
International Smoking Statistics

Web Edition

A collection of worldwide historical data

Sweden

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Contents

Contents	3
List of Figures	4
Preface	5
Downloads	5
Acknowledgements	6
Introduction.....	7
Sales data	7
Survey data	7
Table 1.1 Total annual sales of tobacco products, 1920-1973.....	9
Table 1.2 Total annual sales of tobacco products, 1974-2006.....	10
Table 1.3 Percentage of sales of tobacco in different forms (by weight), selected years	11
Table 2 Sales of cigarettes (including estimated number of hand-rolled cigarettes) and of all tobacco products. Annual total and average per adult (age 15 years and over) per day.....	12
Table 3 Manufactured cigarettes: percentage of total sales as filter cigarettes; sales-weighted average machine yields per cigarette of tar (SWAT) and nicotine (SWAN).....	15
Table 4M Prevalence of smoking, males: selected surveys by age.....	16
Table 4F Prevalence of smoking, females: selected surveys by age.....	17
Table 5M Number of cigarettes smoked per smoker per day, males: selected surveys by age	28
Table 5F Number of cigarettes smoked per smoker per day, females: selected surveys by age	29
Table 6M Number of cigarettes smoked per person per day, males: selected surveys by age; with percentage total sales	32
Table 6F Number of cigarettes smoked per person per day, females: selected surveys by age; with percentage total sales	33
Table 7M Number of cigarettes smoked per person per day, sales-adjusted, males: selected surveys ¹ by age; with percentage total sales	36
Table 7F Number of cigarettes smoked per person per day, sales-adjusted, females: selected surveys ¹ by age; with percentage total sales	37
Table 8 Estimated ¹ prevalence of smoking and estimated ¹ number of cigarettes per person per day (unadjusted and sales-adjusted): summary of Tables 4, 6 and 7. Males and females aged 15 years and over	38
Table 9M Prevalence of snus use, males: selected surveys by age.....	44
Table 9F Prevalence of snus use, females: selected surveys by age.....	45
Table 10M Prevalence of any tobacco use ¹ , males: selected surveys by age.....	50
Table 10F Prevalence of any tobacco use ¹ , females: selected surveys by age.....	51
Table 11 Estimated ¹ prevalence of smoking, snus use and any tobacco use: summary of Tables 4, 9 and 10. Males and females aged 15 years and over	54
Notes	59
Notes on sources of sales data	59
Snus.....	59
Sales data before 1920	59
Sales data 1920-1973	59
Sales data for 1974 onwards.....	59
Estimates of smuggling	60
Estimates of numbers of hand-rolled cigarette for 1950-2006	60
Plain/Filter cigarette sales	61

Tar and nicotine machine yields of cigarettes	61
Notes on sources of survey data.....	62
Additional sources.....	73
References	76

¹ See footnotes to Tables

List of Figures

Figure 1	Percentage of sales of tobacco in different forms (by weight), selected years	11
Figure 2	Sales of (i) manufactured and total ¹ cigarettes and (ii) all tobacco products Average per adult (aged 15 years and over) per day	14
Figure 3	Estimated prevalence of smoking of (i) manufactured cigarettes, (ii) total cigarettes and (iii) all tobacco products ¹ ; by year of survey. Males and females aged 15 years and over	41
Figure 4	Estimated number of total cigarettes smoked per person per day, sales- adjusted; by year of survey. Males and females aged 15 years and over	43
Figure 5	Estimated prevalence of snus use, by year of survey. Males and females aged 15 years and over	57
Figure 6	Estimated prevalence of any tobacco use ¹ , by year of survey. Males and females aged 15 years and over	58

¹ See footnotes to Figures

Preface

International Smoking Statistics is a collection of smoking data covering most of Europe and various other economically developed countries. The second edition (published by Wolfson Institute of Preventive Medicine and OUP, 2002, www.oup.co.uk/isbn/0-19-850856-5) included data for 30 countries up to 1995. It is planned to update the chapter for each country separately, and make them available online. Please register at www.pnlee.co.uk if you wish to be informed when updates are posted.

The methods used in the web edition are essentially unchanged from those of the second edition, although some minor changes are included in the online Methods chapter. Readers are strongly recommended to consult the Methods chapter.

The two main types of data presented are sales data and survey data. We give the results of the original authors as closely as possible, whilst presenting them in a uniform format.

Sales data give the total national consumption of tobacco. Data on sales of cigarettes and of all tobacco products are presented, usually from about 1920. Estimates of the consumption of hand-rolled cigarettes are included where possible, as are data on the types of manufactured cigarettes sold. The Tobacco Research Council provided most of the sales data until 1973, while later sales data were obtained from government and industry sources.

Survey data provide information on the prevalence and amount of smoking according to age and sex. These were obtained from a wide variety of surveys. Some survey data are available for the early part of the 20th century, but for most countries they are available only from the 1950s or 1960s onwards.

In additional tables we calculate further statistics by combining sales and survey data using certain standardized assumptions. The figures are intended to provide an easily interpretable summary of the data presented in the tables, and the commentary has deliberately been kept to a minimum.

Downloads

Updates currently available to download from www.pnlee.co.uk include:

Methods, including

Appendix I: *Estimated size of adult population;*

Appendix II: *Comparisons of manufactured and hand-rolled cigarettes and differences in the way they are smoked;*

Appendix III: *Consumption category estimation;*

Comparisons between countries;

Updated country chapters (see *Methods* for current list);

Tables from each updated chapter, in Excel format.

Supplement 1: *Estimation of sex-specific smoking statistics by standardized age groups and time periods.* [The web edition comprises a brief Update Note, together with tables (in Excel format only) for the countries with a chapter in the web edition. The original Supplement 1 to the second edition

(an extended version of Appendix IV to the second edition) is also available and gives a full description and tables for the other countries];

Also available from the same source are:

Supplement 2 to the second edition: *Estimating past smoking habits by an indirect method. An investigation into a method based on recall, with application to Great Britain*. [This supplement is an extended version of Appendix V to the second edition];

IMASS, a comprehensive Excel database system, based on WHO mortality data and smoking statistics from Supplement 1. The IMASS system includes powerful routines for creating graphs and tables.

Acknowledgements

We would like to acknowledge the tobacco industry for their financial support and for providing some of the sales data in International Smoking Statistics.

We would also like to thank the many government and research organizations and individuals who supplied much of the information included.

We thank Yvonne Cooper, Pauline Wassell and Diana Morris for maintenance of our references database.

We are indebted to G. F. Todd, past director of the Tobacco Research Council, who, shortly before he died in 1988, had prepared a draft report from which the first edition of International Smoking Statistics developed.

Professor Nicholas Wald was an editor of earlier editions, and we thank him for his support and encouragement.

We alone bear the responsibility for the analysis and interpretation of the data presented.

Introduction

Sales data

See Tables 1-3 and *Notes on sources of sales data*.

From 1920 until 1945 the consumption of manufactured cigarettes per adult was about 1 cigarette per day. Consumption rose steadily until the mid-1970s when it levelled around 5 cigarettes per day. From the mid-1980s it has declined to around 2.5 cigarettes per day in the mid-2000s. Between 1950 and 1980, our estimates for hand-rolled cigarettes suggest that consumption, always much lower than that of manufactured cigarettes, was about 0.2 to 0.3 cigarettes per adult per day; there may have been some rise in consumption in the 1980s and 1990s, but this is uncertain as cross-border sales of hand-rolling tobacco to Norway were high at that period.

Smokeless tobacco has long been used in Sweden. Initially it was dry snuff taken nasally. During the 19th century, there was a change to snus, or moist snuff, which consists of very finely ground tobacco with high moisture content, of which a 'pinch' is placed between the cheek and the gum (Ramström (1990)). More recently, portion-packed snus has become available (Axéll (1993)). In 1920 the consumption of snus per adult exceeded 4 g per day. Consumption fell to 1 g per day in the late 1960s, then increased to 2.5 g per day in the mid-2000s.

The consumption of all tobacco products (including snus) per adult was between 4 and 5 g per day from the mid-1920s to the mid-1940s, then between 5 and 6 g until the early 1990s, and again between 4 and 5 g since then. In the 1920s, the largest proportion of tobacco used was snus, while consumption of manufactured cigarettes accounted for less than 10%. The proportion of manufactured cigarettes increased to over 60% in the 1960s and 1970s, but decreased again to 35% by 2006. The proportion of tobacco used as snus correspondingly decreased to below 20%, then increased to over 50% since the late 1990s. The proportion used as pipe and hand-rolling tobacco has been slowly decreasing, from a peak over 20% in the 1940s to below 10% since the late 1970s. Consumption of cigars and cigarillos declined from 9% in the 1920s to 1% from the 1980s.

Survey data

See Tables 4-11 and *Notes on sources of survey data*.

In the late nineteenth century, smoking was largely restricted to men. (Haglund (1988), Hyllienmark (1983)).

In surveys from 1946-1963 (sources 6, 11 and 24), the prevalence of regular smoking among men aged 15 years and over was about 30% for cigarette smoking and 50% for any smoking; estimates of the additional prevalence of occasional smoking varied considerably. Over the same period, the prevalence of regular smoking among women increased from 9% to 20%.

Survey data are available annually from industry sources (sources 1 and 2) from 1969 to the early 1980s, but differences in the age range and smoking frequency reported by the two sources lead to an apparent difference in prevalence for females (aged 15 years and over) of about 5% (Table 8); for males, one cannot distinguish how much of the difference of 15-20% is due to these differences and how much to the difference in prevalence between cigarette smokers and smokers

of all products. Other series of national survey data are also available, notably the Statistics Sweden Survey of Living Conditions (ULF) (source 8-9) since 1977, the National Smoking and Health Association (NTS) (source 14-15) for 1976-1987, and the National Institute of Public Health (source 22) more recently.

The prevalence of cigarette smoking among men aged 15 years and over fell from about 40% in the late 1960s to 23% in the late-1980s. Over the same period the prevalence of regular smoking fell from about 55% to 26%; implying that the additional percentage smoking other products probably fell from 15 to 3%. The prevalence of regular smoking continued to decrease, to 13% or 11% (sources 8, 22) in the most recent surveys. There may have been a small increase in the additional prevalence of occasional smoking from about 8% in the 1970s to 11% in the 2000s. The prevalence of smoking among women was 30% (source 1) or 35% (source 2) by the mid-1970s, but then fell to about 15% for regular smoking and 25% for all smoking by the mid-2000s; virtually no women smoke products other than cigarettes. From the 1990s, the estimated prevalence of smoking was similar or slightly higher among women than among men.

Data on adult smoking by age are available since 1963. In that year, more men than women smoked at all ages. Since the 1970s most surveys have shown that the prevalence was higher among women than men at younger ages, about equal among the middle age groups, and lower for women at the older ages. The ages at which this direction of difference occurred has gradually moved upwards – in the early 1970s more women than men smoked up to about age 30, in the mid-1980s up to about age 40, and by the late 1990s up to about age 60. The prevalence of smoking decreased among both young men and young women, but this was more marked for young men, prevalence always being quite low among older women.

Annual national school-based data on smoking by adolescents have been available since 1971 (source 7), and there have also been occasional national postal surveys (source 28). More girls than boys aged 15 and over smoked throughout, while there was little difference in the prevalence between the sexes at age 13.

Comparison between survey and sales data is only rarely possible. It suggests that the ULF survey (source 9) increasingly under-reported consumption, by 15% in 1980, by about 25% for 1983-1996 and by 30% in 2004. Other surveys varied between a 35% understatement (source 6 in 1963, and source 21 in 2002) and virtually none (source 21 in 1995). In 1963, the estimated number of cigarettes smoked per person per day (sales-adjusted) was 5.2 for men and 2.6 for women. For men, it was estimated to be about 6 for men from 1969 to 1980, then decreased to below 3 by the mid-2000s. For women, it increased to about 4 for 1975 to 1990, then also decreased to below 3 by the mid-2000s.

In the 1950s, snus use was predominantly restricted to older men, but it spread rapidly among younger men from 1969 onwards (sources 26, 27). The prevalence of regular snus use among men age 15 and over rose from about 12% in the 1950s to 20% in the mid-1980s, and has remained around that level. Among women, it rose from negligible levels to about 3% during the 2000s. A further 5% of men and 3% of women use snus occasionally.

No data on the use of any tobacco product (i.e. smoking and/or snus use) are available until the 1980s. For women, they differ little from the smoking data. The prevalence of regular use of any tobacco among men aged 15 and over decreased from 46% in 1980 to about 30% in the mid-2000s. The *Notes on sources of survey data* show some data on joint usage (smoking only, snus only or both).

Table 1.1 Total annual sales of tobacco products, 1920-1973

Year	Manufactured cigarettes		Cigars		Cigarillos		Smoking tobacco tonnes	Chewing tobacco tonnes	Snuff tonnes	All tobacco products tonnes
	tonnes	millions	tonnes	millions	tonnes	millions				
1920	820	1 559	540	89	320	118	770	360	6 530	9 340
1921	730	1 345	360	58	320	117	820	320	6 080	8 620
1922	640	1 123	360	62	320	118	910	270	5 670	8 160
1923	590	1 058	230	40	360	120	950	270	5 490	7 890
1924	640	1 089	230	39	360	128	1 000	230	5 350	7 800
1925	640	1 085	270	39	410	137	1 040	230	5 310	7 890
1926	680	1 204	270	41	410	141	1 040	230	5 260	7 890
1927	730	1 284	270	40	410	141	1 000	180	5 130	7 710
1928	860	1 446	270	39	410	146	1 000	180	4 990	7 710
1929	950	1 640	270	37	450	160	1 000	180	4 850	7 710
1930	1 090	1 864	230	36	500	174	950	140	4 850	7 760
1931	1 270	1 999	230	32	500	171	910	140	4 850	7 890
1932	1 360	2 012	180	31	500	171	1 000	140	4 850	8 030
1933	1 320	1 894	180	29	450	170	1 000	140	4 760	7 850
1934	1 500	1 878	180	29	450	174	1 000	90	4 580	7 800
1935	1 630	1 843	180	27	500	179	1 000	90	4 490	7 890
1936	1 770	1 806	180	26	500	187	1 040	90	4 400	7 980
1937	1 910	1 822	180	26	500	193	1 040	90	4 400	8 120
1938	2 040	1 889	140	25	540	196	1 090	90	4 350	8 260
1939	2 180	1 976	140	23	540	197	1 090	90	4 260	8 300
1940	2 400	2 126	140	20	450	176	1 360	90	3 900	8 350
1941	2 310	2 191	140	25	450	204	1 540	90	3 860	8 390
1942	1 500	2 235	140	24	410	171	1 680	50	3 400	7 170
1943	1 680	2 237	180	34	360	158	1 680	50	3 270	7 210
1944	2 360	2 307	180	30	410	160	2 000	50	3 490	8 480
1945	2 810	2 468	180	28	410	154	1 950	50	3 490	8 890
1946	3 720	3 141	180	30	410	157	1 720	50	3 490	9 570
1947	4 310	3 670	180	27	360	146	1 540	50	3 450	9 890
1948	4 490	3 809	140	26	360	144	1 630	50	3 360	10 020
1949	4 670	3 984	140	23	320	134	1 540	50	3 220	9 930
1950	4 850	4 352	140	23	320	133	1 500	50	3 130	9 980
1951	4 850	4 416	140	20	230	104	1 410	50	2 900	9 570
1952	5 530	5 121	140	21	270	114	1 500	50	2 950	10 430
1953	5 580	5 248	140	20	270	115	1 500	50	2 900	10 430
1954	5 530	5 289	140	23	270	129	1 500	50	2 900	10 390
1955	5 760	5 548	140	23	270	135	1 450	50	2 860	10 520
1956	5 940	5 714	140	21	270	130	1 360	50	2 770	10 520
1957	6 080	5 903	140	21	270	134	1 320	50	2 720	10 570
1958	6 210	6 066	90	20	270	137	1 450	50	2 680	10 750
1959	6 530	6 240	90	19	270	142	1 500	50	2 630	11 070
1960	7 080	6 740	140	21	360	197	1 590	50	2 680	11 880
1961	7 530	7 216	90	29	360	188	1 540	50	2 590	12 160
1962	7 760	7 498	90	29	360	195	1 540	50	2 540	12 340
1963	7 980	7 860	450	223			1 540	0	2 540	12 520
1964	7 940	7 810	640	310	Included with		1 720	0	2 540	12 840
1965	8 160	8 300	590	311	cigars for		1 720	0	2 490	12 970
1966	8 620	8 700	590	318	1963 to 1973		1 720	0	2 490	13 430
1967	8 350	8 927	680	331			1 720	0	2 400	13 150
1968	8 620	9 679	680	333			1 680	0	2 360	13 340
1969	8 660	10 147	640	334			1 590	0	2 400	13 290
1970	8 350	10 269	640	326			1 590	0	2 490	13 060
1971	7 760	9 957	540	282			1 540	0	2 630	12 470
1972	8 710	11 243	500	254			1 410	0	2 680	13 290
1973	7 080	9 265	450	249			1 450	0	2 720	11 700

Source: see *Notes on sources of sales data: Sales data before 1920* p. 59, and *Sales data 1920-1973*, p. 59

Table 1.2 Total annual sales of tobacco products, 1974-2006

Year	Manufactured cigarettes		Cigars & cigarillos			Smoking & chewing tobacco		Snuff tobacco tonnes	All tobacco products ² tonnes
	tonnes	millions	tonnes	cigars cigarillos		tonnes	cross-border ¹ tonnes		
				millions	millions				
1974	7 196	11 070	474	8	243	1 369	46	2 812	11 805
1975	7 587	11 674	465	8	242	1 301	50	2 943	12 246
1976	7 792	11 988	443	7	234	1 252	54	3 189	12 622
1977	7 382	11 357	378	6	201	1 174	56	3 361	12 239
1978	7 623	11 727	325	5	174	1 134	64	3 442	12 460
1979	7 782	11 973	301	5	162	1 105	68	3 550	12 670
1980	7 741	11 909	280	5	150	1 146	74	3 665	12 758
1981	7 464	11 483	249	4	138	1 147	84	3 760	12 536
1982	7 840	12 062	236	4	133	1 337	200	3 930	13 143
1983	7 514	11 560	200	4	121	1 534	350	4 029	12 927
1984	7 476	11 502	192	4	116	1 768	350	4 332	13 418
1985	7 249	11 152	175	3	108	1 700	280	4 560	13 404
1986	7 287	11 211	169	3	105	1 604	350	4 673	13 383
1987	7 219	11 106	156	3	99	1 499	336	4 695	13 233
1988	7 278	11 197	143	3	91	1 437	318	4 594	13 134
1989	7 116	10 948	150	3	100	1 430	308	4 606	12 994
1990	6 899	10 610	183	3	131	1 409	237	4 632	12 886
1991	6 852	10 541	184	3	137	1 372	204	4 836	13 040
1992	7 128	10 966	174	3	132	1 468	272	5 007	13 505
1993	5 670	8 723	144	2	109	1 318	160	5 034	12 006
1994	5 662	8 710	129		100	1 332	189	5 238	12 172
1995	5 280	8 123	117		90	1 303	194	5 407	11 913
1996	5 381	8 278	111		83	1 314	205	5 637	12 238
1997	3 900	5 999	96		73	1 139	150	5 328	10 313
1998	3 730	5 738	92		71	1 131		5 350	10 303
1999	4 471	6 878	78		60	948		5 690	11 187
2000	4 594	7 067	79		61	934		6 229	11 836
2001	4 739	7 290	78		60	906		6 462	12 185
2002	4 861	7 478	69		53	896		6 752	12 578
2003	4 696	7 224	60		46	837		6 762	12 355
2004	4 485	6 900	59		46	914		6 725	12 183
2005	4 499	6 922	59		45	971		6 561	12 090
2006	4 353	6 697	62		48	805		7 186	12 406

¹ Cross border sales of pipe and rolling tobacco to Norway

² Excludes cross border 1974-1997

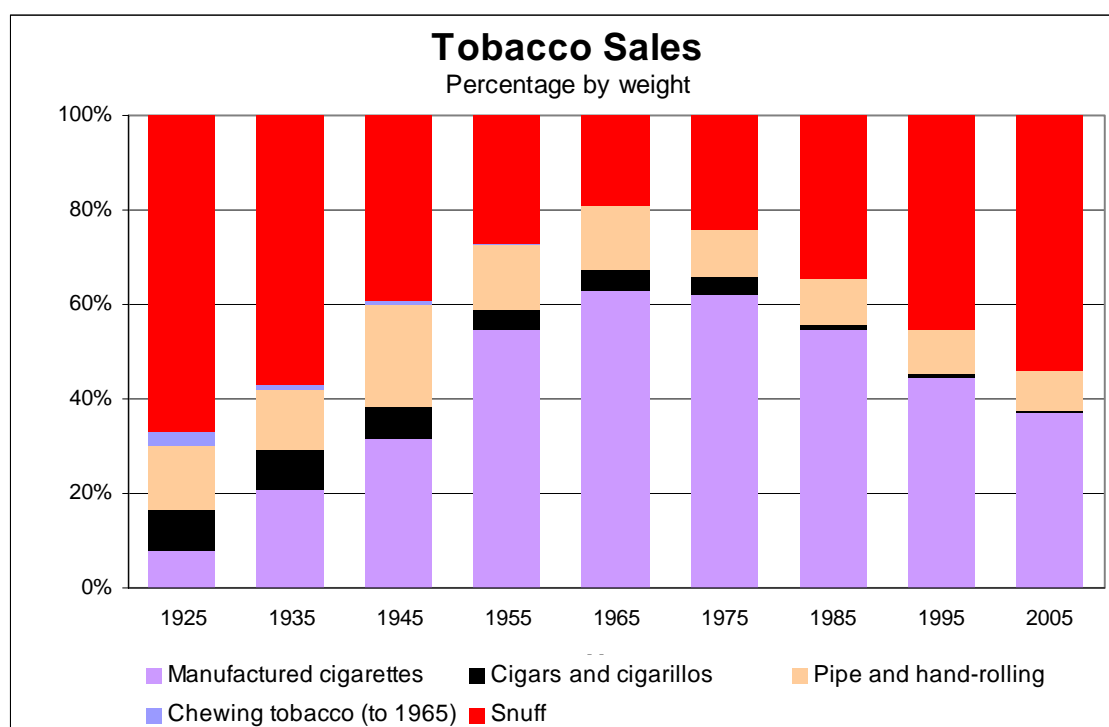
Source: see Notes on sources of sales data: Sales data for 1974 onwards, p. 59

