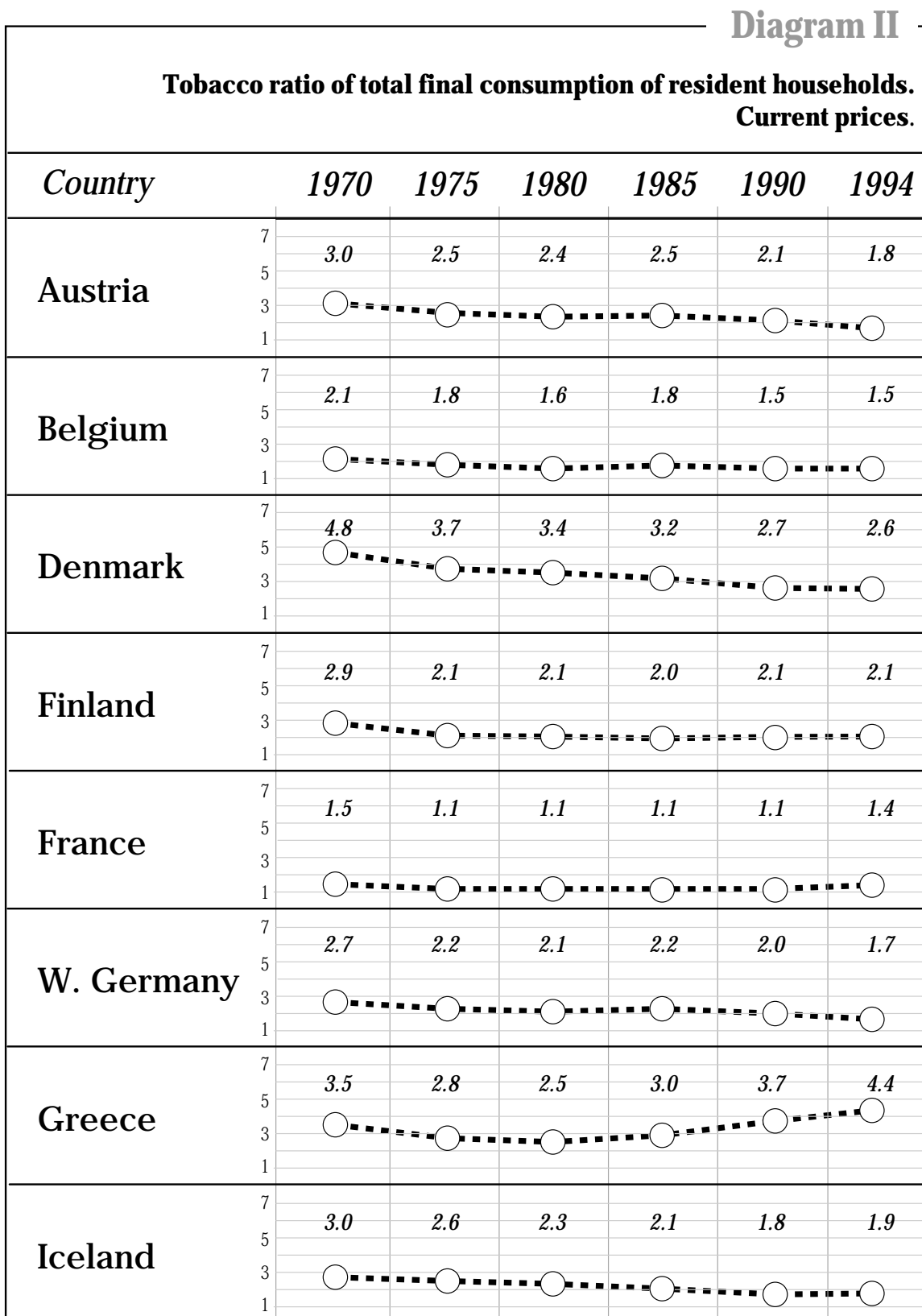
Diagram 1



2.2. Ratio of tobacco consumption to the total household consumption, current and fixed prices

Diagram II shows the tobacco consumption ratio in current prices. The tobacco consumption part of the household expenses decreased in almost all the countries. Exceptions are Greece and Luxembourg, possibly due to consumption of non-residents, see comment page 3.

Regarding the ratio in fixed prices, Diagram III, the tendency is the same with Greece and Luxembourg as the exceptions (see comment p.3). (For some countries values are missing, due to lack of CPI data in suitable series).

