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# International Smoking Statistics

Web Edition

A collection of worldwide historical data

## Hungary

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<sup>1</sup> See footnotes to Tables

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<sup>1</sup> 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](http://www.oup.co.uk/isbn/0-19-850856-5)) included data for 30 countries up to 1995. Since 2006, work has been ongoing to make individual country updates available online. Please register at [www.pnlee.co.uk](http://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 20<sup>th</sup> 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](http://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, including extended versions of Tables 4 and 6 and Figure 3 for chapters issued since January 2011;

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];

An updated version of Appendix V Bibliography. [This bibliography lists published papers that use an indirect method for estimating past smoking habits based on recall];

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*.

In the 1920s and 1930s consumption of manufactured cigarettes per adult was low, below 1 cigarette per day. No estimates of hand-rolled cigarette consumption are available until 1940, at which point about equal numbers of manufactured and hand-rolled cigarettes were smoked. Sales of manufactured cigarettes increased to 3 per day by 1950, 6 per day in the early 1960s, and continued to increase to around 9 in 1980, staying at that level through to the mid-1990s. These figures may be lower than actual consumption, as estimates of smuggling are as high as 25% for 1990-91. Information on hand-rolled cigarettes in those decades is only fragmentary, but suggests they had all but disappeared at least by the 1980s. Numbers of manufactured cigarettes, whether based on legal sales or on estimates of consumption (taking account of smuggling and cross-border sales), have fallen since the mid-1990s, to around 4 per day in the early-2010s. However a resurgence in hand-rolled cigarette consumption occurred over the same period, such that total cigarette consumption fell only to about 6 per day. The proportion of manufactured cigarettes that were filtered rose slowly during the 1960s, then rapidly during the 1970s to about 80% in 1980. Information on the machine tar yield of cigarettes is limited, but suggests it was high, in the range 32-34 mg per cigarette in 1973, and 18-24 in 1992.

Data on products other than cigarettes are available only for occasional years. Consumption of all tobacco products per adult rose from 2.5 g per day in 1920 to 5 g in 1940 and 9 g in 1988, then fell to around 6 g in the early 2010s. Around 20-25% of all tobacco was consumed as manufactured cigarettes before 1940 with the remainder mainly as smoking tobacco; in 1940 this was about equally split between pipe and cigarette tobaccos. By 1988 products other than manufactured cigarettes had virtually disappeared. Since then, smoking tobacco has increased to nearly 25%.

### Survey data

See Tables 4-8 and *Notes on sources of survey data*.

Limited non-representative surveys in the 1960s suggest that the prevalence of smoking among men aged 15 years and over was over 50%, while among women it was under 20%. There have been a considerable number of nationally representative surveys since, but few were repeated to provide consistent estimates over time, making it difficult to detect trends against the considerable fluctuation between sources. However, with some exceptions, prevalence estimates for men generally decreased from around 50% in the 1970s to around 40% in the mid-1990s, while estimates for women generally increased to around 25%. Later estimates show little evidence of decline below that level for men where occasional smokers are included, but estimates for regular smoking show some reduction to around 35%. Estimates of the prevalence among women in the same period were mostly 25-30% where occasional smokers were included, or 20-25% for regular smoking. One survey (see source 43) in 2012 gave much lower prevalence estimates for specifically manufactured cigarette smoking prevalence (22% among men and 15% among women for regular smoking).

There are no age-specific data available on the prevalence of smoking until 1977. In general, more men than women smoked at every age, but the difference between the proportions of boys and girls smoking is small and occasionally in the opposite direction for surveys conducted among teenagers since the late 1990s. A lower prevalence of smoking in older age groups was more marked in women than in men.

Comparison of survey and sales data showed very variable results, influenced both by the variability of the survey results and the uncertainty of the sales data due to smuggling – understatement by surveys ranged from just a few percent to nearly 50%. Between 1966 and 1986, the estimated number of cigarettes smoked per person per day (sales-adjusted) increased from about 12 to 14 for men and from 3 to 4 for women, further increasing to around 6 for women in the late 1990s. Since then, it has decreased to around 7 for men and 4 for women. Estimates from the 2012 survey (source 43) suggested that it had fallen to 4.5 for men and 2.3 for women.



**Table 1.1** Total annual sales of tobacco products, 1920-1934

Year	Manufactured cigarettes		Cigars tonnes	Pipe & HR tobacco tonnes	Snuff tonnes	All tobacco products tonnes
	tonnes	millions				
1920	898	898	570	3 470	1	4 939
1921	1 652	1 652	719	5 898	1	8 270
1922	2 041	2 041	742	7 247	1	10 031
1923	1 299	1 299	607	6 314	1	8 221
1924	1 872	1 872	591	7 194	1	9 658
1925	1 980	1 980	699	8 195	1	10 875
1926	2 113	2 113	752	8 424	1	11 290
1927	2 267	2 267	950	8 872	1	12 090
1928	2 344	2 344	744	9 043	1	12 132
1929	2 199	2 199	544	8 674	1	11 418
1930	2 000	2 000	409	7 910	1	10 320
1931	1 827	1 827	316	7 506	1	9 650
1932	1 793	1 793	259	6 507	1	8 560
1933	1 971	1 971	237	6 588	1	8 797
1934	1 958	1 958	231	6 655	1	8 845

Source: see *Notes on sources of sales data: Sales data for 1920-1934*, p. 35.

**Table 1.2** Total annual sales of tobacco products, 1940-2012

Year	Manufactured cigarettes		total consumption		Cigars		Smoking tobacco		All tobacco products tonnes
	legal sales				tonnes	millions	Pipe tobacco tonnes	Cigarette tobacco tonnes	
	tonnes	millions	tonnes	millions					tonnes
1940	3 120	3 120			350	70	4 858	3 626	11 954
1951	8 000	8 000							
1952	10 500	10 500							
1953	10 500	10 500							
1954	11 500	11 500							
1955	12 500	12 500							
1956	13 500	13 500							
1957	14 500	14 500							
1958	14 000	14 000							
1959	15 000	15 000							
1960	15 782	15 782							
1961	16 793	16 793							
1962	16 449	16 449							
1963	15 812	15 812							
1964	16 393	16 393							
1965	18 478	18 478							
1966	20 525	20 525							
1967	20 936	20 936							
1968	21 836	21 836							
1969	20 772	20 772							
1970	22 502	22 502							
1971	24 008	24 008							
1972	26 135	26 135							
1973	23 603	23 603							
1974	23 593	23 593							
1975	25 783	25 783							
1976	26 250	26 250							
1977	25 700	25 700							
1978	25 525	25 525							
1979	26 050	26 050							
1980	28 598	28 598							
1981	28 190	28 190							
1982	26 435	26 435							
1983	24 850	24 850							
1984	27 540	27 540							
1985	27 280	27 280							
1986	27 133	27 133							
1987	27 242	27 242							
1988	26 628	26 628			65	13	50	17	26 760
1989	27 415	27 415							
1990	28 489	28 489							
1991	26 530	26 530							
1992	25 895	25 895							
1993	27 769	27 769							
1994	28 579	28 579							
1995	27 750	27 750							
1996	21 200	21 200							
1997	22 200	22 200						87	
1998	22 400	22 400							
1999	22 700	22 700							
2000	21 200	21 200							
2001	21 000	21 000							
2002	20 300	20 300							
2003	18 700	18 700					893		
2004	14 900	14 900			50	10	1 170		16 120
2005	13 800	13 800			50	10	1 800		15 650
2006	15 870	15 870	18 830	18 830	45	9	1 800		20 675
2007	16 460	16 460	17 770	17 770	45	9	2 153		19 968
2008	16 300	16 300	17 110	17 110	45	9	2 400		19 555
2009	15 300	15 300	15 570	15 570	45	9	2 828		18 443
2010	14 180	14 180	14 140	14 140	50	10	3 735		17 925
2011	13 940	13 940	13 010	13 010	45	9	4 065		17 120
2012	11 210	11 210	10 280	10 280					

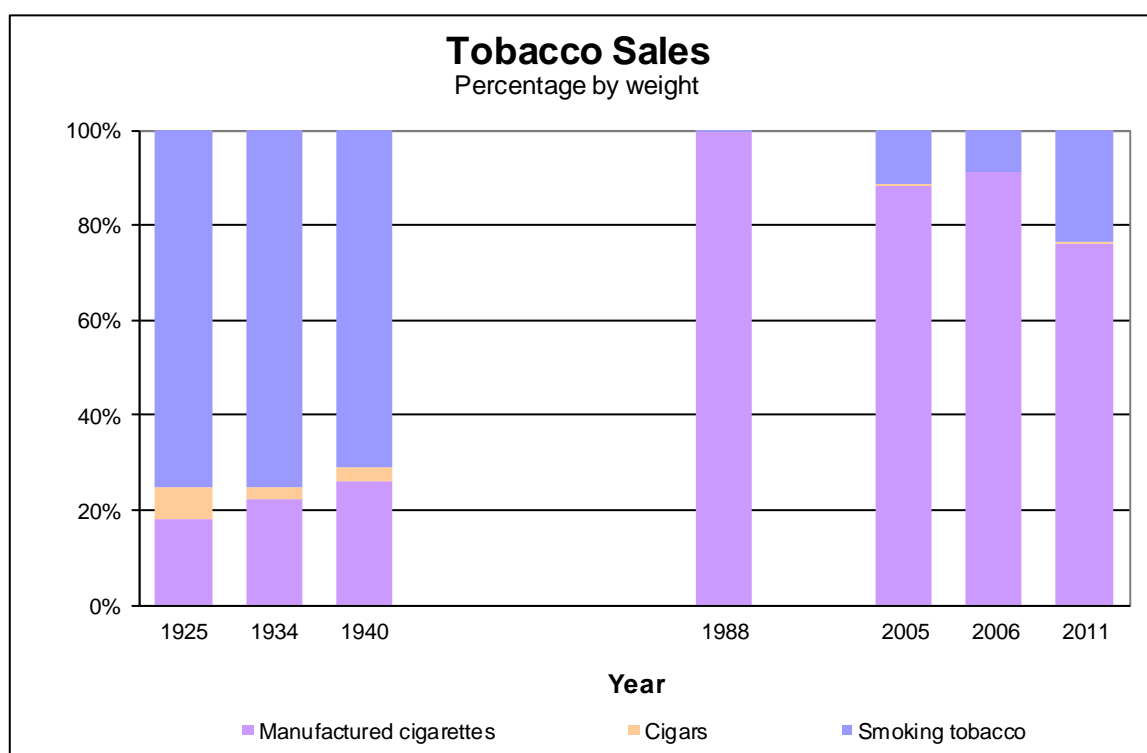
Source: see *Notes on sources of sales data: Sales data for 1940 onwards*, p. 35.

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

Year	Manufactured cigarettes %	Cigars %	Smoking tobacco		Overall %
			Pipe tobacco %	Cigarette tobacco %	
			1925	18.2	
1934	22.1	2.6			75.2
1940	26.1	2.9	40.6	30.3	70.9
1988	99.5	0.2	0.2	0.1	0.3
2005	88.2	0.3			11.5
2006 /1	91.1	0.2			8.7
2011 /1	76.0	0.3			23.7

1 Manufactured cigarettes using estimated total consumption.  
Source: calculated from Tables 1.1 & 1.2.

**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 <sup>1</sup>		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	898	0.4					4 939	2.4
1921	1 652	0.8					8 270	4.0
1922	2 041	1.0					10 031	4.8
1923	1 299	0.6					8 221	3.9
1924	1 872	0.9					9 658	4.5
1925	1 980	0.9					10 875	5.1
1926	2 113	1.0					11 290	5.1
1927	2 267	1.0					12 090	5.4
1928	2 344	1.0					12 132	5.4
1929	2 199	1.0					11 418	5.1
1930	2 000	0.9					10 320	4.5
1931	1 827	0.8					9 650	4.1
1932	1 793	0.8					8 560	3.7
1933	1 971	0.8					8 797	3.7
1934	1 958	0.8					8 845	3.7
1940	3 120	1.2	3 626	1.5	6 746	2.7	11 954	4.8
1951	8 000	3.1						
1952	10 500	4.0						
1953	10 500	4.0						
1954	11 500	4.4						
1955	12 500	4.7						
1956	13 500	5.0						
1957	14 500	5.5						
1958	14 000	5.2						
1959	15 000	5.6						
1960	15 782	5.8						
1961	16 793	6.1						
1962	16 449	6.0						
1963	15 812	5.7						
1964	16 393	5.8						
1965	18 478	6.5						
1966	20 525	7.2						
1967	20 936	7.2						
1968	21 836	7.5						
1969	20 772	7.0						
1970	22 502	7.5						
1971	24 008	8.0						
1972	26 135	8.6						
1973	23 603	7.7						
1974	23 593	7.7						
1975	25 783	8.4						
1976	26 250	8.6						
1977	25 700	8.4						
1978	25 525	8.3						
1979	26 050	8.5						
1980	28 598	9.4						
1981	28 190	9.2						
1982	26 435	8.7						
1983	24 850	8.2						
1984	27 540	9.0						
1985	27 280	8.9						
1986	27 133	8.9						
1987	27 242	8.9						
1988	26 628	8.7	17	0.0	26 645	8.7	26 760	8.8
1989	27 415	8.9						