Table 1.3 Percentage of sales of tobacco in different forms (by weight), selected years

Year	Manufactured cigarettes %	Cigars and cigarillos %	Pipe and hand-rolling %	Chewing tobacco %	Snuff %
1925	8.1	8.6	13.2	2.9	67.3
1935	20.7	8.6	12.7	1.1	56.9
1945	31.6	6.6	21.9	0.6	39.3
1955	54.8	3.9	13.8	0.5	27.2
1965	62.9	4.5	13.3	0.0	19.2
1975	62.0	3.8		10.2	24.0
1985	54.1	1.3		9.5	34.0
1995	44.3	1.0		9.1	45.4
2005	37.2	0.5		8.0	54.3

Source: calculated from Tables 1.1 & 1.2, excluding cross-border sales 1975, 1985 and 1995

Figure 1 Percentage of sales of tobacco in different forms (by weight), selected years



Source: Table 1.3

Table 2 Sales of cigarettes (including estimated number of hand-rolled cigarettes) and of all tobacco products.
Annual total and average per adult (age 15 years and over) per day

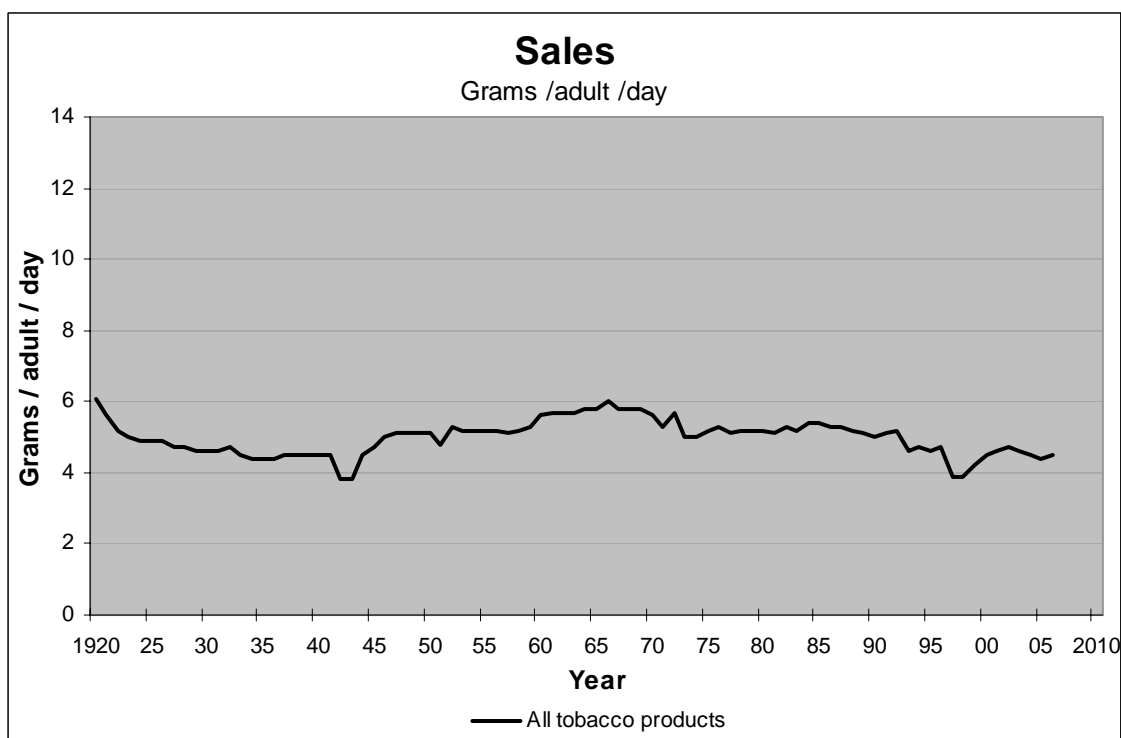
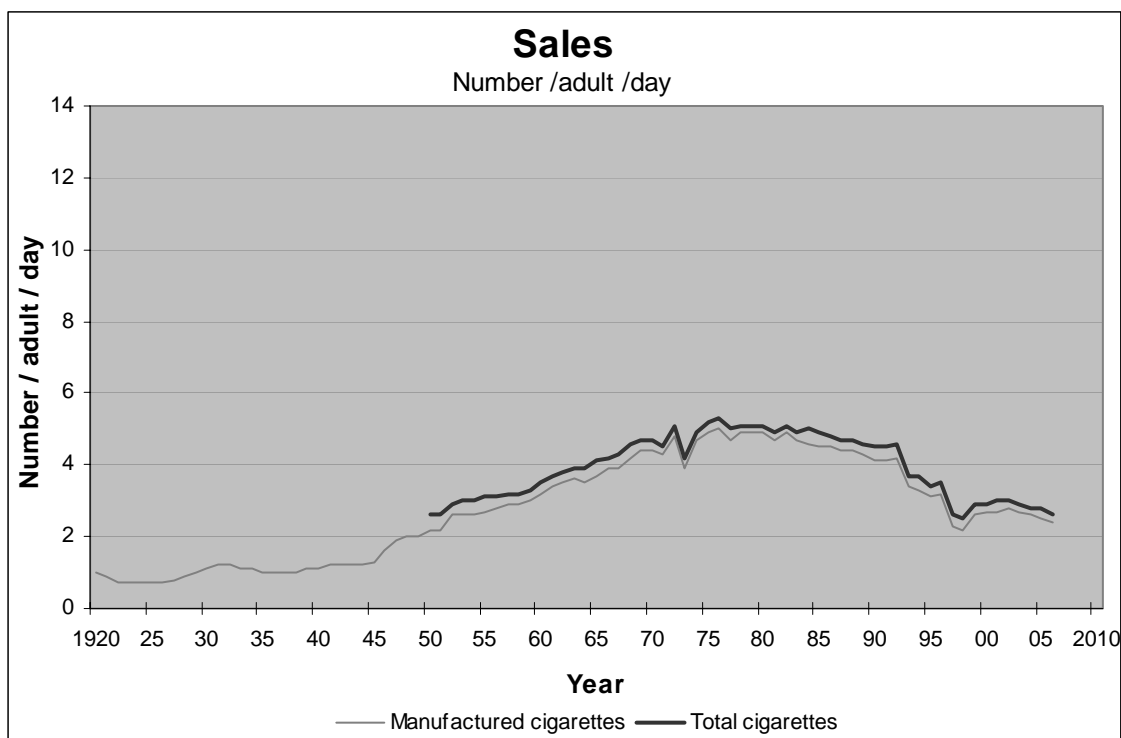
Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual tonnes	Grams/ adult/day
1920	1 559	1.0					9 340	6.1
1921	1 345	0.9					8 620	5.6
1922	1 123	0.7					8 160	5.2
1923	1 058	0.7					7 890	5.0
1924	1 089	0.7					7 800	4.9
1925	1 085	0.7					7 890	4.9
1926	1 204	0.7					7 890	4.9
1927	1 284	0.8					7 710	4.7
1928	1 446	0.9					7 710	4.7
1929	1 640	1.0					7 710	4.6
1930	1 864	1.1					7 760	4.6
1931	1 999	1.2					7 890	4.6
1932	2 012	1.2					8 030	4.7
1933	1 894	1.1					7 850	4.5
1934	1 878	1.1					7 800	4.4
1935	1 843	1.0					7 890	4.4
1936	1 806	1.0					7 980	4.4
1937	1 822	1.0					8 120	4.5
1938	1 889	1.0					8 260	4.5
1939	1 976	1.1					8 300	4.5
1940	2 126	1.1					8 350	4.5
1941	2 191	1.2					8 390	4.5
1942	2 235	1.2					7 170	3.8
1943	2 237	1.2					7 210	3.8
1944	2 307	1.2					8 480	4.5
1945	2 468	1.3					8 890	4.7
1946	3 141	1.6					9 570	5.0
1947	3 670	1.9					9 890	5.1
1948	3 809	2.0					10 020	5.1
1949	3 984	2.0					9 930	5.1
1950	4 352	2.2	675	0.3	5 027	2.6	9 980	5.1
1951	4 416	2.2	635	0.3	5 051	2.6	9 570	4.8
1952	5 121	2.6	675	0.3	5 796	2.9	10 430	5.3
1953	5 248	2.6	675	0.3	5 923	3.0	10 430	5.2
1954	5 289	2.6	675	0.3	5 964	3.0	10 390	5.2
1955	5 548	2.7	653	0.3	6 201	3.1	10 520	5.2
1956	5 714	2.8	612	0.3	6 326	3.1	10 520	5.2
1957	5 903	2.9	594	0.3	6 497	3.2	10 570	5.1
1958	6 066	2.9	653	0.3	6 719	3.2	10 750	5.2
1959	6 240	3.0	675	0.3	6 915	3.3	11 070	5.3
1960	6 740	3.2	716	0.3	7 456	3.5	11 880	5.6
1961	7 216	3.4	693	0.3	7 909	3.7	12 160	5.7
1962	7 498	3.5	693	0.3	8 191	3.8	12 340	5.7
1963	7 860	3.6	693	0.3	8 553	3.9	12 520	5.7
1964	7 810	3.5	774	0.4	8 584	3.9	12 840	5.8
1965	8 300	3.7	774	0.3	9 074	4.1	12 970	5.8
1966	8 700	3.9	774	0.3	9 474	4.2	13 430	6.0
1967	8 927	3.9	774	0.3	9 701	4.3	13 150	5.8
1968	9 679	4.2	756	0.3	10 435	4.6	13 340	5.8
1969	10 147	4.4	716	0.3	10 863	4.7	13 290	5.8
1970	10 269	4.4	716	0.3	10 985	4.7	13 060	5.6
1971	9 957	4.3	693	0.3	10 650	4.5	12 470	5.3
1972	11 243	4.8	635	0.3	11 878	5.1	13 290	5.7
1973	9 265	3.9	653	0.3	9 918	4.2	11 700	5.0
1974	11 070	4.7	589	0.2	11 659	4.9	11 805	5.0
1975	11 674	4.9	557	0.2	12 231	5.2	12 246	5.2
1976	11 988	5.0	533	0.2	12 521	5.3	12 622	5.3
1977	11 357	4.7	496	0.2	11 853	5.0	12 239	5.1
1978	11 727	4.9	475	0.2	12 202	5.1	12 460	5.2
1979	11 973	4.9	459	0.2	12 432	5.1	12 670	5.2

Table 2 (continued)

Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/adult/day	Total annual millions	Number/adult/day	Total annual millions	Number/adult/day	Total annual tonnes	Grams/adult/day
1980	11 909	4.9	474	0.2	12 383	5.1	12 758	5.2
1981	11 483	4.7	448	0.2	11 931	4.9	12 536	5.1
1982	12 062	4.9	535	0.2	12 597	5.1	13 143	5.3
1983	11 560	4.7	615	0.2	12 175	4.9	12 927	5.2
1984	11 502	4.6	893	0.4	12 395	5.0	13 418	5.4
1985	11 152	4.5	966	0.4	12 118	4.9	13 404	5.4
1986	11 211	4.5	865	0.3	12 076	4.8	13 383	5.3
1987	11 106	4.4	813	0.3	11 919	4.7	13 233	5.3
1988	11 197	4.4	794	0.3	11 991	4.7	13 134	5.2
1989	10 948	4.3	819	0.3	11 767	4.6	12 994	5.1
1990	10 610	4.1	926	0.4	11 536	4.5	12 886	5.0
1991	10 541	4.1	924	0.4	11 465	4.5	13 040	5.1
1992	10 966	4.2	946	0.4	11 912	4.6	13 505	5.2
1993	8 723	3.4	916	0.4	9 639	3.7	12 006	4.6
1994	8 710	3.3	904	0.3	9 614	3.7	12 172	4.7
1995	8 123	3.1	878	0.3	9 001	3.4	11 913	4.6
1996	8 278	3.2	878	0.3	9 156	3.5	12 238	4.7
1997	5 999	2.3	782	0.3	6 781	2.6	10 313	3.9
1998	5 738	2.2	775	0.3	6 513	2.5	10 303	3.9
1999	6 878	2.6	629	0.2	7 507	2.9	11 187	4.2
2000	7 067	2.7	618	0.2	7 685	2.9	11 836	4.5
2001	7 290	2.7	595	0.2	7 885	3.0	12 185	4.6
2002	7 478	2.8	587	0.2	8 065	3.0	12 578	4.7
2003	7 224	2.7	540	0.2	7 764	2.9	12 355	4.6
2004	6 900	2.6	602	0.2	7 502	2.8	12 183	4.5
2005	6 922	2.5	647	0.2	7 569	2.8	12 090	4.4
2006	6 697	2.4	514	0.2	7 211	2.6	12 406	4.5

Source: Manufactured cigarettes and all tobacco products, Tables 1.1 and 1.2. Hand-rolled cigarettes, see *Notes on sources of sales data: Estimates of numbers of hand-rolled cigarette for 1950-2006*, p. 60. Population, see *Population, Methods* p. 14.

Figure 2 Sales of (i) manufactured and total¹ cigarettes and (ii) all tobacco products
Average per adult (aged 15 years and over) per day



¹ Includes estimated hand-rolled cigarette consumption
Source: Table 2

Table 3 Manufactured cigarettes: percentage of total sales as filter cigarettes; sales-weighted average machine yields per cigarette of tar (SWAT) and nicotine (SWAN)

Year	Filter		SWAT mg/cig	SWAN mg/cig
	consumption %	production %		
1960	10.3			
1961	12.8			
1962	17.0			
1963	21.0			
1964	29.0		31	1.8
1965			29	1.75
1966	48.1		27	1.7
1967	54.5		28	2.0
1968	62.0		26	1.75
1969	67.0		25	1.7
1970	70.0		23	1.6
1971	74.9		23	1.6
1972	77.8		22	1.55
1973	80.4		21	1.55
1974	82.3		22	1.6
1975	82.0		21.4	
1976	85.4		20.8	
1977	87.6		18.7	
1978			17.0	
1979	89.0		15.7	
1980	90.0		15.1	
1981	91.0			
1982		91.0		
1983		91.8		
1984		92.3		
1985		92.5		
1986		93.6		
1987		94.0		
1988		94.3		
1989		95.5		
1990		95.8		
1991		95.9		
1992		96.5		
1993		96.1		
1994		97.3		
1995		97.6		
1996		100.0		
1997		100.0		
1998		100.0		
1999		100.0		
2000		100.0		
2001		100.0		
2002		100.0		
2003		100.0		
2004		100.0		

Source: see *Notes on sources of sales data: Plain/Filter cigarette sales*, p. 61 and *Tar and nicotine machine yields of cigarettes*, p. 61

Table 4M Prevalence of smoking, males: selected surveys by age
(continues on p. 18)

Year	Source	Product	Frequency	Age Groups																	All ages	
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65
46	11	U	R	50																		
51	24	UC	R	30																		
51	24	A	R	46																		
51	24	UC	A	35																		
51	24	A	A	50																		
60	25	U	R	54	44	56																51
63	6	UC	R	44																	35	
63	6	A	R	51																	49	
63	6	UC	A	60																		
63	6	A	A	62																	62	
67	5	UC	U	35																		
68	12	U	U	28																		
68	18	A	R	0																		
68	18	A	A	8																		
69	1	UC	U	43																		
69	13	U	U	54																		
69	23	UC	R	59																		
70	1	UC	U	42																		
71	1	UC	U	40																		
71	2	A	R	55																		
71	3	UC	U	44																	42	
71	7	U	U	14	41																	
71	18	A	R	22																		
71	18	A	A	35																		
72	1	UC	U	40																		
72	2	A	R	55																		
72	5	UC	U	28																		
72	7	U	U	10	35																	
72	13	U	U	49																		
72	18	A	R	32																		
72	18	A	A	37																		
73	1	UC	U	40																		
73	2	A	R	56																		
73	4	UC	R	38																		
73	7	U	U	10	31																	
73	18	A	R	32																		
73	18	A	A	40																		
74	1	UC	U	39																		
74	2	A	R	55																		
74	7	U	U	10	31																	
74	18	A	R	38																		
74	18	A	A	56																		
75	1	UC	U	41																	39	
75	2	A	R	54																		
75	7	U	U	12	32																	
76	1	UC	U	36																	35	
76	2	A	R	52																		
76	7	U	U	11	27																	
76	14	UC	R	36																		
76	14	A	R	43																		
76	14	A	A	51																		

Table 4F Prevalence of smoking, females: selected surveys by age
(continues on p. 19)

Year	Source	Product	Frequency	Age Groups																	All ages		
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70
46	11	U	R	9																			
51	24	UC	R																				
51	24	A	R																				
51	24	UC	A																				
51	24	A	A																				
60	25	U	R			46	51	38															45
63	6	UC	R						36	32	25	11					23						
63	6	A	R						36	32	25	11					23						
63	6	UC	A						51	43	34	17											
63	6	A	A						51	43	34	17					32						
67	5	UC	U									28	17	8	2								
68	12	U	U									47	44	37	38	20							
68	18	A	R	5																			
68	18	A	A	10																			
69	1	UC	U						33														
69	13	U	U						32														
69	23	UC	R																				
70	1	UC	U						35														
71	1	UC	U						34														
71	2	A	R						34														
71	3	UC	U				43	49	38	33	23	12						35					
71	7	U	U		16				47														
71	18	A	R				43																
71	18	A	A				60																
72	1	UC	U						34														
72	2	A	R						34														
72	5	UC	U				35	45	34	28													
72	7	U	U		12				47														
72	13	U	U						33														
72	18	A	R				49																
72	18	A	A				57																
73	1	UC	U						34														
73	2	A	R						35														
73	4	UC	R						34														
73	7	U	U		10				45														
73	18	A	R				54																
73	18	A	A				60																
74	1	UC	U						36														
74	2	A	R						36														
74	7	U	U		12				45														
74	18	A	R				57																
74	18	A	A				72																
75	1	UC	U						46	38	21								35				
75	2	A	R						36														
75	7	U	U		13				45														
76	1	UC	U						49	38	23								37				
76	2	A	R						38														
76	7	U	U		12				40														
76	14	UC	R						34														
76	14	A	R						34														
76	14	A	A						41														

Table 4M (continued from p. 16, continues on p. 24)
Prevalence of smoking, males

Year	Source	Product	Frequency	Age Groups																	All ages																		
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+														
84	7	U	*																					8															
84	7	U	R																						11														
84	7	U	U																						16														
84	8	U	R							14		28		37		40		37		40		34		38		37		42		29		27		23		22		33	
84	15	A	R																																			28	
84	15	A	A																																			37	
85	7	U	*																																			8	
85	7	U	R																																			11	
85	7	U	U																																			16	
85	8	U	R																																				30
85	15	UC	R																																			24	
85	15	A	R																																			27	
85	15	A	A																																			37	
85	16	UC	R																																			32	
85	16	UC	A																																			35	
85	16	A	A																																			40	
86	7	U	*																																			10	
86	7	U	R																																			12	
86	7	U	U																																			17	
86	8	U	R																																				29
86	15	UC	R																																			23	
86	15	A	R																																			24	
86	15	A	A																																			35	
86	17	UC	R																																			23	
86	17	UC	A																																			30	
86	17	A	A																																			36	
86	19	U	*																																			9	
86	19	U	R																																			15	
86	19	U	A																																			22	
87	7	U	*																																			8	
87	7	U	R																																			10	
87	7	U	U																																			17	
87	8	U	R																																			29	
87	15	UC	R																																			23	
87	15	A	R																																			27	
87	15	A	A																																			37	
87	28	UC	*																																			6	
87	28	UC	R																																			13	
88	7	U	*																																			8	
88	7	U	R																																			10	
88	7	U	U																																			17	
88	8	U	R																																			28	
88	9	U	R																																			27	
88	9	U	A																																			36	
89	7	U	*																																			10	
89	7	U	R																																			12	
89	7	U	U																																			23	
89	8	U	R																																			26	
89	19	U	*																																			10	
89	19	U	R																																			15	
89	19	U	A																																			24	

Table 4F (continued from p.21, continues on p. 25)
Prevalence of smoking, females

Year	Source	Product	Frequency	Age Groups																	All ages							
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+			
90	7	U	*																				16					
90	7	U	R																					19				
90	7	U	U																					31				
90	8	U	R							14		30	31	34	38	34	37	26	23	22	20	14	11	3	26			
90	16	UC	R									28		30		33		26						30				
90	16	UC	A									34		38		39		28						36				
90	16	A	A									35		38		40		28						36				
90	17	UC	R									26		33		23		21						26				
90	17	UC	A									33		41		28		22						31				
90	17	A	A									33		41		28		22						32				
91	7	U	*																				15					
91	7	U	R																					18				
91	7	U	U		5																			27				
91	8	U	R								12	31	30	27	33	33	37	29	22	19	21	7	8	0	24			
92	7	U	*																					15				
92	7	U	R																						18			
92	7	U	U																						27			
92	8	U	R								16	25	31	40	32	32	41	26	25	23	19	16	8	9	27			
92	18	A	R												36													
92	18	A	A												40													
93	7	U	*																					15				
93	7	U	R																						18			
93	7	U	U		5																				26			
93	8	U	R									17	21	26	25	29	32	33	29	26	21	19	16	8	4	23		
93	19	U	*		2																				13			
93	19	U	R		4																					19		
93	19	U	A		9																					27		
94	7	U	*																						17			
94	7	U	R																							20		
94	7	U	U																							29		
94	8	U	R									18	23	23	32	35	28	32	34	25	21	15	12	10	3	24		
94	17	UC	R										25		31		30		21						28			
94	17	UC	A										34		34		36		22						32			
94	17	A	A										34		35		36		23						32			
94	28	UC	*		1																					10		
94	28	UC	R		4																					19		
95	7	U	*																						14			
95	7	U	R																							17		
95	7	U	U		4																					27		
95	8	U	R										20	22	28	28	29	32	29	33	21	19	15	15	8	6	24	
95	16	UC	R											25		34		27		24						29		
95	16	UC	A											34		40		31		24						33		
95	16	A	A											33		39		29		22						31		
95	20	UC	*																						18			
95	20	UC	A																							33		
95	21	MC	U										26		31		28									26		
95	21	TC	U										27		33		32									28		
95	21	A	U										27		33		32									28		
96	7	U	*																						15			
96	7	U	R																							17		
96	7	U	U																							25		
96	8	U	R											17	28	23	27	30	26	28	31	23	20	20	13	9	8	23
96	9	UC	R																							22		
96	9	U	R												21		25		27		31		22		17	8	23	
96	9	U	A													39		35		38		37		26		18	9	31