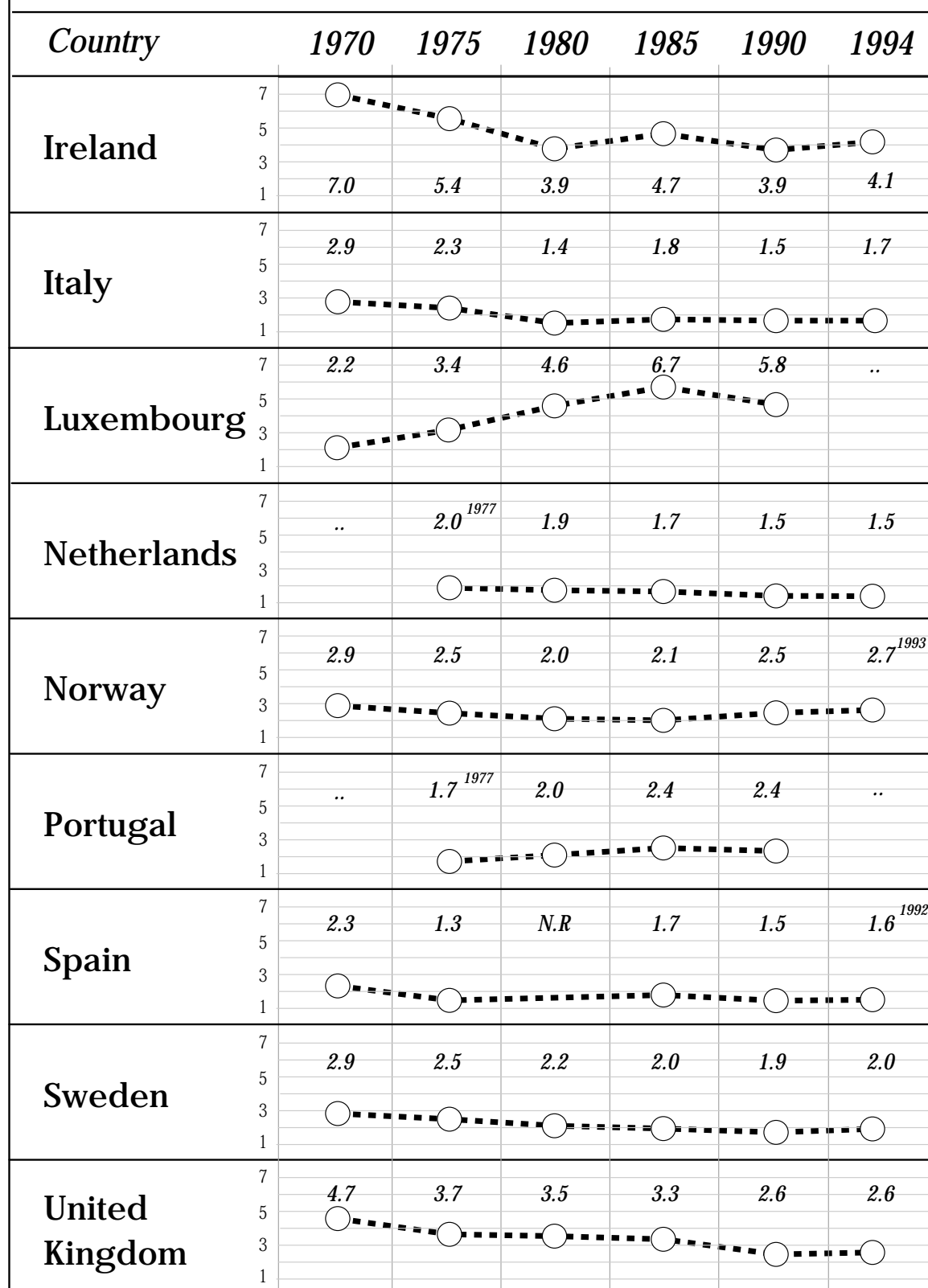


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Diagram II

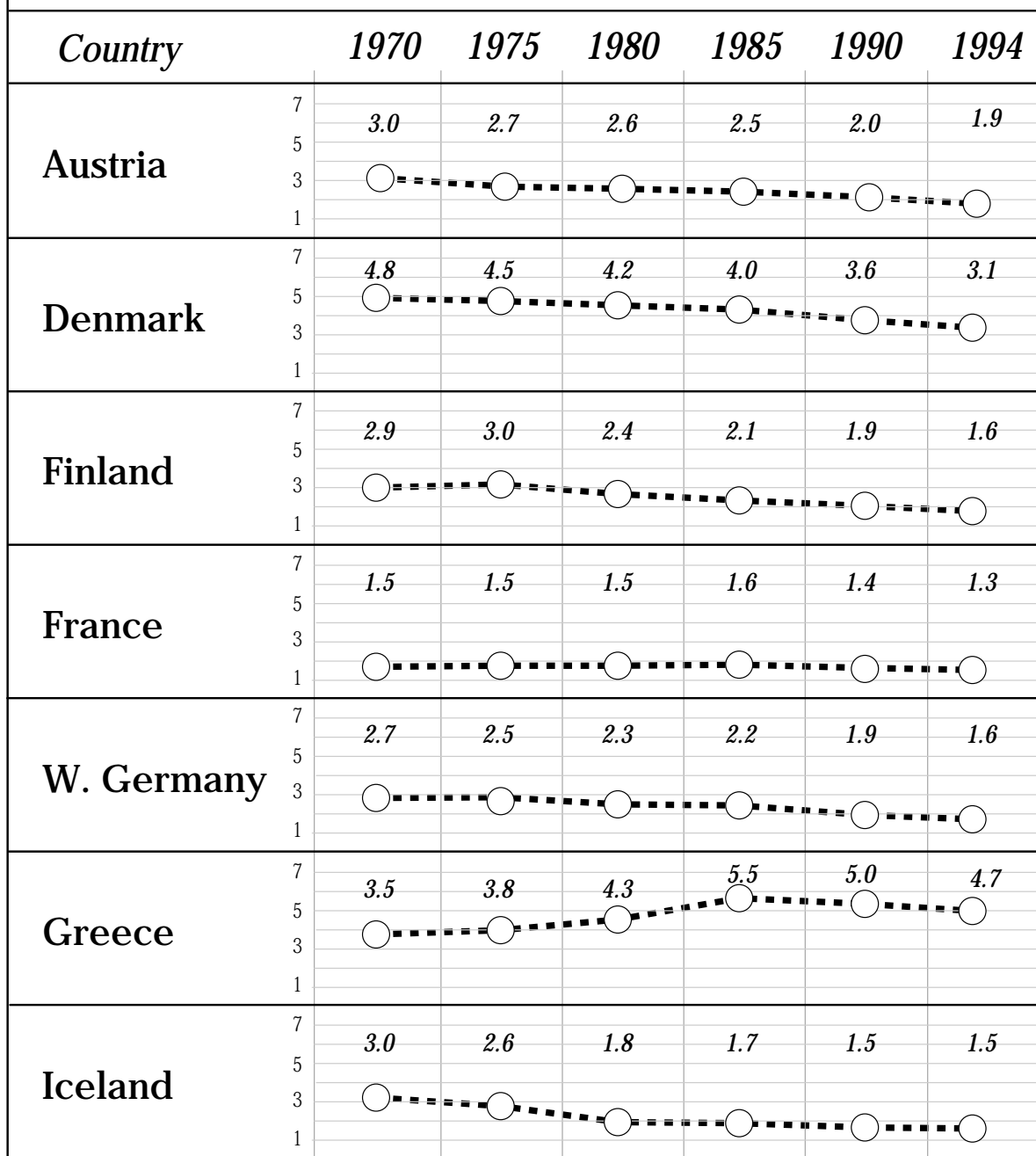
**Tobacco ratio of total final consumption of resident households.
Current prices.**



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Diagram III

**Tobacco ratio of total final consumption of resident households.
Fixed prices. (1970 = 100).**

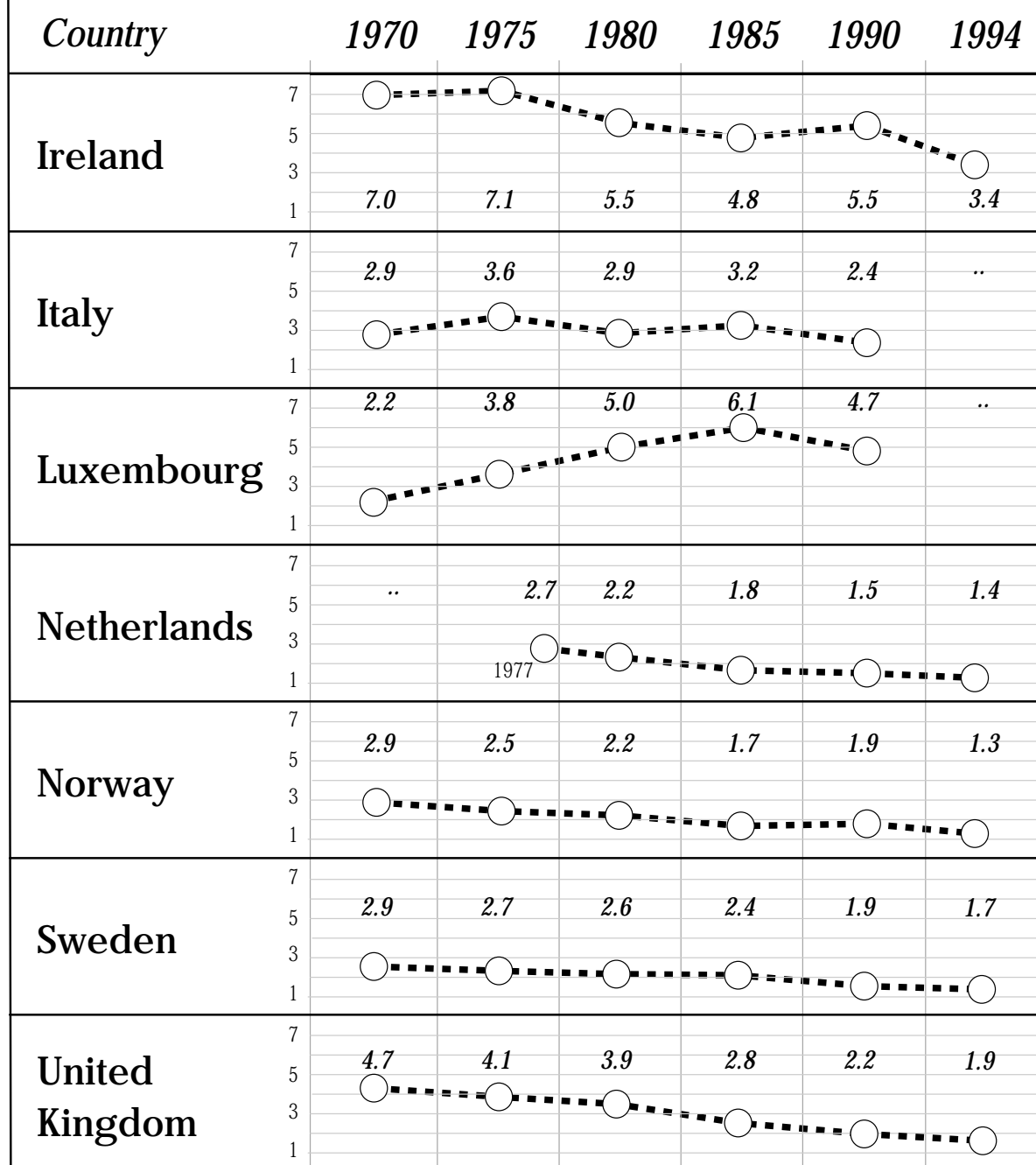


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Diagram III

**Tobacco ratio of total final consumption of resident households.
Fixed prices. (1970 = 100).**



2.3. Consumer price trends

Table 2 gives national Consumer Price Indices data for the period. Two series are given, both tobacco and general cost of living (some countries missing). The Iceland figures seem astonishingly high, but they are the figures reported.