**Table 2** (continued)

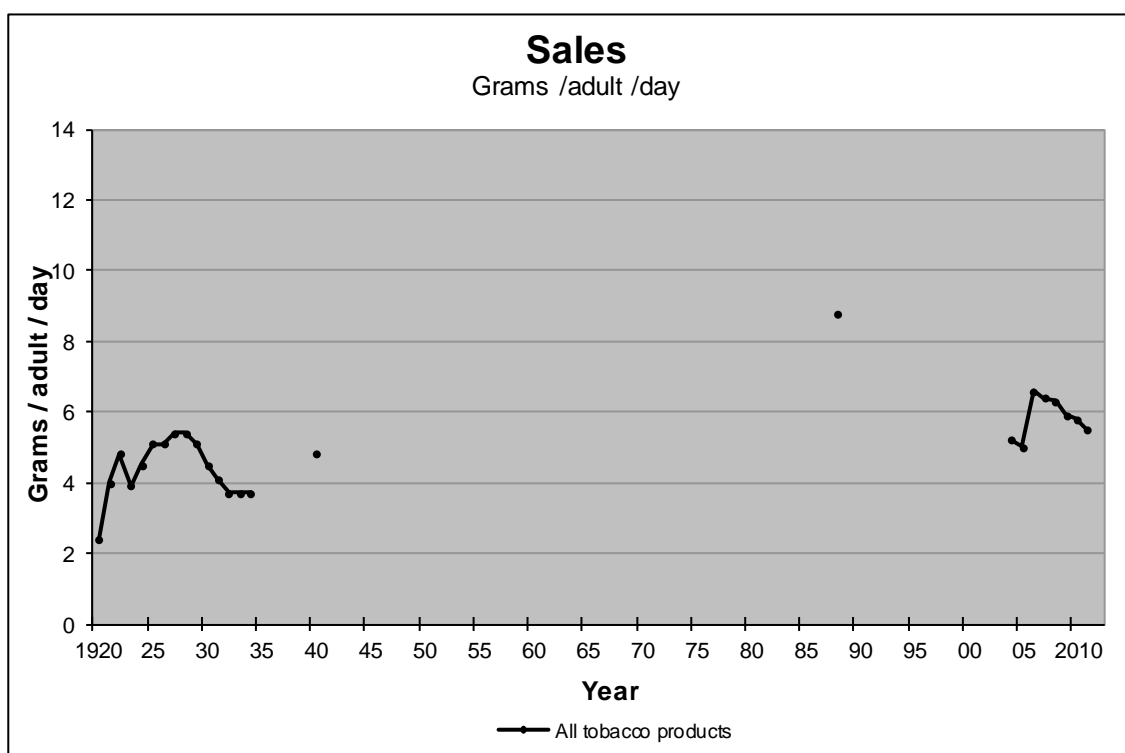
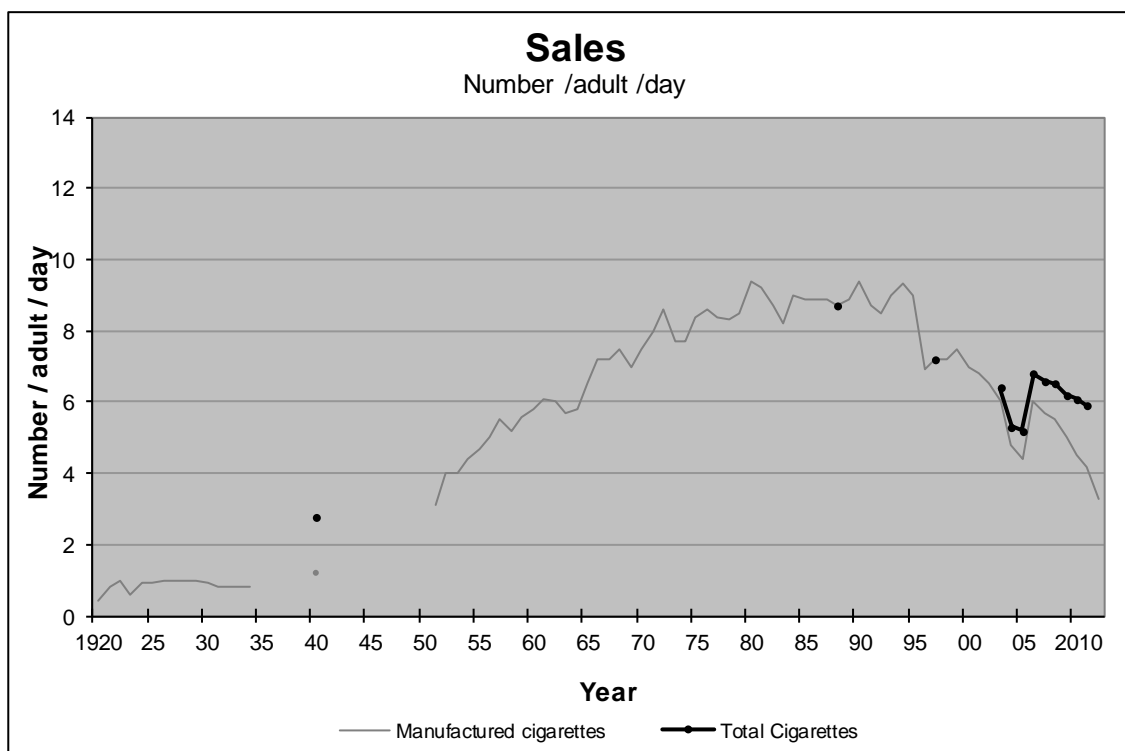
Year	Manufactured cigarettes <sup>1</sup>		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/adult/day	Total annual millions	Number/adult/day	Total annual millions	Number/adult/day	Total annual tonnes	Grams/adult/day
1990	28 489	9.4						
1991	26 530	8.7						
1992	25 895	8.5						
1993	27 769	9.0						
1994	28 579	9.3						
1995	27 750	9.0						
1996	21 200	6.9						
1997	22 200	7.2	87	0.0	22 287	7.2		
1998	22 400	7.2						
1999	22 700	7.5						
2000	21 200	7.0						
2001	21 000	6.8						
2002	20 300	6.5						
2003	18 700	6.0	1 190	0.4	19 890	6.4		
2004	14 900	4.8	1 560	0.5	16 460	5.3	16 120	5.2
2005	13 800	4.4	2 400	0.8	16 200	5.2	15 650	5.0
2006/1	18 830	6.0	2 400	0.8	21 230	6.8	20 675	6.6
2007/1	17 770	5.7	2 870	0.9	20 640	6.6	19 968	6.4
2008/1	17 110	5.5	3 200	1.0	20 310	6.5	19 555	6.3
2009/1	15 570	5.0	3 770	1.2	19 340	6.2	18 443	5.9
2010/1	14 140	4.5	4 980	1.6	19 120	6.1	17 925	5.8
2011/1	13 010	4.2	5 420	1.7	18 430	5.9	17 120	5.5
2012/1,2	10 280	3.3						

1 Manufactured cigarettes – estimated total consumption for 2006 onwards, other years – legal sales; see Table 1.2 and *Sales data for 1940 onwards*, p. 35.

2 Uses population data for 2012.

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*, p. 37. Population, see *Population, Methods* p. 14.

**Figure 2** Sales of (i) manufactured and total<sup>1</sup> cigarettes and (ii) all tobacco products. Average per adult (aged 15 years and over) per day



<sup>1</sup> Includes estimated hand-rolled cigarette consumption.  
Source: Table 2.

**Table 3** Manufactured cigarettes: percentage of total consumption or production as filter cigarettes; average machine yields per cigarette of tar

Year	Filter		Tar yield mg/cig
	Consumption %	Production %	
1963	6.4		
1964	10.5		
1965	14.0		
1966	16.5		
1967	19.5		
1968	23.2		
1969	27.3		
1970	37.2		
1971	41.4		
1972	46.8		
1973	52.0		32 - 34
1974	56.7		
1975	61.0		
1976	67.7		
1977	72.0		
1978	77.3		
1979	78.0	78.0	
1980	79.0	78.0	
1981	82.2	78.0	
1982	84.0	79.0	
1983		80.0	
1984		87.1	
1985		90.8	
1986		92.5	
1987		93.1	
1988	91.4	93.7	
1989		93.8	
1990		94.3	88%> 18mg
1991		94.1	
1992		92.0	18 - 24
1993		92.9	
1994		93.2	
1995		93.8	
1996		93.6	
1997	98.5	93.0	average >15mg
1998		93.7	
1999		94.3	
2000		94.8	
2001		94.7	
2002		94.9	
2003		94.7	
2004		94.7	

Source: see *Notes on sources of sales data: Plain/Filter cigarette sales*, p. 38, and *Tar, nicotine and CO machine yields of cigarettes*, p. 38. There is also limited information in the *Notes on Menthol cigarette sales*, p. 38 and *Slim cigarette sales*, p. 38,

**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 24	25 29	30 34	35 39	40 44	45 49	50 54	55 59		60 64	65 69	70 74	75 79
65	1	UC	U									56												
66	2	U	U									57												
75	3	U	U									45												
77	15	U	U					65				52		46		58		40				52		
80	4	UC	U					31																
80	5	U	U									50												
81	16	U	U									38												
82	6	UC	R					65				47		56		40				48				
82	6	UC	A					65				47		57		40				49				
82	6	A	A					66				47		57		41				49				
83	7	UC	R					62				59		44		44				50				
83	7	UC	A					63				60		45		44				50				
83	7	A	A					63				60		45		44				51				
84	8	U	U									47												
86	5	MCR										61												
86	9	U	*	3		21																		
86	9	U	R	7		27																		
86	9	U	A	15		35																		
86	11	U	U									49												
87	6	UC	R					54				60		47		41				50				
87	6	UC	A					55				61		47		41				51				
87	6	A	A					55				61		48		41				51				
88	7	UC	R					52				57		42		43				48				
88	7	UC	A					52				59		43		43				49				
88	7	A	A					52				59		43		43				49				
88	17	U	U									47												
89	5	U	R									40												
90	9	U	*	5		25																		
90	9	U	R	11		31																		
90	9	U	A	21		39																		
92	5	U	U									63												
93	5	U	U									40												
93	9	U	R	9		25																		
94	11	U	R					22				44		51		54		42		33		44		
95	12	UC	U					27				33		35		47		39		28		19		34
95	12	A	U					29				33		37		48		39		28		20		35
95	13	UC	*					32																
95	13	UC	A					36																
95	14	UC	A									37												
95	17	U	U									48				46				*				45
95	18	UC	A					44				48		51		49		36		31		14		40
96	19	A	R									47												
97	9	A	*	6		29																		
97	9	A	R	12		36																		
97	20	UC	R	3		31				43				21				34						
97	20	UC	A	11		38				48				22				39						
97	21	U	R									39												
97	21	U	A									45												



**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	75	80+						
65	1	UC	U																												
66	2	U	U	18																											
75	3	U	U	23																											
77	15	U	U					41				31		22		13		6				22									
80	4	UC	U					20																							
80	5	U	U	25																											
81	16	U	U	15																											
82	6	UC	R									48		33		24		10				24									
82	6	UC	A									51		35		24		10				25									
82	6	A	A									51		35		24		11				25									
83	7	UC	R									42		43		28		25				33									
83	7	UC	A									44		44		29		26				34									
83	7	A	A									44		44		29		26				34									
84	8	U	U	22																											
86	5	M	R	23																											
86	9	U	*		1					14																					
86	9	U	R		2					21																					
86	9	U	A		7					29																					
86	11	U	U	22																											
87	6	UC	R									49		36		23		12				25									
87	6	UC	A									50		36		24		13				26									
87	6	A	A									50		37		24		13				26									
88	7	UC	R									46		39		26		20				30									
88	7	UC	A									46		41		27		20				31									
88	7	A	A									46		41		27		20				30									
88	17	U	U	29																											
89	5	U	R	27																											
90	9	U	*		3					14																					
90	9	U	R		5					20																					
90	9	U	A		11					29																					
92	5	U	U	25																											
93	5	U	U	37																											
93	9	U	R		7					19																					
94	11	U	R					14				30		37		36		18		8				27							
95	12	UC	U					23				28		34		37		33		20			13			28					
95	12	A	U					24				28		35		38		33		20			13			28					
95	13	UC	*					26																							
95	13	UC	A					32																							
95	14	UC	A					35																							
95	17	U	U					32				22				*						27									
95	18	UC	A					38				31		45		43		28		16			6			30					
96	19	A	R	39																											
97	9	A	*		3					20																					
97	9	A	R		6					28																					
97	20	UC	R					0				17				28				5						18					
97	20	UC	A					2				27				32				6						23					
97	21	U	R	22																											
97	21	U	A	28																											

**Table 4M** (continued from p. 16, continues on p. 20)  
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
98	5	U	R	44																				
98	22	U	U				30	41																35
99	13	UC	*				28																	
99	13	UC	A				37																	
99	14	UC	A				45																	
99	23	M	C	R				30	47	43	42	52	55	43	57	43	31	35	33			44		
99	23	M	C	A				40	61	57	54	60	62	45	64	45	47	38	33			53		
99	24	A	U	40																				
00	18	UC	A				48		37	46		50		43		22		9					39	
00	25	U	R				44				41				14							38		
00	25	U	A				47				43				15							41		
01	26	UC	R				38		40	28	43	42	28	27	29	22	11					32		
01	26	U	A				40		49	45	49	40	36	30	33	26	19							
01	27	UC	R				40																	
01	27	UC	A				46																	
02	9	A	*	6		21																		
02	9	A	R	10		28																		
02	10	A	R	11		29		40																
02	17	U	U	35																				
02	28	U	U				34			46			54			23				39				
02	29	U	U	46																				
03	13	UC	*				29																	
03	13	UC	A				39																	
03	25	A	R				43				39				16				37					
03	25	A	A				50				42				16				41					
03	27	UC	R				41																	
03	27	UC	A				50																	
03	30	UC	A	27																				
03	31	M	C	A	31																			
03	31	UC	A	33																				
03	31	A	A	34																				
03	32	U	R	39																				
03	32	U	A	43																				
04	18	UC	A				48	40	49	49		31		32		19					40			
04	18	UC	R	36																				
05	28	M	C	R				28			33			48			22				33			
05	28	T	C	R				30			39			50			23				36			
05	28	A	R				30			40			50			23				36				
05	28	M	C	U				31			35			49			23				35			
05	28	T	C	U				34			41			52			25				38			
05	28	A	U				34			42			52			25				39				
05	33	UC	R	37																				
05	33	UC	A	43																				
05	34	U	U	34																				