Table 5M Number of cigarettes smoked per smoker per day, males:
selected surveys by age
(continues on p. 30)

Year	Source	Product	Estimated	Age Groups																	All ages
				12	13	14	15	16	17	18	19	20 - 24	25 - 29	30 - 34	35 - 39	40 - 44	45 - 49	50 - 54	55 - 59	60 - 64	
51	24	UC	E	15																	
51	24	A	E	13			14	14	15	14	15	14	13								
63	6	UC	E	8.4				13			12			10				12			
67	5	UC							11			9.8		7.9		6.6					
68	18	A	E																		
69	23	UC	E																		
71	18	A	E	8.4																	
72	5	UC		11				13			14		14								
72	18	A	E	8.4																	
73	18	A	E	10																	
74	18	A	E	14																	
77	18	A	E	15																	
80	9	UC		14				16			17		16		14		11		9.5		15
81	18	A	E	15																	
83	14	UC		15																	
84	15	UC		16																	
85	15	UC		14				15			17				14				15		
85	16	UC		17				17		22		15								18	
86	7	UC	E	10																	
86	15	UC		14				22			16				11				16		
86	17	UC		15				15		17		15								16	
87	7	UC	E	11																	
87	15	UC		16				19			18				16				17		
88	7	UC	E	11																	
88	9	UC		13				15			17		16		15		11		8.0		15
89	7	UC	E	11																	
90	7	UC	E	11																	
90	16	UC		13				17			17		15								17
90	17*	UC		13				16			16		14								15
91	7	UC	E	12																	
92	7	UC	E	12																	
92	18	A	E	17																	
93	7	UC	E	11																	
94	7	UC	E	11																	
94	17	UC		14				15			14		12								14
95	7	UC	E	11																	
95	16*	UC		17				15			18		16								16
95	20	UC	E	11																	
95	21	TC	E	15				16			17		15				16				
96	7	UC	E	10																	
96	9	UC		11				13			16		16		15		13		8.5		14
97	7	UC	E	11																	
97	19	UC		0.6		1.4															
98	7	UC	E	9.2																	
99	7	UC	E	10																	
99	20	UC	E	9.6																	

Table 6M Number of cigarettes smoked per person per day, males:
selected surveys by age; with percentage total sales
(continues on p. 34)

Year	Source	Product	Age Groups																	All ages	% Total sales						
			12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60			65	70	75	80+		
51	24	UC	3.8																		**						
51	24	A	6.3					6.5	7.4	8.5	8.0	8.4	7.1	6.7							**						
63	6	UC	3.7					5.3			4.4			2.6			4.0	65%T									
67	5	UC						4.0			2.8			1.8			0.9				**						
68	18	A																			**						
69	23	UC	7.4																		**						
71	18	A	1.8																		**						
72	5	UC	2.9					5.3			4.7			4.2				**									
72	18	A	2.7																		**						
73	18	A	3.3																		**						
74	18	A	5.1																		**						
77	18	A	5.2																		**						
80	9	UC	3.6					6.5			6.8			6.1			4.8			3.4			2.5			5.1	84%T
81	18	A	4.4																		**						
83	14	UC*	4.5																		73%T						
84	15	UC*	4.5																		76%T						
85	15	UC	2.0					4.2			5.3			2.5						3.6	72%T						
85	16	UC	4.9					5.9			7.3			4.3						6.0	**						
86	7	UC	1.0																		**						
86	15	UC	2.8					5.7			4.3			1.7						3.7	72%T						
86	17	UC	3.2					3.6			4.1			3.3						3.7	**						
87	7	UC	0.9																		**						
87	15	UC	2.4					5.3			5.0			3.4						3.9	75%T						
88	7	UC	0.9																		**						
88	9	UC	2.1					4.1			5.7			5.2			4.3			2.6			1.5			3.9	75%T
89	7	UC	1.1																		**						
90	7	UC	1.2																		**						
90	16	UC	3.1					6.2			4.8			4.4						5.2	**						
90	17*	UC	2.7					4.4			3.8			3.7						4.0	**						
91	7	UC	1.3																		**						
92	7	UC	1.6																		**						
92	18	A	4.8																		**						
93	7	UC	1.4																		**						
94	7	UC	1.1																		**						
94	17	UC	1.8					3.7			2.5			2.2						2.9	**						
95	7	UC	1.2																		**						
95	16*	UC	3.5					3.5			5.1			4.1						4.2	**						
95	20	UC	1.5																		**						
95	21	TC*	3.4					4.2			4.2			2.2						3.5	98%T						
96	7	UC	1.0																		**						
96	9	UC	1.5					2.0			3.5			3.7			3.3			2.2			1.1			2.6	74%T
97	7	UC	1.1																		**						
97	19	UC	0.0	0.3																	**						
98	7	UC	0.8																		**						
99	7	UC	0.7																		**						
99	20	UC	1.2																		**						

Table 6M (continued from p. 32)
Number of cigarettes smoked per person per day, males

Year	Source	Product	Age Groups																	All ages	% Total sales								
			12	13	14	15	16	17	18	19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64			65 69	70 74	75 79	80+				
00	7	UC					0.8																						**
01	7	UC					0.7																						**
02	7	UC					0.6																						**
02	21	TC							0.5			0.9			2.1						1.4							1.3	63%T
03	7	UC					0.6																						**
03	20	UC					1.0		1.1																				**
04	7	UC					0.4		0.7																				**
04	9	UC							1.0			1.4		1.7		3.0		3.4		1.6		1.1					1.9	71%T	
05	7	UC					0.4		0.8																				**
05	21	MC							1.6			1.5		1.7						2.0								1.7	76%M
05	21	TC							1.6			1.7		1.9						2.5								2.0	76%T
06	7	UC					0.5		0.7																				**
07	7	UC					0.4		0.8																				**
08	7	UC					0.6		0.9																				**

Source: *Notes on sources of survey data*, p. 62
 Product: MC = manufactured cigarettes
 TC = total cigarettes (including hand-rolled)
 UC = cigarettes (type unspecified)
 A = all products
 U = unspecified

* = refer to *Notes on sources of survey data*, p. 62
 All ages: relates to ages reported; as given in original source
 % Total sales: estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined
 ** = cannot be calculated
 -- = adjusted by original author

Table 6F (continued from p. 35)
Number of cigarettes smoked per person per day, females

Year	Source	Product	Age Groups																	All ages	% Total sales							
			12	13	14	15	16	17	18	19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64			65 69	70 74	75 79	80+			
00	7	UC					1.3																					**
01	7	UC					1.2																					**
02	7	UC					1.2																					**
02	21	TC							2.2			2.7			4.0						1.4						2.5	63%T
03	7	UC					1.0																					**
03	20	UC				1.1		2.3																				**
04	7	UC				1.0		1.3																				**
04	9	UC						1.3			1.8		2.5		3.0		2.4		1.7		0.9					2.0	71%T	
05	7	UC				1.0		1.5																				**
05	21	MC						1.9			1.8		3.1		1.8												2.2	76%M
05	21	TC						1.9			1.8		3.3		1.8												2.2	76%T
06	7	UC				0.7		1.3																				**
07	7	UC				0.7		1.3																				**
08	7	UC				0.8		1.3																				**

Source: *Notes on sources of survey data*, p. 62
 Product: MC = manufactured cigarettes
 TC = total cigarettes (including hand-rolled)
 UC = cigarettes (type unspecified)
 A = all products
 U = unspecified

* = refer to *Notes on sources of survey data*, p. 62
 All ages: relates to ages reported; as given in original source
 % Total sales: estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined,
 ** = cannot be calculated
 -- = adjusted by original author

Table 7M Number of cigarettes smoked per person per day, sales-adjusted, males: selected surveys¹ by age; with percentage total sales

Year	Source	Product	Age Groups																	All ages	% Total sales		
			12	13	14	15	16	17	18	19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64			65-69	70-74
63	6	UC							5.7	8.1	6.8				4.0							6.1	65%T
80	9	UC						4.3	7.8	8.1	7.3	5.7	4.1	3.0								6.1	84%T
83	14	UC*								6.1													73%T
84	15	UC*								5.9													76%T
85	15	UC						2.7	5.8	7.3	3.5											5.0	72%T
86	15	UC						3.9	7.9	6.0	2.3											5.1	72%T
87	15	UC						3.2	7.1	6.7	4.5											5.2	75%T
88	9	UC						2.8	5.5	7.5	6.9	5.7	3.4	2.0								5.2	75%T
95	21	TC*						3.5	4.2	4.3	2.3											3.5	98%T
96	9	UC						2.0	2.7	4.8	5.0	4.5	3.0	1.5								3.5	74%T
02	21	TC						0.8	1.5	3.4	2.3											2.1	63%T
04	9	UC						1.4	2.0	2.4	4.3	4.8	2.3	1.5								2.8	71%T
05	21	MC						2.0	2.0	2.2	2.6											2.3	76%M
05	21	TC						2.1	2.3	2.5	3.4											2.7	76%T

1 Based on those surveys in Table 6 with data for both sexes and age range at least 21-64 (see *Cigarette consumption per person*, Methods p. 11)

Source: *Notes on sources of survey data*, p. 62
 Product: MC = manufactured cigarettes
 TC = total cigarettes (including hand-rolled)
 UC = cigarettes (type unspecified)
 A = all products
 U = unspecified

* = refer to *Notes on sources of survey data*, p. 62
 All ages: relates to ages reported; as given in original source
 % Total sales: Adjustment factor used, estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined
 -- = adjusted by original author

Table 7F Number of cigarettes smoked per person per day, sales-adjusted, females: selected surveys¹ by age; with percentage total sales

Year	Source	Product	Age Groups																		All ages	% Total sales	
			12	13	14	15	16	17	18	19	20 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59	60 64	65 69			70 74
63	6	UC						4.6		4.3		3.5			1.2							3.1	65%T
80	9	UC					5.6		6.3		6.0		4.5		2.7		1.5		0.5			4.0	84%T
83	14	UC*									4.8												73%T
84	15	UC*									5.3												76%T
85	15	UC					4.9		7.8		6.9				2.3							5.2	72%T
86	15	UC					5.5		8.2		6.4				2.7							5.6	72%T
87	15	UC					5.2		7.4		5.4				2.0							4.7	75%T
88	9	UC					4.6		6.3		6.4		5.6		3.5		2.2		0.8			4.4	75%T
95	21	TC*					3.4				3.7		3.8				2.9					3.4	98%T
96	9	UC					2.9		4.1		4.3		5.4		3.6		2.3		1.1			3.6	74%T
02	21	TC					3.4				4.3		6.3				2.2					3.9	63%T
04	9	UC					1.8		2.5		3.5		4.2		3.4		2.5		1.3			2.9	71%T
05	21	MC					2.5				2.4		4.1				2.4					2.9	76%M
05	21	TC					2.6				2.4		4.4				2.4					2.9	76%T

1 Based on those surveys in Table 6 with data for both sexes and age range at least 21-64 (see *Cigarette consumption per person*, Methods p. 11)

Source: See *Notes on sources of survey data*, p. 62
 Product: MC = manufactured cigarettes
 TC = total cigarettes (including hand-rolled)
 UC = cigarettes (type unspecified)
 A = all products
 U = unspecified

* = refer to *Notes on sources of survey data*, p. 62
 All ages: relates to ages reported; as given in original source
 % Total sales: Adjustment factor used, estimated % of total sales of M = manufactured or T = total cigarette consumption implied by survey, sexes combined
 -- = adjusted by original author

Table 8 Estimated¹ prevalence of smoking and estimated¹ number of cigarettes per person per day (unadjusted and sales-adjusted): summary of Tables 4, 6 and 7. Males and females aged 15 years and over

Year	Source ²	Product ³	Prevalence ⁴						Number of cigarettes					
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		Unadjusted ⁷			Sales-adjusted ⁸		
			M	F	M	F	M	F	Number/ person/day	Total sales %		Manufactured cigarettes number/ person/day	Total cigarettes ⁹ number/ person/day	
						M	F		M	F	M	F		
1946	11	U					48	9						
1951	24	UC			30				3.8					
	24	A					52		7.2	/10				
	24	UC+A			31		58							
1963	6	UC+A			32	20	47	20	3.4	1.7	65		5.2 2.6	
	6	UC+A			50	28	56	28						
1969	1	UC			40	29							(6.0 3.5)	
	13	U					54	32						
1970	1	UC			39	30							(5.8 3.7)	
1971	1	UC			37	30							(5.6 3.6)	
	2	A					55	34						
	3	UC			38	29							(5.6 3.5)	
1972	1	UC			37	29							(6.2 3.9)	
	2	A					55	34						
	13	U					49	33						
1973	1	UC			37	29							(5.2 3.3)	
	2	A					56	35						
	4	UC			38	34							(4.9 3.5)	
1974	1	UC			36	31							(5.9 4.0)	
	2	A					55	36						
1975	1	UC			35	30							(6.2 4.2)	
	2	A					54	36						
1976	1	UC			33	31							(6.0 4.6)	
	2	A					52	38						
	14	UC+A			34	30	40	30					(6.2 4.4)	
	14	A					48	36						
1977	1	UC			32	28							(5.8 4.1)	
	2	A					50	34						
	8	U					39	30						
	13	U					39	21						
	14	A					37	27						
	14	A					45	34						
1978	1	UC			31	29							(5.8 4.4)	
	2	A					47	35						
	14	A					36	30						
	14	A					46	38						
1979	1	UC			29	28							(5.8 4.5)	
	2	A					47	34						
	14	UC+A			29	28	35	28					(5.8 4.4)	
	14	A					43	34						

Table 8 (continued)

Year	Source ²	Product ³	Prevalence ⁴				Number of cigarettes										
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		Unadjusted ⁷			Sales-adjusted ⁸					
			M	F	M	F	M	F	M	F	Total sales %	Manufactured cigarettes number/person/day		Total cigarettes ⁹ number/person/day			
1980	1	UC			26	26											(5.6 4.6)
	8	U					36	28									
	9	UC+U			28	27	35	27	5.1	3.5	84						6.1 4.1
	14	UC+A			25	23	30	23									(5.9 4.3)
	14	A					39	29									
1981	1	UC			27	28											(5.4 4.4)
	8	U					33	26									
	14	A					29	27									
	14	A					36	32									
1982	1	UC			28	26											(5.9 4.4)
	8	U					33	27									
	13	U					30	30									
	14	UC+A			24		29	25									
	14	A					40	34									
1983	1	UC			27	25											(5.6 4.2)
	8	U					31	26									
	14	UC+A					28	24	4.2	3.0	73						5.7 4.1
	14	A					37	31									
	15	A					30	23									
1984	8	U					33	27									
	15	UC+A					28	27	4.2	3.5	76						5.5 4.5
	15	A					36	34									
1985	8	U					30	26									
	15	UC+A			23	24	27	25	3.6	3.4	72						4.9 4.8
	15	A					36	32									
1986	8	U					28	26									
	15	UC+A			22	25	24	25	3.4	3.5	72						4.7 4.9
	15	A					34	32									
1987	8	U					29	25									
	15	UC+A			23	24	26	24	4.0	3.2	75						5.3 4.2
	15	A					35	30									
1988	8	U					27	26									
	9	UC+U					26	25	3.9	3.3	75						5.1 4.4
	9	U					36	32									
1989	8	U					25	25									
1990	8	U					25	25								(5.0 4.0)	
1991	8	U					25	23								(5.1 3.8)	
1992	8	U					25	25								(5.1 4.2)	
1993	8	U					23	22								(4.2 3.3)	

Table 8 (continued/2)

Year	Source ²	Product ³	Prevalence ⁴						Number of cigarettes						
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		Unadjusted ⁷			Sales-adjusted ⁸			
			M	F	M	F	M	F	Number/ person/day	Total sales %	Manufactured cigarettes number/ person/day	Total cigarettes ⁹ number/ person/day	M	F	
1994	8	U					21	23							(4.0 3.4)
1995	8	U					21	23							(3.7 3.2)
	21	MC	19	26											
	21	TC+A			22	28	24	28	3.5	3.3	98				3.5 3.4
1996	8	U					21	22							(3.8 3.2)
	9	UC+U			17	22	19	22	2.6	2.6	74				3.5 3.5
	9	U					30	30							
1997	8	U					16	21							(2.5 2.6)
1998	8	U					17	20							(2.5 2.4)
1999	8	U					18	19							(3.2 2.5)
	21	U					19	25							(2.8 2.9)
2000	8	U					16	20							(2.9 2.9)
2001	8	U					17	19							(3.2 2.8)
2002	8	U					16	18							(3.1 2.9)
	21	MC+TC+A	12	21	12	22	13	22	1.3	2.4	63				2.1 3.9
	21	MC+TC+A	18	26	19	28	20	28							
2003	8	U					16	18							(3.1 2.7)
2004	8	U					15	17							(2.9 2.7)
	9	UC+U					14	17	1.9	2.0	71				2.8 2.8
	9	U					25	25							
	22	A					14	18							(2.8 2.8)
	22	A					25	27							
2005	8	U					14	17							(2.7 2.8)
	21	MC	12	18					1.7	2.1	76	2.3	2.8		
	21	TC+A			14	18	14	18	2.0	2.2	76				2.7 2.9
	21	MC+TC+A	15	21	17	22	17	22							
	22	A					12	16							(2.7 2.9)
	22	A					25	25							
2006	8	U					13	16							(2.6 2.6)
	22	A					13	15							(2.7 2.5)
	22	A					24	24							
2007/11	8	U					13	15							
	22	A					12	16							(2.6 2.7)
	22	A					24	23							
2008/11	22	A					11	13							(2.7 2.6)
	22	A					22	24							

See footnotes on next page

Table 8 (continued/3)

- 1 Surveys covering an age range of at least 21-64 are included. Any gaps in the data for ages 15-20 and 65 years and over are filled in by assumed extensions to the age distribution, given in *Notes on sources of survey data*, p. 62. Method: see *Summary of adult smoking*, Methods p. 13. Exceptionally, calculation is based on the *All ages* value from Table 4 in those surveys for which some age-specific data are not available (age groups marked as * in Table 4)
- 2 See *Notes on sources of survey data*, p. 62
- 3 Product: MC = manufactured cigarettes, TC = total cigarettes (including hand-rolled), UC = cigarettes (type unspecified), A = all products, U = unspecified. Frequency of smoking is indicated by: regular or daily smokers in normal type, all smokers (including occasional) in bold, unspecified in italics
- 4 From Table 4
- 5 This column includes prevalence of smoking classified as UC = cigarettes (type unspecified)
- 6 This column includes prevalence of smoking classified as U = unspecified product
- 7 From Table 6
- 8 From Table 7, except data in parentheses, which are derived from the prevalence of smoking from Table 4 as described in *Summary of adult smoking*, Methods p. 13
- 9 Number of cigarettes classified as UC = cigarettes (type unspecified) has been adjusted to total cigarette sales and included in this column. From 1990, estimates derived from prevalence of smoking (all products or product unspecified) have also been included in this column, because few source provide data directly in Table 7 and sales data suggest that smoking was primarily of cigarettes at that time.
- 10 Cigarettes or equivalent amount smoked in other forms.
- 11 Calculations based on 2006 sales and population.