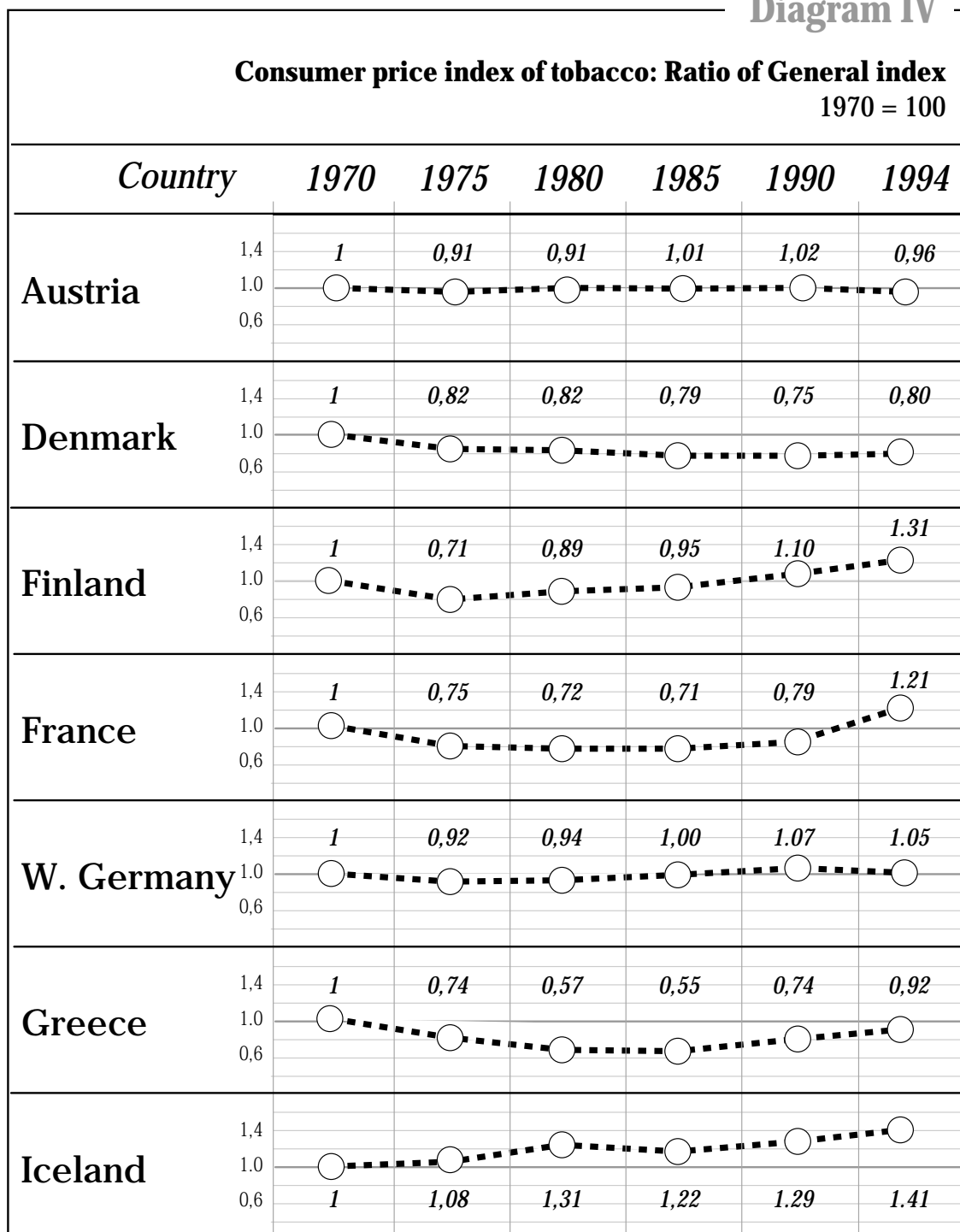
The CPIs indicate the cost development. In all the countries, except Austria, Denmark and Greece, the cost of tobacco has increased compared with the general cost of living.

Diagram IV shows the ratio of tobacco CPI of the general CPI. A ratio larger than 1.0 indicates that the tobacco cost has increased in relation to the general cost of living.

<i>Consumer Price Index</i>		Table 2					
		1970	1975	1980	1985	1990	1994
Austria	<i>Tobacco</i>	100	129	168	240	267	291
	<i>General</i>	100	142	185	238	263	304
Belgium		100	..	..	..	..	..
		100	149	204	284	316	351
Denmark		100	128	209	294	340	393
		100	156	256	374	453	491
Finland		100	124	259	418	616	809
		100	176	292	439	560	617
France		100	115	180	283	365	569
		100	153	251	397	462	507
Germany		100	123	154	199	228	259
		100	135	164	199	213	246
Greece		100	127	199	468	1 383	2 989
		100	171	350	853	1 875	3 233
Iceland		100	344	2 058	16 218	39 260	49 363
		100	318	1 867	13 282	30 379	34 917
Ireland		100	144	262	647	795	1034
		100	190	367	655	770	850
Italy		100	109	176	391	561	..
		100	171	365	694	914	1 110
Luxembourg		100	128	177	295	365	519*
		100	142	190	269	293	336*
Netherlands		100	117	171	241	250	325
		100	155	205	253	263	295
Norway		100	150	206	408	607	869
		100	149	224	344	466	512
Portugal		100	..	..	..	..	..
		100	202	225	639	1094	1 485
Spain		100	..	..	..	..	..
		100	177	414	737	1 010	1 238
Sweden		100	136	205	317	482	704
		100	147	242	372	502	601
United Kingdom		100	153	303	555	715	1 058
		100	172	337	477	622	780

Sources: Data Reported in the Tobacco Consumption questionnaire, National Statistical Yearbooks, OECD National Accounts, Volume II.