**Table 4F** (continued from p. 17, continues on p. 21)  
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
98	5	U	R	27																				
98	22	U	U				25	35																30
99	13	UC	*				22																	
99	13	UC	A				35																	
99	14	UC	A				47																	
99	23	MCR					21	28	15	15	30	27	33	36	15	9	12	0			21			
99	23	MCA					33	46	25	27	42	43	42	45	19	12	12	0			30			
99	24	A	U				26																	
00	18	UC	A				42	37	37	39	28	17	6					29						
00	25	U	R				29				28				3				23					
00	25	U	A				35				31				4				26					
01	26	UC	R				23	17	17	24	29	25	27	17	15	11					21			
01	26	U	A				38	31	27	32	39	32	33	22	16	12								
01	27	UC	R				26																	
01	27	UC	A				34																	
02	9	A	*	3	18																			
02	9	A	R	6	26																			
02	10	A	R	7	28	35																		
02	17	U	U				23																	
02	28	U	U				26	31	34	11								23						
02	29	U	U				31																	
03	13	UC	*				28																	
03	13	UC	A				40																	
03	25	A	R				33				29				5				25					
03	25	A	A				38				32				6				28					
03	27	UC	R				31																	
03	27	UC	A				39																	
03	30	UC	A	27																				
03	31	MCA		32																				
03	31	UC	A	33																				
03	31	A	A	33																				
03	32	U	R				28																	
03	32	U	A				31																	
04	18	UC	A				40	33	27	29	36	9	1					23						
04	18	UC	R				26																	
05	28	MCR					18	36	35	8								22						
05	28	TC	R				20	37	37	9								24						
05	28	A	R				20	37	37	9								24						
05	28	MC	U				22	41	37	10								26						
05	28	TC	U				23	42	40	11								27						
05	28	A	U				23	42	40	11								27						
05	33	UC	R				24																	
05	33	UC	A				30																	
05	34	U	U				23																	

**Table 4M** (continued from p. 18, continues on p. 22)  
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+
06	9	A	*		4		18																		
06	9	A	R		5		22																		
06	10	A	R		7		27				38														
06	10	A	R*		5		26				37														
06	10	A	A*		7		28				39														
06	18	UC	R											41											
06	18	UC	A											44											
06	28	M	C	R					26				53		43				22						37
06	28	T	C	R					28				56		51				26						41
06	28	A		R					28				56		51				26						41
06	28	M	C	U					28				56		46				22						39
06	28	T	C	U					32				60		54				26						44
06	28	A		U					32				60		54				26						44
07	13	UC	*				22																		
07	13	UC	A				31																		
07	18	UC	R											42											
07	18	UC	A											48											
07	35	UC	R											35											
07	35	UC	A											41											
08	30	UC	*			6																			
08	30	UC	A			22																			
08	30	A		A		28																			
08	36	UC	*			11																			
08	36	UC	A			27																			
08	37	U		R										37											
08	37	U		A										40											
09	28	M	C	R					32				40		48				24						36
09	28	T	C	R					41				46		61				28						44
09	28	M	C	A					39				44		60				28						42
09	28	T	C	A					41				46		62				28						44
09	28	A		A					41				51		62				29						46
09	38	T	C	R					33				35		36		35		34		19		8	5	31
09	38	A		R									36		36				14						32
09	38	A		A									43		39				16						36
09	38*	A		A					40	46	45	41	35	44	41	39	43	28	21	22	7	10	8		
09	39	U		R										34											
09	39	U		A										39											
09	40	U		*					2																
09	40	U		R					12																
09	40	U		A					23																
10	9	A		*		4																21			
10	9	A		R		7																26			
10	10	A		R		9																30		42	
10	10	A		R*		10																31		45	
10	10	A		A*		16																38		52	
10	41	T	C	R											41										
10	41	T	C	A						49				46		42			33						43

**Table 4F** (continued from p. 19, continues on p. 23)  
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+
06	9	A	*		3		17																		
06	9	A	R		6		21																		
06	10	A	R		7		26		33																
06	10	A	R*		5		22		32																
06	10	A	A*		7		27		37																
06	18	UC	R											26											
06	18	UC	A											30											
06	28	M	C	R				18				34		41					11						25
06	28	T	C	R				21				37		41					12						27
06	28	A	R					21				37		41					12						27
06	28	M	C	U				24				38		42					12						28
06	28	T	C	U				27				41		43					13						29
06	28	A	U					27				41		43					13						29
07	13	UC	*				24																		
07	13	UC	A				34																		
07	18	UC	R											25											
07	18	UC	A											28											
07	35	UC	R											25											
07	35	UC	A											32											
08	30	UC	*			5																			
08	30	UC	A			24																			
08	30	A	A			27																			
08	36	UC	*			12																			
08	36	UC	A			35																			
08	37	U	R											28											
08	37	U	A											31											
09	28	M	C	R				33				39		28					14						26
09	28	T	C	R				36				47		35					15						31
09	28	M	C	A				36				47		37					14						31
09	28	T	C	A				36				47		37					15						31
09	28	A	A					36				49		37					15						32
09	38	T	C	R				21				25		27		33		25		10		3		3	22
09	38	A	R									25		28					7						22
09	38	A	A									33		32					8						26
09	38*	A	A					36	35	32	32	24	41	41	33	28	27	15	9	5	0	3			
09	39	U	R											24											
09	39	U	A											28											
09	40	U	*			1																			
09	40	U	R			11																			
09	40	U	A			26																			
10	9	A	*			2		19																	
10	9	A	R			5		26																	
10	10	A	R			7		26		34															
10	10	A	R*			8		30		39															
10	10	A	A*			13		40		48															
10	41	T	C	R										28											
10	41	T	C	A					35			32		27					16						29

**Table 4M** (continued from p. 20)  
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+
11	13	UC	*																				26		
11	13	UC	A																				35		
12	42	U	R																						32
12	42	U	A																						34
12	43	MC	R																						25
12	43	TC	R																						24
12	43	A	R																						32
12	43	A	R																						34
12	43	MC	A																						27
12	43	TC	A																						25
12	43	A	A																						34
12	43	A	A																						35
																									36
																									9
																									15
																									16
																									10
																									16
																									16
																									22
																									31
																									32
																									23
																									32
																									33

Source: see *Notes on sources of survey data*, p. 38  
 Product: MC = manufactured cigarettes  
 TC = total cigarettes (including hand-rolled)  
 UC = cigarettes (type unspecified)  
 A = all products

Frequency: A = all smokers (including occasional)  
 R = regular or daily smokers  
 U = unspecified  
 \* = refer to *Notes on sources of survey data*, p. 38  
 All ages: relates to ages reported; as given in original source

**Table 4F** (continued from p. 21)  
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
11	13	UC *									24	29	34	39	44	49	54	59	64	69	74	79		
11	13	UC A									24	29	34	39	44	49	54	59	64	69	74	79		
12	42	U R									24													
12	42	U A									25													
12	43	MCR								19						18							5	15
12	43	TC R								23						27							6	21
12	43	A R								25						29							7	23
12	43	MCA								22						19							5	17
12	43	TC A								27						29							7	23
12	43	A A								27						29							7	24

Source: see *Notes on sources of survey data*, p. 38  
 Product:  
 MC = manufactured cigarettes  
 TC = total cigarettes (including hand-rolled)  
 UC = cigarettes (type unspecified)  
 A = all products

Frequency: A = all smokers (including occasional)  
 R = regular or daily smokers  
 U = unspecified  
 \* = refer to *Notes on sources of survey data*, p. 38  
 All ages: relates to ages reported; as given in original source

**Table 5M** Number of cigarettes smoked per smoker per day, males: :  
selected surveys by age

Year	Source	Product	Estimated	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+								
66	2	UC	E	21																													
77	15	UC	E*	19					23			22			23			16			21												
82	6	UC							20		22		21		19							21											
83	7	UC							21		25		24		19							23											
87	6	UC							21		23		21		19							21											
88	7	UC							22		24		23		20							23											
94	11	UC		20																													
95	12	UC		9.0			15		18		21		20		17		17			18													
95	13	UC	E	16																													
95	17	UC		17					*					*					17														
95	18	UC	E	22																													
96	19	UC		20																													
97	9	UC		0.4	3.4																												
97	20	UC		4.7		15			20			15								18													
98	22	UC	E	9.3																													
99	13	UC	E	9.9																													
99	23*	MC							39		12		26		21		21		19		19		22		14		18		15		2.1		
99	23	MC							30		10		20		17		19		18		18		20		14		14		15		2.1		
00	18	UC	E	19																													
00	25	UC	E*	19					22					17					20														
01	26	UC	E						13		16		17		17		22		21		18		21		21		13						
02	10	UC	E*	3.2	5.9		8.1																										
02	17	UC		18																													
03	13	UC	E	9.6																													
03	25	UC	E*	19					21					17					20														
03	32	UC		19																													
04	18	UC	E	18																													
04	18	UC		18																													
05	28	MC	E	14					18		19		18								18												
05	28	TC	E	14					17		19		18								17												
06	18	UC		18																													
06	28	MC	E	16					17		19		20								18												
06	28	TC	E	15					17		19		19								18												
07	13	UC	E	8.9																													
07	18	UC		17																													
07	35	UC		17																													
09	28	TC		14					16		20		18								17												
09	38	TC	E*	13					19		19		19		19		19		17		17		*		18								
10	41	MC		17																													
10	41	TC		18																													
11	13	UC	E	9.3																													
12	43	MC		11					14					11					12														
12	43	TC		13					15					11					14														

Source: see *Notes on sources of survey data*, p. 38  
 Product: MC = manufactured cigarettes  
 TC = total cigarettes (including hand-rolled)  
 UC = cigarettes (type unspecified)  
 A = all products  
 U = unspecified

Estimated: E = mean estimated from percentage distribution  
 (see also *Consumption category estimation*, Methods p. 11, and Appendix III)  
 \* = refer to *Notes on sources of survey data*, p. 38  
 All ages: relates to ages reported; as given in original source



**Table 5F** Number of cigarettes smoked per smoker per day, females:  
selected surveys by age

Year	Source	Product	Estimated	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+		
66	2	UC	E	16																							
77	15	UC	E*	14					18			16			14			16			15						
82	6	UC							15	18			17			16			15	16							
83	7	UC							15	18			18			16				17							
87	6	UC							16			16			15			13			15						
88	7	UC							15			17			16			16			16						
94	11	UC		16																							
95	12	UC		8.7					11	12			15			14			14			13					
95	13	UC	E	12																							
95	17	UC							13					*					*		14						
95	18	UC	E	17																							
96	19	UC		15																							
97	9	UC		0.4	1.7																						
97	20	UC		4.0			12					14					13					13					
98	22	UC	E	7.7																							
99	13	UC	E	8.0																							
99	23*	MC							12	12	16	15	24	12	16	11	17	19	12	0.0							
99	23	MC							8.9	8.9	11	9.2	19	9.0	14	9.8	15	16	12	0.0							
00	18	UC	E	15																							
00	25	UC	E*						15					16					16			16					
01	26	UC	E						11	13	16	15	13	13	16	15	15	15									
02	10	UC	E*	1.8	4.1		5.1																				
02	17	UC		14																							
03	13	UC	E	7.9																							
03	25	UC	E*						16					15					16			15					
03	32	UC		15																							
04	18	UC	E	14																							
04	18	UC		16																							
05	28	MC	E						12			14			14			10			13						
05	28	TC	E						12			14			14			11			13						
06	18	UC		14																							
06	28	MC	E						8.5			14			13			13			13						
06	28	TC	E						10			14			13			13			13						
07	13	UC	E	7.8																							
07	18	UC		15																							
07	35	UC		13																							
09	28	TC							15			14			16			15			15						
09	38	TC	E*						13			13			14			14			13	15	*	14			
10	41	MC		16																							
10	41	TC		17																							
11	13	UC	E	8.8																							
12	43	MC							9.0					9.6					8.3			9.3					
12	43	TC							9.2					10					9.3			9.7					

Source: see *Notes on sources of survey data*, p. 38  
 Product: MC = manufactured cigarettes  
 TC = total cigarettes (including hand-rolled)  
 UC = cigarettes (type unspecified)  
 A = all products  
 U = unspecified

Estimated: E = mean estimated from percentage distribution  
 (see also *Consumption category estimation*, Methods p. 11, and Appendix III)  
 \* = refer to *Notes on sources of survey data*, p. 38  
 All ages: relates to ages reported; as given in original source

**Table 6M** Number of cigarettes smoked per person per day, males:  
selected surveys by age; with percentage total sales

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+			
66	2	UC	12																91% <sup>m</sup>									
77	15	UC*	12						12			9.9			13			6.4			11	84% <sup>m</sup>						
82	6	UC							13			10			12			7.4			10	**						
83	7	UC							13			15			11			8.3			12	**						
87	6	UC							12			14			9.6			7.4			11	**						
88	7	UC							11			14			9.7			8.6			11	**						
94	11	UC	8.8																60% <sup>T</sup>									
95	12	UC	2.4			4.9			6.2			9.9			7.9			4.8			3.3			6.2	52% <sup>T</sup>			
95	13	UC	5.2																			**						
95	17	UC							8.0						*			*			7.7	61% <sup>T</sup>						
95	18	UC	8.6																70% <sup>T</sup>									
96	19	UC*	9.3																**									
97	9	UC	0.1	1.2																			**					
97	20	UC	0.2			4.5						8.5						3.1			6.0	59% <sup>T</sup>						
98	22	UC	3.3																			**						
99	13	UC	2.8																			**						
99	23*	MC				12	5.7	11	8.8	11	11	8.1	12	5.9	5.7	5.3	0.7				69% <sup>M</sup>							
99	23	MC				12	6.1	12	9.1	11	11	8.2	13	6.1	6.7	5.6	0.7				74% <sup>M</sup>							
00	18	UC	7.4																76% <sup>T</sup>									
00	25	UC*	8.5						9.0						2.4			7.8	75% <sup>T</sup>									
01	26	UC				5.0	6.5	4.9	7.4	9.3	5.8	4.8	6.1	4.6	1.5					55% <sup>T</sup>								
02	10	UC*	0.5	1.9		3.4																			**			
02	17	UC*	6.4																66% <sup>T</sup>									
03	13	UC	2.8																			**						
03	25	UC*	8.2						8.2						2.7			7.4	83% <sup>T</sup>									
03	32	UC*	7.1																85% <sup>T</sup>									
04	18	UC	7.0																90% <sup>T</sup>									
04	18	UC	6.6																96% <sup>T</sup>									
05	28	MC	3.9			5.7			9.4			3.9						5.9	98% <sup>M</sup>									
05	28	TC	4.1			6.7			9.8			4.0						6.3	90% <sup>T</sup>									
06	18	UC	7.3																74% <sup>T</sup>									
06	28	MC	4.0			9.0			8.1			4.3						6.5	79% <sup>M</sup>									
06	28	TC	4.3			9.6			10			5.1						7.4	79% <sup>T</sup>									
07	13	UC	2.0																			**						
07	18	UC	7.3																77% <sup>T</sup>									
07	35	UC*	5.9																60% <sup>T</sup>									
09	28	TC	6.0			7.4			12			5.0						7.7	96% <sup>T</sup>									
09	38	TC*	4.5			6.5			6.9			6.6			6.6			3.2			1.3			*			5.6	68% <sup>T</sup>
10	41	TC	7.7																97% <sup>T</sup>									
11	13	UC	2.4																			**						
12	43	MC	2.7						3.3						1.0			2.8	61% <sup>M</sup>									
12	43	TC	4.0						5.0						1.6			4.2	59% <sup>T</sup>									