Figure 3 Estimated prevalence of smoking of (i) manufactured cigarettes, (ii) total cigarettes and (iii) all tobacco products¹; by year of survey. Males and females aged 15 years and over

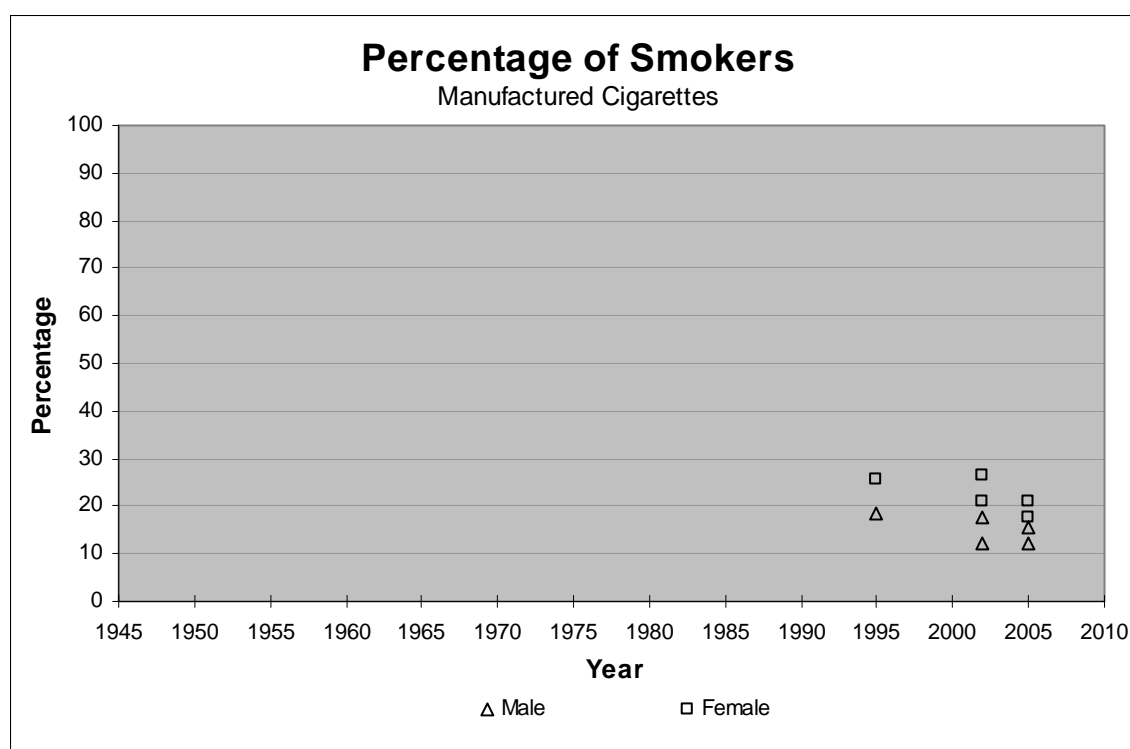
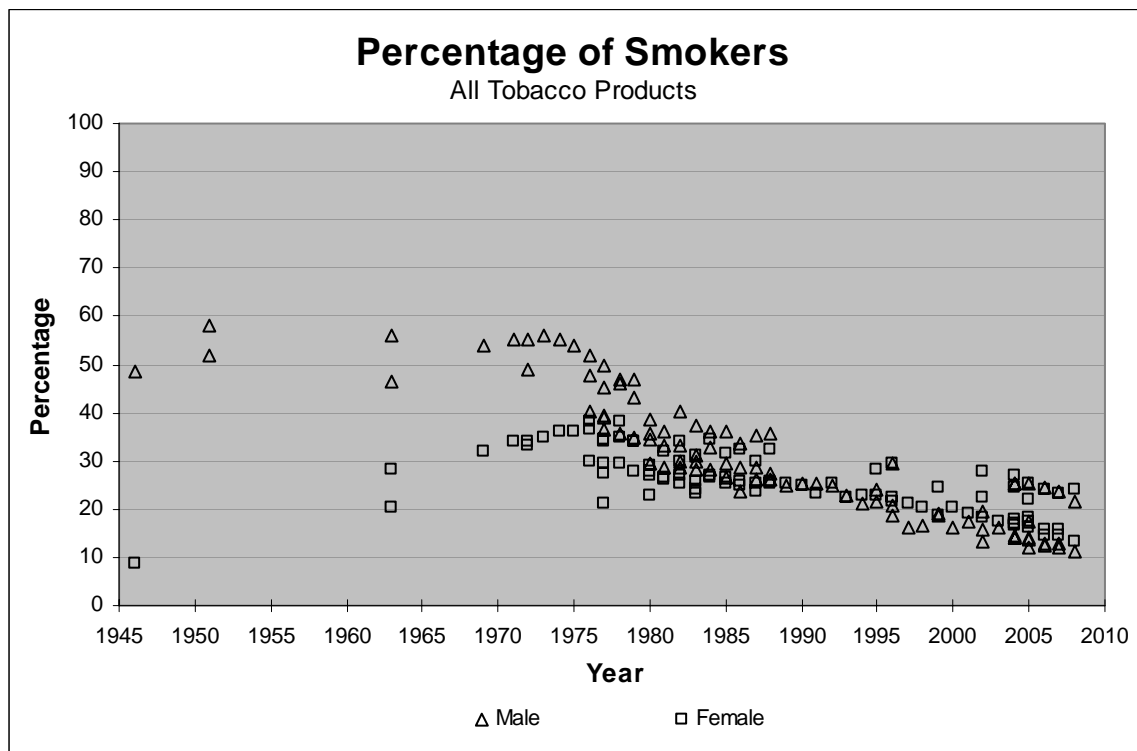
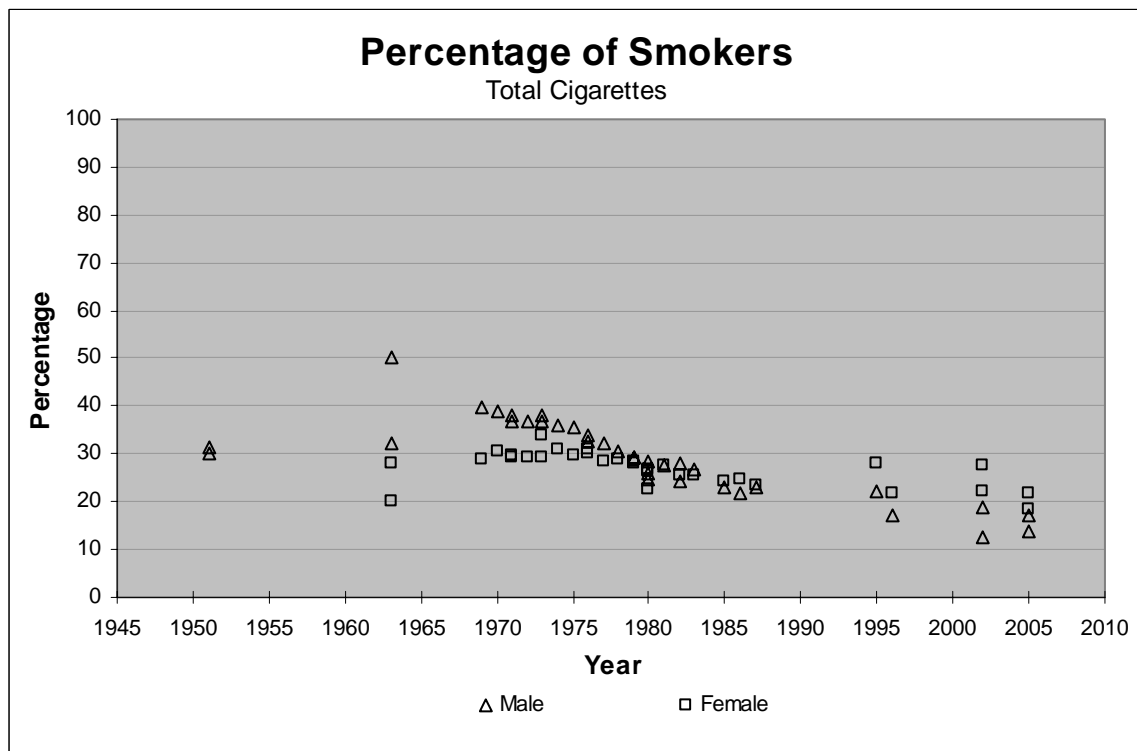
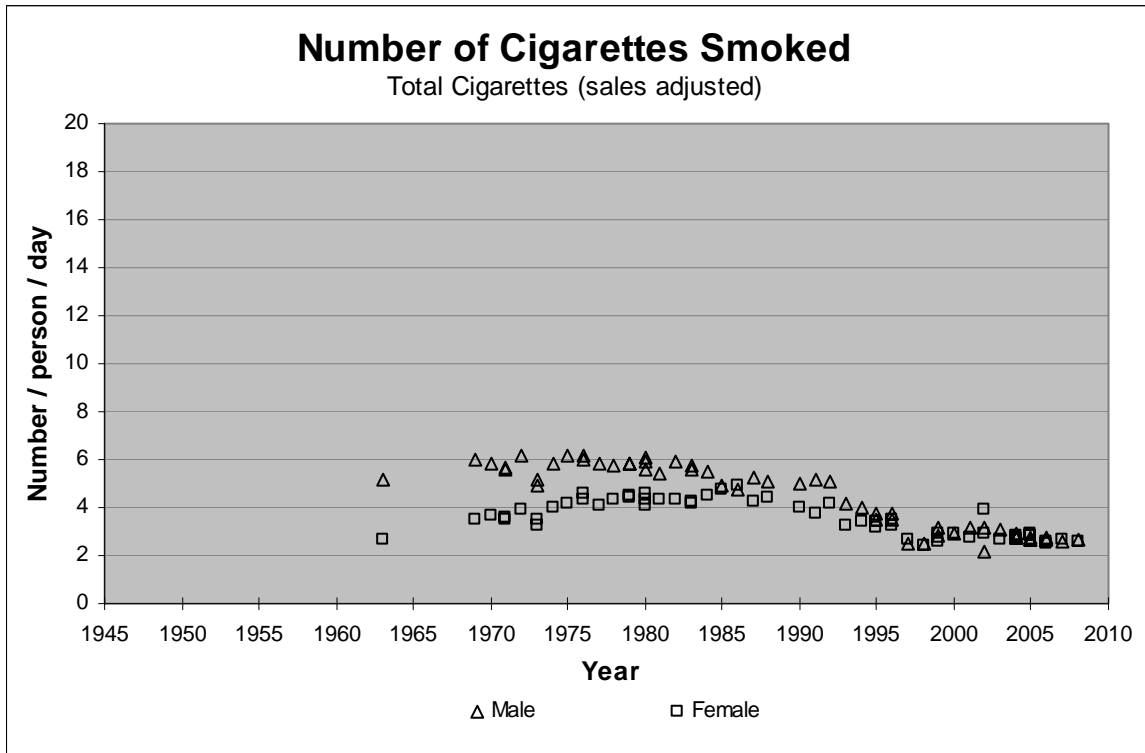


Figure 3 (continued)



¹ Excluding smokeless products e.g. snus
Source: Table 8

Figure 4 Estimated number of total cigarettes smoked per person per day, sales-adjusted; by year of survey. Males and females aged 15 years and over



Source: Table 8

Table 9F Prevalence of snus use, females: selected surveys by age
(continues on p. 47)

Year	Source	Product	Frequency	Age Groups																All ages								
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55		60	65	70	75	80+			
55	26	S	U																									
69	27	S	U																									
70	27	S	U																									
71	27	S	U																									
72	27	S	U																									
74	7	S	A		2					4																		
75	7	S	A							5																		
76	7	S	A							5																		
77	7	S	A		5					8																		
79	7	S	A		3					6																		
80	7	S	A							8																		
80	9	S	U																									
81	7	S	A		3					7																		
81	14	S	R																									
82	7	S	A							7																		
82	14	S	R																									
83	7	S	*							0																		
83	7	S	R		0					0																		
83	7	S	A		1					7																		
83	14	S	R																									
84	7	S	*							0																		
84	7	S	R							0																		
84	7	S	A							1																		
85	7	S	*							0																		
85	7	S	R		0					0																		
85	7	S	A		0					2																		
85	15	S	R						2				0		1				0									1
85	15	S	A						3			3		1				0										2
86	7	S	*							0																		
86	7	S	R							0																		
86	7	S	A							2																		
86	15	S	R							1			1		1				0									1
86	15	S	A							5			2		2				1									2
86	17	S	R												0													
87	7	S	*							0																		
87	7	S	R		0					0																		
87	7	S	A		0					2																		
87	15	S	R							1			1		1				0									1
87	15	S	A							2			2		2				0									2
87	28	S	R		0		0			1																		1
87	28	S	A		0		0			2																		1
88	7	S	*							0																		
88	7	S	R							0																		
88	7	S	A							2																		
88	9	S	R							1			1		1				0		0							1
88	9	S	A							3			2		2				0		0							1
89	7	S	*							0																		
89	7	S	R		0					0																		
89	7	S	A		0					3																		
90	7	S	*							0																		
90	7	S	R							0																		
90	7	S	A							2																		
90	16	S	U									5		1		3			0									2
90	17	S	R												3													

Table 9M (continued from p. 46)
Prevalence of snus use, males

Year	Source	Product	Frequency	Age Groups																	All ages						
				12	13	14	15	16	17	18	19	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60-64		65-69	70-74	75-79	80+		
03	7	S	*					14																			
03	7	S	R		2			16																			
03	7	S	A		3			24																			
03	28	S	R		1		8			17																	8
03	28	S	A		2		10			19																	9
04	7	S	*					12		23																	
04	7	S	R					15		25																	
04	7	S	A					21		32																	
04	9	S	R							27		32		31		24		18		10		7					23
04	9	S	A							33		37		34		27		20		12		7					27
04	17	S	R									35		38		27		20		17							29
04	22	S	R								23		28		29		26		17		10		6				22
04	22	S	A													27											
05	7	S	*					12		21																	
05	7	S	R					14		23																	
05	7	S	A					20		30																	
05	19	S	*		2			11																			
05	19	S	R		3			15																			
05	19	S	A		4			20																			
05	21	S	U						16			23			20				10								16
05	22	S	R							21			29			23				10							22
05	22	S	A													27											
06	7	S	*					11		22																	
06	7	S	R					13		25																	
06	7	S	A					20		31																	
06	22	S	R							24			27			21				10							21
06	22	S	A													26											
07	7	S	*					9		19																	
07	7	S	R					11		21																	
07	7	S	A					17		28																	
07	8	S	R						19		29		25		23		20		13		9						21
07	22	S	R							22			21			19				9							19
07	22	S	A													26											
08	7	S	*					7		15																	
08	7	S	R					9		18																	
08	7	S	A					16		25																	
08	22	S	R							21			23			19				9							19

Source: see *Notes on sources of survey data*, p. 62
Product: S = snus

Frequency: A = all snus users (including occasional)
R = regular or daily snus users
U = unspecified
* = refer to *Notes on sources of survey data*, p. 62
All ages: relates to ages reported; as given in original source

Table 9F (continued from p. 47)
Prevalence of snus use, females

Year	Source	Product	Frequency	Age Groups																	All ages					
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+	
03	7	S	*					1																		
03	7	S	R		0			2																		
03	7	S	A		0			6																		
03	28	S	R		0		0		3																	1
03	28	S	A		0		0		4																	2
04	7	S	*					2		3																
04	7	S	R					3		4																
04	7	S	A					8		9																
04	9	S	R						4			4	4	4	4	1	1	1							3	
04	9	S	A						11			6	6	7	2	1	1	1							5	
04	17	S	R									14	16	11	5	2									11	
04	22	S	R							3		5	6	4	2	1	0								3	
04	22	S	A												6											
05	7	S	*					2		4																
05	7	S	R					3		5																
05	7	S	A					6		11																
05	19	S	*		1			1																		
05	19	S	R		2			2																		
05	19	S	A		3			4																		
05	21	S	U						3			6		4			1								3	
05	22	S	R							4			5		3			2							4	
05	22	S	A												7											
06	7	S	*					2		4																
06	7	S	R					3		6																
06	7	S	A					7		11																
06	22	S	R							4			5		4		2								4	
06	22	S	A												7											
07	7	S	*					1		3																
07	7	S	R					2		4																
07	7	S	A					5		11																
07	8	S	R						6			6	7	4	2	0	0								4	
07	22	S	R							5			4		4		1								4	
07	22	S	A												7											
08	7	S	*					0		3																
08	7	S	R					0		4																
08	7	S	A					4		9																
08	22	S	R							5			4		3		2								4	

Source: see *Notes on sources of survey data*, p. 62
Product: S = snus

Frequency: A = all snus users (including occasional)
R = regular or daily snus users
U = unspecified
* = refer to *Notes on sources of survey data*, p. 62
All ages: relates to ages reported; as given in original source

Table 10M Prevalence of any tobacco use¹, males: selected surveys by age
(continues on p. 52)

Year	Source	Product	Frequency	Age Groups																	All ages					
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+	
80	9	U	UU							45			55		50		42		42		42		42		47	
84	7	U	UA							30																
85	7	U	UA							31																
86	7	U	UA							32																
86	15	A	RR						*			53				38				*					42	
86	15	A	AA						*			63				45				*					50	
86	17	UC	RR												41											
86	17	A	AU												49											
87	7	U	UA							33																
87	15	A	RR						*			49				35				*					40	
87	15	A	AA						*			57				42				*					48	
88	7	U	UA							30																
88	9	U	RR								32		43		45		38		34		31		30		37	
88	9	U	RA									39		49		49		42		36		33		32		42
89	7	U	UA							35																
90	7	U	UA							30																
90	17	UC	RR												41											
91	7	U	UA							28																
92	7	U	UA							32																
93	7	U	UA							28																
94	7	U	UA							28																
94	17	UC	RR												39											
94	28	UC	RA							19																
95	7	U	UA							29																
95	21	A	UU								25		32		39				24						30	
96	7	U	UA							27																
96	9	U	RR									31		40		43		37		29		23		20	34	
96	9	U	RA										40		46		47		40		32		25		21	38
97	7	U	UA							27																
97	7*	U	UA							34																
98	7	U	UA							34																
99	7	U	UA							38																
99	17	UC	RR												41											
00	7	U	UA							38																
01	7	U	UA							40																
01	19	A	RR								10												26			
02	7	U	UA							34																
02	21	A	UU									29		39		42				25					33	
03	7	U	UA							31																
03	28	UC	RA								12															
04	7	U	UA							27		43														
04	8	U	RR									32		39		39		43		36		19		11	34	
04	8	U	RA										39		45		43		47		38		20		11	38
04	17	UC	RR										38		45		36		35		23				38	
04	22	A	R										32		40				37				18		33	

Table 10F Prevalence of any tobacco use¹, males: selected surveys by age
(continues on p. 53)

Year	Source	Product	Frequency	Age Groups																	All ages				
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+
80	9	U	UU																						
84	7	U	UA																						
85	7	U	UA																						
86	7	U	UA																						
86	15	A	RR							*												*			28
86	15	A	AA							*												*			37
86	17	UC	RR																						
86	17	A	AU																						
87	7	U	UA																						
87	15	A	RR							*												*			27
87	15	A	AA							*												*			34
88	7	U	UA																						
88	9	U	RR																						
88	9	U	RA																						
89	7	U	UA																						
90	7	U	UA																						
90	17	UC	RR																						
91	7	U	UA																						
92	7	U	UA																						
93	7	U	UA																						
94	7	U	UA																						
94	17	UC	RR																						
94	28	UC	RA																						
95	7	U	UA																						
95	21	A	UU																						
96	7	U	UA																						
96	9	U	RR																						
96	9	U	RA																						
97	7	U	UA																						
97	7*	U	UA																						
98	7	U	UA																						
99	7	U	UA																						
99	17	UC	RR																						
00	7	U	UA																						
01	7	U	UA																						
01	19	A	RR																						
02	7	U	UA																						
02	21	A	UU																						
03	7	U	UA																						
03	28	UC	RA																						
04	7	U	UA																						
04	8	U	RR																						
04	8	U	RA																						
04	17	UC	RR																						
04	22	A	R																						

Table 10M (continued from p. 50)
Prevalence of any tobacco use¹, males

Year	Source	Product	Frequency	Age Groups																	All ages					
				12	13	14	15	16	17	18	19	20	25	30	35	40	45	50	55	60		65	70	75	80+	
05	7	U	UA					28		43																
05	19	A	RR		4			19																		
05	21	A	UU					27				38				36			26					32		
05	22	A	R					28				37				37			19					32		
06	7	U	UA					26		45																
06	22	A	R					29				37				35			21					32		
07	7	U	UA					25		45																
07	22	A	R					30				29				35			18					29		
08	7	U	UA					27		42																
08	22	A	R					27				31				31			16					27		

1 Smoking and/or snus use

Source: see *Notes on sources of survey data*, p. 62

Smoking product: MC = manufactured cigarettes

TC = total cigarettes (including hand-rolled)

UC = cigarettes (type unspecified)

A = all smoking products

* = refer to *Notes on sources of survey data*, p. 62

Frequency: A = all (including occasional)

R = regular or daily

U = unspecified

When two frequency codes are shown, the first refers to smoking and the second to snus use; when only one is shown it refers to joint use.

All ages: relates to ages reported; as given in original source

Table 11 Estimated¹ prevalence of smoking, snus use and any tobacco use: summary of Tables 4, 9 and 10.
Males and females aged 15 years and over

Year	Source ²	Product ³	Smoking prevalence ⁴						Snus use prevalence ⁷		Any tobacco use prevalence ⁸	
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		M	F	M	F
			M	F	M	F	M	F				
1946	11	U					48	9				
1951	24	UC			30							
	24	A					52					
	24	UC+A			31		58					
1955	26								12			
1963	6	UC+A			32	20	47	20				
	6	UC+A			50	28	56	28				
1969	1	UC			40	29						
	13	U					54	32				
	27								12			
1970	1	UC			39	30						
	27								15			
1971	1	UC			37	30						
	2	A					55	34				
	3	UC			38	29						
	27								16			
1972	1	UC			37	29						
	2	A					55	34				
	13	U					49	33				
	27								16			
1973	1	UC			37	29						
	2	A					56	35				
	4	UC			38	34						
1974	1	UC			36	31						
	2	A					55	36				
1975	1	UC			35	30						
	2	A					54	36				
1976	1	UC			33	31						
	2	A					52	38				
	14	UC+A			34	30	40	30				
	14	A					48	36				
1977	1	UC			32	28						
	2	A					50	34				
	8	U					39	30				
	13	U					39	21				
	14	A					37	27				
	14	A					45	34				
1978	1	UC			31	29						
	2	A					47	35				
	14	A					36	30				
	14	A					46	38				
1979	1	UC			29	28						
	2	A					47	34				
	14	UC+A			29	28	35	28				
	14	A					43	34				

Table 11 (continued)

Year	Source ²	Product ³	Smoking prevalence ⁴				Snus use prevalence ⁷		Any tobacco use prevalence ⁸			
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		M	F	M	F
			M	F	M	F	M	F				
1980	1	UC			26	26						
	8	U					36	28				
	9	UC+U			28	27	35	27	16		46	
	14	UC+A			25	23	30	23				
	14	A					39	29				
1981	1	UC			27	28						
	8	U					33	26				
	14	A					29	27				
	14	A					36	32				
1982	1	UC			28	26						
	8	U					33	27				
	13	U					30	30				
	14	UC+A			24		29	25	14			
	14	A					40	34				
1983	1	UC			27	25						
	8	U					31	26				
	14	UC+A					28	24	13			
	14	A					37	31				
	15	A					30	23				
1984	8	U					33	27				
	15	UC+A					28	27				
	15	A					36	34				
1985	8	U					30	26				
	15	UC+A			23	24	27	25	18	1		
	15	A					36	32	24	1		
1986	8	U					28	26				
	15	UC+A			22	25	24	25	18	1	40	25
	15	A					34	32	23	2	48	34
1987	8	U					29	25				
	15	UC+A			23	24	26	24	16	1	39	24
	15	A					35	30	21	1	46	31
1988	8	U					27	26				
	9	U					26	25	16	1	37	25
	9	U					36	32	21	1	41	26
1989	8	U					25	25				
1990	8	U					25	25				
1991	8	U					25	23				
1992	8	U					25	25				
1993	8	U					23	22				

Table 11 (continued/2)