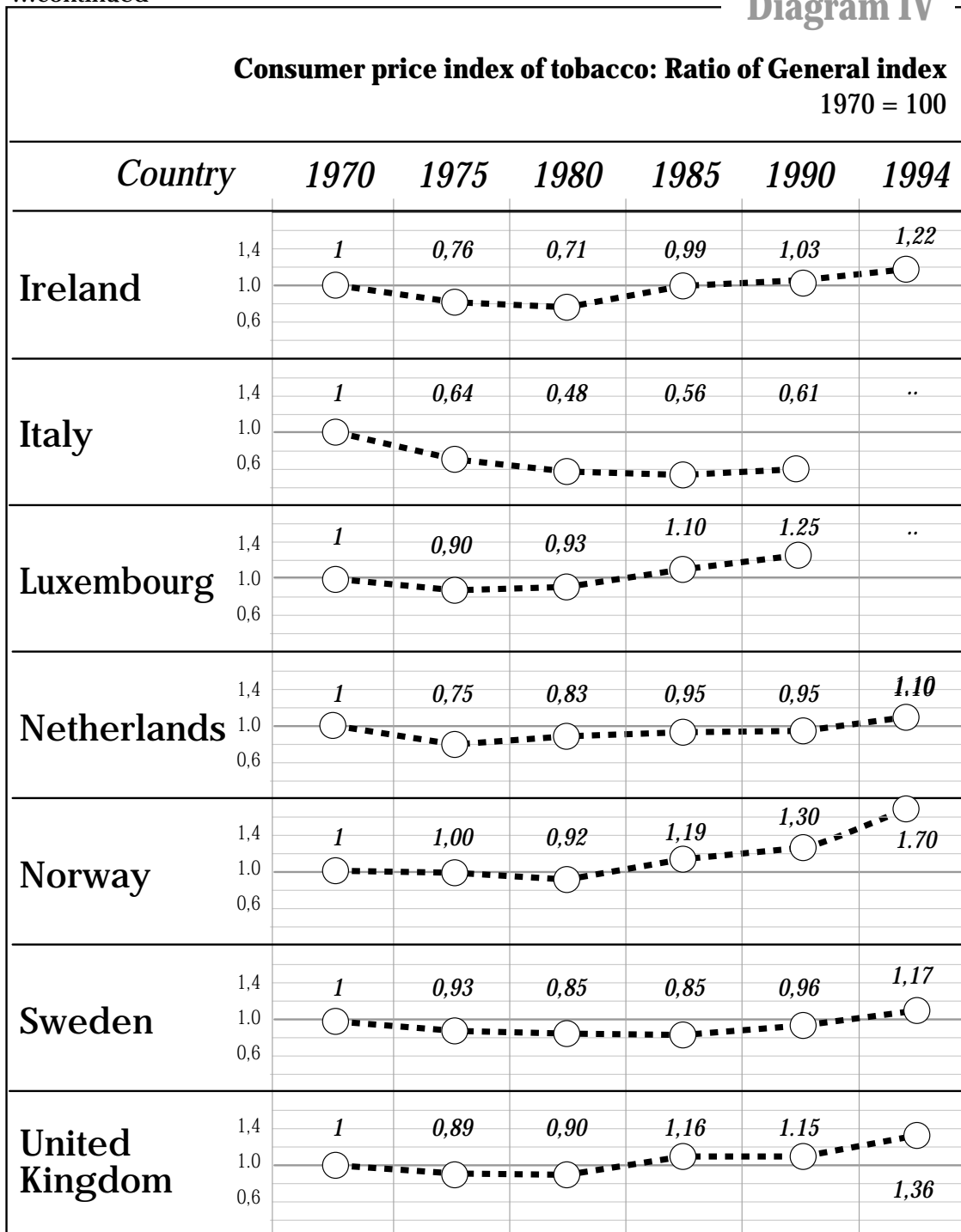
Diagram IV



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Diagram IV



2.4 Relative price levels of tobacco 1990 and 1994 of final expenditure on GDP (GDP = 100)

The previous chapter indicated the relative price development. This chapter describes the relative price level in each country at international prices using purchasing power parities¹. The total price level is set to 100 for each country and each year. Relating to consumption theory and consumption preferences, this should be an adequate measure, when comparing the influence of prices on the consumption level. We should expect that the consumption is low if tobacco is relatively expensive to other expenditures. The figure 77 for Spain tells us that tobacco in that country was relatively cheaper than other items in the country. The actual price in that country can still be higher than in another country with an index more than 100, depending on a higher total price level in the latter country. A lower index in 1994 can also mean a higher actual price than a higher index in say 1990, depending on a higher total price level in 1994.

	1990	1994
Austria	105	90
Belgium	91	99
Denmark	135	125
Finland	115	125
France	79	100
Germany	108	92
Greece	85	96
Iceland	136	117
Ireland	151	156
Italy	88	95
Luxembourg	72	74
Netherlands	86	86
Norway	168	172
Portugal	105	106
Spain	78	77
Sweden	108	116
U.K.	138	141

The prices on tobacco are high relative to other prices in the Nordic countries, Ireland and U.K. They are low in Luxembourg, Netherlands and Spain.

¹ EKS method. For more details we refer to the Eurostat publication Comparison in real terms of the aggregates of ESA

2.5. Tobacco consumption volume

Table 3 shows the total tobacco consumption in metric tons in figures for cigarettes, total smoking tobacco and non-smoking tobacco. When number of pieces has been reported, the figures are based on the assumption of one gram of tobacco per cigarette, and 2 grams per cigar and cigarillo. (Commonly used assumption according to WHO.) Figures on cigarette consumption as a percentage of the total consumption of smoking tobacco are also given in the table.

In most of the countries the cigarette consumption forms the major part. In Norway, Denmark and the Netherlands cigarettes are rolled to a fairly large extent, and in Sweden the consumption of moist snuff is a comparatively large part of the tobacco consumption.

Table 3

Total tobacco consumption. Tons.													
<i>Country/year</i>		<i>1970</i>		<i>1975</i>		<i>1980</i>		<i>1985</i>		<i>1990</i>		<i>1994</i>	
		<i>tons</i>	<i>%¹⁾</i>	<i>tons</i>	<i>%</i>	<i>tons</i>	<i>%</i>	<i>tons</i>	<i>%</i>	<i>tons</i>	<i>%</i>	<i>tons</i>	<i>%</i>
Austria	Cigarettes	12 993	93	13 976	96	15 515	97	15 645	97	14 401	97	14 077	97
	Total smoking tobacco	13 996		14 614		16 042		16 146		14 845		14 473	
	Non-smoking tobacco	19		14		9		8		8		10	
Belgium/Lux	Cigarettes ²⁾	18 900		20 118		19 867		20 560		19 883		24 794	
	Total smoking tobacco	..		..		..		..		..		..
	Non-smoking tobacco	..		..		..		..		..		..
Denmark	Cigarettes ³⁾	8 489	80	9 318	84	9 279	87	10 101	91	9 537	94	9 211	95
	Total smoking tobacco	10 590		11 068		10 671		11 045		10 193		9 661	
	Non-smoking tobacco	417		316		220		150		96		56	
Finland	Cigarettes	4 341	75	4 891	79	4 501	80	4 674	83	4 735	85	3 698	76
	Total smoking tobacco	5 810		6 154		5 649		5 657		5 574		4 891	
	Non-smoking tobacco	26		27		27		27		94		93	
France	Cigarettes	69 650	82	84 847	87	87 628	89	96 209	91	95 802	92	90 113	91
	Total smoking tobacco	84 960		97 622		98 620		106 243		103 683		99 125	
	Non-smoking tobacco	694		685		516		404		397		370	
W.Germany	Cigarettes	117 648	89	124 561	91	128 426	89	120 409	86	152 746	87	136 525	87
	Total smoking tobacco	131 765		136 691		145 004		140 682		174 921		156 794	
	Non-smoking tobacco	..		..		..		..		..		..
Iceland	Cigarettes	254	71	335	76	378	84	435	88	413	91	381	91
	Total smoking tobacco	359		439		452		492		455		417	
	Non-smoking tobacco	28		17		15		13		12		13	

¹⁾ Percentage cigarettes of total smoking tobacco

²⁾ Source UN Year Book of Industrial Statistics, UN Commodity Trade Statistics

³⁾ Incl. pipe/roll tobacco

...continued

Table 3

		Total tobacco consumption. Tons.											
Country/year		1970		1975		1980		1985		1990		1994	
		tons	% ¹⁾	tons	%	tons	%	tons	%	tons	%	tons	%
Ireland	Cigarettes ²⁾	4 833		7 498		7 518		6 226		5 800			
	Total smoking tobacco	..		..		..		..		..		..
	Non-smoking tobacco	..		..		..		..		..		..
Italy	Cigarettes ²⁾	69 500		88 700		98 700		105 100		94 600		90 600	
	Total smoking tobacco	..		..		..		..		..		..
	Non-smoking tobacco	..		..		..		..		..		..
Netherlands	Cigarettes ⁴⁾	2 343		2 791		2 667		2 395		2 412		2 075	
	Total smoking ⁴⁾ tobacco	2 559	92	2 967	94	2 795	95	2 489	96	2 478	97	2 137	97
	Non-smoking tobacco	..		..		..		..		..		..
Norway	Cigarettes	5 907		6 385		6 733		6 582		6 668		5 636	
	Total smoking tobacco	6 005	98	6 483	98	6 809	99	6 646	99	6 717	99	5 678	99
	Non-smoking tobacco	403		326		320		332		310		319	
Portugal	Cigarettes ³⁾	8 973		12 186		13 053		13 042		16 927		18 230 ²⁾	
	Total smoking tobacco	9 390	96	12 453	98	13 254	98	14 763	88	..		..
	Non-smoking tobacco	36		29		26		23		..		..
Spain	Cigarettes	54 604		60 072		74 087		81 321		76 875		79 248*	
	Total smoking tobacco	..		..		..		..		..		..
	Non-smoking tobacco	..		..		..		..		..		..
*1993													
Sweden	Cigarettes ²⁾	8 335		8 579		8 303		7 563		6 810		5 564*	
	Total smoking tobacco	10 554	79	10 331	83	9 712	85	9 418	80	8 388	81	7 013	79
	Non-smoking tobacco	2 528		2 957		3 683		4 580		4 646		5 047	
*1993													
United Kingdom	Cigarettes	127 425		131 825		121 460		98 310		98 325		87 250	
	Total smoking tobacco	142 000	90	146 875	90	134 420	90	109 150	90	107 450	92	93 990	93
	Non-smoking tobacco	195		150		135		110		70		40	