Source: *Notes on sources of survey data*, p. 38  
 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. 38  
 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 (m – see Methods p.12)  
 \*\* = cannot be calculated  
 -- = adjusted by original author

**Table 6F** Number of cigarettes smoked per person per day, females:  
selected surveys by age; with percentage total sales

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+			
66	2	UC	3.0																		91%M							
77	15	UC*	5.5					5.4			3.5			1.8			1.0					3.4	84%M					
82	6	UC						7.3			5.8			3.5			1.1					3.8	**					
83	7	UC						6.5			7.6			5.0			3.9					5.7	**					
87	6	UC						7.6			5.8			3.6			1.5					3.9	**					
88	7	UC						7.1			6.5			4.3			3.1					4.9	**					
94	11	UC	4.1																		60%T							
95	12	UC	2.0					3.2			4.2			5.5			4.6			2.9					3.7	52%T		
95	13	UC	3.2																							**		
95	17	UC						4.1					*					*					3.6	61%T				
95	18	UC	5.1																		70%T							
96	19	UC*	5.6																		**							
97	9	UC	0.0	0.5																				**				
97	20	UC	0.0		2.0					3.9					0.7					2.5	59%T							
98	22	UC	2.3																							**		
99	13	UC	1.7																				**					
99	23*	MC						2.6	3.3	2.3	2.2	7.2	3.3	5.4	3.8	2.6	1.7	1.4	0.0						69%M			
99	23	MC						3.0	4.1	2.8	2.5	7.8	3.9	5.8	4.4	2.7	2.0	1.4	0.0						74%M			
00	18	UC	4.3																		76%T							
00	25	UC*						4.3					4.5					0.5					3.6	75%T				
01	26	UC						2.5	2.2	2.6	3.7	3.7	3.2	4.3	2.5	2.2	1.7							55%T				
02	10	UC*	0.2	1.3		1.9																				**		
02	17	UC*	3.1																		66%T							
03	13	UC	2.2																							**		
03	25	UC*						5.1					4.3					0.9					3.8	83%T				
03	32	UC*	4.2																		85%T							
04	18	UC	3.2																		90%T							
04	18	UC	4.3																		96%T							
05	28	MC						2.1			5.1			4.8			0.8					3.0	98%M					
05	28	TC						2.3			5.3			5.3			0.9					3.2	90%T					
06	18	UC	3.6																		74%T							
06	28	MC						1.5			4.8			5.3			1.5					3.2	79%M					
06	28	TC						2.1			5.2			5.5			1.6					3.5	79%T					
07	13	UC	1.9																							**		
07	18	UC	3.8																		77%T							
07	35	UC*	3.3																		60%T							
09	28	TC						5.4			6.6			5.8			2.1					4.6	96%T					
09	38	TC*						2.8			3.2			3.8			4.5			3.5			1.3		0.5	*	3.0	68%T
10	41	TC	4.8																		97%T							
11	13	UC	2.3																				**					
12	43	MC						1.7					1.7					0.4					1.4	61%M				
12	43	TC						2.1					2.8					0.6					2.1	59%T				

Source: *Notes on sources of survey data*, p. 38  
 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. 38  
 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, (m – see Methods p.12)  
 \*\* = cannot be calculated  
 -- = adjusted by original author

**Table 7M** Number of cigarettes smoked per person per day, sales-adjusted, males: selected surveys<sup>1</sup> by age; with percentage total sales

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+					
66	2	UC	13														91% <i>m</i>													
77	15	UC*	15					14			12		16			7.6			13	84% <i>m</i>										
94	11	UC	15																	60% <i>T</i>										
95	12	UC	4.6				9.3		12		19			15		9.1			6.3		12	52% <i>T</i>								
95	17	UC	13													*		*		13	61% <i>T</i>									
95	18	UC	12																	70% <i>T</i>										
97	20	UC	0.3		7.7					14					5.4				10	59% <i>T</i>										
99	23*	MC	17				8.3		16		13		16		15		12		18		8.6		8.3		7.7		1.0			69% <i>M</i>
99	23	MC	17				8.4		16		12		16		15		11		18		8.3		9.2		7.6		0.9			74% <i>M</i>
00	18	UC	9.7																	76% <i>T</i>										
00	25	UC*	11					12					3.2						10	75% <i>T</i>										
01	26	UC	9.2				12		9.0		14		17		11		8.8		11		8.4		2.8			55% <i>T</i>				
02	17	UC*	9.7																	66% <i>T</i>										
03	25	UC*	9.9					9.9					3.2						8.9	83% <i>T</i>										
03	32	UC*	8.4																	85% <i>T</i>										
04	18	UC	7.8																	90% <i>T</i>										
04	18	UC	6.9																	96% <i>T</i>										
05	28	MC	4.0				5.9				9.6				4.0				6.0	98% <i>M</i>										
05	28	TC	4.6				7.5				11				4.5				7.0	90% <i>T</i>										
06	18	UC	9.9																	74% <i>T</i>										
06	28	MC	5.1				11				10				5.5				8.2	79% <i>M</i>										
06	28	TC	5.4				12				13				6.5				9.4	79% <i>T</i>										
07	18	UC	9.4																	77% <i>T</i>										
07	35	UC*	9.9																	60% <i>T</i>										
09	28	TC	6.2				7.8				13				5.2				8.0	96% <i>T</i>										
09	38	TC*	6.6				9.6				10		9.7		9.7		4.7		1.9		*		8.3	68% <i>T</i>						
10	41	TC	7.9																	97% <i>T</i>										
12	43	MC	4.5				5.3				1.6				4.5	61% <i>M</i>														
12	43	TC	6.7				8.4				2.7				7.1	59% <i>T</i>														

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. 38  
 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. 38  
 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. (m – see Methods p. 12)  
 -- = adjusted by original author

**Table 7F** Number of cigarettes smoked per person per day, sales-adjusted, females: selected surveys<sup>1</sup> 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	75-79	80+				
66	2	UC	3.3																		91% <sub>m</sub>								
77	15	UC*	6.6					6.4			4.2		2.2			1.2				4.1	84% <sub>m</sub>								
94	11	UC	6.8																		60% <sub>T</sub>								
95	12	UC	3.8				6.0		8.1		10			8.8		5.5				3.2		7.0	52% <sub>T</sub>						
95	17	UC	6.7																	*	61% <sub>T</sub>								
95	18	UC	7.3																		70% <sub>T</sub>								
97	20	UC	0.0		3.4				6.7					1.2				4.2	59% <sub>T</sub>										
99	23*	MC	3.7			4.8		3.4		3.2		10		4.8		5.5		3.7		2.4		2.1		0.0			69% <sub>M</sub>		
99	23	MC	4.0			5.6		3.8		3.3		11		5.3		7.9		6.0		3.7		2.7		2.0		0.0			74% <sub>M</sub>
00	18	UC	5.7																		76% <sub>T</sub>								
00	25	UC*	5.8					5.9					0.7				4.7	75% <sub>T</sub>											
01	26	UC	4.6			4.1		4.8		6.8		6.8		5.9		7.8		4.6		4.1		3.1					55% <sub>T</sub>		
02	17	UC*	4.7																		66% <sub>T</sub>								
03	25	UC*	6.2					5.2					1.0				4.6	83% <sub>T</sub>											
03	32	UC*	5.0																		85% <sub>T</sub>								
04	18	UC	3.6																		90% <sub>T</sub>								
04	18	UC	4.5																		96% <sub>T</sub>								
05	28	MC	2.2				5.2			4.9			0.8				3.0	98% <sub>M</sub>											
05	28	TC	2.6				5.8			5.9			1.0				3.6	90% <sub>T</sub>											
06	18	UC	4.9																		74% <sub>T</sub>								
06	28	MC	1.9				6.0			6.7			1.9				4.0	79% <sub>M</sub>											
06	28	TC	2.7				6.6			6.9			2.0				4.4	79% <sub>T</sub>											
07	18	UC	4.9																		77% <sub>T</sub>								
07	35	UC*	5.6																		60% <sub>T</sub>								
09	28	TC	5.6				6.8			6.1			2.2				4.8	96% <sub>T</sub>											
09	38	TC*	4.2				4.8			5.6		6.6		5.1		2.0		0.7		*		4.4	68% <sub>T</sub>						
10	41	TC	4.9																		97% <sub>T</sub>								
12	43	MC	2.8					2.8					0.6				2.3	61% <sub>M</sub>											
12	43	TC	3.5					4.7					1.0				3.5	59% <sub>T</sub>											

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. 38  
 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. 38  
 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. (m – see Methods p. 12)  
 -- = adjusted by original author

**Table 8** Estimated<sup>1</sup> prevalence of smoking and estimated<sup>1</sup> 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 <sup>2</sup>	Product <sup>3</sup>	Prevalence <sup>4</sup>				Number of cigarettes								
			Manufactured cigarettes		Total cigarettes <sup>5</sup>		All products <sup>6</sup>		Unadjusted <sup>7</sup>			Sales-adjusted <sup>8</sup>			
			M	F	M	F	M	F	Number/ person/day	Total sales %	Manufactured cigarettes <sup>9</sup> number/ person/day	Total cigarettes <sup>10</sup> number/ person/day	M	F	
1966	2	UC+U					53	18	10.6	2.8	91	11.7	3.1		
1975	3	U					44	23							
1977	15	UC+U					54	23	10.8	3.5	84	13.0	4.2		
1980	5	U					50	25							
1981	16	U					38	15							
1984	8	U					47	22							
1986	5 11	MC U	61	23			45	21				( 14.0	4.2 )		
1988	17	U					46	29							
1989	5	U					40	27							
1992	5	U					63	25							
1993	5	U					40	37							
1994	11	UC+U					41	24	8.0	3.5	60			13.3	5.8
1995	12 17 18	UC+A UC+U UC			34	27	35	27	6.1	3.5	52			11.6	6.7
					41	30			7.7	3.6	61			12.6	5.9
									8.1	4.7	70			11.6	6.7
1997	20 20 21 21	UC UC U U			34	18			6.1	2.5	59			10.5	4.3
					39	23									
							38	22							
							44	28							
1998	5	U					43	27							
1999	23 23 24	MC* MC A	43	19					7.8	2.8	69	11.3	4.1		
			51	28					8.1	3.2	74	11.0	4.3		
							40	26							
2000	18 25 25	UC UC+U U			39	29			7.0	4.0	76			9.3	5.3
							38	23	7.6	3.5	75			10.1	4.7
							40	26							
2001	26 27 27	UC+U UC UC			30	18	36	25	5.3	2.6	55			9.7	4.7
					36	21								( 9.8	4.6 )
					41	27									
2002	17 28 29	UC+U U U					35	23	6.2	3.0	66			9.4	4.6
							40	24							
							45	31							

**Table 8** (continued)

Year	Source <sup>2</sup>	Product <sup>3</sup>	Prevalence <sup>4</sup>				Number of cigarettes										
			Manufactured cigarettes		Total cigarettes <sup>5</sup>		All products <sup>6</sup>		Unadjusted <sup>7</sup>			Sales-adjusted <sup>8</sup>					
			M	F	M	F	M	F	Number/ person/day	Total sales %	Manufactured number/ person/day	Total cigarettes <sup>10</sup> number/ person/day					
						M	F		M	F	M	F					
2003	25	UC+A					36	24			7.2	3.7	83			8.6	4.5
	25	<b>A</b>					40	28									
	32	UC+U					38	28			6.9	4.1	85			8.1	4.9
	32	<b>U</b>					42	31									
2004	18	<b>UC</b>					39	25			6.7	3.1	90			7.4	3.4
	18	UC					35	25			6.3	4.0	96			6.6	4.2
2005	28	MC	33	23							5.8	3.0	98	6.0	3.1		
	28	TC+A					36	24	36	24	6.3	3.3	90			7.0	3.6
	28	<i>MC+TC+A</i>	34	26			38	27	38	27							
	33	UC					36	24									
	33	<b>UC</b>					43	30									
2006	34	<i>U</i>							34	24							
	18	UC					39	25			6.9	3.4	74			9.4	4.6
	18	<b>UC</b>					43	29									
	28	MC	37	25							6.6	3.2	79	8.3	4.0		
	28	TC+A					42	27	42	27	7.5	3.5	79			9.5	4.4
2007	28	<i>MC+TC+A</i>	39	27			44	29	44	29							
	18	UC					40	24			6.9	3.6	77			8.9	4.6
	18	<b>UC</b>					46	27									
	35	UC					31	21			5.3	2.7	60			8.9	4.6
	35	<b>UC</b>					37	26									
2008	37	<b>U</b>					36	28									
	37	<b>U</b>					40	31									
2009	28	MC+TC	36	26			43	30			7.6	4.5	96			7.9	4.7
	28	<b>MC+TC+A</b>	42	31			44	31	45	31							
	38	TC+A					32	22	32	22	5.6	3.0	68			8.3	4.4
	38	<b>A</b>							36	27							
	39	<b>U</b>							32	21							
2010	39	<b>U</b>							36	25							
	41	TC					41	28			7.5	4.7	97			7.7	4.8
2012/11	41	<b>TC</b>					43	27									
	42	<b>U</b>							32	24							
	42	<b>U</b>							34	25							
	43	MC	22	15							2.7	1.4	61	4.5	2.3		
	43	TC+A					30	21	31	23	4.1	2.0	59			6.9	3.4
43	<b>MC+TC+A</b>	23	17			31	23	32	24								

- 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, shown in the extended versions of Tables 4 and 6 in the Excel tables workbook. Method: see *Summary of adult smoking*, Methods p. 13. Exceptionally, calculation is based on the *All ages* value from Tables 4, 6 and 7 in those surveys for which some age-specific data are not available (age groups marked as \* in Tables 4, 6 and 7)
- 2 See *Notes on sources of survey data*, p. 38.
- 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 Estimated from data in Table 4 (see also extended version of Table 4 in the Excel tables workbook)
- 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 Estimated from data in Table 6 (see also extended version of Table 6 in the Excel tables workbook)
- 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 Prior to 1988, number of cigarettes classified as UC = cigarettes (type unspecified) has been adjusted to manufactured cigarette sales and included in this column. (See also *Estimates of numbers of hand-rolled cigarettes*, p. 37)
- 10 From 1988 onwards, number of cigarettes classified as UC = cigarettes (type unspecified) has been adjusted to total cigarette sales and included in this column.
- 11 Calculations based on 2011 population.