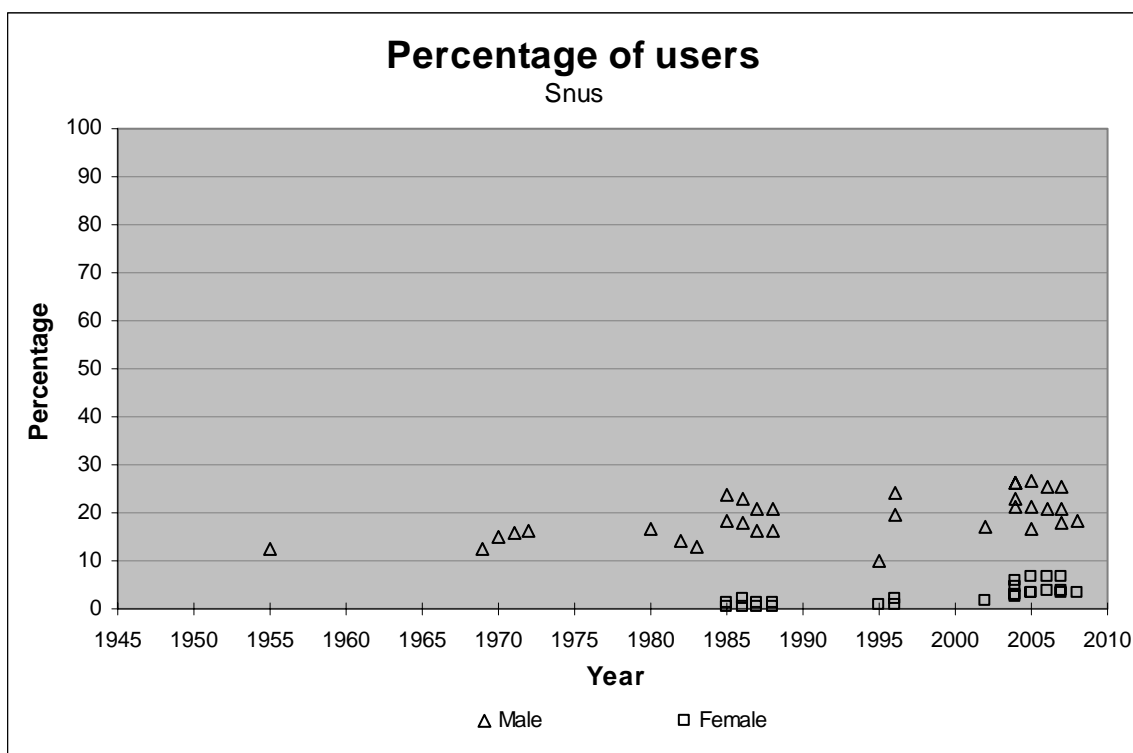
Year	Source ²	Product ³	Smoking prevalence ⁴						Snus use prevalence ⁷		Any tobacco use prevalence ⁸	
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		M	F	M	F
			M	F	M	F	M	F				
1994	8	U					21	23				
1995	8	U					21	23				
	21	MC	19	26								
1996	21	TC+A			22	28	24	28	10	1	30	29
	8	U					21	22				
	9	UC+U			17	22	19	22	20	1	34	22
1997	9	U					30	30	24	2	38	23
	8	U					16	21				
1998	8	U					17	20				
1999	8	U					18	19				
	21	U					19	25				
2000	8	U					16	20				
2001	8	U					17	19				
2002	8	U					16	18				
	21	MC+TC+A	12	21	12	22	13	22				
	21	MC+TC+A	18	26	19	28	20	28	17	1	33	29
2003	8	U					16	18				
2004	8	U					15	17			33	18
	8	U									37	20
	9	UC+U					14	17	23	3		
	9	U					25	25	26	5		
	22	A					14	18	21	3	32	21
	22	A					25	27	26	6		
2005	8	U					14	17				
	21	MC	12	18								
	21	TC+A			14	18	14	18				
	21	MC+TC+A	15	21	17	22	17	22	17	4	32	25
	22	A					12	16	21	3	31	19
22	A					25	25	27	7			
2006	8	U					13	16				
	22	A					13	15	21	4	31	18
	22	A					24	24	26	7		
2007/9	8	U					13	15	21	4		
	22	A					12	16	18	3	29	18
	22	A					24	23	26	7		
2008/9	22	A					11	13	18	3	27	17
	22	A					22	24				

See footnotes on next page

Table 11 (continued/3)

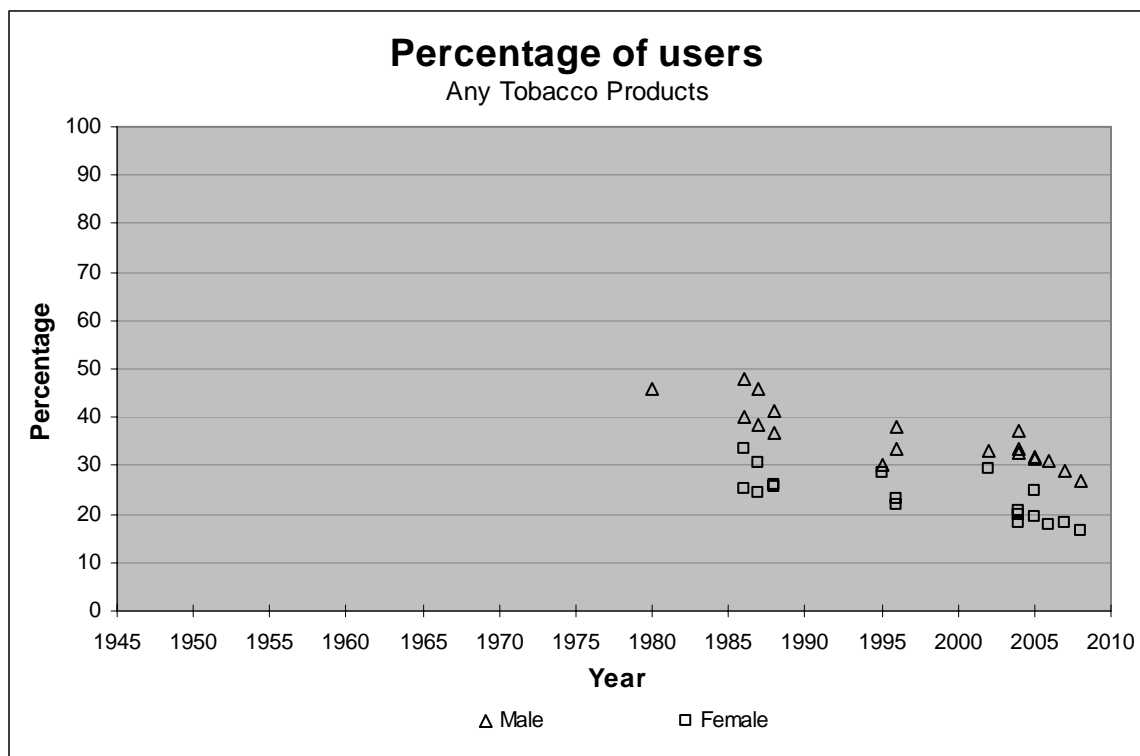
- 1 Surveys covering an age range of at least 21-64 are included. Any gaps in the data for ages 15-20 and 65 years and over are filled in by assumed extensions to the age distribution, given in *Notes on sources of survey data*, p. 62. Method is equivalent to that used for Table 8: see *Summary of adult smoking*, Methods p. 13. Exceptionally, calculation is based on the *All ages* value from Table 4 or 10 in those surveys for which some age-specific data are not available (age groups marked as * in Tables 4 and 10).
- 2 See *Notes on sources of survey data*, p. 62.
- 3 Product refers to the data in the *Smoking prevalence* columns: MC = manufactured cigarettes, TC = total cigarettes (including hand-rolled), UC = cigarettes (type unspecified), A = all products, U = unspecified. Frequency of smoking is indicated by: regular or daily smokers in normal type, all smokers (including occasional) in bold, unspecified in italics. The smoking element of the data in the *Any tobacco use prevalence* columns is always A = all products. Frequency of snus use or any tobacco use is usually the same as that shown for smoking (see Tables 9 and 10 for details).
- 4 From Table 4. These columns are the same as in Table 8.
- 5 This column includes prevalence of smoking classified as UC = cigarettes (type unspecified).
- 6 This column includes prevalence of smoking classified as U = unspecified product.
- 7 From Table 9.
- 8 From Table 10.
- 9 Calculations based on 2006 sales and population.

Figure 5 Estimated prevalence of snus use, by year of survey. Males and females aged 15 years and over



Source: Table 11

Figure 6 Estimated prevalence of any tobacco use¹, by year of survey.
Males and females aged 15 years and over



1 Smoking and/or snus use
Source: Table 11

Notes

Notes on sources of sales data

The data presented in the tables and figures were obtained from several sources, details of which are given below, together with estimations and related assumptions. Full citations of the sources are given on p. 76 under *References*.

Snus

Snus is a form of moist snuff traditionally associated with Sweden. It is finely cut non-fermented moist snuff, available loose or portion-packed. It consists of finely ground dry tobacco (Kentucky and Virginia tobacco), mixed with aromatic substances, salts (sodium chloride), water, humidifying agents and chemical buffering agents (sodium carbonate). Portion-packed snus was introduced in the 1970s. The snus portion or a pinch ("dip") of loose snus is placed inside the upper lip. (International Agency for Research on Cancer (2007), Rodu *et al* (2002), Swedish Match (2009b))

Oral snuff is banned in the EU except for Sweden where a derogation was granted (ASPECT (Analysis of the Science and Policy for European Control of Tobacco) Consortium (2004)).

Sales data before 1920

Nordlund (2005)

Snus, pipe and cigars became popular during the 1700s. During the 1800s, there was a change from dry snuff taken nasally to moist snuff placed in the lip. Production of moist snuff was 500 tonnes in 1830, 1 700 tonnes in 1860 and 6 000 tonnes in 1912. It peaked in 1919 at 7 000 tonnes, equivalent to 1.7 kg per adult (age 15+). Other products combined (cigarettes, cigars and cigarillos) amounted to 1 500 tonnes in 1912.

Sales data 1920-1973

RP6 (Lee (1975))

Data by weight, originally given to nearest 100 000 pounds, have been converted to tonnes and given to the nearest 10 tonnes (100 000 lbs = 45.359 tonnes).

Notes as given in RP6:

- (a) Details of the number and weight of cigarettes, cigars and cigarillos and of the weight of smoking tobacco, chewing tobacco and snuff consumed were obtained from the Annual Reports of the Swedish Tobacco Monopoly (now the Swedish Tobacco Company).
- (b) Figures for cigarette consumption per adult in 1972 and 1973 have been corrected for the effect of hoarding prior to an increase in cigarette tax on 1st January, 1973.

All Swedish tobacco production plants were nationalized and a tobacco monopoly formed in 1915. The import and sales monopoly was abolished in 1961, and the manufacturing monopoly in 1967. Most pre-war cigarettes contained oriental tobacco mixtures, and the first American blend cigarette was introduced in 1947. (Swedish Match (accessed March 2009a))

Sales data for 1974 onwards

Statistiska Centralbyrån (SCB Statistics Sweden) (successive editions), Wicklin (1998) Data for cigarettes, cigars and cigarillos in numbers, and for smoking and chewing tobacco and for snus are taken from SCB (successive editions). Up to 1997, data for cigarettes, cigars and cigarillos by weight are taken from Wicklin (1998). Wicklin stated that the weight had been estimated on the basis of 0.65 g per cigarette and 2 g per cigar or cigarillo, which he described as "conventional conversion rates" based on "industry based information ... not the results of objective tests". The weights for cigars and cigarillos seem in fact to correspond to 2 g per cigar and 1 g per cigarillo. From 1998 onwards, we use conversion factors of 0.65 g per cigarette and 1.3 g per cigar or cigarillo.

Data for cross-border sales of pipe and rolling tobacco to Norway (Table 1.2, 1974-1997) are from Wicklin (1998). They are included in the overall category of *smoking and chewing tobacco*, but have been excluded from the calculated total weight for those years. It was also reported by

Norwegian News Digests (2004) that cross-border purchases of hand-rolling tobacco by Norwegians in Sweden and Finland increased by 36% in 2004, to 530 tonnes, following a tax increase in Norway. In 1998, legal tax-free imports by tourists were estimated at 2 billion pieces (Joossens (1999))

Wicklin (1998) also gave data on sales of chewing tobacco separately (not shown); these increased from 15 tonnes in 1974 to 24 tonnes in 1983 then decreased to 12 tonnes in 1997.

Snus sales were affected when “tobacco tax was increased twice, in January 2006 and 2007, by a total of 173 percent. The tax increases generated significant hoarding, an increase in tax-free sales and a switch from loose snus to portion-packed snus. Hoarding in December 2006 is estimated to have amounted to approximately 13 million cans, while hoarding in December 2007 is estimated at about 5 million cans.” (Swedish Match (accessed March 2009c))

Around 1999-2001, menthol cigarettes accounted for 12% of the total cigarette market (Giovino *et al* (2004) quoting ERC Group PLC (1999a, 1999b)).

Estimates of smuggling

According to Merriman *et al* (2000) quoting estimates by 'expert sources', smuggling represented 2% of domestic sales in 1995. Joossens and Raw (2003) quoting the Swedish National Police gave the same figure for duty not paid cigarettes in 1996. Tobacco tax on cigarettes was increased in 1997 by a total of 63%, which led to an increase in black market sales at the expense of the legitimate trade. Taxes were reduced by 30% the following year (Swedish Match ((accessed March 2009a)).

For 2004, recorded cigarette sales were estimated to account for 90% of consumption in Sweden. (Centralförbundet för alkohol- och narkotikaupplysning (CAN) (2008)), while the following year, smuggled cigarettes were estimated to represent 1.9% of legal sales (Shafey *et al* (2009) quoting Euromonitor International (2007))

Seizures by Tullverkets (Customs Service) were as follows (cigarettes, millions):

1970	2	1980	3	1990	2	2000	45
1971	2	1981	2	1991	3	2001	48
1972	3	1982	2	1992	4	2002	27
1973	3	1983	1	1993	6	2003	74
1974	3	1984	1	1994	5	2004	23
1975	4	1985	1	1995	6	2005	17
1976	4	1986	1	1996	17	2006	10
1977	3	1987	1	1997	39	2007	32
1978	3	1988	1	1998	46		
1979	3	1989	2	1999	32		

Source: CAN (2008)

Estimates of numbers of hand-rolled cigarette for 1950-2006

We have taken as our estimate of hand-rolled cigarette consumption 45% of pipe and hand-rolling tobacco sales before 1980, an increasing proportion for 1981-1989 (see table below) and 80% for 1990 onwards, at 1 g per cigarette. From 1974 onwards, this estimate was based on sales excluding cross-border trade, and from 1998 onwards, the cross-border trade and sales of chewing tobacco were assumed to have continued at their 1997 level.

There is little evidence on which to base estimates of hand-rolled cigarette consumption before 1980. Mørck *et al* (1982) stated that ‘hand-rolled cigarettes account for only 4-5% of the overall cigarette market in 1980’. Assuming 1 g per hand-rolled cigarette, this represented approximately 45% of pipe and hand-rolling tobacco. This agrees with data from Svenska Tobaks AB for hand-rolling tobacco and pipe tobacco separately, available from 1981-1989, but these data, and data for cigarette papers and filters from 1984 (see table below), suggest that consumption of hand-rolled cigarettes rose during the 1980s, both absolutely and relative to other smoking products. However, these data may give a distorted picture since they include border trade to Norway where hand-rolled cigarettes are a major product. Assuming that all cross-border sales comprised hand-rolling tobacco (rather than pipe), and excluding them from the calculation, then hand-rolling as a percentage of pipe and hand-rolling can be calculated as shown below.

Year	Hand-rolling tobacco	Hand-rolling tobacco as % of pipe and hand-rolling tobacco*	Cigarette papers and filters (million pieces)
1981	527	43	
1982	737	48	
1983	968	53	
1984	1 246	64	
1985	1 245	69	1 135
1986	1 216	70	1 209
1987	1 152	71	1 153
1988	1 115	72	1 124
1989	1 128	74	1 147

Source: Grahn (1990).

* Calculation based on Table 1.2 excluding cross-border sales and chewing tobacco.

Data on cross-border sales are available only for certain years. Before 1974, the cross-border trade is assumed to have been fairly small so that the estimates of hand-rolled cigarettes are not seriously affected. However, for recent years, the only available data (that cross-border purchases of hand-rolling tobacco by Norwegians in Sweden and Finland combined amounted to 530 tonnes in 2004, see *Sales data for 1974 onwards* above) imply that it was substantial. We assume that cross-border trade continued at its 1997 level, but this may still overestimate hand-rolled cigarettes.

The Coresta task force on roll-your-own (fine cut) tobacco (1999) reported that, according to the latest available data, 18% of consumer-made cigarettes were made by simple hand-rolling, 22% by machine-rolling and 60% by tubing, with 20% using loose filters. They also reported a 1995 Coresta study involving 210 consumers in 3 countries making cigarettes using pre-made filter tubes; the Swedish consumers made cigarettes containing an average of 990 mg of tobacco.

Plain/Filter cigarette sales

Consumption 1960-1981: Maxwell, Jr. (Successive years)

Production 1982-2004: US Department of Agriculture (accessed May 2009)

The first filter cigarette brand was introduced in 1936. (Swedish Match (accessed March 2009a))

Tar and nicotine machine yields of cigarettes

1964-1974: Hjern (1976)

1975-1980: Mørck *et al* (1982)

Hjern (1976) gives the sales-weighted mean of domestic brands which made up 80-85 % of the total cigarette market; data have been extracted from a graph. Mørck *et al* (1982) quote the Swedish tobacco industry.

Lundh *et al* (1977) give details of ten popular cigarette brands in 1975: tar range 12-25 mg, nicotine range 1.0-1.9 mg, weight range 0.61-0.91 g.

The tar yield per cigarette was limited by EC directive to 15 mg by the end of 1992, and to 12 mg by the end of 1997; nicotine yield was limited to 1.3 mg (Harkin *et al* (1997)). Limits of 10 mg tar, 1 mg nicotine and 10 mg CO per cigarette came into force from 2004 (ASPECT Consortium (2004)).

Staberg (1959) reported tests on all 19 Swedish brands using the method of Bradford *et al* (1936). The average machine yields (mg per cigarette, not sales-weighted) and ranges were:

Brand type	N	Tar	Nicotine
Regular or king-size	14	25.3 (22.2- 28.3)	1.74 (1.26-2.08)
Filter	3	14.9 (11.7-18.1)	1.08 (0.85-1.30)
With cardboard mouthpiece	2	25.4 (23.7-27.2)	1.77 (1.53-2.00)

Notes on sources of survey data

Each source of survey data—either an individual survey or a series of surveys repeated over a number of years—is cited by a source number. This number is shown in the tables and corresponds to the source numbers given below, where details of the source publication and of the survey methodology are given. Full citations of the sources are given on p. 76 under *References*.

In other chapters of *International Smoking Statistics*, we do not usually include information specifically related to the use of smokeless tobacco. However as there has been considerable interest regarding snus in the medical and tobacco control literature, we have included extra tables in this chapter. Table 9 shows the prevalence of snus use (irrespective of smoking habits) and Table 10 shows the prevalence of any tobacco use, i.e. “smoking and/or snus use”. The table layout is the same as in Table 4. Relatively little information is available on the joint distribution of smoking and snus use prevalence, and not in a standard form, so this is presented in the *Notes* for those sources which contribute to the main Tables, and under *Additional sources*, p. 72 for other sources, together with any information on amount of snus used. Table 11 provides a summary of the adult prevalence data; the smoking data are the same as shown in Table 8, while the prevalence of snus use and of any tobacco use (smoking and/or snus use) are based on those sources in Tables 9 and 10 respectively that cover an age range of at least 21-64 using methods comparable to those used for Table 8 (see *Summary of adult smoking*, Methods chapter, p. 13). The snus and any tobacco prevalence data are also shown in Figures 5 and 6, in a style comparable to Figure 3.

Source number

- 1 Svenska Tobaks AB**
 - a. Year given as 1969 represents 1969-1970 etc.
 - b. Assumed extension to age distribution for percentage smokers, age 68+: males 15% and females 5%.
- 2 Mørck *et al* (1982), based on data from Svenska Tobaks**
 - a. Smokers: smoked daily.
- 3 Le Meitour-Kaplan (1977), quoting Swedish Tobacco Company**
 - a. Assumed extension to age distribution for percentage smokers, age 68+: males 15% and females 5%.
- 4 Le Meitour-Kaplan (1977), quoting Nordic Research Association (1973)**
 - a. Survey conducted November-December 1973 in four Nordic countries. Total sample size 6 000. Age group not stated (see also Denmark source 3, Norway source 3, and Finland source 8).
 - b. Smokers: smoked ‘yesterday’.
- 5 Floder-Myrhed (1986)**
 - a. Data from Swedish part of Swedish-Finnish twin cohort study. Data for 1967 based on all like-sexed twin pairs born in Sweden 1886-1925 provided that both in a pair were alive in 1967 and that both answered a questionnaire in that year. Corresponding criteria applied to younger cohort born 1926-1958 and where both were alive in 1972.
- 6 Statistiska Centralbyrån (SCB Central Bureau of Statistics) (1965)**
 - a. Representative postal survey. Sample size 55 074. Response rate 89%, increased to 94% by telephone and personal interviews.
 - b. Consumption category estimation based on 1-3, 4-7, 8-15, 16-25, and 26+ cigarettes/smoker/day.
 - c. Assumed extension to age distribution for percentage smokers, age 15-17: males (UC/R) 20%, (A/R) 25%, (UC/A) 22%, (A/A) 30%; females 20%. Number of cigarettes/person/day: males 1.0 and females 0.8. For age 70+: males (UC/R) 15%, (A/R) 25%, (UC/A) 20%, (A/A) 30%; females (regular) 2%, (all) 4%. Number of cigarettes/person/day: males 1.0 and females (age 15-17) 0.8, (age 70+) 0.5.

7 Hibell and Jonsson (1977), Nordgren (1980), Ramström (1982a, 1982b), Hvitfeldt *et al* (2004), Hvitfeldt and Nyström (2009)

- a. Annual national schools surveys on alcohol, drugs, tobacco and sniffing practices. Conducted from 1971-82 by the Skolöverstyrelsen (Swedish National Board of Education) and Sociologiska institutionen of Stockholm University, from 1983-85 by Statistiska Centralbyrån (Statistics Sweden), and since 1986 by Centralförbundet för alkohol- och narkotikaupplysning (CAN, Swedish Council for Information on Alcohol and Other Drugs) (on behalf of Folkhälsoinstitutet (National Institute of Public Health) or Socialdepartementet (Ministry of Health and Social Affairs) since 1993). Up to 1994, a random sample of classes was supplied by Statistics Sweden. Since 1995, a random sample of schools has been selected, and one class per school then chosen – for 1995-2000 the class was chosen according to the alphabetic order of teacher's name, and since 2001 classes have been randomly selected with probability proportional to class size. Conducted in March-April each year. Anonymous questionnaires completed in class and sealed in envelope by the pupil.
- b. The surveys have included school grade 9 throughout. Grade 6 was also included up to 2005 (only alternate years after 1983), and Upper secondary grade 2 has been included since 2004. Other grades were occasionally included but results are not presented here. Tables 4-6 show approximate ages corresponding to school grades.
- c. There were some changes to the questionnaire for 1983 and some results are also presented from a link survey using the earlier format. Elements of the original questionnaire were reintroduced in 1986 for continuity. The smoking questions also changed in 1997, with half the students completing each format. Results for prevalence are presented for both, with the new format B marked * against source in Tables 4 and 9. Results for cigarettes per smoker are from format A. In 2006, A and B formats of the questionnaire were also used, but this did not concern the tobacco questions.
- d. The numbers of questionnaires processed and rates of loss are shown in the table below. Loss refers to pupil absence from contributing classes; in some schools, whole classes may not have contributed owing e.g. to school holiday or forms lost in the post.