¹⁾ Percentage cigarettes of total smoking tobacco²⁾ Source UN Year Book of Industrial Statistics, UN Commodity Trade Statistics³⁾ Incl. pipe/roll tobacco⁴⁾ Estimation based on per capita consumption



<i>Country</i>	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1994</i>
Austria						
Belgium/Lux						
Denmark³⁾						
Finland¹⁾						
France						
W. Germany						
Greece						
Iceland						
Ireland						
Italy						
Netherlands^{2) 3)}						
Norway³⁾						
Portugal						
Spain						
Sweden						
United Kingdom						

Total population aged 15+ ————— Table 4a

Thousands of persons

	<i>1970</i>	<i>1975</i>	<i>1980</i>	<i>1985</i>	<i>1990</i>	<i>1994</i>
Austria	5 649	5 819	6 007	6 180	6 364	6 616
Belgium	7 378	7 618	7 867	8 022	8 144	8 308
Denmark	3 757	3 908	4 040	4 160	4 254	4 315
Finland	3 472	3 674	3 809	3 951	4 023	4 117
France	37 946	39 944	41 643	43 375	45 188	46 347
Germany W.	46 898	48 561	50 655	51 894	53 936	55 360
Greece	6 583	6 886	7 443	7 860	8 177	8 702
Iceland	138	153	165	178	191	200
Ireland	2 029	2 195	2 366	2 506	2 551	2 682
Italy	40 597	42 005	43 864	45 655	47 495	48 651
Luxemburg	264	284	294	304	315	337
Netherlands	9 475	10 193	10 986	11 674	12 206	12 651
Norway	2 917	3 042	3 166	3 308	3 432	3 489
Portugal	6 443	6 554	7 232	7 600	7 806	7 971
Spain	24 301	25 767	27 566	29 492	31 137	32 431
Sweden	6 367	6 498	6 682	6 886	7 023	7 154
United Kingdom	42 141	43 086	44 590	45 722	46 636	47 036

3.1 Smoking prevalence

In Diagram V and tables 5.1-6 data on smoking prevalence are shown. The age classification differs from the standard one in some countries, and this is indicated in the tables 5.1-6.

The same difficulty pertains to occupational classification, i.e. the classification used in the questionnaire does not in many cases correspond to national (and international) classification.

WHO definition

$$\text{Prevalence of smokers (in \%)} = \frac{\text{Number of smokers in the population being surveyed}}{\text{Total size of the survey population (smokers and non-smokers)}} \times 100$$

Diagram V

Smoking prevalence.
Percentage of target population group.

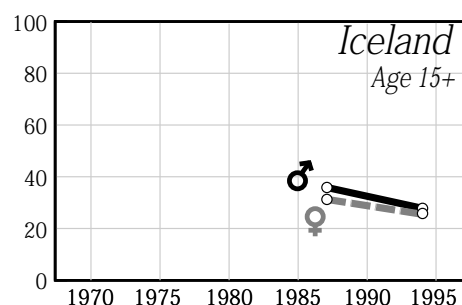
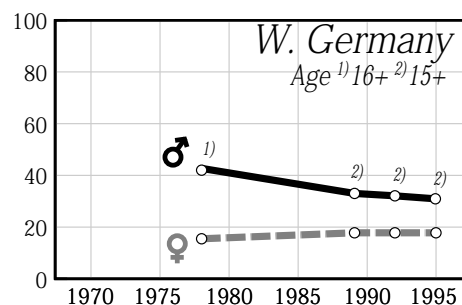
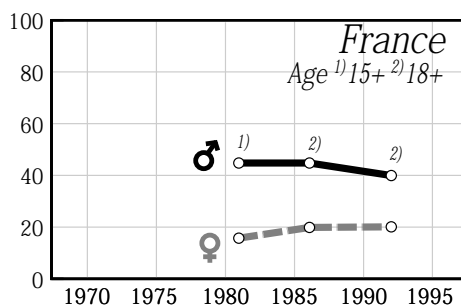
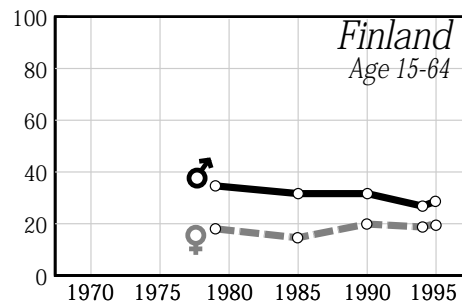
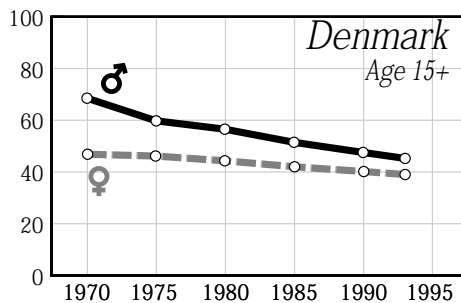
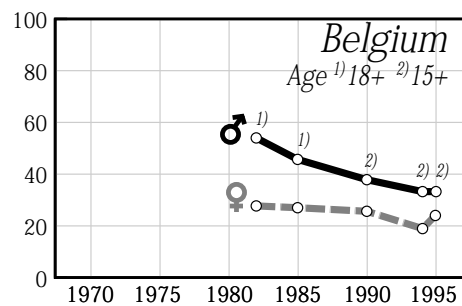
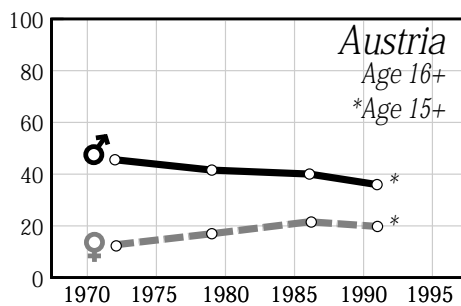
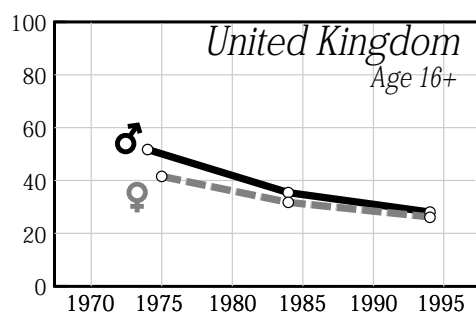
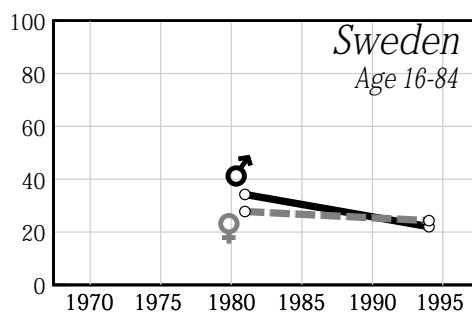
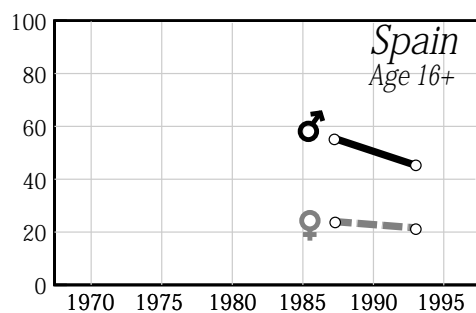
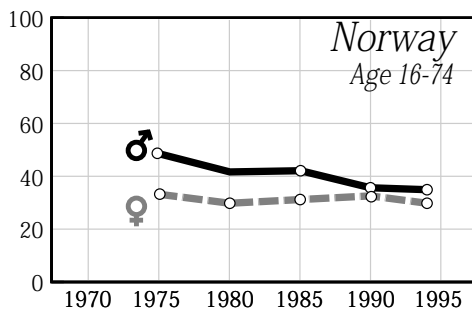
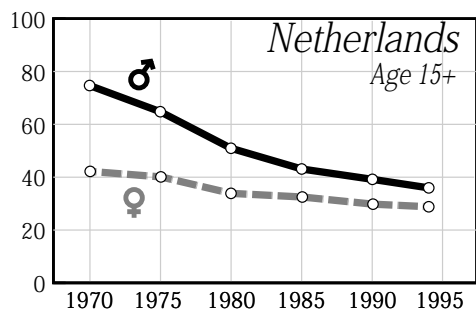
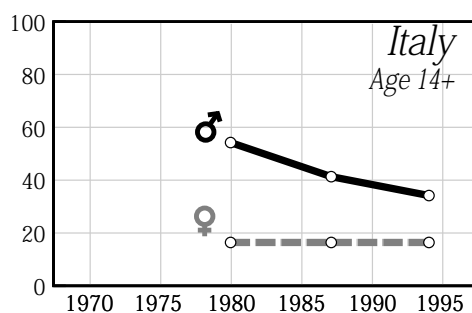
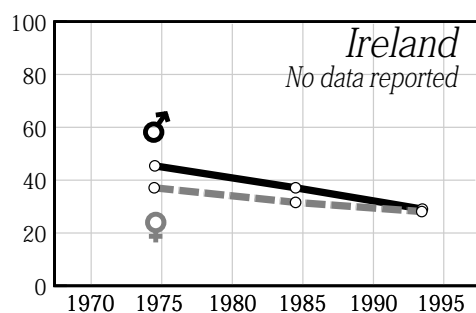