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

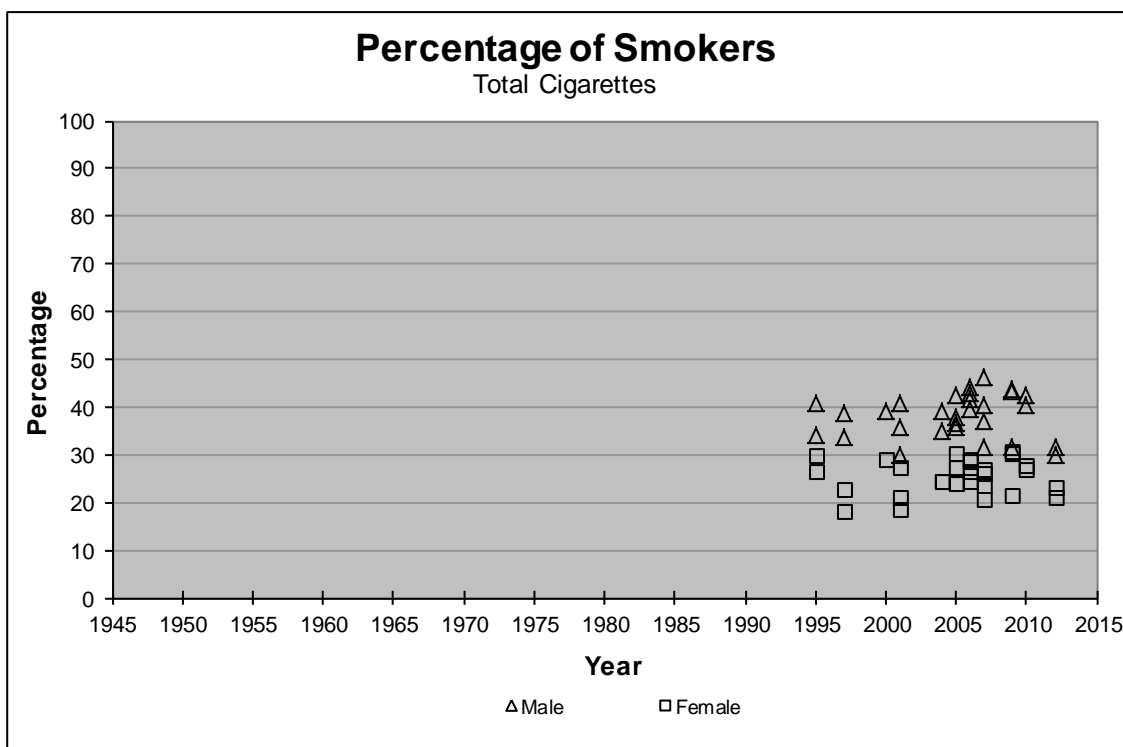
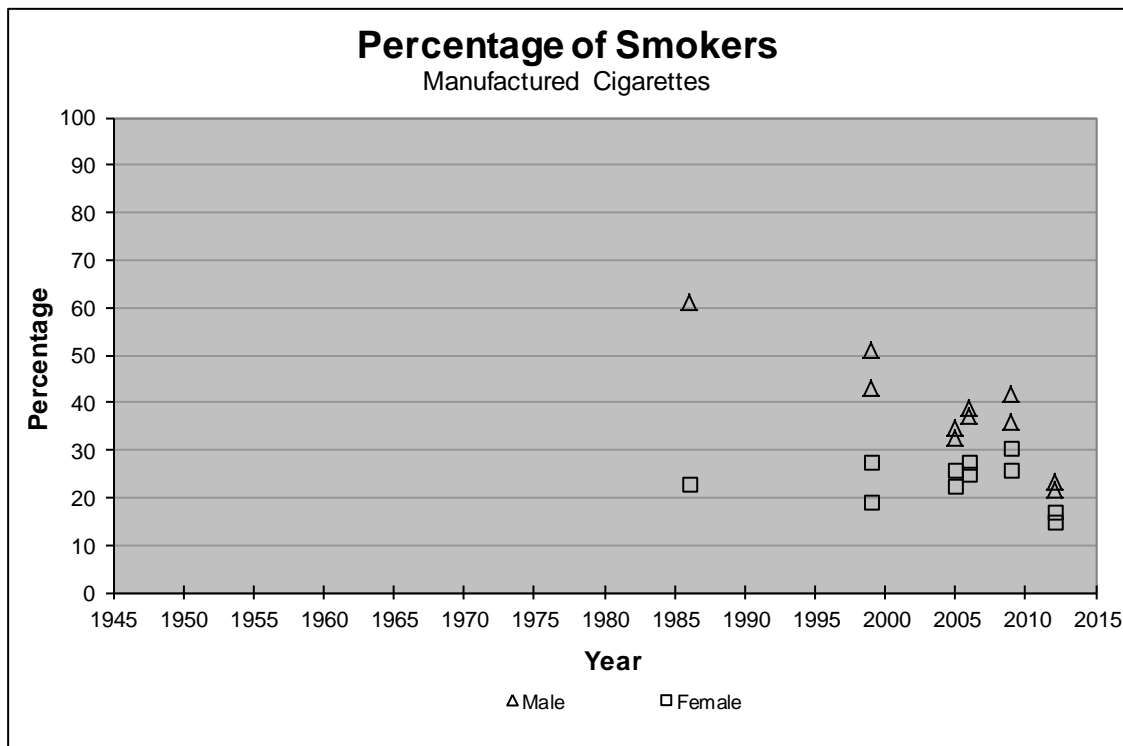
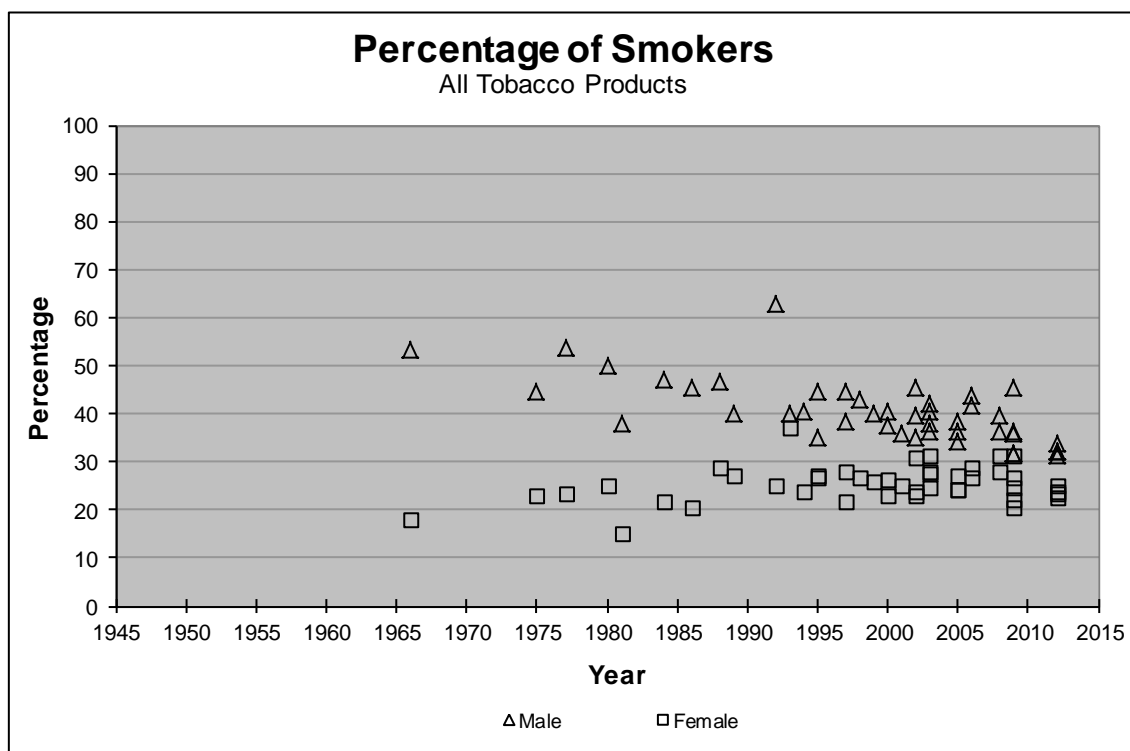


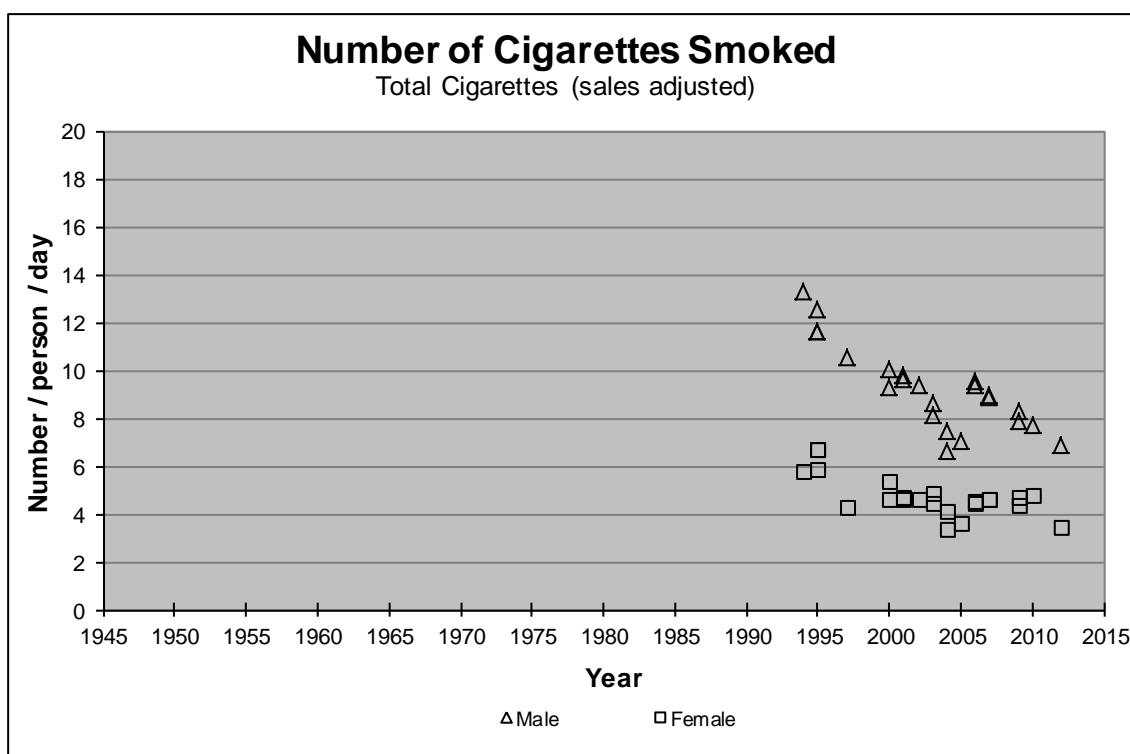
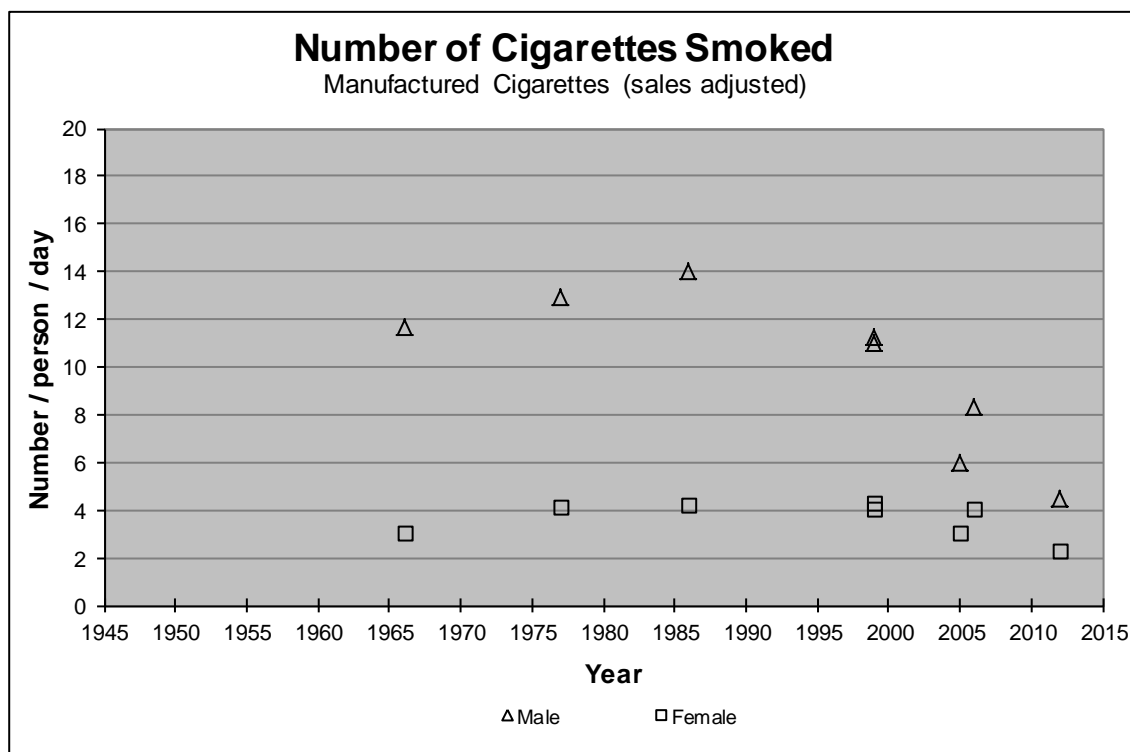


Figure 3 (continued)



Source: Table 8.  
See also customisable version of Figure 3 in the Excel workbook

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



Source: Table 8.