Year	Grade 6			Grade 9			Upper secondary grade 2		
	Questionnaires		Loss (%)	Questionnaires		Loss (%)	Questionnaires		Loss (%)
	Males	Females		Males	Females		Males	Females	
1971	2 521	2 346	*	1 914	1 921	*			
1972	3 840	3 697	7	3 089	2 996	15			
1973	2 838	2 796	8	2 789	2 996	14			
1974	2 720	2 586	6	2 352	2 282	14			
1975	2 568	2 596	7	2 087	2 130	14			
1976	2 242	2 139	7	2 151	1 985	15			
1977	3 603	3 506	8	3 096	2 938	15			
1978	5 165	4 959	6	4 734	4 809	16			
1979	5 139	4 917	6	5 630	4 729	13			
1980	5 040	4 945	7	5 977	4 964	14			
1981	4 476	4 196	7	5 827	4 669	12			
1982	2 096	1 900	6	2 599	2 547	14			
1983†				833	808	14			
1983	688	711	8	825	796	13			
1984				16 832	15 987	14			
1985	783	652	8	795	707	14			
1986				2 942	2 878	12			
1987	1 961	1 941	7	2 958	2 820	11			
1988				2 722	2 708	14			
1989	1 792	1 773	7	2 863	2 851	13			
1990				3 019	2 958	13			
1991	1 917	1 820	9	2 980	2 903	14			
1992				3 000	2 851	13			
1993	1 962	1 995	7	3 024	2 880	10			
1994				2 919	2 949	10			

/continued

Year	Grade 6			Grade 9			Upper secondary grade 2		
	Questionnaires		Loss (%)	Questionnaires		Loss (%)	Questionnaires		Loss (%)
	Males	Females		Males	Females		Males	Females	
1995	1 882	1 740	8	2 827	2 750	12			
1996				3 071	2 956	11			
1997	2 046	1 913	6	2 935	2 748	11			
1998				2 760	2 695	13			
1999	1 904	1 862	7	2 683	2 515	14			
2000				2 598	2 692	14			
2001	1 837	1 756	11	2 796	2 773	15			
2002				2 726	2 623	15			
2003	1 910	1 855	9	2 667	2 559	14			
2004				2 661	2 753	15	2 246	2 248	17
2005	1 622	1 559	9	2 688	2 684	15	2 231	2 311	18
2006A				2 487	2 403	15	1 841	1 931	14
2006B				2 464	2 398	15	2 037	2 055	14
2007				2 752	2 550	17	2 046	2 257	18
2008				2 480	2 404	16	1 846	2 137	17

* 12% overall

† link survey

A,B see note c above.

- e. Smokers marked as frequency *: smoked every day. Regular smokers: smoked every day or almost every day. Smokers (unspecified frequency): for grade 6, and up to 1983A unspecified; from 1983B-1997A (grade 9): smoked every day, almost every day, only at weekends, only at parties, or almost never; from 1997B onwards (grade 9 and Upper secondary grade 2) smoked every day, almost every day, only at weekends, only at parties, or occasionally.
- f. Snus users (Table 9) marked as frequency *: 1983B-1997A: used 4+ times per week; 1997B onwards: used every day. Regular snus users: all years for grade 6 and up to 1997A for grade 9: used 1+ times per week; 1997B onwards for grade 9 and all years for Upper secondary grade 2: used every day or almost every day. All snus users: 1974-1982: unspecified; 1983 onwards for grade 6 and 1983-1997A for grade 9: used 1+ times per week or less than once a week; 1997B onwards for grade 9 and all years for Upper secondary grade 2: used every day, almost every day or only sometimes.
- g. The joint distribution of smoking and snus use (%) was as follows:

Grade 9	Smoking: Snus:	Males			Females		
		yes	yes	no	yes	yes	no
		no	yes	yes	no	yes	yes
1984		8	7	15	21	1	1
1985		9	8	14	20	1	1
1986		8	9	15	20	1	1
1987		8	9	16	21	1	1
1988		8	8	14	22	1	1
1989		14	10	11	28	2	1
1990		11	9	10	30	1	1
1991		12	7	9	26	1	0
1992		13	9	10	27	0	0
1993		12	7	9	26	0	0
1994		9	7	12	28	1	0
1995		11	8	10	26	1	1
1996		11	8	8	24	1	1
1997A		9	8	10	24	1	1

/continued

		Males			Females			
		Smoking:	yes	yes	no	yes	yes	no
		Snus:	no	yes	yes	no	yes	yes
Grade 9 (continued)	1997B		13	14	7	32	3	0
	1998		14	14	6	31	2	0
	1999		14	16	8	33	3	0
	2000		12	17	9	33	3	1
	2001		13	17	10	31	5	1
	2002		9	15	10	29	4	1
	2003		7	12	12	25	5	1
	2004		7	11	9	23	6	1
	2005		8	11	9	25	5	1
	2006		7	11	8	21	5	2
	2007		8	12	5	26	4	1
2008		11	10	6	24	3	0	
Upper secondary grade 2	2004		12	19	12	31	7	2
	2005		13	18	12	32	9	3
	2006		14	19	12	31	8	3
	2007		17	19	9	33	8	3
	2008		17	18	7	34	7	2

A,B see note c above

A further category of "no answer" amounted to up to 3%

Source Hvitfeldt and Nyström (2009)

h. Consumption category estimation based on 1-2, 3-6, 7-10, 11-16, >20 cigarettes/smoker/day.

8, 9 Rosén *et al* (1987), Statistiska Centralbyrån (SCB Statistics Sweden) (2007, 2008, 2009)

a. Surveys of Living Conditions (Undersknigar on levnadsförhållanden, ULF). Annual interview survey of random sample of Swedish resident population, conducted by SCB.

Year	Interviews	Response rate (%)
1977	11 699	81
1980	7 261	86
1985	6 585	83
1990	6 191	78
1995	6 014	80
2000	5 680	76
2005	4 277	75

(selected years)

- b. Results shown as source 8 refer to results from individual surveys, and results shown as source 9 are based on 2-year averages. We have included the single survey results in preference when available; further results based on 2-year averages are available, e.g. from SCB (accessed February 2009). See also source 10 for results for children.
- c. Up to 2005, the survey was mainly conducted by personal interviews, and from 2007 mainly by computer-aided telephone interviews. In 2006, both methods were used, on half the sample each, and the prevalence estimates (daily smokers) by interview method were as follows:

		16-24	25-34	35-44	45-54	55-64	65-64	75-84	16-84
Males	Personal	8.7	12.4	12.0	15.1	14.2	14.3	6.8	12.4
	Telephone	10.2	11.1	11.2	17.9	21.6	14.5	7.8	14.1
Females	Personal	15.5	14.2	20.9	23.8	22.0	9.8	4.4	17.1
	Telephone	12.7	17.1	15.2	22.2	20.1	16.9	4.1	16.3

A small number (about 2%) of proxy interviews were conducted, but these did not include smoking questions.

- d. With the exception of 1977 (when the upper age surveyed was 75), all results included in the main tables refer to ages 16-84. Results (not shown) for prevalence for age 85+, or for age 16+, are available for a few years only from e.g. SCB (2007, 2009).
- e. Data shown in Table 5 are number of cigarettes per daily smokers of unspecified product. Calculation of consumption of cigarettes per person (Table 6) is based on those data from Table 5 and prevalence of daily smoking (product unspecified).
- f. Regular snus users (Table 9): daily users. All snus users: daily or occasional.

- g. The prevalence of joint usage of smoking and snus was provided to us by Högstorp (2005), and is summarized as follows:

Year(s)	Smoking*	Snus†	Males					Females				
			16-24	25-44	45-64	65-84	16-84	16-24	25-44	45-64	65-84	16-84
1980-81‡	current	no	19	34	32	27	30					
	current	yes	7	7	4	4	5					
	ex	yes	6	8	4	8	7					
	never	yes	12	4	1	4	5					
1988-89	current	none	9	22	26	19	21	26	34	27	11	26
	current	daily	3	5	2	2	3	0	0	0	0	0
	current	occasional	5	3	2	1	3	1	1	0	0	1
	ex	daily	6	10	6	7	8	1	1	0	0	0
	ex	occasional	1	1	1	1	1	0	0	0	0	0
	none	daily	15	7	2	3	6	1	0	0	0	0
	none	occasional	2	1	0	0	1	1	0	0	0	0
1996-97	current	none	9	13	18	13	14	19	25	26	13	22
	current	daily	2	3	3	2	2	0	0	0	0	0
	current	occasional	3	3	2	1	2	2	1	0	0	1
	ex	daily	9	13	10	6	10	0	1	0	0	1
	ex	occasional	1	1	1	1	1	1	0	0	0	0
	none	daily	12	12	3	1	7	0	0	0	0	0
	none	occasional	4	2	0	0	1	1	0	0	0	0
2004	current	none	5	7	18	8	11	10	16	21	11	16
	current	daily	2	3	2	0	2	1	0	0	0	0
	current	occasional	3	2	2	0	2	4	1	1	0	1
	ex	daily	11	15	15	7	13	3	3	2	0	2
	ex	occasional	2	0	0	1	1	1	0	0	0	0
	none	daily	14	14	4	1	8	1	0	0	0	0
	none	occasional	2	2	1	0	1	1	0	0	0	0

* daily

† current

‡ In 1980-81, snus information was available only as yes/no, and only for males.

- h. At the same time as the 1989-90 survey, a panel of participants from the 1980-81 survey were re-interviewed. Among the men (sample size 2 383), the joint distribution of daily smokers/snus users at both time points, and the percentages of each 1980-81 group who changed their habits were reported by Tillgren *et al* (1996) as:

	Habits in 1980-81 (as % of panel)	Switched to	Switchers (as % of 1980-81 group)	Habits in 1989-90 (as % of panel)
Snus only	12	Mixed	5	13
		Smoking only	5	
		None	26	
Mixed	5	Snus only	31	3
		Smoking only	26	
		None	13	
Smoking only	27	Snus only	5	24
		Mixed	2	
		None	23	
None	56	Snus only	5	60
		Mixed	1	
		Smoking only	5	

The mean consumption of snus (boxes per week) in 1989-90 was 3.9 among men, and 7.3 among women.

- i. There are some minor discrepancies with results presented in earlier editions of this report. Some results shown in Table 4 as product U were erroneously shown as product A.
- j. Assumed extension to age distribution for percentage smokers, age 15: males (1977) 20%, (1980-1999) regular 12%, all 15%, (1990-1994) 10%, (1995-2006) regular 8%, all 15%; and females (1977) 25%, (1980-1989) regular 17%, all 20%, (1990-2007) regular 14%, all 20%. For age 75+ (1977 only): males 20%, and females 5%. For age 85+: males (1980-1984) 15%, (1985-1989) regular 12%, all 16%, (1990-1994) 10% (1995-1999) UC/R 7%, U/R 8%, U/A 10%, (2000-) U/R 4%, U/A 7%; females (1980-1999) U/R 3%, U/A 4%, (2000-2007) U/R 4%, U/A 6%. For age 85+, these values were loosely based on original data (see note d above).

- k. Assumed extension to age distribution for percentage snus users, age 15: males (regular or unspecified) 5%, (all) 20%, and females (regular) 0%, (all) 1%. For age 85+: males (1980) 16%, (1988) 12%, (1996) 10%, (2004, 2007) 8%, and females 0%.
- l. Assumed extension to age distribution for percentage any tobacco users, age 15: males (regular or unspecified) 15%, (all, 1988-1996) 25%, (all, 2004) 20%, and females (1988) 17%, (1996-2004) 14%. For age 85+: males (1980) 25%, (1988) regular 20%, all 25%, (1996) regular 10%, all 15%, (2004) regular 8%, all 10%, and females (1988) 2%, (1996) 3%, (2004) 4%.

10 Statistiska Centralbyrån (SCB Statistics Sweden) (2005)

- a. Barn-ULF, children's arm of the ULF survey (sources 8,9). All children age 10-18 in participating households, concurrent with the adult ULF interviewing. The children listen to recorded questions and enter answers in a reply booklet. Results refer to 2-year average 2002-03.
- b. Lowest age group (Table 4) refers to 10-12 years.
- c. Regular smokers: smoked at least once a week.

11 Nordlund (1998, 2005) quoting Swedish Gallup Institute

- a. Frequency code was shown as unspecified in earlier editions of this report.
- b. Assumed extension to age distribution for percentage smokers, age 15-17: males 20% and females 5%.

12 Noppa and Bengtsson (1980)

- a. Survey in Göteborg. Population sample 1 462 women, response rate 90%. Ages 38, 46, 50, 54, and 60.

13 Adriaanse *et al* (1986), quoting Ramström (1985)

- a. Age group not stated.
- b. Possibly same source as source 14 for 1977 and 1982, although the prevalence data for females is unexpectedly low for 1977.

14-15 Anonymous (1983, 1984, 1985), Ramström (1986), Ramström and Tibblin (1987, 1988), Wersäll and Eklund (1998)

- a. Representative survey by NTS (Nationalfoereningen foer upplysning om tobakens skadeverknignar, Swedish National Smoking and Health Association). Source 14, 1976-1983: Conducted by SIFO. Personal interviews. Response rate 75-80%. Source 15, 1983-1988: Conducted by SCB. Postal questionnaire. Response rate (1983) 83%. Both methods were used in 1983 to compare results. Sample size 2 000-2 500 per year.
- b. For 1986 and 1987 (Table 10) the *All ages* values refer to ages 16-74; age-specific data are not available for age groups marked *.
- c. Regular snus users (Table 9): use snus daily. Regular tobacco users (Table 10): smoke or take snus (or both) daily.
- d. The consumption (g per day) of snus per snus user in 1987 was:

	Males					Females				
	16-24	25-34	35-54	55-74	16-74	16-24	25-34	35-54	55-74	16-74
Daily user	13	17	14	8	13	6	10	4	-	6
Occasional user	5	10	5	4	6	4	5	6	-	5

- e. In 1984, two thirds of occasional snus users and one third of daily snus users were also smokers. Among occasional smokers, 35% were daily snus users and 10% occasional snus users (Anonymous (1985)). Nordgren and Ramström (1990) presented a pooled analysis of the 1985-87 surveys, from which the joint distribution (%) of smoking and snus use among men is estimated as:

Smoking [*] : Snus:	current	current	current	former	former	former	never	never
	none	occasional	daily	none	occasional	daily	occasional	daily
Age 18-34	16	5	4	10	1	11	2	15
Age 35-70	25	3	2	28	1	7	0	2

* daily

Ramström and Tibblin (1987) also presented extensive tables on the joint distribution of smoking and snus for 1986. **Within** the various categories of smokers, the distribution (%) of snus use was:

Smoking	Snus*	Males		Females	
		18-34	35-70	18-34	35-70
current daily	daily	8	5	1	0
	occasional	17	9	4	0
	non	74	86	95	92
current occasional	daily	45	28	0	1
	occasional	9	5	0	0
	non	46	65	96	96
13+ cigs per day	daily	4	4	0	0
	occasional	14	13	0	0
	non	81	82	100	90
<12 cigs per day	daily	18	6	2	0
	occasional	25	5	7	0
	non	58	89	90	94
pipe/cigar only	daily		0		
	occasional		5		
	non		95		
former daily	daily	45	28	0	1
	occasional	9	5	0	0
	non	46	65	96	96
never	daily	34	5	2	1
	occasional	4	0	1	1
	non	62	89	96	93

* Categories do not sum to 100 because category "Missing information" is not shown here, up to 10%.

- f. In 1983 and 1984, calculation of cigarettes per person based on percentage smokers of all products, and number of cigarettes per cigarette smoker, so may overestimate.
- g. Assumed extension to age distribution for percentage smokers, age 15-17: males UC/R and A/R (1976) 25%, (1977-1979) 20%, (1980-1983) 15%; males A/A (1976) 30%, (1977-1979) 25%, (1980-1983) 20%; females UC/R and A/R (1976) 30%, (1977-1979) 25% (1980-1983) 20%; females A/A (1976) 35%, (1977-1979) 30%, (1980-1983) 25%. For age 15 (1984-1987): males (UC/R and A/R) 12%, (A/A) 15%; females (UC/R and A/R) 17%, (A/A) 20%. For age 71+ or age 75+: males UC/R (1976-1982) 20%, (1983-1987) 15%; males A/R (1976-1982) 25%, (1983-1987) 20%; males A/A (1976-1982) 30%, (1983-1987) 25%; females (UC/R and A/R) 5%, (A/A) 8%. Number of cigarettes/person/day, age 15-17: males 2.0 and females 3.0. For age 71+: males 3.0 and females 0.5. For age 15: males 1.0 and females 2.0. For age 75+: males 2.0 and females 0.5.
- h. Assumed extension to age distribution for percentage snus users, age 15-17 (source 14): males 5%. For age 15 (source 15): males (regular) 5%, (all) 20% and females (regular) 0%, (all) 1%. For age 71+ (source 14): males 16%. For age 75+ (source 15): males 14% and females 0%.
- i. Assumed extension to age distribution for percentage any tobacco users, age 15: males (regular) 15%, (all) 25%, and females (regular) 17%, (all) 20%. For age 75+: males (regular) 20%, (all) 25% and females (regular) 5%, (all) 8%.

16-17 Tolonen *et al* (2000), Kuulasmaa *et al* (1998), Wolf *et al* (1998), Molarius *et al* (1999), Wilhelmssen *et al* (1997), Stegmayr *et al* (2005)

- a. Surveys using self-administered questionnaires in two regions carried out in three phases, forming part of WHO MONICA Project:

	Region	Phase	Participation rate (%)		Sample used*		Date
			Males	Females	Males	Females	
16	Göteborg	1	69	75	666	702	Feb 1985-Nov 1986
17	Northern Sweden	1	88	83	815	794	Jan 1986-Apr 1986
16	Göteborg	2	71	73	772	777	Feb 1990-May 1991
17	Northern Sweden	2	82	84	764	794	Jan 1990-Apr 1990
16	Göteborg	3	72	71	813	959	Sep 1994-Feb 1996
17	Northern Sweden	3	78	81	736	768	Jan 1994-Apr 1994

* 'Sample used' includes age 25-34, all other figures are for age 35-64 only

- b. *All ages* column relates only to age 35-64 and is standardized to world population.
- c. Regular cigarette smokers: smoked cigarettes daily. All smokers: smoked cigarettes daily or occasionally, or smoked 1 g pipe tobacco or 1 cigar per week. For source 17, regular snus user: used any amount each day.

- d. Data on cigarettes per smoker (Table 5) refer to daily smokers. Data marked * against source indicate that a high proportion of missing data was reported and results should be regarded with caution. Furthermore for source **16**, more than 10% of occasional smokers smoked 5 or more cigarettes per day.
- e. For source **16**, the prevalence of use of snus (Table 9) is based on a subset of subjects who also attended hospital examination. (Wilhelmsen *et al* (1997))
- f. For source **17**, Peltonen *et al* (1998) reported that regular use of any tobacco (cigarettes, cigarillos, cigars, pipe or snus) remained constant around 45% in men and 29% in women throughout the 3 phases.
- g. For source **17**, joint usage of smoking and snus (% , age 25-64) was reported by Huhtasaari *et al* (1988) and Rodu *et al* (2002) as:

Smoking: Snus:	Males					Females				
	current never	current ex	current current	ex current	never current	current never	current ex	current current	ex current	never current
1986*	21	6	8	10	4					
1986†	15	4	4	9	9	27	0	0	0	0
1990†	15	3	5	8	10	25	0	1	1	1
1995†	13	2	4	12	8	26	0	1	1	1
1999†,§	7	4	3	14	13	20	1	1	4	2

* Regular or occasional smoker of any product. 0.6% of women were current snus users. (Huhtasaari *et al* (1988)).

† Daily cigarette smokers (Rodu *et al* (2002)).

§ Additional survey, sample size 1 415.

Rodu *et al* also reported the average consumption per male smoker/snus user pooled over the 4 phases as:

	Smoking: Snus:	current never	current ex	current current	ex current	never current
Cigarettes per day		16.0	15.1	10.8		
Snus packages per day				0.25	0.41	0.44

- h. Stegmayr *et al* (2005) reported a further phase for source **17**. Conducted in 2004, sample size 1 869. The *All ages* values (Tables 4 and 9) refer to age 25-64 only. The joint distribution of smoking and snus use (%) by age was:

	Males					Females				
	25-34	35-44	45-54	55-64	65-74	25-34	35-44	45-54	55-64	65-74
Smoking* only	3	7	9	15	6	12	16	17	20	11
Both	1	4	3	2	1	2	4	2	2	0
Snus† only	34	34	24	18	16	12	12	9	3	2

Approximate results read from chart.

* daily cigarette smoker.

† daily user.

- i. There are some discrepancies between the data shown in Table 4 and equivalent data taken from World Health Organization (1989), Wilhelmsen *et al* (1997), Peltonen *et al* (1998) used in earlier editions of this report.

18 Janson (1999)

- a. Longitudinal study of a cohort recruited in 1955-1957 at the Solna ante-natal clinic. Considered representative of Swedish urban communities. Original participation rate 97%. Response rate at each follow-up around 80% of survivors, except at age 12 when it dropped to 65% for administrative reasons. Sample size (males) 122, (females) 90.
- b. Follow-up interviews were conducted at single years of age, and are shown in Tables 4-6 for the midpoint year.
- c. Regular smokers: smoked daily. All smokers: smoked daily or not daily. Pipe and cigar smoking were included, but are reported to have been infrequent at all ages.
- d. Consumption category estimation based on 1-2, 3-6, 7-10, 11-16, 17-20, >20 cigarette equivalents/smoker/day, counting 1 g tobacco equivalent to 1 cigarette.

19 Nutbeam and Aarø (1990), King and Coles (1992), King *et al* (1996), Currie *et al* (2000, 2004, 2008), Marklund ((accessed January 2009)), Danielson and Marklund (2000), Danielson (2003, 2006)

- a. Part of the HBSC (Health Behaviour in School-Aged Children) Study, a collaborative cross-national research study sponsored by the WHO. School classes or schools were randomly selected, targeting age groups 11 (not presented here), 13 and 15. The target sample size was 1 300 in each age group.