Diagram V

Smoking prevalence.
Percentage of target population group.



Smoking prevalence by country



Smoking prevalence by country

FEMALES

1970s

	Year																		
	1979	A	B	D	DK	E	F	FIN	GR	I	IR	IS	L	N	NL	P	S	UK*	
Age groups					1978	1975	80/81	78/79	1980	74/75	1975	1975	1977	1974					
15-24 ¹⁾ 16-24	27		28 ¹⁾				27	26						39 ¹⁾			47	41	
25-34	33		31				25	24						45			46	46	
35-44	20		22				17	17						39			33	49	
45-54	14		16				12	12						34			27	48	
55-64	11		14				10	8						27			22	26	
65-74	5		9				4	••						7			12	26	
75-84 or more	2		4				2	••						—					
Total	17		16	46			16	18	17	37				33	40		32	41	
Profession																			
White collar							24	21									33	38	
Blue collar							16	24									35	43	
Professional, managers							22										28	25	
Farmers							2	5									10		
Entrepreneurs, self employed							12										34	38/46	
Students / not active, housewives							15/13										30		
Retired							14	11									12		
Un-employed							36										28		
Total							16	18		37							32	41	
Number of daily/regular smokers in the sample							4199	1359							494			1908	4707
																			27

* Cigarette smoking only Great Britain

Smoking prevalence by country

MALES

1980s

Year	1980s																
	A	B	D	DK	E	F	FIN	GR	I	IR	IS	L	N	NL	P	S	UK*
	1986	1985	1989	1985	1987	86/87	83/85	1983	84/85	1987	1985	1985	1985	1984	1984	1984	1984
Age groups																	
15-24 ²⁾ 16+24 ³⁾ 18-24	40	28	28		54	52 ³⁾	26	36 ¹⁾		28	36 ²⁾			22	35		
25-34	52	43			64	54	40	58		45	45			38	40		
35-44	47	42				48	35	54		42	46			38	38		
45-54	35	33			54	42	30	53		35	44			36	41		
55-64	33	29				35	28	47		33	46			40	36		
65-74	27	21			34	27	••	••		29	35			28	30		
75-84 or more ⁴⁾ 75-79	25	16				22	••	••		18 ⁴⁾				23	25		
Total	40	45	33	51	55	44	32	46	37	36	42	43		33	36		
Profession																	
White collar					55	42	30							31	30		
Blue collar					56	49	40							40	45/49		
Professional					53	34								25	17		
Farmers					53	33	26							23			
Entrepreneurs, self employed						40								35	29/40		
Students / not active, housewives						18								13			
Retired						35	36							28			
Un-employed						58								57			
Total					55	44	32		37					33	36		
Number of daily/regular smokers in the sample			7481		7275	2555					515			1212	3030		

Number of daily/regular smokers in the sample * Cigarette smoking only Great Britain

Smoking prevalence by country

FEMALES

1980s

	A	B	D	DK	E	F	FIN	GR	I	IR	IS	L	N	NL	P	S	UK	
Year	1986	1985	1989	1985	1987	86/87	83/85		1983	84/85	1987		1985	1985		1984	1984	
Age groups																		
15-24 ¹⁾ 14+24 ²⁾ 16-24 ³⁾ 18-24	31	22	22	49	42 ³⁾	19	21 ¹⁾	28	34	31	28	34	34	31	31	34	34	
25-34	37	32	32	36	25	31	31	37	42	38	37	42	42	38	38	36	36	
35-44	30	27	27	33	20	19	24	40	36	35	40	36	36	35	35	37	37	
45-54	16	16	16	13	11	17	17	31	35	31	31	35	35	1	31	36	36	
55-64	11	12	12	5	9	8	11	25	28	27	25	28	28		27	35	35	
65-74	8	7	7	2	6	••	••	19	9	14	19	9	9		14	25	25	
75-84 or more ⁴⁾ 75-79	3	2	2	2	••	••	••	15 ⁴⁾		5	15 ⁴⁾				5	12	12	
Total	21	27	18	42	20	17	18	31	32	28	31	32	33		28	32	32	
Profession																		
White collar				36	23	20										29	28	
Blue collar				22	17	23										32	37/36	
Professional				29	25											19	15	
Farmers				11	2	5										8		
Entrepreneurs, self employed				12												22	29/37	
Students / not active, housewives					12/15											21		
Retired				23	11											12		
Un-employed					2451											51		
Total				20	17			32								28	32	
Number of daily/regular smokers in the sample * Cigarette smoking only, Great Britain			4454	3301	1471				390							997	3132	29

Data on special risk groups

Young people who smoke form a special high-risk group. The prevalence trends in the age bracket 15-24 years of age are shown below, based on figures made available to the study.

Smoking prevalence.

Percent of the total population 15/16-24 years of age by sex

Country	Males			Females		
	1970s	1980s	1990s*	1970s	1980s	1990s*
Austria	42	40		27	31	
Belgium			33			30
W Germany	38	28	27	28	22	20
Denmark			20/41			21/42
France	38	52**	46**	27	42**	35**
Finland	35	26	23	26	19	23
Italy		36	27		21	13
Iceland		28	22		28	20
Norway	38	36	32	39	34	23
Netherlands			39			36
Spain		54	39		49	33
Sweden	35	22	15	47	31	20
Great Britain	47	35	35	41	34	34

* 15-18/19-24 years of age

** 18-24 years of age

The table indicates that the smoking prevalence among young people has diminished, to a greater or lesser extent, during the period.

The heaviest young smokers are found in Denmark (especially in the age-bracket 19-24 years of age), Spain, France, Netherlands and United Kingdom. The only country where females smoke more than the males, is Sweden. The males often use moist snuff instead.

Smoking prevalence amongst the different occupational/socio-economic groups

The classification according to occupation differs considerably among the countries. An effort has been made to adapt the classifications to the groups listed in the questionnaire but there might be inconsistencies.

Only a few countries report separate data for the unemployed. Austria, Finland, France, Italy and Sweden report data for this group, at least the latest part of the period. It is notable that the smoking prevalence in this group is higher than in any other group.

3.2 Smoking prevalence

Technical notes

AUSTRIA

Source:

CSO:Ergebnisse des Mikrozensus September 1986 (including data from 1972 and 1979).

Target population

For the part program "Smoking habits" 1986 16+. The 16 year limit has been kept for comparability. Responding not compulsory.

Sample:

Measurement method:

Face-to-face interview

Non-response:

1972: 1.6% 1979: 2.7% 1986: 4.9%.

	<i>1972</i>	<i>1979</i>	<i>1986</i>	<i>1991</i>
Number of respondents corresponds to (millions)	5.35	5.56	5.72	5.33
Interviewed in person (%)	72.0	68.3	68.6	

For the rest another member of the household has responded.