As explained in footnotes 9, 10 to Table 8, prior to 1988 estimates classified as UC = cigarettes (type unspecified) have been adjusted to manufactured cigarettes sales and are included in part i of this Figure, and from 1988 onwards, they have been adjusted to total cigarettes sales and are included in part ii.

## 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. 47 under *References*. Központi Statisztikai Hivatal (Hungarian Central Statistical Office, HCSO) is generally abbreviated as KSH.

#### *Sales data for 1920-1934*

Hutson (1937) quoting *Annuaire Statistique Hongrois*

Data were originally given to the nearest 1 000 pounds and have been converted to tonnes and given to the nearest tonne (1 000 lbs = 0.45359 tonnes). For conversion from weights to numbers we assumed an average cigarette weight of 1 g. 1920 represents 1920-1921, etc. Hutson commented that ‘following the close of the war, either the data were incomplete or consumption fluctuated widely’.

#### *Sales data for 1940 onwards*

1940, and 1988 (products other than cigarettes): Péter (1990)

Data were given as numbers of cigarettes and cigars, and grams of cigarette and pipe tobacco, per adult per year. No information is available on the weights of cigarettes or cigars, and we have assumed an average of 1 g per cigarette and 5 g per cigar.

1951-1959: Szilágyi (2004) quoting data from Boros J and KSH

Data are approximate, being read from a graph.

1960-1996 (cigarettes): US Department of Agriculture (USDA) (accessed Nov 2012)

Apart from 1988 (see above), data for these years are available only for cigarettes. The data refer to domestic consumption. For conversion from numbers to weights we assumed an average cigarette weight of 1 g. This may be too high a weight, especially for later years when international brands were becoming popular. The share of local brands fell from 80% in the early 1990s to around 60% in 1998 (Tobacco Reporter (1998)). Data for cigarettes for 1988 from this source are very similar to the data from Péter (1990) (not shown), and the trends in the data appear broadly similar to those shown graphically by Szilágyi (2004).

1997-2012 (products other than cigars): KPMG LLP (2011, 2012, 2013), Coresta task force on roll-your-own (fine cut) tobacco (1999)

Data are available from KPMG as numbers of cigarettes for all years, and as cigarette equivalents for smoking tobacco (including pipe tobacco) for later years only. For conversion from numbers to weights we assumed an average cigarette weight of 1 g for cigarettes, and 0.75 g for smoking tobacco, the latter factor being given by KPMG LLP (2011, 2012). In their most recent (2013) report, KPMG use alternative conversion factors of 0.73g per “make-your own” cigarettes and 0.6g per “roll-your-own” (resulting estimates not shown). Exceptionally for 1997, data for smoking (fine cut) tobacco were given by Coresta task force on roll-your-own (fine cut) tobacco (1999), as tonnes.

For manufactured cigarettes, data are shown in Table 1.2 for all years for legal sales. For 2006-12 estimates are also shown of total consumption, i.e. after subtracting outflows (products purchased legally in Hungary but consumed elsewhere, principally Austria) and adding duty-free and cross-border purchases (legally brought in by travellers), and counterfeit and contraband (see also *Estimates of smuggling and cross-border sales*, p. 36). In 2006, counterfeit and contraband (3 260 million) substantially outweighed outflows (440 million) but by 2012 this had reversed (420 and 1 410 million respectively). The estimates of total consumption are used in Table 2 and in subsequent calculations (e.g. all tobacco products and sales adjustment).

For 1997-2004, when cigarette data are available from both USDA and KPMG, data are similar except for 1999 when the USDA estimate is 15% lower, and 2004 when it is 27% higher than the KPMG estimate.

In July 2013, a state monopoly on retail sales of tobacco products was introduced, sharply reducing the number of outlets (MTI-EcoNews (2013b)).

According to KPMG LLP (2013), significant quantities of green leaf tobacco are understood to be consumed in Hungary which are not captured in the legal domestic sales data given.

No data are available for oral tobacco products. Szilágyi (2004) noted that their use is negligible.

2004-2011 (cigars): Bundesverband der Zigarrenindustrie (accessed Oct 2013)

Data were given as numbers of cigars and we have assumed an average of 5 g per cigar.

#### All tobacco products

Data for all tobacco shown in Table 1.2 are calculated from the weights of each tobacco type, using the conversion factors as described in the preceding paragraphs. Alternative data for tobacco consumption, on a per capita basis, are given by KSH (accessed Oct 2013) and selected years, together with the implied total consumption and daily per adult consumption, are as follows:

	per capita (kgs)	total (tonnes)	per adult per day (g)
1970	2.2	22743	7.6
1980	2.4	25706	8.4
1990	2.0	20749	6.9
2000	1.5	15036	5.0
2010	1.4	14000	4.5

Source : KSH (accessed Oct 2013)

For years when both are available, these estimates are lower by 10% -37% than those shown in Table 1.2 and Table 2, but this difference may be due in part to the assumed weight of tobacco per cigarette.

#### Estimates of smuggling and cross-border sales

Many sources have given estimates of the numbers or market share of non-legal sales of cigarettes. The following table summarises these, with references for the estimates and the basis of the % as described by the original author given below the table.

#### Estimates for the market share (%) of non-legal sales of cigarettes

Year	Source																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1987-88	10-15																
1990-91		25															
1995			5	12-16													
1999				4-6													
2000					8												
2001					14												
2002					9	5-10											
2003					9		>20										
2004					18			18									
2005					23			27	~20	25-28	22						
2006					18			17			13	11	25	17			
2007					12			11						10			
2008					10			9						8			
2009					9			7						7	10		
2010					8			6						6			
2011								4						4		12	
2012								4						4			8
2013																	6

#### Sources:

1. Connolly (1995) quoting ERC Statistics International (1988). Contraband as % of consumption.
2. Horne (1992). Illegal sales as % of total sales.
3. Jha and Chaloupka (2000) quoting Merriman *et al* (2000) quoting "expert sources". Smuggling as % of domestic sales.
4. Napi Gazdasag (2000) quoting the Hungarian Tobacco Industry Association. Data shown as 1995 refer to 1995-96. Illegal sales, calculated by us as % of legal sales. Data for 1999 are also given by USDA (2000), described as smuggled and "privately imported".
5. Bogrodi (2011). Smuggled.

6. Szilágyi (2007) quoting Magyar Narancs (2002) quoting Customs Office - black market. Also USDA (2002) quoting industry representatives – black market as % of production.
7. Hungarian News Agency (2004). Smuggled as % of legal sales.
8. Nagy (2012) quoting Hungarian Customs & Finance Guard and GfK Research commissioned by the Hungarian Tobacco Industry Association. Illicit market.
9. Hungarian News Agency (2005). Smuggled cigarettes as % of the market.
10. Hungarian News Agency (2006) quoting VPOP (Hungarian Customs & Finance Guard). Smuggled as % of sales.
11. BBJ.hu (2006) quoting Hungarian Customs & Finance Guard. Figures refer to July of each year. Contraband as % of total trade.
12. MTI-EcoNews (2006). Black market as % of total consumption. The same estimate was described by Shafey et al (2003) as smuggled as % of legal sales.
13. Szilágyi (2007) quoting Cnossen (2006) quoting industry sources. Black market.
14. KPMG LLP (2013). Counterfeit and contraband as % of total consumption.
15. RealIdeal.hu (2009) quoting survey by market researcher GfK Hungaria. Illegal as % of the market.
16. Eriksen et al (2012). Illicit as % of the market.
17. MTI-EcoNews (2013a) quoting GfK Hungaria survey based on cigarette butts in public places. Black market as % of legal sales.

In 1992, Horne described the situation as “market anarchy”, and reported that tax stamps were to be introduced by the Hungarian Finance Ministry to put an end to the contraband trade. Although there is some inconsistency in the later estimates (even when apparently citing the same original sources), there is a reasonable consensus that the share increased from a low level about 2000, to around 25% by 2005, and has subsequently decreased to below 10%. Nagy (2012) reported that, despite a temporary derogation from the application of excise duties for cigarettes when Hungary joined the EU, prices rose rapidly (by 80% between 2000 and 2005) giving rise to increased smuggling activities from neighbouring non-EU countries, and action plans were implemented from 2005 to counter these.

Some Eurobarometer surveys enquired about contact with smuggled cigarettes and cross-border purchasing. In 2008, 6% of Hungarian respondents had, in the last 6 months, often seen cigarettes being sold that they thought were smuggled, with a further 17% seeing them occasionally (Flash Eurobarometer 253, Gallup Organization Hungary (2009)). In 2012, 4% reported having purchased tobacco products abroad in the previous year (Eurobarometer 77.1, European Commission (2012)).

A multinational survey in 2010 by PPACTE was reported by Gallus *et al* (2012) and Joossens *et al* (2012). The Hungarian sample size was 1 002 of which 356 were current cigarette smokers. The sources of the cigarettes bought in the previous 30 days (as percentages of the total number bought) were as follows:

Source	Proportion of cigarettes bought (%)	
	Smokers aged 15-24	All smokers
Legal shops	93.3	92.6
Vending machines	5.4	1.2
Internet	0.0	0.0
Other countries/Duty-free	0.0	0.3
Smuggled (markets, door-to-door sellers etc)	0.0	0.0
Offered by peers	1.3	5.9

No current smokers reported having bought smuggled cigarettes in the previous 30 days. Participants were asked to show their most recently purchased pack. Packs identified as illicit (defined as purchased from an illicit source or at an extremely low price, or lacking the appropriate health warning or tax stamp), comprised 4.9% of manufactured cigarette packs and 72.7% of hand-rolled packs (although the latter figure is based on only 11 packs).

Legal non-domestic sales made up only a very small proportion of total cigarette sales, always <2% for the period 2006-2012 (KPMG LLP (2013)).

### *Estimates of numbers of hand-rolled cigarettes*

For 1940, 1988 and 1997, we estimated hand-rolled cigarette consumption as 100% of cigarette tobacco at 1 g per cigarette. For 2003-2011, we use estimates of cigarette equivalents as given by KPMG LLP (2011, 2012), based on smoking tobacco at 0.75g per cigarette.

These estimates appear compatible with the statement by Szilágyi (2004) that less than 2% of smokers use other tobacco products (cigar, pipe or hand-rolled cigarettes), and that use of hand-rolled cigarettes is increasing.

As noted above (*Sales data, 1997-2012*, p. 35), a later report from KPMG2013 used alternative conversion factors to estimate hand-rolled cigarette consumption (estimates not shown).

For other calculations such as sales-adjustment, and in compiling the Tables in the *Comparisons between countries* chapter, we assumed hand-rolled cigarette consumption was negligible in the period 1965-1987; for 1989-1996 and 1998-2002 we estimated hand-rolled consumption by simple linear interpolation (data not shown).

#### *Plain/Filter cigarette sales*

Consumption : Maxwell, Jr. (successive years), except 1988 : Péter (1990)

Production : USDA (accessed Nov 2012)

The USDA figures represent the percentage of production, rather than of consumption, that was filter cigarettes. However, imports and exports are low compared with production. For example, in 2004 imports and exports amounted to 1.6% and 2.1% of production respectively (USDA (accessed Nov 2012)).

#### *Menthol cigarette sales*

Around 1999-2001, menthol cigarettes accounted for 1% of the total cigarette market (Giovino *et al* (2004) quoting ERC Group PLC (1999, 2001)). In 2012, menthol cigarettes accounted for 8% of total cigarette consumption (KPMG LLP (2013)).

#### *Slim cigarette sales*

In 2012, slim cigarettes accounted for 13% of total cigarette consumption (KPMG LLP (2013)).

#### *Tar, nicotine and CO machine yields of cigarettes*

Doolittle (1991), Péter (1990), WHO (1997), Harkin *et al* (1997), Szilágyi (2004)

Doolittle (1991) reported that, around 1973, cigarettes in Hungary averaged around 1.5 milligrams of nicotine and 32 to 34 mg “tar”. In 1990, Péter reported that 88% of cigarettes had a tar content >18mg per cigarette, while the most popular brands were said to range from 18-24 mg in 1992 (WHO (1997)). Harkin *et al* (1997) reported that the average was >15 mg, and, although there was no maximum permitted limit, the tar content of cigarettes was required to be printed on the packet.

On joining the EU in 2004, Hungary immediately adopted the Tobacco Product Regulation Directive 2001/37/EC, limiting the yield per cigarette of tar to 10 mg, of nicotine to 1 mg and of CO to 10 mg (Szilágyi (2004)).

### **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. 47 under *References*.

#### **Source number**

##### **1 Lamm *et al* (1985)**

- a. Study of coronary risk factors, using methods strictly comparable to the Seven Countries Study (see e.g. Keys *et al* (1966)). All men age 40-59 from 3 small villages in southern Hungary invited for screening. Sample size 1 088, response rate 99%. Analysis was restricted to 1 038 ‘coronary-free’ men.

