
International Smoking Statistics

Web Edition

A collection of worldwide historical data

Czechoslovakia and successor countries

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¹ See footnotes to Figures

Preface

International Smoking Statistics is a collection of smoking data covering most of Europe and various other economically developed countries. The second edition (published by Wolfson Institute of Preventive Medicine and OUP, 2002, www.oup.co.uk/isbn/0-19-850856-5) included data for 30 countries up to 1995. Since 2006, work has been ongoing to make individual country updates available online. Please register at www.pnlee.co.uk if you wish to be informed when updates are posted.

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

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

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

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

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

In this chapter, the survey data are largely reproduced from the 2nd edition, which covered the years up to 1995, subject to a few amendments for consistency with the Web edition. For the subsequent years, only certain multinational surveys have been added.

Downloads

Updates currently available to download from <http://www.pnlee.co.uk/iss.htm> 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 a customisable version of Figure 3;

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]. No update to Supplement 1 is planned for countries (including Czechoslovakia, Czech Republic and Slovakia) which have only been partially updated for the web edition.

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

Countries and years considered

This chapter covers Czechoslovakia up to 1992, and its successor countries Czech Republic and Slovakia thereafter. Some data for the separate republics before that date, or for the combined countries after that date are included if provided by the original data sources. Only sales data have been fully updated for this edition. The survey data presented are largely reproduced from the 2nd edition of this report (published in 2002 and covering up to the year 1995), with only certain multinational surveys added for the subsequent years.

Sales data

See Tables 1-3, Figures 1 and 2 and *Notes on sources of sales data*.

Although no data are available for the war years, consumption of manufactured cigarettes per adult in Czechoslovakia increased fairly steadily from 2 cigarettes per day in 1923 to about 7 in the mid 1980s, after which it decreased slightly. Where separate data are available for both republics before 1992, consumption per adult in the Czech Republic was higher than in Slovakia. Consumption data in recent decades should be regarded with caution because of discrepancies between different sources of information, and because of illegal and cross-border trade which some sources suggest were major factors. Recent estimates (by KPMG, adjusting for cross-border sales, counterfeit and contraband) suggest that, since the mid 2000s, consumption of manufactured cigarettes per adult has fallen from 6 to 4 in the Czech Republic, and from 5 to 4 in Slovakia. Consumption of hand-rolled cigarettes in the Czech Republic increased from a negligible level in the late 1990s to about 0.5 per adult per day by 2012; there is no information on their usage in Slovakia.

The proportion of cigarettes which were filtered rose rapidly from about 20% in the mid 1960s to 80% in the mid 1970s, and, based on production data, had reached 99% by 1992. It then stood around 95% in the Czech Republic and 100% in Slovakia until the late 1990s, after which no data are available.

Between 1923 and 1934 about half of all tobacco was consumed as manufactured cigarettes, with most of the remainder accounted for by smoking mixtures. The proportion used as cigars declined from 10% to 5%, and insignificant quantities of snuff were also used. No data are available on the consumption of tobacco products other than cigarettes for later years, but production data from the 1980s suggest that cigarettes accounted for nearly 99%. With the uptake of hand-rolling in the Czech Republic, the percentage of tobacco used in manufactured cigarettes fell to 93% by 2011.

Survey data

See Tables 4-8, Figures 3 and 4 and *Notes on sources of survey data*.

At the time of writing the 2nd edition, few nationally representative surveys were available, and much of the survey data presented came from individual regional epidemiological studies. It is difficult to draw conclusions from such disparate data, particularly as the few studies which reported separately for regular and occasional smokers show a high proportion of occasional smokers, both among

men and women. Estimates of the prevalence of smoking among men varied between 40% and 60% before 1990, and between 30% and 55% in the 1990s. For women, some regional surveys gave very low estimates, below 5%, but more generally estimates varied between 10% and 35%.

The prevalence of smoking was higher among men than among women at all ages, the decline in prevalence with age being more marked among women than among men. Only one study has reported the prevalence of smoking among younger teenagers, about 5-7% among boys and 2-4% among girls at age 13. Among older pupils, the prevalence of smoking was about 20% among boys and 10% among girls at age 15-16. The prevalence among apprentices was more than double that among students.