Year	Sample size		Mean age	
	Target age 13	Target age 15	Target Age 13	Target age 15
1986-7	–	1 062	–	–
1989	3 553		13.4	15.4
1993	1 208	1 151	13.5	15.5
1997	1 357	1 151	13.5	15.5
2001	1 201	1 226	13.5	15.5
2005	1 353	1 526	13.5	15.5

- b. Number of cigarettes per smoker per day (Table 5, 1997 only) is derived from the median number smoked per week.
- c. Smokers marked as frequency *: smoked daily. Regular smokers: smoke once a week or more. All smokers: includes those smoking less than once a week. Frequency codes for snus use (Tables 9 and 10) have the same meanings.
- d. The joint distribution of weekly smoking and snus use (%) in 2001/02 was:

Smoking	Snus	Males		Females	
		Age 13	Age 15	Age 13	Age 15
yes	no	1.5	5	6	18
yes	yes	3.5	6	0	1
no	yes	4.5	15	0	0

Source: Danielson (2003). Estimated from data some of which was given to nearest whole number. Equivalent data for 2005/06 are only available in a graph (Danielson (2006)).

20 Hibell *et al* (1997, 2000, 2004), Andersson *et al* (2007)

- a. Nationally representative survey forming part of ESPAD (European School Survey Project on Alcohol and Other Drugs). Survey of pupils in school grade 9, selecting those born within a target year, thus age 15-16 at the time of the survey. At least 95% of 15-16 year-olds were still in school in each survey year, with 95% in the surveyed grade. Anonymous questionnaire completed and sealed in an envelope by the pupil, in class. Teachers present, but discouraged from walking round the classroom.

Date	Sample size		Participation rate (%)		Target year of birth	Average age
	Males	Females	Classes	Pupils		
Mar 1995	1 746	1 725	94	86	1979	–
Mar 1999	1 715	1 730	89	87	1983	15.2
Mar 2003	1 592	1 640	87	87	1987	15.7

- b. In 2003, some countries including Sweden conducted a survey using identical methodology targeting students born in 1985 (thus age 17-18). 90-93% of this age group are still in school, of whom 80% are in the surveyed grade. Sample size (boys) 1 960, (girls) 2 285. Response rate (schools) 96%, (classes) 94%, (students) 84%. (Andersson *et al* (2007))
- c. Smokers marked as frequency *: smoked 1 or more cigarettes per day in last 30 days. All smokers: smoked in last 30 days.
- d. Consumption category estimation based on 1-5, 6-10, 11-20, 21+ cigarettes/smoker/day.

21 Reif and Marlier (1998), Melich (2006), Christensen (2004), Papacostas (2008)

- a. Eurobarometer Surveys commissioned by the European Commission to monitor public opinion in the European Union. Some Eurobarometer surveys include questions on smoking habits. Sample size around 1 000.
- b. The sample consisted of people aged 15 and over who were resident in the country and had the nationality of any of the member states.
- c. Frequency U represents positive answers to questions such as “Do you smoke cigarettes?” or “You smoke packeted cigarettes?”. From 2002 an additional question made it possible to identify regular smokers also; however the estimated prevalence of regular manufactured cigarette smoking may be too high because the estimate includes any regular smokers of pipe/cigar/hand-rolled who smoked manufactured cigarettes only occasionally (and similarly for regular smoking of total cigarettes).
- d. Prevalence of snus use (Tables 9, 10) refers to chewing tobacco or taking snuff.
- e. In 2006, the prevalence of smoking (age 15+, sexes combined, sex-specific data not yet available) was 17% for packeted cigarettes, 2% for roll-up cigarettes and 1% for cigars or pipe. 80% of smokers smoked regularly. 8% reported using chewing tobacco or snuff. (Special Eurobarometer 272c European Commission (2007))

- f. Consumption category estimation based on <5, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39 and 40+ cigarettes/smoker/day.
- g. Before 2002 the calculation of cigarettes per person was based on prevalence of smoking (daily and non-daily) and number of cigarettes per daily smoker, so may overestimate.

22 Boström (2005, 2006, 2007, 2008), Wadman *et al* (2007), Wadman (2009)

- a. "Hälsa på lika villkor" (Health on equal terms) series of postal surveys by Statens folkhälsoinstitut (Swedish National Institute of Public Health). National random samples from the population register, augmented by regional samples which were either random samples or were samples stratified on municipality and sometimes on age.

Year	National sample target	Regional samples		Overall	
		participating counties	target	achieved	response rate (%)
2004	20 000	Gävleborg, Dalarna, Kronoberg, Halland, Gotland, Västra Götaland	34 000	33 000	63
2005	10 000	Dalarna, Blekinge, Kalmar, Jönköping, Västra Götaland	54 000	40 000	63
2006	10 000	Östergötland, Jämtland, Västernorrland, Västerbotten, Norrbotten, Gotland, Västra Götaland	83 000	57 000	61
2007	10 000	Västra Götaland, Gävleborg	60 000	42 000	60
2008	20 000			11 118	56

Non-response rates were higher among men, young people, people with less education and those born outside Sweden.

- b. From the data available on prevalence of daily smoking, snus, and smoking and/or snus, the joint distribution of users can be derived as follows:

		Males					Females				
		16*-29	30-44	45-64	65-84	16*-84	16*-29	30-44	45-64	65-84	16*-84
2004	Smoking only	8	11	16	10	11	15	18	25	11.5	19
	Both	2	3	3	1	3	1	0	0	0.5	0
	Snus only	22	26	18	7	19	3	5	3	0.0	3
2005	Smoking only	7	8	14	9	10	15	15	22	11	16
	Both	2	2	4	1	3	1	1	0	0	1
	Snus only	19	27	19	9	19	3	4	3	2	3
2006	Smoking only	5	10	14	11	11	12	13	20	11	14
	Both	2	3	3	1	2	0	0	1	0	1
	Snus only	22	24	18	9	19	4	5	3	2	3
2007	Smoking only	8	8	16	9	10	13	12	21	12	15
	Both	1	2	2	1	2	1	1	1	1	1
	Snus only	21	19	17	8	17	4	3	3	0	3
2008	Smoking only	6	8	12	7	8	12	11	19	10	13
	Both	2	3	3	2	3	0	0	0	1	1
	Snus only	19	20	16	7	16	5	4	3	1	3

*18 in 2004

- c. For 2005-07, results were also presented for age 18-84 (for consistency with the 2004 survey). Prevalences were identical to those shown in Tables 4 and 10 except for females product A* (regular) in 2006 which was one percentage point higher.
- d. Assumed extension to age distribution for percentage smokers, age 15-17: males (2004) regular 12%, all 16%, (2005-2008) regular 8%, all 15%; females (2004) regular 16%, all 20%, (2005-2008) regular 14%, all 20%. For age 85+: males (all years) regular 4%, all 7%; females, regular 4%, all 6%.
- e. Assumed extension to age distribution for percentage snus users, age 15-17: males (regular) 10%, (all) 20%, and females (regular) 1%, (all) 5%. For age 15: males (regular) 5%, (all) 20%, and females (regular) 0%, (all) 1%. For age 85+: males 8%, and females 0%.
- f. Assumed extension to age distribution for percentage any tobacco users, age 15-17: males 20%, and females 16%. For age 15: males 15% and females 14%. For age 85+: males 12%, and females 4%.

23 Hemmingsson and Kriebel (2003)

- a. Nationwide survey on conscription for compulsory military service in 1969-70. Only 2-3% of all Swedish men were exempted from conscription. Smoking was included in the second of two questionnaires completed by all conscripts. Sample size 49 323.
- b. Consumption category estimation based on 1-10, 11-20 and >20 cigarettes/smoker/day.

24 Bjurulf (1963)

- a. Survey of 3 014 men resident in Malmö in latter part of 1951. Under-representative of lower social and economic status and of younger and older men, but age range not stated.
- b. Smoker: smoked pipes, cigars or cigarettes. Cigarette smoker: smoked mainly cigarettes.
- c. Amount smoked (all products) refers to cigarettes or corresponding amount in other forms; number of cigarettes refers to those who smoked mainly cigarettes. In both cases, amounts refer to those who smoked daily.
- d. Consumption category estimation based on 1-10, 10-20 (assumed 11-20) and >20 cigarettes or equivalent amount /smoker/day.
- e. Prevalence of regular smoking has been estimated from the sometimes conflicting data.

25 Otterland (1964)

- a. Under Swedish law, all employees below age 18 (except seamen) are subject to supervision by the county medical inspector, including an annual examination. Questionnaires were completed at the examination by 553 workers from an area in Gothenburg.
- b. Smoker: smoked more or less regularly.

26 Nordgren and Ramström (1990) quoting Swedish Gallup Institute (1955)

- a. Data read from small graph and should be regarded as very approximate. Age range not stated.
- b. In the 1950s and 1960s, the habit of snuff dipping (i.e. snus usage) was widespread among elderly men, especially farmers, fishermen and lumberjacks.

27 Nordgren and Ramström (1990) quoting Unger (1976).

- a. In response to an advertising campaign by Swedish Tobacco Company in 1969, snus usage increased and spread to younger men. Data shown in Table 9 as e.g. 1969 refers to 1969-70 etc.
- b. The median ages of male users were:

Year	Median age
1969-70	41
1970-71	34
1971-72	33
1972-73	30

- c. Assumed extension to age distribution for percentage snus users, age 68+, males only: 16%

28 Nilsson *et al* (2009)

- a. Postal surveys conducted by The National Board for Health and Welfare (1987) and The Swedish National Institute of Public Health (1994, 2003), with identical methods. Individual nationally representative national samples of 13, 15 and 17 year olds. Parents informed of survey and passive consent requested, emphasizing children's anonymity in completing the questionnaire. Target sample 1 500 in each age group. Sample achieved (1987) 3 033, (1994) 3 737, (2003) 2 974. Response rate (1987) 67%, (1994) 83%, (2003) 66%.
- b. Smoker marked frequency *: smoked daily. Regular smoker: smoked every week. Regular snus user: uses 1 box per week or more. All snus users: uses snus now including those using <1 box per week.
- c. Results shown in the *All ages* column of Tables 4 and 9, and in Table 10, refer to ages 13, 15 and 17 combined.
- d. Among boys (ages 13, 15, 17 combined), the joint distribution of smoking (weekly) and snus use (any) can be estimated as:

	Smoking:	yes	yes	no
	Snus:	no	yes	yes
1994		8	4	7
2003		3	3	6

Additional sources

This section includes information on the joint distribution of smoking and snus use, and on the amount of snus per snus user, from sources not presented in the main tables.

Hyllienmark (1983)

In the late 19th century, smoking by women was generally considered immoral, but was permitted for independent women. By the 1920s, employed women started to smoke. In the 1940s, 75-80% of men and 52% of women smoked. This differs markedly from the estimates shown in Table 4 from around the same period (sources 11, 24).

Hergens *et al* (2007)

A cohort of **never-smoking** men working in the construction industry was recruited in 1978-1993, sample size 118 395. The mean daily consumption among ever snus users was 22 g. The distribution (%) of snus use, by age at recruitment, was as follows:

Snus use	Amount per day (g)	Age			
		<35	35-44	45-55	55+
Never		64	82	89	88
Former *		2	3	1	1
Current †	<12.5	7	4	3	5
	12.5 - 24.9	16	7	4	4
	25 - 49.9	8	3	2	1
	≥50	4	2	1	1
Total		34	16	10	11

* Stopped for at least a year.

† At least 1 g per day for at least a year.

Novo *et al* (2000)

Surveys of 21-year-olds in a middle-sized industrial town in northern Sweden, using self-administered questionnaire. Sample size (1986) 1 083, (1994) 898. Response rate (1986) 98%, (1996) 90%. The joint usage of cigarettes (daily) and snus was (%):

	Males			Females			
	Smoking:	yes	no	yes	no	no	
	Snus:	no	yes	yes	no	yes	
1986		20	6	21	38	0.2	3
1994		10	8	20	22	3	5

Lundqvist *et al* (2009)

The Västerbotten Intervention Programme (VIP) started in 1985 and by 1990 covered all of Västerbotten county. Persons aged 30, 40, 50 and 60 were invited to health screening and counselling at 10-yearly intervals. Analysis was based on those who first participated in 1990-1994 and who attended the follow-up. No information is available on baseline response rate. Mean age at baseline was (males) 41, (females) 42. 6% of baseline participants were ineligible for follow-up (died, moved away or untraceable) and the response rate at follow-up among the eligible was 74%, giving an overall response rate at follow-up of 68%. Sample size (males) 7 686, (females) 8 800. The joint distribution (%) of daily smoking and regular snus use was:

	Males					Females					
	Smoking:	current	current	ex	ex	never	current	current	ex	ex	never
	Snus:	no	yes	no	yes	yes	no	yes	no	yes	yes
Baseline (1990-1994)		14	4	14	8	13	22	0.5	16	1	1
Follow-up (2000-2004)		9	3		23		15	1		5	

* Ex-smoking not reported at follow-up

Within each baseline category, the transition %s to each follow-up category were as follows:

	Baseline			Follow-up				
	Smoking	Snus	n	Smoking:	current	current	no	no
				Snus:	no	yes	yes	no
Males	current	no	1104		53	7	14	26
	current	yes	314		9	33	46	12
	ex	no	1099		4	1	8	86
	ex	yes	608		1	3	77	18
	never	no	3596		1	0.2	5	94
	never	yes	965		1	3	77	19
Females	current	no	1914		57	2	8	33
	current	yes	43		9	21	53	16
	ex	no	1406		7	0.5	3	89
	ex	yes	96		1	6	70	23
	never	no	5210		2	0.1	1	97
	never	yes	131		0.0	3	79	18

Galanti *et al* (2001)

The 1998 national school survey by CAN (see source 7) was complemented by a census survey in the County of Stockholm, i.e. targeting all 9th grade classes in the area. Sample size (boys) 6 465, (girls) 6 395, response rate 83%. Among girls, 1.3% were current snus users. Among boys, the joint distribution (%) of current smoking and snus use, and the frequency of cigarette smoking, were:

	% smoking/ using	of which:	smoke not daily	smoke daily or almost daily
only cigarettes	14		66	34
cigarettes and snus	14		47	53
only snus	6			

Expressed another way, the proportion of smokers also using snus was 41% among non-daily smokers, and 60% among daily smokers.

Furberg *et al* (2005)

The Screening Across Lifespan Twin (SALT) study conducted telephone interviews in 1999-2002 with 31 425 twins born before 1959. The lifetime prevalence of snus use among women was 2.5%. Among men, the joint distribution of smoking and ever snus use was:

	Smoking						
	current			former			never
	regular	now and then	at parties	regular	now and then	at parties	
Snus							
regular	3	1	0.0	14	1	0.0	7
now and then	1	0.1	0.0	1	0.3	0.0	0.4
never	15	1	1	21	2	3	29

For users of both products, results were also presented on the order of starting use (not shown here).

Edvardsson *et al* (2009)

An open cohort of pupils in Kronoberg County (southern Sweden) was followed by repeat cross-sectional surveys at all schools in the area. In the final year (2000), the subjects were in upper secondary grade 3 and aged approximately 18. Sample size 1 585, response rate 76%. The joint distribution of smoking (including occasional smokers) and snus use (%) was:

	Males			Females			
	Smoking:	yes	yes	no	yes	yes	no
	Snus:	no	yes	yes	no	yes	yes
2000		13	12	14	32	1	2

Hedman *et al* (2007)

The Obstructive Lung Disease in Northern Sweden (OLIN) study, a longitudinal survey of children in 3 towns. In 2003 the 2 989 participants were age 14-15, and were 87% of the original sample. The joint distribution of smoking (excluding occasional smokers) and snus use was (%):

	Males			Females		
	yes	yes	no	yes	yes	no
Smoking:	no	yes	yes	no	yes	yes
Snus:	no	yes	yes	no	yes	yes
2003	1	2	14	8	1	3

Swedish Match ((accessed March 2009)b)

Based on the 2005-2006 Temo/Synovate postal omnibus survey of approximately 12 000 people age 16-75, 47% of daily snus users (sexes combined) are former smokers, but only 7% of daily smokers are former snus users. Among women, the figures are 59% and 3% respectively.

References

- Adriaanse H., van Reek J. and van Zutphen W.M. (1986). Rookgewoonten van artsen wereldwijd; een overzicht van 100 onderzoekingen naar tabaksgebruik onder artsen in 31 landen in de periode 1951-1985 (Worldwide physicians' smoking habits; a review of 100 surveys into physicians' tobacco consumption in 31 countries in the period 1951-1985). *Ned Tijdschr Geneeskd*, **130**, 2224-9.
- Andersson B., Hibell B., Beck F., Choquet M., *et al* (2007). *Alcohol and drug use among European 17-18 year old students: data from the ESPAD project*. The Swedish Council for Information on Alcohol and Other Drugs (CAN) and Council of Europe, Co-operation Group to Combat Drug Abuse and Illicit Trafficking in Drugs (Pompidou Group).
http://www.espad.org/documents/Espad/ESPAD_reports/17_18_Year_Old_Students_Full_Report.pdf.
- Anonymous (1983). Tobaksvanor i Sverige 1982. Några resultat från NTS rökvanundersökning. (Tobacco habits in Sweden, 1982. Some results from the study on smoking habits carried out by the NTS). *Tobaken Och Vi*, **28**, 16-20.
- Anonymous (1984). Tobaksvanor i Sverige 1983. (Smoking habits in Sweden 1983). *Tobaken Och Vi*, **29**, 17-9.
- Anonymous (1985). Svenska folkets rökvanor 1984. *Tobaken Och Vi*, **30**, 15-7.
- Norwegian News Digests, Anonymous (2004, Jul 27). Hand-rolling tobacco sales in Norway down 37 pct H1 2004 - Tiedemanns.
- ASPECT (Analysis of the Science and Policy for European Control of Tobacco) Consortium (2004). *Tobacco or health in the European Union. Past, present and future*. European Commission.
http://europa.eu.int/comm/health/ph_determinants/life_style/Tobacco/Documents/tobacco_fr_en.pdf.
- Axell T.E. (1993). Oral mucosal changes related to smokeless tobacco usage: research findings in Scandinavia. *Eur J Cancer B Oral Oncol*, **29B**, 299-302.
- Bjurulf P. (1963). Om hälsopropaganda mot rökning. II. Rökvanor I förhållande till ålder, inkomst och utbildning (On health propaganda against smoking. II. Smoking habits in relation to age, income, and education). *Soc Med Tidskr*, **40**, 344-52.
- Boström G. (2006, (accessed Jan 2009)). *Resultat från nationella folkhälsoenkäten 2005 - levnadsvanor. (Results from the National Public Health Survey 2005 - Ways of living)*. Statens folkhälsoinstitut.
http://www.fhi.se/upload/ar2005/ovrigt/levnadsvanor_nationellt.pdf.
- Boström G. (2008, (accessed Jan 2009)). *Resultat från nationella folkhälsoenkäten 2007 - tobaksvanor*. Statens folkhälsoinstitut.
<http://www.fhi.se/upload/Folkh%C3%A4lsoenk%C3%A4ten/Tobaksvanor.pdf>.
- Boström G. (2005). *Folkhälsoenkät. Resultat 2004. Nationella data. Levnadsvanor*. Statens folkhälsoinstitut. http://www.fhi.se/templates/Page_5835.aspx.
- Boström G. (2007). *Folkhälsoenkät. Resultat 2006. Nationella data. Levnadsvanor*. Statens folkhälsoinstitut. http://www.fhi.se/templates/Page_9514.aspx.
- Bradford J.A., Harlan W.R. and Hanmer H.R. (1936). Nature of cigarette smoke: technic of cigarette smoking. *Industrial and Engineering Chemistry*, **28**, 836-9.
- Centralförbundet för alkohol- och narkotikaupplysning (CAN) (2008). *Drogutvecklingen i Sverige 2008. (Drug trends in Sweden 2008)*. CAN, Stockholm. Rapport nr. 113.
<http://www.can.se/documents/CAN/Rapporter/rapportserie/can-rapportserie-113-drogutvecklingen-i-sverige-2008.pdf>.
- Christensen T. (2004). *Euro-barometer 58.2: Health and developing countries, October-December 2002 [Computer file]*. Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan. <http://www.data-archive.ac.uk/findingData/snDescription.asp?sn=4810>.
- Coresta task force on roll-your-own (fine cut) tobacco (1999). *Report of the CORESTA task force on roll-your-own (fine cut) tobacco*. Special CORESTA Bulletin 1999-2. <http://www.coresta.org/>.
- Currie C., Hurrelmann K., Settertobulte W., Smith R. and Todd J. (eds) (2000). *Health and health behaviour among young people: Health behaviour in school-aged children: a WHO cross-national*

- study (HBSC) international report*. World Health Organization. (WHO Policy Series: Health policy for children and adolescents, issue 1.) www.hbsc.org/downloads/Int_Report_00.pdf.
- Currie C., Roberts C., Morgan A., Smith R., Settertobulte W., Samdal O. and Barnekow Rasmussen V. (eds) (2004). *Young people's health in context. Health behaviour in school-aged children (HBSC) study: international report from the 2001/2002 survey*. World Health Organization. Health policy for children and adolescents, No. 4. <http://www.euro.who.int/Document/e82923.pdf>.
- Currie C., Gabhainn S.N., Godeau E., Roberts C., Smith R., Currie D., Pickett W., Richter M., Morgan A. and Barnekow V. (eds) (2008). *Inequalities in young people's health. Health behaviour in school-aged children: international report from the 2005/2006 survey*. World Health Organization. Health policy for children and adolescents, No. 5. <http://www.euro.who.int/Document/E91416.pdf>.
- Danielson M. (2003). *Svenska skolbarns hälsovanor 2001/02. (Health behaviour in school-aged children. A WHO collaborative study)*. Statens Folkhälsoinstitut. 2003:50. http://www.fhi.se/shop/material_pdf/skolbarnshalsovanor0312.pdf.
- Danielson M. (2006). *Svenska skolbarns hälsovanor 2005/2006 (Health behaviour in school-aged children)*. Statens Folkhälsoinstitut. R2006:10. http://www.fhi.se/upload/ar2006/Rapporter/svenska_skolbarns_halsovanor.pdf.
- Danielson M. and Marklund U. (2000). *Svenska skolbarns hälsovanor 1997/98. Tabellrapport (Health behaviour in school-aged children. A WHO collaborative study)*. Folkhälsoinstitutet. 2000:5. http://www.fhi.se/shop/material_pdf/skolbarnhva9798.pdf.
- Edvardsson I., Lendahls L. and Håkansson A. (2009). When do adolescents become smokers? Annual seven-year population-based follow-up of tobacco habits among 2000 Swedish pupils - an open cohort study. *Scand J Prim Health Care*, **27**, 41-6.
- ERC Group PLC (1999a). *World cigarette market - the 1999 survey*, Vols I, II, III, and IV. ERC, Suffolk, UK. §
- ERC Group PLC (1999b). *World cigarettes 1 and 2 - the 2001 survey*. ERC, Suffolk, UK. §
- Euromonitor International (2007). *The world market for tobacco*. Euromonitor International Inc. §
- European Commission (2007). *Attitudes of Europeans towards tobacco. Special Eurobarometer 272c/Wave 66.2*. http://ec.europa.eu/public_opinion/archives/ebs/ebs_272c_en.pdf.
- Floder-Myrhed B. (The Karolinska Institute) *Re: Smoking habits in Swedish twins* [Personal communication to Todd G. F.] 1986, 2 March.
- Furberg H., Bulik C.M., Lerman C., Lichtenstein P., Pedersen N.L. and Sullivan P.F. (2005). Is Swedish snus associated with smoking initiation or smoking cessation? *Tob Control*, **14**, 422-4.
- Galanti M.R., Wickholm S. and Gilljam H. (2001). Between harm and dangers. Oral snuff use, cigarette smoking and problem behaviours in a survey of Swedish male adolescents. *Eur J Public Health*, **11**, 340-5.
- Giovino G.A., Sidney S., Gfroerer J.C., O'Malley P.M., et al (2004). Epidemiology of menthol cigarette use. *Nicotine Tob Res*, **6(Suppl 1)**, S67-S81.
- Grahn S. (Svenska Tobaks AB) *Total markets, Sweden* [Personal communication to Forey B. A.] 1990, 4 July.
- Haglund M. (1988). Development trends in smoking among women in Sweden - an analysis. In: Aoki M., Hisamichi S. and Tominaga S. (eds) *Smoking and health 1987, Proceedings of the 6th World Conference on Smoking and Health, Tokyo, 9-12 November 1987*. Elsevier Science Publishers B.V. (Biomedical Division), Amsterdam; 525-9. International Congress Series No. 780.
- Harkin A.M., Anderson P. and Goos C. (1997). *Smoking, drinking and drug taking in the European Region*. Alcohol, Drugs and Tobacco Programme, WHO Regional Office for Europe, Copenhagen.
- Hedman L., Bjerg-Bäcklund A., Perzanowski M., Sundberg S. and Rönmark E. (2007). Factors related to tobacco use among teenagers. *Respir Med*, **101**, 496-502.
- Hemmingsson T. and Kriebel D. (2003). Smoking at age 18-20 and suicide during 26 years of follow-up - how can the association be explained? *Int J Epidemiol*, **32**, 1000-4.
- Hergens M.-P., Alfredsson L., Bolinder G., Lambe M., Pershagen G. and Ye W. (2007). Long-term use of Swedish moist snuff and the risk of myocardial infarction amongst men. *J Intern Med*, **262**, 351-9.