**2 Ormos *et al* (1969)**

- a. Systematic questioning of railway passengers (to provide comparison group for a study of lung cancer). Mostly in Csongrád, also Bács-Kiskum, Pest and Szolnok. Sample size (males) 777, (females) 1 044.
- b. Consumption category estimation based on 1-15, 16-30, >30 cigarettes/smoker/day.
- c. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

**3 Benjamin (1978)**

- a. Quoting Statistical Yearbook of Hungarian Central Statistical Office (HCSO) (1975).
- b. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

**4 Geizerova and Masironi (1988)**

- a. No original source.

**5 WHO quoted by Mackay (1994), Harkin *et al* (1997), Masironi and Rothwell (1988), Piha *et al* (1993), Jha and Chaloupka (2000), Strong and Bonita (2003)**

- a. For data shown in Table 4 as 1993, the year was not stated, merely described as “early to mid 1990s” (Harkin *et al* (1997)). Data shown as 1998 refer to 1998-99, with the original source described as “KSH (National/Central Statistical Office), Egészségnevelés folyóirat. 1998-1999 survey on smoking prevalence in Hungary (title unknown). 1999, Personal communication: Erzsebet Podminiczky, Department of Internal Relations, National Institute of Oncology. Nations Tobacco Database” (Strong and Bonita (2003)). For other years, no details of the original surveys are available. Age group not stated.
- b. It is notable that the male smoking prevalences shown for 1989 and 1992 substantially exceed those reported by any other source.
- c. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

**6-7 Tolonen *et al* (2000), Kuulasmaa *et al* (1998), Wolf *et al* (1998), Molarius *et al* (1999)**

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

	Region	Phase	Participation rate (%)		Sample used*		Date
			Males	Females	Males	Females	
6	Pecs	1	-	-	823	862	Mar 1982-Feb 1983
7	Budapest	1	80	79	776	737	Jun 1982-Sep 1984
6	Pecs	2	87	87	1 584	1 522	Feb 1987-Jun 1988
7	Budapest	2	78	78	1 417	1 603	Oct 1987-May 1989

\* ‘Sample used’ includes age 25-64, participation rates are for age 35-64 only

The Hungarian centres did not participate in the 3<sup>rd</sup> phase of the project.

- b. In Phase 1, the survey in Pecs included subjects aged 30, 40, 50 and 60 years only, and the survey in Budapest included subjects aged 25-26, 35-36, 45-46, 55-56 years only (Kuulasmaa *et al* (1998)).
- c. The *All ages* column (Tables 4-7) relates only to age 35-64 and is standardized to the world population, although it is not clear how this applies for the limited age ranges of the Phase 1 surveys.
- d. Regular cigarette smokers: smoked cigarettes daily. All smokers: smoked cigarettes daily or occasionally, or smoked 1 g pipe tobacco or 1 cigar per week.
- e. For phase 1, there are minor discrepancies between the data shown in Table 4 and equivalent data taken from WHO (1989) used in earlier editions of this report.

**8 Tombor *et al* (2010) quoting KSH (1987)**

- a. Microcensus conducted in 1984.
- b. The data shown for prevalence of smoking among women differs for that given by Kertai (1993) and quoted in the previous edition of this report.

**9, 10 Nutbeam and Aarø (1990), King and Coles (1992), King *et al* (1996), Currie *et al* (2000, 2004, 2008, 2012), Aszmann (2003), Kovacsics *et al* (2007), Halmai and Németh (2011)**

- 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 in each age group was 1 000 – 1 500.

Year	Mean age		Sample size		
	Target age 13	Target age 15	Target age 13	Target age 15	Total*
1985-1986	–	–	1 573	1 266	
1990	14.2	16.2			6 498
1993	13.8	15.8	1 944	1 759	
1997	14.0	16.1	1 356	818	
2002	13.5	15.5	1 463	1 330	
2006	13.5	15.5	1 215	1 187	
2010	13.5	15.5	1 581	1 733	

\* Includes age 11

- b. For source **9**, number of cigarettes per smoker per day (Table 5, 1998 only) is derived from the median number smoked per week.
- c. All results are taken from the international reports, except those shown as source **10** for 2002-2010 which are taken from the national reports (Kovacsics *et al* (2007), Halmai and Németh (2011)), and include an additional sample of grade 11 students (age 17). There are some minor unexplained discrepancies in the prevalence of regular smoking between the two sources.
- d. Smokers marked as frequency \*: smoked daily. Regular smokers: smoked once a week or more. All smokers: included those smoking less than once a week. Alternative definitions (shown as frequency R\*, A\*) for source **10** are as follows: Regular smokers : (2007) smoked at least 40 cigarettes in the past year, (2010) smoked at least 3 cigarettes in the past month. All smokers : (2007) smoked at least 20 cigarettes in the past year, (2010) smoked at least one cigarette in the past month.
- e. To avoid duplication, only source **9** is used in the Supplement tables (with the exception of CPP data for 2002, where only source **10** data are available).
- f. For source **10**, 2002 only, consumption category estimation based on 1-10, 11-20, 21-30, 31-40, 41-80 and >80 cigarettes/smoker/week using standard distribution (derived from adult daily smoking), and resulting figures should be regarded with caution.

#### 11 Szilágyi (accessed Dec 2007), KSH (1996)

- a. Egészségi állapotfelmérés - Health Behaviour Survey by KSH. Nationally representative interview surveys conducted in 1986 and 1994. Representative of non-institutionalized population. One person per household interviewed. Response rate 85%. Sample size 5 476.
- b. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

#### 12 Scientific Association of Hungarian General Practitioners (1996), and additional unpublished data

- a. A health and lifestyle survey, conducted 1995-1996. Representative of the population registered at family practices, thus under-representing younger, male and more highly qualified persons compared with the national population. Sample size (males) 1 109, (females) 1 503.

#### 13 Hibell *et al* (1997, 2000, 2004, 2009, 2012)

- a. Nationally representative survey forming part of ESPAD (European School Survey Project on Alcohol and Other Drugs). Survey of pupils in various school grades, selecting those born within a target year, thus age 15-16 at the time of the survey. One grade was sampled in 1995, two in 1999 and three thereafter. At least 89% of 15-16 year-olds were still in school in each survey year, with 67% in the surveyed grade in 1995 and at least 91% in the samples grades thereafter. Anonymous questionnaire completed and sealed in a joint envelope in front of the class. Teachers not present.

Date	Sample size		Participation rate (%)			Target year of birth	Average age
	Males	Females	Schools	Classes	Pupils		
Mar 1995	1 199	1 372	–	99	89	1979	–
Mar 1999	3 305	3 115	–	91	90	1983	15.2
Mar 2003	1 398	1 279	99	98	82	1987	15.7
Mar 2007	1 356	1 461	95	94	89	1991	15.7
Mar 2011	1 608	1 455	–	85	86	1995	15.7

- b. Smokers marked as frequency \*: smoked 1 or more cigarettes per day in last 30 days. All smokers: smoked in last 30 days.
- c. Consumption category estimation based on 1-5, 6-10, 11-20, 21+ cigarettes/smoker/day.



**14 Kiss *et al* (2000), Easton and Kiss (2005)**

- a. Budapest Student Health Behavior Survey. Study conducted in Budapest by the Field Epidemiology Training Program, Hungarian Ministry of Welfare, at randomly selected schools. All pupils in randomly selected classes completed questionnaire. Information was collected anonymously. The questionnaire was translated from the US Youth Risk Behavior Survey.

Date	Schools		Pupils		Participation rate (%)		
	Traditional high	Vocational	Males	Females	Schools	Classes	Pupils
Jan 1995	20	5	1 470	1 324	–	–	–
Mar-May 1999	21	9	1 181	1 209	100	100	85

- b. In 1999, school grades 9-12 were surveyed, while grades surveyed in the 1995 survey were not stated. Results shown in Table 4 refer only to students aged 15-19. Results for 1995 (not shown) referring to all participants age 14-18 are available from Ursicz *et al* (1997).
- c. Smokers: smoked at least 1 cigarette in last 30 days.

**15 TÁRKI Joint Research Center *et al* (accessed Oct 2013)**

- a. Életmód- és életminőség-vizsgálat Magyarországon (Life Style and Quality of Life in Hungary). Nationally representative random sample survey, conducted in 1977. Face-to-face interviews. Age group not stated (adults). Sample size 1 464.
- b. Results derived from a data file accessed via TÁRKI data archive, study reference A66.
- c. Consumption category estimation based on 0-10, 11-20 and 21+ cigarettes/smoker/day, i.e. including occasional smokers and smokers of other products only (if any) as smokers of 1-10 cigarettes, and calculation of cigarettes per person based on percentage smokers (product unspecified), and number of cigarettes per cigarette smoker, and should be regarded with caution.

**16 KSH (1983)**

- a. Nationally representative survey conducted by KSH in June 1981, personal interviews.
- b. The prevalence of smoking (age 15+) was also reported by residence and education:

	Males	Females
<b>Residence</b>		
Budapest	39	23
Other cities	37	17
Rural	39	10
<b>Level of education</b>		
General school grade 1-7	31	5
General school grade 8	48	21
Vocational school	62	36
High school	47	29
University or college	41	27

**17 Kopp *et al* (2000), Kopp and Csoboth (2001), Skrabski *et al* (2004), Kopp and Kovács (2006), Konkoly Thege *et al* (2009), Tombor *et al* (2010)**

- a. HUNGAROSTUDY. A series of nationally representative studies by SOTE (Institute of Behavioural Sciences, Semmelweis University). Multistage sampling controlled for gender, age and settlement type, with replacement respondents based on similar sampling characteristics in the same neighbourhood. The 1995 survey was representative at the level of 20 counties, while the 2002 survey was representative at the level of 150 sub-regions. Interviews conducted at home by district nurses. See also source 34.

Year	Sample size	Response rate (%)
1988	20 902	85
1995	12 640	81
2002	12 643	82

- b. In 2002, cigarettes per person (c.f. Table 6) was reported to range over the 120 sub-regions from 1.20 to 14.05 for males, and from 0.11 to 8.85 for females (Skrabski *et al* (2004)).
- c. The *All ages* values refer to ages 18+; age-specific data are not available for the age groups marked \* in Tables 4-7.
- d. Calculation of cigarettes per person (2002) based on percentage smokers (product unspecified), and number of cigarettes per cigarette smoker, so may overestimate.
- e. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

- 18 Gallup Organization (Magyar Gallup Intézet) (accessed May 2013), Szilágyi (accessed Dec 2007), Országos Dohányfüstmentes Egyesület (ODE) (National Smoke-Free Association) (accessed May 2013)**
- Magyar Dohányzás Monitor, nationally representative surveys conducted by Hungarian Gallup Institute for Országos Dohányfüstmentes Egyesület (ODE, National Smoke-free Association). Personal interviews. Usually conducted in March-April, but in 2004 a further survey was conducted in October and results from both are shown in Tables 4-8. Sample size (1995) 1 005, (2000) 1 013, (2004) 1 006 and 1 011, (2006) 2 020, (2007) 2 020.
  - All cigarette smokers: smoked at least 1 cigarette last week. Regular cigarette smoker: smoked cigarettes daily. These definitions were given by Szilágyi (accessed Dec 2007) for 2000, 2004 and 2006 and have been assumed (Table 4) to apply to other years also.
  - Consumption category estimation based on <20, 20 and >20 cigarettes/smoker/day.
  - Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.
- 19 Laaksonen *et al* (2001)**
- Part of the Bridging the East-West Health Gap survey. The Hungarian part was conducted in Baranya, the southernmost county including Pécs. Postal questionnaires directed to a random sample of the general population. Sample size (males) 456, (females) 647. Response rate (males) 67%, (females) 81%.
  - Regular smokers: had smoked regularly for at least a year, had smoked at least 100 cigarettes, cigars or pipefuls in lifetime and smoked in last month.
  - It is not stated whether mean number of cigarettes per day is based on all smokers or only on cigarette smokers. If the former, then calculation of cigarettes per person may overestimate.
- 20 Johan Béla Országos Epidemiológiai Központ (2002), TÁRKI Joint Research Center and Tóth (accessed Oct 2013)**
- TÁRKI Egészségkutatás (Health Survey) 1997. Multistage proportionally stratified probability sample of households. Face-to-face interviews. Sample size 4 037.
  - Most results derived from a data file accessed via TÁRKI data archive, study reference D59e, with weighting on gender, age and settlement type.
  - Regular smokers: smoked cigarettes regularly. All smokers: smoked cigarettes regularly or occasionally.
- 21 Johan Béla Országos Epidemiológiai Központ (2002), Tombor *et al* (2010)**
- Szivbarát Program (Healthy Heart Programme) survey conducted in 1997. Sample size 3 000.
  - There are minor discrepancies in the data reported by the two source papers.
  - Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.
- 22 Antal *et al* (2003)**
- Nationally representative survey of nutritional and lifestyle habits of secondary school students. Conducted in 1997-2000 (and shown against 1998 in the Tables). Sample size 3 071 (boys), 3 276 (girls).
  - Consumption category estimation based on 1-9, 10-20 and 21+ cigarettes/smoker/day.
- 23 Tistyan (1999), Johan Béla Országos Epidemiológiai Központ (2002)**
- FACT Institute of Applied Sciences. Nationally representative survey. Sample size 1 200.
  - Tistyan (1999) noted that smoking of pipes or cigars was not considered in the survey but was rare (less than 2%).
  - Regular smokers: self-assessed. All smokers: smoked regularly or occasionally, self assessed.
  - Results in Table 5 are derived from results originally given as weekly averages. Results marked \* against the source in Tables 5-7 are based on regular smokers, while those not marked \* are based on regular and occasional smokers. Average daily cigarettes per occasional smoker ranged, in the various age groups, from 1.4 to 8.6 for men, and from 2.9 to 6.5 for women.
  - The results marked \* against the source (see note d) have been omitted from the period averages in the Supplement tables. Although, where there is a choice, we usually prefer results for regular smoker (see Methods chapter, p. 10), the high average number smoked per occasional smoker suggests that the figure based on all smokers is more appropriate in this instance.
  - Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