It was not possible to assess under-statement of smoking by comparison of survey and sales data. The estimated number of cigarettes smoked per person per day (based on sales data and prevalence) appears to have fallen from about 11 to 7-9 for men between the 1970s and the 1990s and risen from about 2 to 3-5 for women in the same period.

Based on the multinational surveys added in this edition, which started in 2002, estimates for the Czech Republic of the prevalence of regular smoking among men age 15 and over are mostly in the range 28-32%, or 32-38% when occasional smokers are included. Among women, the prevalence of regular smoking is around 20%, or up to 25% for all smoking. The estimated number of cigarettes per person per day (sales-adjusted) was 10-11 for men and 4-5 for women in the mid 2000s, then fell to about 7 for men and 3 for women by 2012. For Slovakia, estimates of the prevalence of smoking among men are mostly in the range 26-30%, and among women 12-15%. When occasional smokers are included, there is some suggestion of a fall in prevalence, from just over 40% to around 30% among men, and from 20% among women to around 17%. The estimated number of cigarettes per person per day (sales-adjusted) was around 12 for men and 4 for women in the mid-2000s, then fell to about 6 for men and 2.5 for women by 2012. These results should be regarded with caution due to the uncertainty of the sales data, and the limited surveys considered.

Table 1.1 Total annual consumption of tobacco products, 1923-1934. Czechoslovakia

Year	Manufactured cigarettes		Cigars tonnes	Smoking mixtures tonnes	Snuff tonnes	All tobacco products tonnes
	tonnes	millions				
1923	7 997	7 997	1 875	8 998	84	18 954
1924	8 905	8 905	1 851	9 044	93	19 893
1925	9 492	9 492	1 865	8 509	97	19 963
1926	10 244	10 244	1 759	8 833	95	20 931
1927	10 813	10 813	1 684	9 013	90	21 600
1928	11 536	11 536	1 696	8 816	93	22 141
1929	11 922	11 922	1 671	8 492	92	22 177
1930	12 120	12 120	1 629	8 173	89	22 011
1931	12 249	12 249	1 409	7 965	85	21 708
1932	11 365	11 365	1 090	8 573	79	21 107
1933	10 667	10 667	919	8 395	68	20 049
1934	10 951	10 951	826	8 238	61	20 076

Source: see *Notes on sources of sales data: Consumption data to 1934*, p. 46.

Table 1.2 Total annual consumption or production of tobacco products, 1937-1992.
Czechoslovakia

Year	Manufactured cigarettes		Cigars		Cigarette tobacco tonnes	Pipe tobacco tonnes	All tobacco products tonnes
	tonnes	millions	tonnes	millions			
1937		11 565					
1948		12 984					
1950		14 304					
1953		16 246					
1955		16 136					
1960		18 620					
1961		19 407					
1962		18 389					
1963		18 688					
1964		17 640					
1965		19 320					
1966		20 100					
1967		20 058					
1968		21 370					
1969		18 500					
1970		20 472					
1971		21 190					
1972		21 058					
1973		21 200					
1974		21 790					
1975		22 955					
1976		23 300					
1977		24 000					
1978		23 300					
1979		24 000					
1980		24 000					
1981		28 330					
1982		28 406					
1983	28 416	28 416	103	34	12	293	28 824
1984	29 400	29 400	95	32	9	315	29 819
1985		27 940					
1986		27 700					
1987		27 765					
1988	27 902	27 902	61	20	6	257	28 226
1989	26 828	26 828	54	18	4	246	27 132
1990		29 108					
1991		26 640					
1992		29 150					

Source: see *Notes on sources of sales data: Consumption and production data 1937-1996*, p. 46.