Definition of smokers:

Smokers

Ratio daily smokers 85.4 M, 74.9 F 86.0 M, 79.7 F 86.4 M, 82.0 F

Ratio regular but not daily 4.2 M, 4.4 F 3.0 M, 3.2 F 2.2 M, 2.6 F

Ratio Occasionally 10.4 M, 20.7 F 11.0 M, 17.1 F 11.4 M, 15.4 F

In the 1986 Mikrozensus an additional number of detailed questions were asked concerning status, frequency, quantity and strength of cigarettes, trials to abstain etc.

BELGIUM

Source: Centre d'Information et de Documentation sur le Tabac/ CRIOC, Centre du Recherche d'Information des Organisations de Consommateurs. Gallup made by SOBEMAP.

Target population: 1982-89 age 18+, 1990-95 age 15+

Sample: 1995: 1904 persons, 920 Males, 984 Females

Definition of smokers: Regular/daily

DENMARK

Source: Statistics Sweden: Tobakskonsumtionen 1970-1993, Gallup commissioned to Statistics Denmark by the Tobacco Manufacturers Association of Denmark.

Target population: 15+

Sample: 1 500-2 000 persons

Definition: Smoked yesterday

FINLAND

Sources: National Public Health Institute: 1) Annual surveys since 1978; 2) Health Behavior of the Finnish elderly, Spring 1993, Biannual surveys of senior citizens since 1986.

Target population: 1) 15-64 years of age, 2) 65-84 years of age

Sample: 1) 5.000 persons, 2) 2400 persons

Measurement method: Postal questionnaire

Non-response: 1) 1995 ca 27% 2) 18 %

Definition of smoker: Daily

Measures of uncertainty: 95 % confidence interval $d = 1.96 \sqrt{p(1-p)/n}$ random variation $d < \pm 2\%$

Comparability over time Very good because the main questions have been unchanged between the years studied.

FRANCE

Sources: Le Ministère du Travail et des Affaires Sociales, Service des Statistiques, des Etudes et des Systèmes d'Information (SESI): L'Enquête Santé, 1991-92. Etude de conditions de vie, 1986-87.

Target population: 1981/82 15+ years of age; 1986/87 and 1991/92 18+ years of age.

Sample: 1981/82: 7323 households representing 21 000 individuals. Questions on tobacco use have been posed to 16 200 persons 15+ years of age. 1986/87: 13 154 households, one person 18+ of age has been selected. 1991/1992: 10 000 addresses from the INSEE Master Sample. 8 000 households studied, 7 666 completed interviews, representing 21.500 individuals 14+ years of age.

Measurement method: Face-to-face interviews with, in most cases, one representative of the household.

Non-response: 1981/82 57 % of the men, 25 % of the women have not responded to the tobacco question.

Definition of smoker: Regular, at least one cigarette per day

W. GERMANY

Source: Statistisches Bundesamt: Mikrozensus 1978,1989,1992.

Target population: 10+ of age. 15+ accounted for.

Sample: 0,5 % of the population

Measurement method: Face-to -face interviews

Non-response: (10 % less than in other non-cumpulsory studies))

Definition of smoker: Regular and occasional. Only regular smokers accounted for in the study

Measures of uncertainty: Standard errors ranging from 0,6 % to 35,8 % depending upon the size of the numbers accounted for in the tables. By numbers lower than 7000 in blowed-up numbers, corresponding to 35 respondents in the sample, the standard error is 19.2 % or more. These numbers are not accounted for in the tables.

ICELAND

Source: Hagvangur hf. Reykjavik (Marketing research)

Target population: 1987: 15-79 years 1994: 15-89 years

Sample: 1987: April 1500, May:1150, Sept:1500

1994: Jan 1400, May:1400, Sept: 1400

Method: Telephone interviews

Non-response : 1987: ca 22 %, 1994: ca 25 %

Measures of uncertainty: Standard deviation: 2 st ca 3%

ITALY

Source: ISTAT: Indagine Multiscopo sulle Famiglie, 1987-91, 1993-94.

Target population: 14+ years of age

Sample: Stratified,1.132 communities, ca 25.878 families,

Measurement method: Face-to-face interviews

Definition of smoker: 1991: habitual smoker

NETHERLANDS

Source: Statistics Netherlands: 1) Health Interview Survey 1989-1994 2) Vademecum of Health statistics 3)De Leefsituatie van de Nederlands Bevolking, 1989-1994; of the Netherlands 1995.

Target population: 1,2) 16-24 years of age, non-institutionalized 3) 18+ of age

Sample: 1)3) 6 500 aged 16+

Method: 1) Self-administered

Non-response: 1) 42-40%, 3) 52-48 %

Definition of smoker: Smoker

Comparability over time: 1) Reasonably good considering that the same questions are used, practically stable response rates etc.

NORWAY

Source: Statens tobaksskaderåd (data from Statistics Norway): Tobaksbruk och holdninger i Norge - utviklingen 1973-1995

Target population: Individuals 16-74 years of age years

Sample: 1973-1991: Additional questions in the Labour Force Survey carried out by Statistics Norway, ca 3 000 persons. 1992-1994 part of the Statistics Norway omnibus, ca 2.500 persons.

Measurement method method: 1973-1980: Face-to-face interviews, 1980-1991: Telephone interviews, 1992- face-to-face interviews

Non-response: Variable, ca 30 %

Definition of smoker: Daily smoker

Measures of uncertainty: Confidence interval i.e. between 2x1,3-3,1 for 400 observations

Comparability over time Questions on tobacco prevalence are the same over the years, which gives good comparability.

SPAIN

Source: Instituto Nacional de Estadística/Ministerio de Sanidad y Consumo: Encuesta Nacional de Salud 1987, 1993.

Target population: Individuals 16+

Sample: Multistage. 27 800 individuals 1987, 21.120 1993

Method: Face-to-face interviews

Non-response: 0,2 % (?) 1987, 0,4 % 1993. 1987: 55% have not answered the tobacco questions

Definition of smoker: 1987: regular, 1993: daily smoker

Measure of uncertainty: Sampling error: (p=50 %) 0,9 Confidence interval in total, ranging between 2,90 for 2000 interviews to 17,39 for 40 interviews.

Occupational distribution: In the 1987 study unemployed are classified according to the occupation of the head of the household.

Socio-economic groups: In the 1993 study data are classified by 5 classes taking into consideration both working status and level of education.

SWEDEN

Source: Statistics Sweden, The Swedish Survey of Living Conditions.

Target population: Adult population 16-84 years.

Sample: Systematic sample of individuals drawn by age-group (simple random sample).

Size 1977: 11 451 1984: 7 211 1994: 5 916

Non-response: Ca 20 % all the years

Method: Face-to-face interviews with non-response follow-up by telephone.

Definition of smoker: Daily smoker

Measures of uncertainty: Approx. confidence intervals ranging from +/- 1.0 to 6.8 at base numbers ranging from 1 000 to 40.

Comparability over time: Good, the same approach and questions have been used in all rounds.

UNITED KINGDOM

Source: Office for National Statistics, General Household Survey, 1974, 84, 94.

There are also data from Office of Population Censuses and Surveys (now Office for National Statistics): General Household Survey 1992 (including 1982 and 72). Here data from the first mentioned survey are accounted for.

Target Population: All adults 16+ in Great Britain.

Sample: Two-stage sample, selecting households. 1994: Selected addresses: 13248; Interviewed households 11836. 18237 individuals.

Method: Face-to-face interviews

Non-response: 1974: 16%, 1994: 18% of households.

Definition of smoker: Current cigarette smokers.

Socio-economic groups: Persons not working classified after last job. Married women (including house-wives) classified according to their husband's occupation (when the husband is in the household).

4 Tobacco policies

WHO has worked out tobacco profiles for the European countries. They cover the situation in 1994 with some notions on the development 1995-96. An attempt has been made to describe the policy situation as shown in the table below.