- 24 Tombor *et al* (2010) quoting Lampek (2002)**
- a. Életmód és időmérleg (Life style and time use) survey by KSH, 1999-2000. Sample size 10 456.
- 25 Boros *et al* (2002), Boros (2005), Demjén *et al* (2011)**
- a. Országos Lakossági Egészségfelmérés (OLEF) National Health Interview Survey. The 2000 survey was conducted by the Hungarian Gallup Institute (Magyar Gallup Intézet), and the 2003 survey by TNS Hungary, both under the supervision of the Johan Béla National Centre for Epidemiology. Sample of individuals living in private households. Sample size (2000) 5 503, (2003) 5 500. Response rate (2000) 79%, (2003) 81%.
  - b. The data presented in Tables 4-7 give results by 3 age groups as reported by the original study authors. Some data by narrower age groups are also available (although incomplete due to insufficient sample size in some groups, Eurostat (accessed Aug 2007)), and have been used where appropriate for the Supplement tables. Downloadable datasets are also available Országos Egészségfejlesztési Intézet (National Institute for Health Development) (accessed Aug 2013).
  - c. Regular smoker: (2000) smoked daily, (2003) smoked cigarette, cigar or pipe daily. All smokers: (2000) smoked daily or not daily, (2003) smoked cigarette, cigar or pipe daily, weekly, monthly or less than monthly.
  - d. Consumption category estimation based on two categories, 1-19 and 20+ cigarettes/smoker/day, and resulting figures should be regarded with caution. Calculation of cigarettes per person based on percentage smokers (product unspecified in 2000, and any product in 2003), and number of cigarettes per cigarette smoker, so may overestimate.
  - e. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.
- 26 Antman *et al* (2005)**
- a. Health risk factor survey conducted in 2001-2002 as part of the WHO/Euro CINDI (Countrywide Integrated Noncommunicable Disease Intervention) programme. Nationally representative sample selected from the population registry, using mailed self-completion questionnaires. Response rate 54%, sample size 3 096.
  - b. Earlier CINDI surveys were regionally based and are not included in this report. See e.g. Morava *et al* (2000).
  - c. It was reported that 98.5% of regular smokers (sexes combined) smoked manufactured cigarettes.
  - d. Regular cigarette smokers: smoked at least 1 cigarette per day.
  - e. Consumption category estimation based on 1-10, 11-20, 21-30, 31-40 and 41+ cigarettes/smoker/day.
  - f. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.
- 27 Elekes and Paksi (2001, 2004b), and Demjén *et al* (2011) quoting Elekes and Paksi (2004a)**
- a. Országos Lakossági Alkohol és Drogepidemiológiai Vizsgálat (ADE). Conducted by Budapesti Közgazdaságtudományi és Államigazgatási Egyetem Viselkedéskutató Központja (BKÁE) (Budapest University of Economic Sciences and Public Administration, Behaviour Research Centre). Multistage surveys, with over-sampling in Budapest, and results weighted to be nationally representative. Smoking questions were included in face-to-face interviews, while alcohol and other drugs were enquired through self-completion questionnaires. Response rate (2001) 94%, (2003) 92%. Sample size (2001) 2 359, (2003) 2 557.
  - b. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.
- 28 Mohedano-Brethes and Soufflot de Magny (2005), Papacostas (2008, 2009, 2012)**
- 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 approximately 1 000.
  - b. These surveys provide results that are comparable across countries. However, they have been criticised for having small sample sizes and for generating “estimates that are in some cases widely discrepant from more substantive national sources” (Bogdanovica *et al* (2011)).
  - c. In 2002 (Candidate Country Eurobarometer), the sample consisted of citizens of the country, and thereafter 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.
  - d. In 2012, the prevalence of smoking (age 15+, sexes combined, sex-specific data not yet available) was 32%. Among smokers, 89% smoked boxed cigarettes, 25% hand-rolled

- cigarettes, 1% cigars and 0% pipes. (Special Eurobarometer 385 wave 77.1, European Commission (2012))
- Frequency U represents positive answers to questions such as “Do you smoke cigarettes?” or “You smoke packeted cigarettes”. For 2005-06 an additional question made it possible to identify regular smokers also. The 2009 survey used a questionnaire format that clearly asked about regular and occasional smoking and so frequency codes R and A are used.
  - In 2005 and 2006, no participants reported using chewing tobacco or snuff (European Commission (2006, 2007))
  - Consumption category estimation based on <5, 5-9, 10-14, 15-19, 20-24, 25-30, 31-34, 35-40 and 41+ cigarettes/smoker/day (1987 only) and <5, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39 and 40+ cigarettes/smoker/day (other years). Exact values for cigarettes/smoker/day are available for 2009.
  - 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.

### 29 Tombor *et al* (2010) quoting Urbán and Marián (2003)

- Életmod és egészségvizsgálat (Survey of lifestyle and health), conducted in 2002. Sample size 1 987.
- Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

### 30, 31 Németh (2003), WHO (2008), Warren *et al* (2008), Demjén *et al* (2009)

- Global Youth Tobacco Survey (GYTS). National school-based surveys targeting ages 13-15. Two-stage cluster sample, covering all schools (public and private), with schools randomly selected in proportion to number of students enrolled, then classes randomly selected. All students present on the day were eligible to participate. Anonymous self-administered data collection procedures, with teachers asked to leave. The grades included were 7-10 in 2003, and 7-9 in 2008.

	Response rates			Sample size		
	Schools	Classes	Students	Schools	Students	
					Total	Age 13-15
2003	98.5	100.0	87.5	66	4 484	3 205
2008	92.5	100.0	88.2	62	3 861	3 139

- Results shown as source 30 refer only to the target age group 13-15, and are weighted to adjust for non-response, and for sex and school grade, while results shown for 2003 as source 31 refer to the whole sample. Results shown against individual years of age (2008) refer to grades 7 and 9 (Demjén *et al* (2009)).
- Smokers marked as frequency \*: smoked daily. All smokers: smoked cigarettes on at least one day in the last 30 days.

### 32 WHO (accessed April 2012)

- World Health Survey. Multinational survey initiated by the World Health Organization using standard survey procedures and instruments, conducted in 2002-2003. Target population comprises all people age 18+ living in the country (i.e. including guest workers, immigrants and refugees). Nationally representative. Households selected using a random stratified sampling procedure, then one individual per household selected. Sample size 1 419. Response rate (households) 72%, individuals (100%). See also Table xi in the *Comparisons between countries* chapter.
- Regular smokers: smoked daily. All smokers: smoked daily or not daily.
- Calculation of cigarettes per person based on percentage smokers of all products, and number of cigarettes per cigarette smoker, so may overestimate.
- Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

### 33 Szilágyi (accessed Dec 2007)

- Nationally representative survey by Marketing Centrum, conducted in February 2005. Sample size 1 200.
- Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

### 34 Susánszky *et al* (2007).

- Hungarostudy Health Panel, a follow-up in 2005 of the 2002 Hungarostudy sample, see source 17. Sample size 3 701.

**35 Tombor *et al* (2010)**

- a. Országos lakossági adatfelvétel az addiktológiai problémákról (OLAAP), National survey on Addiction Problems in Hungary (NSAPH). Nationally representative study conducted in 2007, personal interviews. Sample size 2 710, response rate 85%.
- b. Regular smokers : smoked regularly (daily). All smokers : smoked regularly (daily) or occasionally.
- c. Calculation of cigarettes per person based on prevalence of regular smoking and number of cigarettes per smoker (unspecified), so may underestimate.
- d. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

**36 Urbán (2013)**

- a. Budapest Adolescent Smoking Survey. Year not stated (assumed 2008, baseline of longitudinal study). Schools randomly selected within each district of the city, then classes randomly selected and all students present of the day were eligible to participate. Self-completion questionnaire, based on the US Youth Risk Behaviour Survey (YRBS), completed in class. Sample size (classes) 106, (boys) 1 251, (girls) 1 314. Response rate (schools) 47%, (students) 82%.
- b. Table 4 shows approximate ages corresponding to school grade 9.
- c. Smokers marked as frequency \*: smoked 30+ cigarettes in past 30 days. All smokers: smoked at least one cigarette in past 30 days.

**37 TÁRKI and Image Factory (2008), Demjén *et al* (2011)**

- a. Survey conducted by Táarki and Image Factory. Nationally representative survey conducted in 2008, sample size 1 000.
- b. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

**38 Demjén *et al* (2011), Eurostat (accessed May 2013)**

- a. European Health Interview Survey, Wave 1. The Hungarian arm of the survey was conducted in September–October 2009. Individuals living in private households. Self completion questionnaires. Sample size 5 051, response rate 81%, no proxy respondents.
- b. The prevalence of regular cigarette smoking in Table 4, and results in Tables 5-7, refer to the full age range (15+), using the age grouping from Eurostat, with the upper age groups referring to 75-84 and 85+. Results for age 85+ (marked \*) are omitted from Tables 5-7 due to low reliability but are included in the *All ages* column. Other data presented in Table 4 give results for 3 age groups consistent with those used for source 25, omitting 15-17 year olds (Demjén *et al* (2011)). Prevalence of any smoking is additionally shown in Table 4 (marked \* against the source) using narrower age groups, the upper groups shown referring to ages 80-84 and 85+.
- c. Regular cigarette smoker: smoked manufactured or hand-rolled cigarettes daily. Regular smoker: smoked daily. All smokers: smoked daily or occasionally.
- d. Consumption category estimation based on two categories, 1-19 and 20+ cigarettes/smoker/day, and resulting figures should be regarded with caution.
- e. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

**39 Paulik *et al* (2012), and Demjén *et al* (2011) quoting personal communication from Dr Paulik**

- a. Nationally representative questionnaire survey conducted April-August 2009, in 48 randomly selected municipalities, then one person selected from randomly selected households. Sample size 2 250, response rate 57%.
- b. Smokers: smoked daily or occasionally in the past 30 days.
- c. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

**40 Péntzes *et al* (2012)**

- a. Baseline of the Longitudinal Study of Tobacco Smoking and Weight Management among Adolescents. Conducted in school year 2009-2010 in 6 metropolitan cities. Cluster sampling involving 78 elementary, vocational and high schools. Self-completion questionnaire, based on the US Youth Risk Behaviour Survey (YRBS), completed in class with teachers absent. Sample size (boys) 653, (girls) 792. Response rate 65%.
- b. The survey was conducted in school grades 6 and 9, and results are available only for the two grades combined. Approximate ages corresponding to these grades are 11-12 and 14-15 (shown in Table 4 as 11-15).

- c. Smokers marked as frequency \*: smoked 20+ cigarettes in past 30 days. Regular smokers: smoked 6+ cigarettes in past 30 days. All smokers: smoked at least one cigarette in past 30 days.

#### 41 Gallus *et al* (2012)

- a. Surveys by PPACTE in 2010 in 18 European countries. Coordinated by DOXA, the Italian branch of the GALLUP International Association. Face-to-face interviews using computer-assisted personal interviewing. One section of the survey involved asking to see the subject's most recently bought pack of cigarettes or hand-rolling tobacco.
- b. The survey in Hungary used a multistage random sampling method. Sample size 1 002, response rate 79%. Age range 18+.
- c. Use of smokeless tobacco was reported in 0.6% of males and 0.6% of females. Among smoking subjects, the type of their most recently bought pack was:

Pack type	Proportion (%)
Cigarettes, 20-pack	96.1
Cigarettes, 10-pack	0.8
Hand-rolling tobacco	3.1
Other	0.0

- d. Cigarettes per smoker relates to all smokers rather than regular smokers.
- e. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

#### 42 WHO (2013)

- a. Hungary Adult Tobacco Survey, national survey conducted in 2012.
- b. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

#### 43 TÁRKI Social Research Institute Inc. *et al* (accessed Oct 2013b, Oct 2013a)

- a. TÁRKI Omnibus survey 2012 (waves 2 and 3). Multi-stage proportionately stratified national probability sample representative of the adult Hungarian population. Respondents were selected using the random walking method out of each stratum. Numbers of selected persons are proportional to stratum size. Face-to-face interviews. Sample size 1 506.
- b. Results derived from merged data files accessed via TÁRKI data archive, study references H68, H69, with weighting (gender, age, type of settlement and educational level).
- c. Respondents were first asked if they smoked (product unspecified, possible answers daily, weekly, less often, or no), and all except those answering "no" were then asked how many they smoked for 11 types of product (manufactured cigarettes, handrolled cigarettes, etc or "other", see also note d.), with the number smoked given for daily or weekly (or both). For Table 4, we used the following definitions for the prevalence of smoking: Regular manufactured cigarette smoker: smoked daily and reported smoking 1+ manufactured cigarettes per day or 7+ per week. Manufactured cigarette smoker: smoked at least weekly and reported smoking 1+ manufactured cigarettes per week. Regular cigarette smoker: smoked daily and reported smoking 1+ manufactured and/or handrolled cigarettes per day, or 7+ manufactured and/or hand-rolled cigarettes per week. Cigarette smoker: smoked at least weekly and reported smoking 1+ manufactured and/or hand-rolled cigarettes per week. Regular smoker: smoked daily. Smoker: smoked at least weekly. If both a daily and a weekly amount were stated, we used the daily amount when calculating the average number of cigarettes per smoker (Table 5).
- d. The dual distribution smoking manufactured and hand-rolled cigarettes was as follows (prevalence of daily smoking, %) :

	Males	Females
Manufactured only	21	15
Hand rolled only	8	6
Both	1	0.5

Two persons reported smoking pipes, one cigarillos, and nine e-cigarettes, while none used cigars, water pipe, other "e" products or nicotine inhaler. Five persons used none of the 11 named products but reported "other" product use, all referring to use of a cigarette rolling machine.

- e. Assumed extensions to age distribution for percentage smokers and for cigarettes/person/day are shown in the extended versions of Tables 4 and 6 respectively in the Excel tables workbook.

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§ Original paper not obtained, but information taken as quoted by another author.