Table 1.3 Total annual consumption of tobacco products. Czech Republic

Year	Manufactured cigarettes			Cigars		Smoking tobacco tonnes	All tobacco products tonnes
	official estimates ¹ millions	alternative estimates		tonnes	millions		
		legal sales millions	total consumption millions				
1975	18 950						
1980	19 588						
1981	19 809						
1982	19 117						
1983	19 699						
1984	19 255						
1985	19 424						
1986	19 601						
1987	18 961						
1988	18 129						
1989	18 407						
1993	16 000						
1994	20 500						
1995	21 000						
1996	22 700						
1997	24 224	22 900				236	
1998	19 066	20 000					
1999	21 491	20 700					
2000	19 333	18 300					
2001	17 118	18 300					
2002	19 310	19 100					
2003	22 362	20 400				953	
2004	22 894	22 600		69	23	848	
2005	23 283	23 900		81	27	623	
2006	24 003	24 310	19 750	99	33	518	20 367
2007	24 207	23 970	19 990	120	40	1 245	21 355
2008	21 975	22 770	20 160	141	47	210	20 511
2009	21 728	21 650	18 970	150	50	615	19 735
2010	21 329	21 060	17 010	150	50	833	17 993
2011	20 867	21 060	15 510	156	52	1 020	16 686
2012	20 462	20 460	15 280			1 343	
2013	20 012	19 650	13 340				
2014	20 496	19 870	14 290				

1 Undefined up to 2010; from 2011 includes home produced cigarettes.

Source: see *Notes on sources of sales data: Consumption and production data 1937-1996*, p. 46, and *Consumption data for 1997 onwards, Czech Republic*, p. 47.

Table 1.4 Total annual consumption of tobacco products. Slovakia

Year	Manufactured cigarettes		Cigars millions
	consumption millions	legal sales millions	
1975	7 274		
1980	8 868		
1981	9 114		
1982	9 279		
1983	8 775		
1984	8 469		
1985	8 520		
1986	8 491		
1987	8 542		
1988	8 229		
1989	8 114		
1993	9 750		
1994	9 750		
1995	10 900		
1996	11 250		
1997	11 850	9 600	
1998	12 350	8 300	
1999	12 350	9 700	
2000	12 350	8 400	
2001	12 350	8 500	
2002	12 350	8 500	
2003	12 350	6 300	
2004	12 350	6 300	5
2005		7 100	5
2006	7 040	7 010	5
2007	7 660	7 740	8
2008	8 310	8 030	7
2009	7 620	7 690	7
2010	7 410	7 480	7
2011	7 300	7 360	7
2012	7 020	7 190	
2013	6 530	6 640	
2014	6 540	6 630	

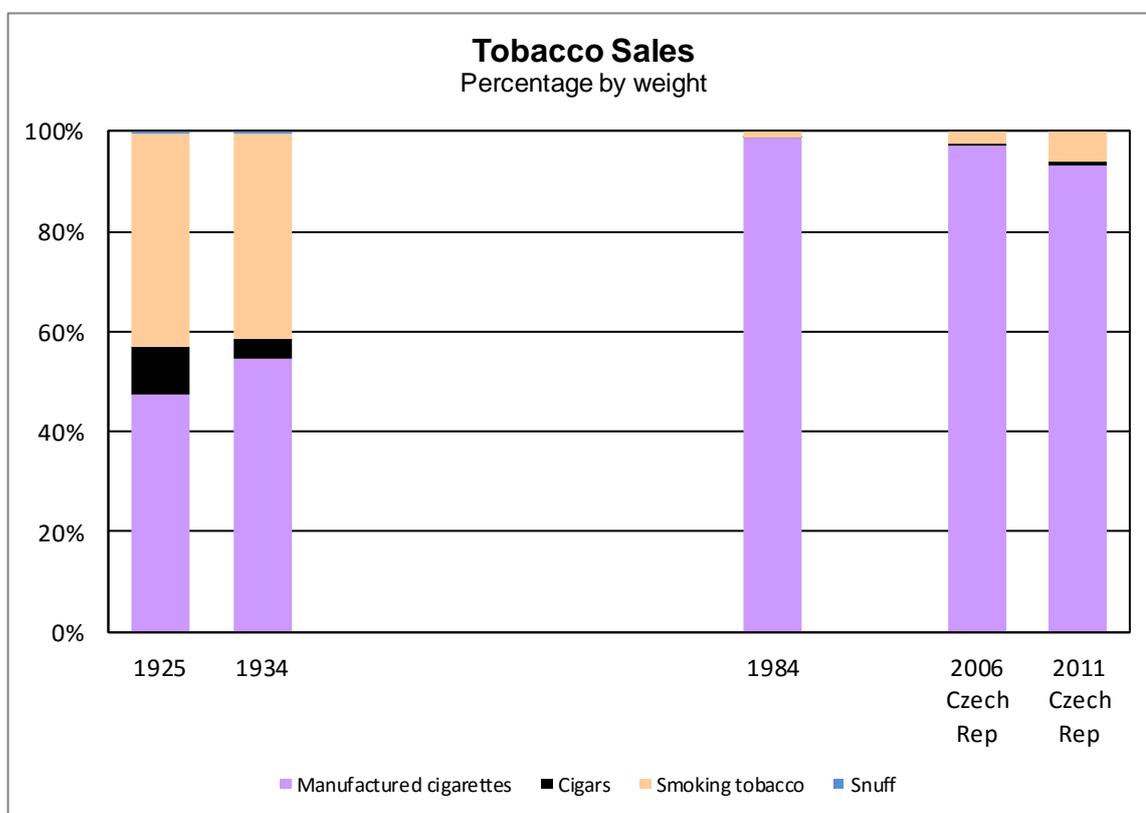
Source: see *Notes on sources of sales data: Consumption and production data 1937-1996, p. 46*, and *Consumption data for 1997 onwards, Slovakia, p. 48*.