The state of legislation concerning banning or restrictions has been classified in three categories:

1) the most severe, **2)** intermediate, **3)** the least severe. The classification has been done on the basis of the text in the profiles where the following categories of banning smoking have been noted:

Public places

Schools, other premises used for education of children and where young people congregate

Care centers, incl medical establishments for sick, old, children
Waiting rooms of railways, busstations, harbours, airports

Government buildings, circulation spaces in government buildings

Public transport vehicles

Railway stations

Domestic flights

International flights

Enclosed places available to the public

Theaters, cinemas, exhibitions, art galleries, museums, libraries

Advertising

Radio, TV

Press

Billboards

Cinemas

Health service premises

Educational establishments

Youth and sport centres

State of legislation

	<i>Legislation</i>	<i>Public places</i>	<i>Advertising</i>	<i>Sales to minors prohibition age</i>	<i>Labelling of cigarettes</i>
Austria	Tobacco Control Act 1995	2	2	–	Tar, nicotine content Health warnings
Belgium	Royal Decrees 1982, 1990	2	2	–	Tar, nicotine content Health warnings
Denmark		3	3	–	Two health warnings (Eu-regulation)
Finland	Control Act 1977, updated 1995	1	1	< 18 years	Tar, nicotine content Health warning
France	Law 1991	1	1	–	EU min standards
W Germany			3	3	– Tar, nicotine level Health warnings
Greece	?	2	2	–	EU min. standards
Iceland	1984 Act	1	1	<16 years	Rotating warnings
Ireland	1990 Act	1	2	<16 years	Rotating warnings
Italy	Law 1975	1	1	<16 years	Tar, nicotine content Health warnings
Luxemburg ?		1	2	–	Tar, nicotine content Health warnings
Netherlands ?		1	2	–	Tar, nicotine content Health warnings
Norway	Law 1973, 1988 Control Act 1995	1	1	<18 years	Tar, nicotine content Health warnings
Portugal	1983 Act	1	1	–	EU min. standard
Spain	1982 Act	1	3	<16 years	Tar, nicotine content Health warnings
Sweden	Control Act 1993 1996	1	1	<18 years	Tar, nicotine content Health warnings
United Kingdom	–	3	3	<16 years	Tar, nicotine content Health warnings

Source: WHO Tobacco Profiles 1994

5. Concluding remarks

A main conclusion of the study is that the definitions, sources of data and produced statistics are far from harmonised. This descriptive pilot study shows limitations in coverage and comparability of data. Sample sizes, collection methods, definitions and classifications vary from one state to another, as demonstrated in the Technical notes to the Smoking Prevalence figures.

Thus, the consumption data must be interpreted with caution. Factors such as the consumption of "roll-your-own" cigarettes, home-grown tobacco, smuggling and cross-border shopping may also affect the estimates. Smuggling has been estimated to 10-30 % of the consumption in Belgium.

For countries with a small indigenous population and a large transient population (e.g. Luxembourg) care must be taken to distinguish the consumption of the two groups.

Risk groups should be observed, specially young and economically inactive people, in particular unemployed. All countries have age classifications of their data, but the unemployed are not reported, except in a few cases. This should be taken into consideration when planning health surveys, since the social situation is an essential factor when it comes to behaviour affecting the health.

A study of this kind, covering all the EU-countries poses particular difficulties. The statistical systems in the different countries vary, although efforts are made, specially from the Eurostat side, to harmonise definitions etc. The time-schedule for data collection has to be rather extensive, due to the mentioned differences. Many questions arise and ample time is needed for completions, frequently in an iterative process.

Comparative and coordinated social surveys are an indispensable tool in the future European statistical system. With an improved quality of future surveys, there will be means of getting good and comparative information on i.a. smoking

Tentatively the European Community Household Panel Survey (ECHP) might be mentioned as a vehicle for a harmonised survey. It is fairly new, only two waves have so far been launched, in 1994 and 1995. The sample size in the various countries is reasonably large (61.106 households representing 127.000 in the EU12 in 1994) to allow special topics to be covered. There are health questions included in the questionnaire, but sofar nothing about smoking. It might be an idea to include that topic.

The Labour Force Surveys (Norway used them for a certain period of time) could be another solution, especially as the behaviour of unemployed persons is of great interest in this context.

In **Table 6** an attempt to summarize indicators relevant to smoking behaviour has been made.

Assuming that the total tobacco consumption per adult (column c) is the most accurate figure and by classifying the countries into three groups: low (white), middle (grey) and high consumption (black), it can be seen that cigarettes per adult (column b) will classify the countries in a different way. Main reasons are "roll-your-own" cigarettes, other smokables and different amount of tobacco in the cigarettes. In some countries light cigarettes are more popular than in other countries.

The tobacco share of the total consumption (column a) gives yet a different grouping of the countries. One reason is that other consumables have increased or decreased differently in the countries.

The prevalence (column d-f) also differs from the consumption per adult (column c). Besides differing quality in the surveys, the smoking amount per smoker might differ from country to country.

Column g shows the trend of cigarette consumption the last 20 years. A figure less than one means a decrease in the consumption per adult. The increase for Norway is probably explained by a change from "roll-your-own" to ready-made cigarettes.

Column h indicates the relative price level of tobacco in each country (see chapter 2.4).

In column i, the price index for tobacco is compared to the total consumer price index. A figure less than one means that tobacco is relatively cheaper than in 1970.

In comparing the tobacco consumption with the state of legislation (columns j-l), it should be remembered that the legislation can be rather new, that it is implemented differently and not least important, also obeyed to a varying extent. For example, the Swedish legislation is in effect from January 1, 1997.

If the different indicators were well correlated, the upper third of the table should be white, the middle third grey and the bottom third black. The conclusion is that the measuring methods are not harmonised, the quality differs and/or the correlations are weak.

Luxembourg is excluded in this summary, due to the relatively large transient population.

Finally, if it is deemed desirable to make a more profound study, putting smoking into its epidemiological context, it might be preferable to work with a limited number of interested countries.

Reference list

Data sources used in the report

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OECD National Accounts, Volume II, 1970-1982, 1979-1991, 1982-1994

National Statistical Yearbooks

UN Year Book of Industrial Statistics 1966-1975, 1975-1984, 1984-1993

UN Commodity Trade Statistics 1970-1994

UN The Sex and Age Distribution of the World Population. The 1994 Revision

Statistics Sweden, Tobakskonsumtionen 1970 - 1993, i Sverige, Norge, Danmark och Finland

WHO Tobacco Profiles 1994

National sources

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Austrian Central Statistical Office: Data on consumption, consumption outlays from the questionnaire; Verbraucherpreisindex; Statistische Nachrichten: Ergebnisse des Mikrozensus 1986, 1991

Belgium

Institut National de Statistique: Indexcijfers van de consumptieprijzen; Population répartie d'après l'âge et le sexe

Centre de Recherche d'Information des Organisations de Consommateurs: Communiqué de presse

Denmark

The Danish Tobacco Manufacturers Association: Data on tobacco consumption

Finland

Central Statistical Office of Finland: Data on consumption, CPI, population from the questionnaire; Tobacco statistics 1994 (report)

National Public Health Institute: Health Behavior among Finnish Adult Population 1995 (report)

France

Institut National de la Statistique et des Études Économiques: Data on consumption, consumption out lays, CPI from the questionnaire; population figures.

Service des Statistiques, des Etudes et des Systemes d'Information: Enquête sur la santé et les soins médicaux 1980-1981, Enquête "Conditions de vie 1986-1987, Enquête santé 1991-1992 (reports)

W Germany

Statistisches Bundesamt: Consumption data, CPI, population, Data from Gesundheitswesen, Fragen zur Gesundheit 1978, Mikrozensus 1989, 1992.

Greece

National Statistical Service of Greece: Per capita consumption of cigarettes

Iceland

Statistics Iceland: Data on Consumption, consumption outlays, CPI, smoking habits from the questionnaire

Ireland

Central Statistics Office: CPI, population data, consumption data

Department of Health: Smoking prevalence 1972/73-1993/94

Italy

Istituto Nazionale de Statistica: Indagine Multiscopo Sulle Famiglie Anni 1987-91 (report), data from 1993-94

Centro di Documentazione e Informazione sul Tabacco: Consumption data on cigarettes

Luxembourg

Statec: Consumption data

Netherlands

Statistics Netherlands: CPI, cigarette consumption per capita, data from Health Interview Survey 1989-1994, Vademecum of Health Statistics, De Leefsituatie van de Nederlands bevolking 1989-94. Stichting Volksgesundheit en Roken

Norway

Statistics Norway: Consumption data, consumption outlays, CPI from the questionnaire

Statens tobakksskaderåd: Tobaksbruk och holdninger i Norge-utviklingen 1973-1995 (report)

Portugal

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Spain

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