- Hibell B., Andersson B., Ahlström S., Balakireva O., *et al* (2000). *The 1999 ESPAD report. Alcohol and other drug use among students in 30 European countries*. The Swedish Council for Information on Alcohol and Other Drugs (CAN) and Council of Europe, Co-operation Group to Combat Drug Abuse and Illicit Trafficking in Drugs (Pompidou Group).
http://www.espad.org/documents/Espad/ESPAD_reports/The_1999_ESPAD_report.pdf.
- Hibell B., Andersson B., Bjarnason T., Ahlstrom S., *et al* (2004). *The ESPAD report 2003. Alcohol and other drug use among students in 35 european countries*. The Swedish Council for Information on Alcohol and Other Drugs (CAN) and Council of Europe, Co-operation Group to Combat Drug Abuse and Illicit Trafficking in Drugs (Pompidou Group), Stockholm, Sweden.
http://www.espad.org/documents/Espad/ESPAD_reports/The_2003_ESPAD_report.pdf.
- Hibell B., Andersson B., Bjarnason T., Kokkevi A., Morgan M. and Narusk A. (1997). *The 1995 ESPAD report. The European school survey project on alcohol and other drugs. Alcohol and other drug use among students in 26 European countries*. The Swedish Council for Information on Alcohol and Other Drugs. Council of Europe (Pompidou Group).
<http://www.espad.org/sa/node.asp?node=641>.
- Hibell B. and Jonsson E. (1977). Alcohol, drug, tobacco and sniffing practices among Swedish schoolchildren 1971-1974. *Br J Addict*, **72**, 117-27.
- Hjern L. (1976). Cigarette smoke tar and nicotine levels in Sweden during the decade 1964-1974. In: Wynder E.L., Hoffmann D. and Gori G.B. (eds) *Modifying the risk for the smoker, Volume I, Proceedings of the Third World Conference on Smoking and Health, New York City, 2-5 June, 1975*. US Dept of Health, Education and Welfare, Public Health Service, National Institutes of Health, USA; 97-102. DHEW Publ No. (NIH) 76-1221.
- Högstorp E. (Statistiska Centralbyrån (SCB Statistics Sweden)) *Tables on smoking and snus, based on Survey of Living Conditions in Sweden* [Personal communication to Lee P. N.] 2005, 21 November.
- Huhtasaari F., Asplund K. and Wester P.O. (1988). Cardiovascular risk factors in the Northern Sweden MONICA study. *Acta Med Scand*, **224**, 99-108.
- Hvitfeldt T., Andersson B. and Hibell B. (2004). *Skolelevers drogvanor 2003*. Centralförbundet för alkohol- och narkotikaupplysning, Stockholm. Report no. 77.
<http://www.can.se/documents/CAN/Rapporter/rapportserie/CAN-rapportserie-77-skolelevers-drogvanor-2003.pdf>.
- Hvitfeldt T. and Nyström S. (2009). *Skolelevers drogvanor 2008*. Centralförbundet för alkohol- och narkotikaupplysning, Stockholm. CAN Report no. 114.
<http://www.can.se/documents/CAN/Rapporter/rapportserie/can-rapportserie-114-skolelevers-drogvanor-2008.pdf>.
- Hyllienmark G. (1983). Rökning, rökfrihet och Könsroller. (Smoking, freedom from smoking and sex roles). *Tobaken Och Vi*, **28**, 16-22.
- International Agency for Research on Cancer (2007). *Smokeless tobacco and some tobacco-specific N-nitrosamines*. IARC, Lyon, France. (IARC Monographs on the evaluation of carcinogenic risks to humans, Volume 89.) <http://monographs.iarc.fr/index.php>.
- Janson H. (1999). Longitudinal patterns of tobacco smoking from childhood to middle age. *Addict Behav*, **24**, 239-49.
- Joossens L. (1999). *Smuggling and cross-border shopping of tobacco products in the European Union*. Health Education Authority, London. <http://www.ash.org.uk/>.
- Joossens L. and Raw M. (2003). Turning off the tap: the real solution to cigarette smuggling. *Int J Tuberc Lung Dis*, **7**, 214-22.
- King A., Wold B., Tudor-Smith C. and Harel Y. (1996). *The health of youth, a cross-national survey*. WHO Regional Publications, Europe, Copenhagen. European Series No. 69.
<http://www.hbsc.org/publications/reports.html>.
- King A.J.C. and Coles B. (1992). *The health of Canada's youth. Views and behaviours of 11-, 13- and 15-year-olds from 11 countries*. Health and Welfare Canada, Ottawa. Catalogue No. H39-239/1992E.
- Kuulasmaa K., Tolonen H., Ferrario M. and Ruokokoski E. (1998). *Age, date of examination and survey periods in the MONICA surveys*. World Health Organization.
www.ktl.fi/publications/monica/age/ageqa.htm.

- Le Meitour-Kaplan A. (1977). Situational Analysis: Profile of women's smoking habits in Continental Western Europe. In: Steinfeld J., Griffiths W., Ball K. and Taylor R.M. (eds) *Health consequences, education, cessation activities, and social action, Volume II, Proceedings of the Third World Conference on Smoking and Health, New York City, June 2-5, 1975*. US Department of Health, Education and Welfare, USA; 309-27. DHEW Publication No (NIH) 77-1413.
- Lee P.N. (ed) (1975). *Tobacco consumption in various countries*, 4th edition. Tobacco Research Council, London. Research Paper 6.
- Lundh B., Ohlin P. and Westling H. (1977). Starka och svaga cigaretter - med och utan filter. *Lakartidningen*, **74**, 2356-8.
- Lundqvist G., Sandström H., Öhman A. and Weinehall L. (2009). Patterns of tobacco use: a 10-year follow-up study of smoking and snus habits in a middle-aged Swedish population. *Scand J Public Health*, **37**, 161-7.
- Marklund U. ((accessed January 2009)). *Skolbarns hälsovanor under ett decennium. Tabellrapport (Health behaviour in school-aged children. A WHO collaborative study)*. http://www.fhi.se/shop/material_pdf/skolbarn.PDF.
- Maxwell J.C., Jr. (Successive years). How the brands ranked. Maxwell International Estimates. *World Tob*.
- Melich A. (2006). *Euro-barometer 52.1: Modern biotechnology, quality of life, and consumers access to justice, November-December 1999 [Computer file]*. Zentralarchiv für Empirische Sozialforschung, Cologne, and Inter-university Consortium for Political and Social Research, Ann Arbor, Michigan. <http://www.data-archive.ac.uk/findingData/snDescription.asp?sn=4203>.
- Merriman D., Yurekli A. and Chaloupka F.J. (2000). How big is the worldwide cigarette-smuggling problem? In: Jha P. and Chaloupka F. (eds) *Tobacco control in developing countries*. OUP, World Bank, World Health Organization; 365-92. <http://www1.worldbank.org/tobacco/tcdc.asp>.
- Molarius A., Kuulasmaa K., Evans A., McCrum E. and Tolonen H. (1999). *Quality assessment of data on smoking behaviour in the WHO MONICA project*. World Health Organization. <http://www.ktl.fi/publications/monica/smoking/qa30.htm>.
- Mørck H.I., Linde J., Agner E., Hein H.O., Gyntelberg F. and Nielsen P.E. (1982). Tobaksforbrug og rygevaner i Norden 1920-1980. (Tobacco consumption and smoking habits in the Nordic countries). *Nord Med*, **97**, 134-46.
- Nilsson M., Weinehall L., Bergström E., Stenlund H. and Janlert U. (2009). Adolescent's perceptions and expectations of parental action on children's smoking and snus use; national cross sectional data from three decades. *BMC Public Health*, **9**, 74.
- Noppa H. and Bengtsson C. (1980). Obesity in relation to smoking: a population study of women in Göteborg, Sweden. *Prev Med*, **9**, 534-43.
- Nordgren P. (1980). The Swedish programme: activities in schools and youth organizations. In: Ramström L.M. (ed) *The smoking epidemic, a matter of worldwide concern, Proceedings of the fourth world conference on smoking and health, Stockholm, 1979*. Almqvist & Wiskell International, Stockholm; 287-92.
- Nordgren P. and Ramström L. (1990). Moist snuff in Sweden - tradition and evolution. *Br J Addict*, **85**, 1107-12.
- Nordic Research Association (1973). *1973 Survey. Antalet rökare i fyra nordiska länder i november - december 1973*. §
- Nordlund A. (2005). Tobaksrökning och hälsa i Sverige under 1990-talet. In: Sundin J., Hogstedt C., Lindberg J. and Moberg H. (eds) *Svenska folkets hälsa i historiskt perspektiv*. Statens folkhälsoinstitut; 305-61. R 2005:8. <http://www.fhi.se/PageFiles/3497/r2005-08-svensk-folkhalsohistoria.pdf?epslanguage=sv>.
- Nordlund L.A. (1998). Trends in smoking habits and lung cancer in Sweden. *Eur J Cancer Prev*, **7**, 109-16.
- Novo M., Hammarström A. and Janlert U. (2000). Smoking habits - a question of trend or unemployment? A comparison of young men and women between boom and recession. *Public Health*, **114**, 460-3.
- Nutbeam D. and Aarø L.E. (1990). Smoking and alienation from school: the implications for health education with young people. Results from the WHO study of health behaviour in schoolchildren.

- In: Durston B. and Jamrozik K. (eds) *Tobacco & health 1990. The global war, Seventh World Conference on Tobacco and Health, Perth, Western Australia, 1-5 April 1990*. Organising Committee of the Seventh World Conference on Tobacco and Health, 189 Royal Street, East Perth, Western Australia 6004; 539-44.
- Otterland A. (1964). Juvenile workers in Sweden. *Industrial Medicine and Surgery*, **33**, 201-8.
- Papacostas A. (2008, (accessed April 2008)). *Euro-barometer 64.1: Mobility, food risk, smoking, AIDS prevention, and medical errors, September-October 2005 [Computer file]*, 1st GESIS-ZA edition as of March 12, 2008. Zentralarchiv für Empirische Sozialforschung an der Universität zu Köln (ZA). ZA4413. <http://zacat.gesis.org/webview/index.jsp>.
- Peltonen M., Huhtasaari F., Stegmayr B., Lundberg V. and Asplund K. (1998). Secular trends in social patterning of cardiovascular risk factor levels in Sweden. The Northern Sweden MONICA Study 1986-1994. *J Intern Med*, **244**, 1-9.
- Ramström L. (1985). *Extrapolations of several studies on smoking in Sweden*. Norske Statens Tobakskarderet. §
- Ramström L.M. (1982a). Fortschritte gegen das Rauchen in Schweden. In: *Rauchen oder Gesundheit. Politische, präventive und therapeutische Aspekte., Kongress zum Weltgesundheitstag 1980 in Bonn-Bad Godesberg*. Neuland-Verlagsgesellschaft mbH, Hamburg; 17-23.
- Ramström L.M. (1982b). National action in Sweden. In: Fontana F. (ed) *Tabacco e giovani (Tobacco and youth), International conference, Venice 9-11 November 1981*. ATTI, Venice; 119-22.
- Ramström L.M. (1986). *Tobaksvanor i Sverige 1985. Resultat från NTS-Undersökningen 1985. (Tobacco habits in Sweden 1985. Results from an NTS study 1985)*. NTS, Stockholm. Tema Tobak Nr. 3.
- Ramström L.M. (1990). Smokeless tobacco - a potential gateway to smoking. In: Durston B. and Jamrozik K. (eds) *Tobacco & health 1990. The global war, Seventh World Conference on Tobacco and Health, Perth, Western Australia, 1-5 April 1990*. Organising Committee of the Seventh World Conference on Tobacco and Health, 189 Royal Street, East Perth, Western Australia 6004; 451-2.
- Ramström L.M. and Tibblin H. (1987). *Tobaksvanor i Sverige 1986. Resultat från NTS-undersökningen 1986. (Smoking habits in Sweden 1986. Results from a National Council on Smoking and Health [NTS] study 1986)*. Tema Tobak No 5.
- Ramström L.M. and Tibblin H. (1988). *Tobaksvanor i Sverige 1987. Resultat från NTS-undersökning 1987. (Tobacco habits in Sweden 1987. Results from study of National Association against Tobacco Damage 1987)*. NTS, Stockholm. Tema Tobak Nr. 7.
- Reif K. and Marlier E. (1998). *Euro-barometer 43.0: Cross-border purchases, smoking habits and cancer risks, March-April 1995 [Computer file]*. Zentralarchiv für Empirische Sozialforschung, Cologne. <http://www.data-archive.ac.uk/findingData/snDescription.asp?sn=3811>.
- Rodu B., Stegmayr B., Nasic S. and Asplund K. (2002). Impact of smokeless tobacco use on smoking in northern Sweden. *J Intern Med*, **252**, 398-404.
- Rosén M., Wall S., Hanning M., Lindberg G. and Nyström L. (1987). Smoking habits and their confounding effects among occupational groups in Sweden. *Scand J Soc Med*, **15**, 233-40.
- Shafey O., Eriksen M., Ross H. and Mackay J. (2009). *The tobacco atlas*, 3rd edition. American Cancer Society, World Lung Foundation. <http://TobaccoAtlas.org>.
- Staberg E.-M. (1959). Tjär- och nikotinhalt i cigaretttrök (Content of tar and nicotine in cigarette smoke). *Nord Hyg Tidskr*, **40**, 71-88.
- Statistiska Centralbyrån (SCB Central Bureau of Statistics) (1965). *Rökvanor i Sverige. En postenkätundersökning våren 1963. (Smoking habits in Sweden. A mail survey - spring 1963)*. Statistiska Centralbyrån, Utredningsinstitutet, Stockholm.
- Statistiska Centralbyrån (SCB Statistics Sweden) ((successive editions)). Försäljning av tobaksvaror. Tobacco retail trade/sales of tobacco. In: *Statistisk årsbok för Sverige, Statistical Yearbook of Sweden*. Statistics Sweden, Stockholm; Recent editions available at http://www.scb.se/Pages/Product___30937.aspx?Produktkod=OV0904&displaypublications=true
- Statistiska Centralbyrån (SCB Statistics Sweden) ((accessed February 2009)). *Levnadsnivåindikatorer i ULF i riket efter kön, ålder och indikator. Tvåårsgenomsnitt 1980-1981-2004-2005*. <http://www.ssd.scb.se/databaser/makro/start.asp?lang=2> [Living conditions].

- Statistiska Centralbyrån (SCB Statistics Sweden) (2008, (accessed February 2009)). *Ohälsa och vård (ULF) efter ålder, kön, hälsoindikator. År 1980-2006*. <http://www.ssd.scb.se/databaser/makro/start.asp?lang=2> [Living conditions].
- Statistiska Centralbyrån (SCB Statistics Sweden) (2009, (accessed February 2009)). *Tabell HA 12. Röker dagligen. Personer 16-84 år. Tabell HA 17. Snusar dagligen. Personer 16-84 år*. http://www.scb.se/statistik/LE/LE0101/2007A01/HA12_07.xls; http://www.scb.se/statistik/LE/LE0101/2007A01/HA17_07_NY.xls.
- Statistiska Centralbyrån (SCB Statistics Sweden) (2005). *Barns villkor*. SCB, Stockholm. (Living conditions, report 110.) http://www.pubkat.scb.se/statistik/_publikationer/LE0101_2002I04_BR_LE110SA0501.pdf.
- Statistiska Centralbyrån (SCB Statistics Sweden) (2007). *Alkohol- och tobaksbruk. (Use of alcohol and tobacco)*. SCB, Enheten för Social Välfärdsstatistik, Stockholm. (Living conditions, report 114.) http://www.pubkat.scb.se/statistik/_publikationer/LE0101_2004I05_BR_LE114SA0701.pdf.
- Stegmayr B., Eliasson M. and Rodu B. (2005). The decline of smoking in northern Sweden. *Scand J Public Health*, **33**, 321-4.
- Swedish Gallup Institute (1955). *Svenska Folkets Tobaksvanor (Tobacco Habits of the Swedish People). Research Report*. Swedish Gallup Institute, Stockholm. §
- Swedish Match (accessed March 2009a). *Company history*. <http://www.swedishmatch.com/en/Our-company/Company-history/>.
- Swedish Match (accessed June 2009b). *History of snus*. <http://www.swedishmatch.com/en/Our-business/Snuff-and-snus/History-of-snuff/>.
- Swedish Match (accessed March 2009c). *Snus use in figures*. <http://www.swedishmatch.com/en/Snus-and-health/Tobacco-use-in-Sweden/Snus-use-in-figures/>.
- Tillgren P., Haglund B.J., Lundberg M. and Romelsjö A. (1996). The sociodemographic pattern of tobacco cessation in the 1980s: results from a panel study of living condition surveys in Sweden. *J Epidemiol Community Health*, **50**, 625-30.
- Tolonen H., Kuulasmaa K. and Ruokokoski E. (2000, revised November 2005). *MONICA population survey data book*. World Health Organization. <http://www.ktl.fi/publications/monica/surveydb/title.htm>.
- Unger K. (Swedish Tobacco Company) *Snuff-dippers (%) among the male adult (15-67) population in Sweden from 1969-70 to 1972-73* [Personal communication to Nordgren P. and Ramström L.] 1976. §
- US Department of Agriculture ((accessed May 2009)). *PSD online dataset for Tobacco, Mfg., Cigarettes*. <http://www.fas.usda.gov/psdonline/psdHome.aspx>.
- Wadman C. (2009). *Levnadsvanor resultat 2008*. Statens Folkhälsoinstitut. <http://www.fhi.se/Statistik-uppfoljning/Nationella-folkhalsoenkaten/Levnadsvanor/>; <http://www.fhi.se/Documents/Statistik-uppfoljning/Folkhalsoenkaten/Resultat-2008/Levnadsvanor-total-090402.pdf>.
- Wadman C., Boström G. and Karlsson A.-S. (2007). *Hälsa på lika villkor. Resultat från nationella folkhälsoenkäten 2006. (Health on equal terms. Results from the 2006 Swedish National Public Health Survey)*. Statens Folkhälsoinstitut. Report nr A-2007-01. http://www.fhi.se/upload/ar2007/Rapporter%202007/A2007-01_Halsa_pa_lika_villkor_0705.pdf; http://www.fhi.se/upload/ar2008/rapporter_2008/A2008_1_halth%20on%20equal%20terms.pdf.
- Wersäll J.P. and Eklund G. (1998). The decline of smoking among Swedish men. *Int J Epidemiol*, **27**, 20-6.
- Wicklin B. (ed) (1998). *Tobaksstatistik 1970-1997. Konsumtion av tobaksvaror, priser, inkomster, rökvanor, handel och illegala tillförseln mm i Sverige, Norge, Danmark och Finland (Tobacco statistics 1970-1997. Consumption of tobacco products prices income, smoking habits, trade and attempted smuggling etc. in Sweden, Norway, Denmark and Finland)*. Svenska tobaksbranschföreningar, Örebro, Sweden.
- Wilhelmsen L., Johansson S., Rosengren A., Wallin I., Dotevall A. and Lappas G. (1997). Risk factors for cardiovascular disease during the period 1985-1995 in Göteborg, Sweden. The GOT-MONICA Project. *J Intern Med*, **242**, 199-211.

References (continued)

Wolf H.K., Kuulasmaa K., Tolonen H. and Ruokokoski E. (1998). *Participation rates, quality of sampling frames and sampling fractions in the MONICA surveys*. World Health Organization. <http://www.ktl.fi/publications/monica/nonres/nonres.htm>.

World Health Organization (1989). The WHO MONICA project: a worldwide monitoring system for cardiovascular diseases. In: *World Health Statistics Annual 1989*. WHO, Geneva; 25-149.

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