Table 1.5 Percentage of sales of tobacco in different forms (by weight), selected years. Czechoslovakia and Czech Republic

	Year	Manufactured cigarettes %	Cigars %	Smoking tobacco %	Snuff %
Czechoslovakia	1925	47.5	9.3	42.6	0.5
	1934	54.5	4.1	41.0	0.3
	1984	98.6	0.3	1.1	
Czech Republic	2006	97.0	0.5	2.5	
	2011	93.0	0.9	6.1	

Source: calculated from Tables 1.1 - 1.3.

Figure 1 Percentage of sales of tobacco in different forms (by weight), selected years. Czechoslovakia and Czech Republic



Source: Table 1.5.

Table 2.1 Sales of cigarettes and of all tobacco products. Czechoslovakia
Annual total and average per adult (age 15 years and over) per day

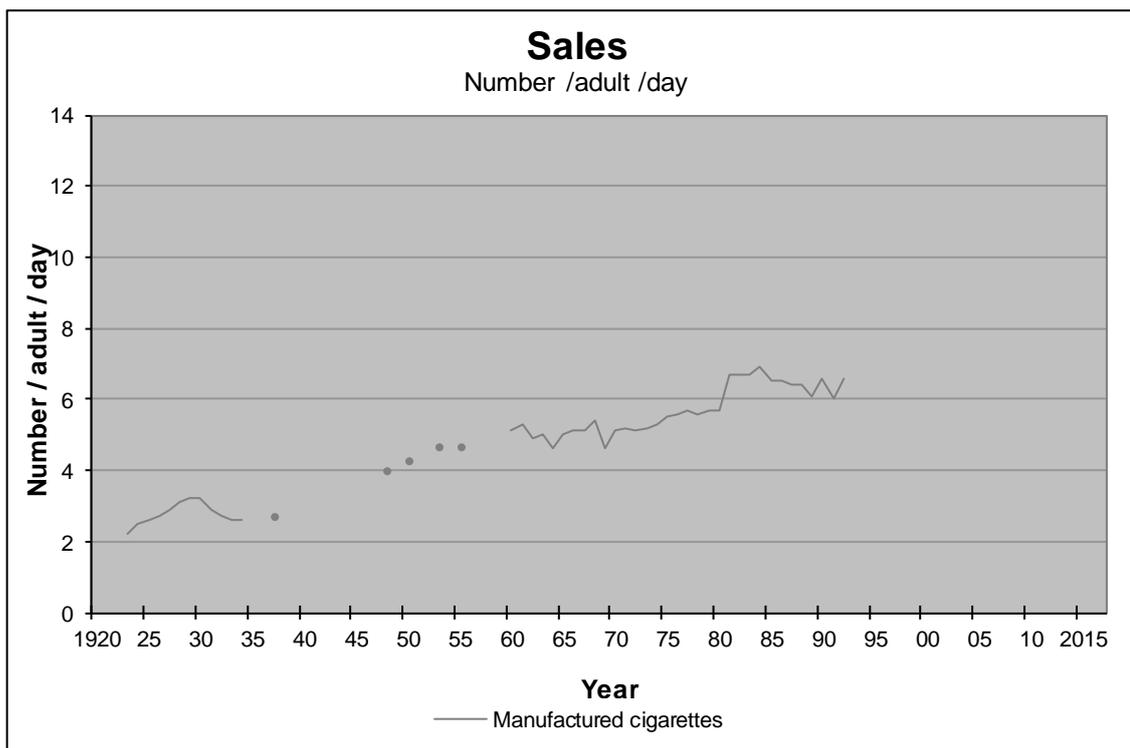
Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual tonnes	Grams/ adult/day
1923	7 997	2.2					18 954	5.3
1924	8 905	2.5					19 893	5.5
1925	9 492	2.6					19 963	5.5
1926	10 244	2.7					20 931	5.6
1927	10 813	2.9					21 600	5.7
1928	11 536	3.1					22 141	5.9
1929	11 922	3.2					22 177	5.9
1930	12 120	3.2					22 011	5.9
1931	12 249	2.9					21 708	5.2
1932	11 365	2.7					21 107	5.1
1933	10 667	2.6					20 049	4.8
1934	10 951	2.6					20 076	4.8
1937	11 565	2.7						
1948	12 984	4.0						
1950	14 304	4.3						
1953	16 246	4.7						
1955	16 136	4.7						
1960	18 620	5.1						
1961	19 407	5.3						
1962	18 389	4.9						
1963	18 688	5.0						
1964	17 640	4.6						
1965	19 320	5.0						
1966	20 100	5.1						
1967	20 058	5.1						
1968	21 370	5.4						
1969	18 500	4.6						
1970	20 472	5.1						
1971	21 190	5.2						
1972	21 058	5.1						
1973	21 200	5.2						
1974	21 790	5.3						
1975	22 955	5.5						
1976	23 300	5.6						
1977	24 000	5.7						
1978	23 300	5.6						
1979	24 000	5.7						
1980	24 000	5.7						
1981	28 330	6.7						
1982	28 406	6.7						
1983	28 416	6.7						
1984	29 400	6.9						
1985	27 940	6.5						
1986	27 700	6.5						
1987	27 765	6.4						
1988	27 902	6.4						
1989	26 828	6.1						
1990	29 108	6.6						
1991	26 640	6.0						
1992	29 150	6.6						

1 Per adult data based on 1991 population.

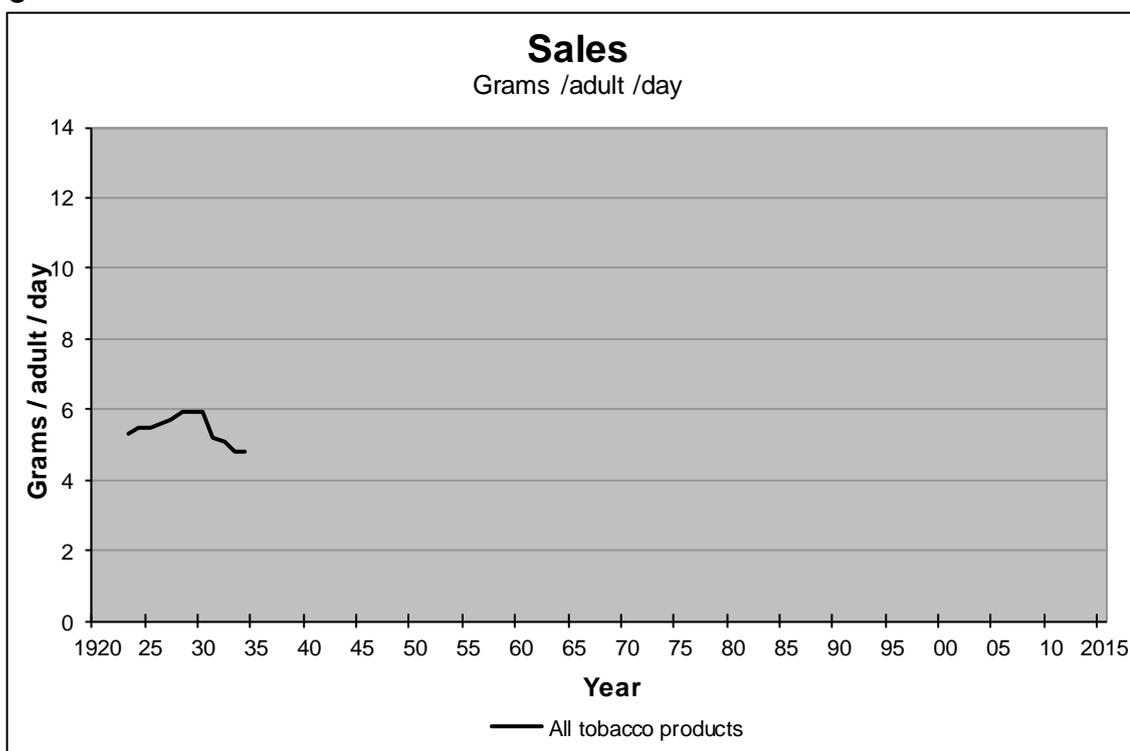
Source: Manufactured cigarettes and all tobacco products, Tables 1.1 and 1.2. Population, see *Population*, Methods p. 14.

Columns for hand-rolled cigarettes, and for total cigarettes including hand-rolled are shown as standard for all chapters, although for Czechoslovakia no estimates are available.

Figure 2.1 Sales of (i) manufactured cigarettes and (ii) all tobacco products. Czechoslovakia. Average per adult (aged 15 years and over) per day



0



Source: Table 2.1.

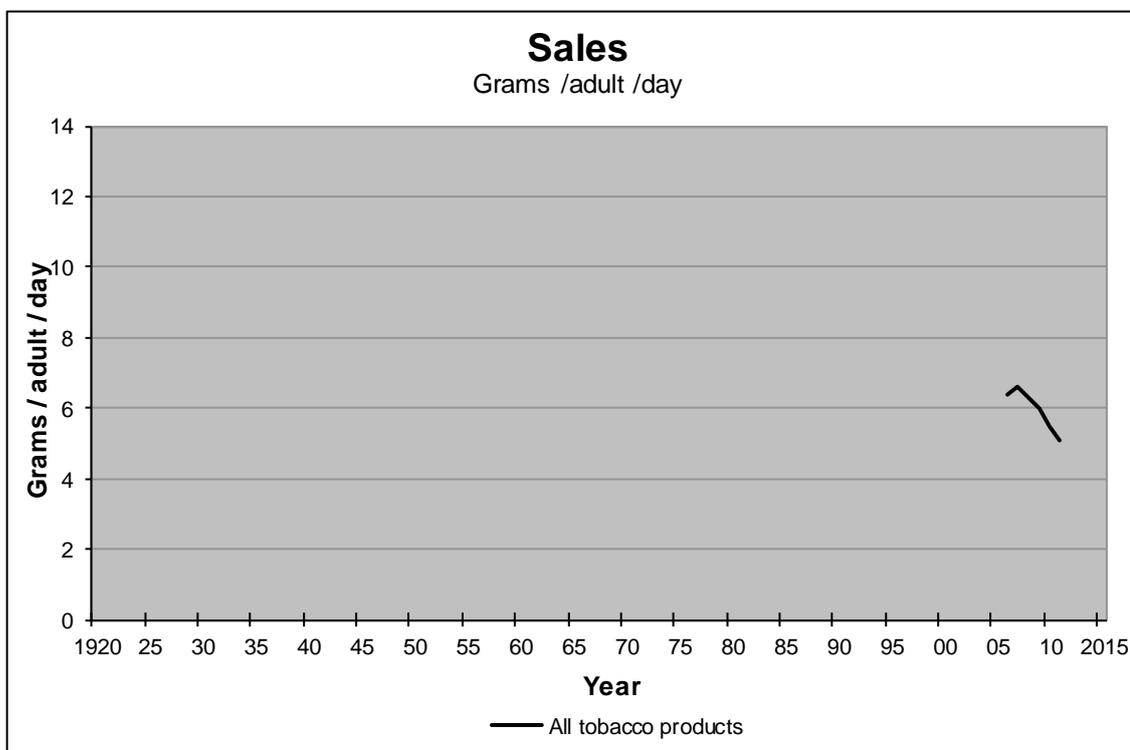
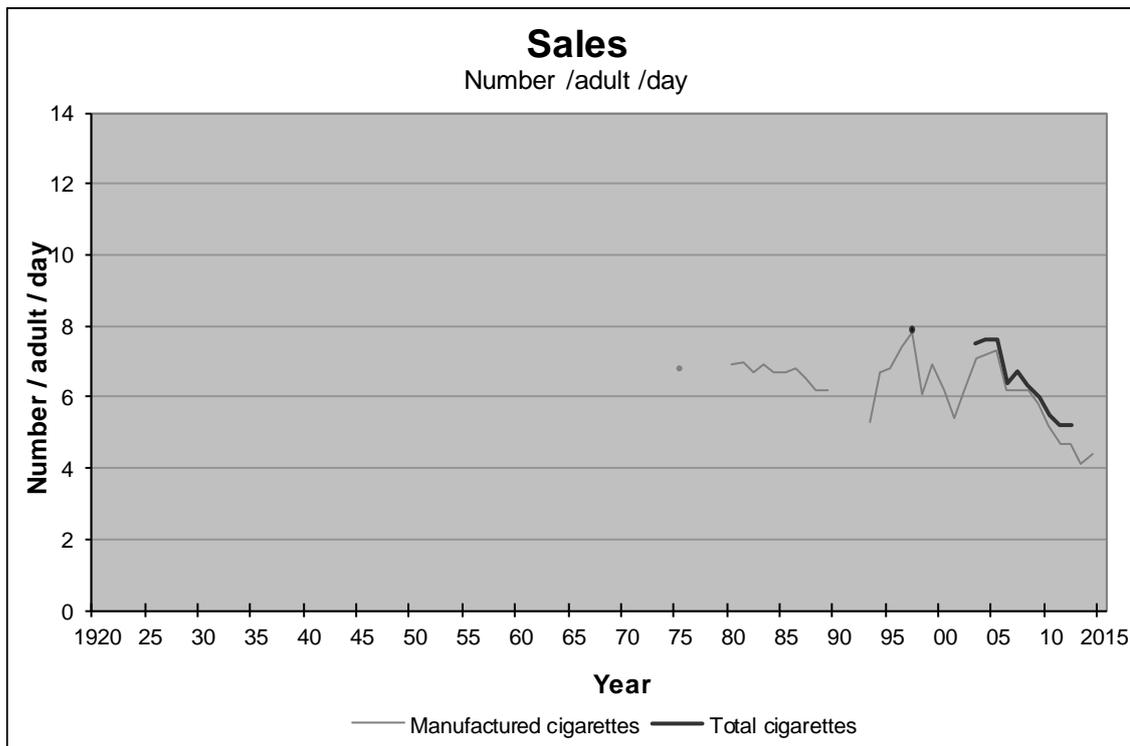
Table 2.2 Sales of cigarettes (including estimated number of hand-rolled cigarettes) and of all tobacco products. Czech Republic.
Annual total and average per adult (age 15 years and over) per day

Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual tonnes	Grams/ adult/day
1975	18 950	6.8						
1980	19 588	6.9						
1981	19 809	7.0						
1982	19 117	6.7						
1983	19 699	6.9						
1984	19 255	6.7						
1985	19 424	6.7						
1986	19 601	6.8						
1987	18 961	6.5						
1988	18 129	6.2						
1989	18 407	6.2						
1993	16 000	5.3						
1994	20 500	6.7						
1995	21 000	6.8						
1996	22 700	7.4						
1997	24 224	7.8	315	0.1	24 539	7.9		
1998	19 066	6.1						
1999	21 491	6.9						
2000	19 333	6.2						
2001	17 118	5.4						
2002	19 310	6.2						
2003	22 362	7.1	1 270	0.4	23 632	7.5		
2004	22 894	7.2	1 130	0.4	24 024	7.6		
2005	23 283	7.3	830	0.3	24 113	7.6		
2006	19 750	6.2	690	0.2	20 440	6.4	20 367	6.4
2007	19 990	6.2	1 660	0.5	21 650	6.7	21 355	6.6
2008	20 160	6.2	280	0.1	20 440	6.3	20 511	6.3
2009	18 970	5.8	820	0.2	19 790	6.0	19 735	6.0
2010	17 010	5.2	1 110	0.3	18 120	5.5	17 993	5.5
2011	15 510	4.7	1 360	0.4	16 870	5.2	16 686	5.1
2012	15 280	4.7	1 840	0.6	17 120	5.2		
2013	13 340	4.1						
2014/1	14 290	4.4						

1 Calculations based on 2013 population.

Source: Manufactured cigarettes and all tobacco products, Table 1.3 using official estimates of manufactured cigarettes to 2005 and alternative estimates (total consumption) thereafter. Hand-rolled cigarettes, see *Notes on sources of sales data: Estimates of numbers of hand-rolled cigarette*, p. 49. Population, see *Population*, Methods p. 14.

Figure 2.2 Sales of (i) manufactured and total¹ cigarettes and (ii) all tobacco products. Czech Republic. Average per adult (aged 15 years and over) per day



¹ Includes estimated hand-rolled cigarette consumption.
Source: Table 2.2.

Table 2.3 Sales of cigarettes. Slovakia.
Annual total and average per adult (age 15 years and over) per day

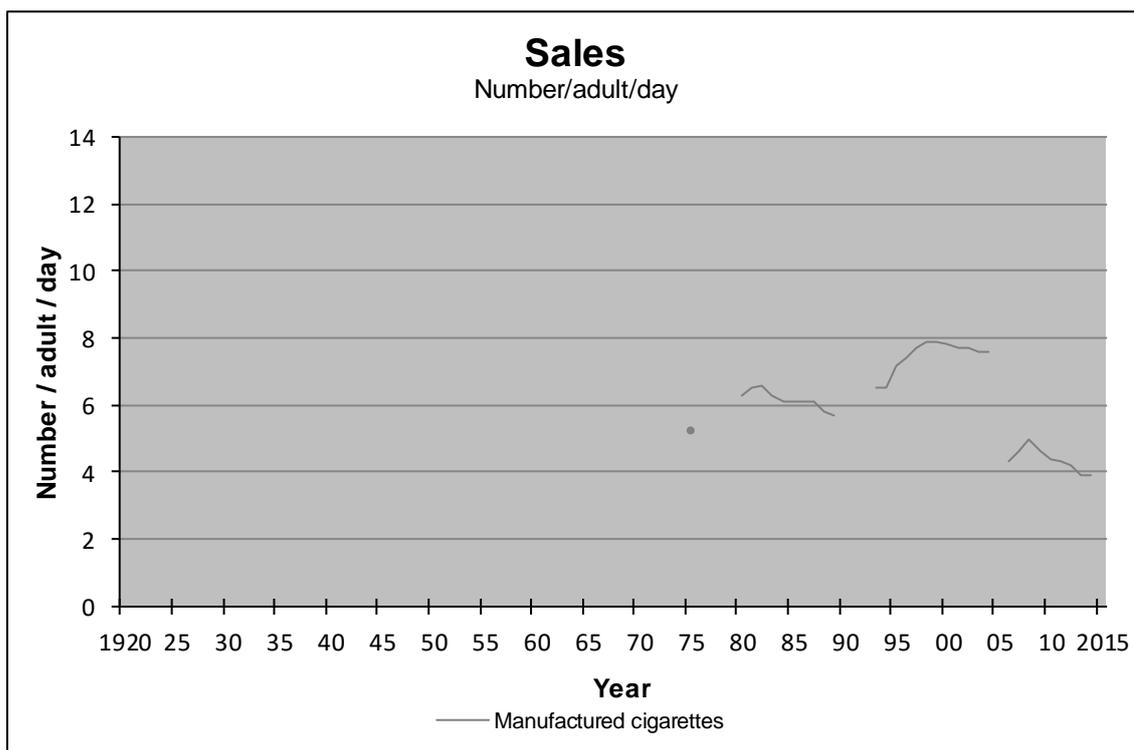
Year	Manufactured cigarettes		Hand-rolled cigarettes		Total cigarettes		All tobacco products	
	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual millions	Number/ adult/day	Total annual tonnes	Grams/ adult/day
1975	7 274	5.3						
1980	8 868	6.3						
1981	9 114	6.5						
1982	9 279	6.6						
1983	8 775	6.3						
1984	8 469	6.1						
1985	8 520	6.1						
1986	8 491	6.1						
1987	8 542	6.1						
1988	8 229	5.8						
1989	8 114	5.7						
1993	9 750	6.5						
1994	9 750	6.5						
1995	10 900	7.2						
1996	11 250	7.4						
1997	11 850	7.7						
1998	12 350	7.9						
1999	12 350	7.9						
2000	12 350	7.8						
2001	12 350	7.7						
2002	12 350	7.7						
2003	12 350	7.6						
2004	12 350	7.6						
2006	7 040	4.3						
2007	7 660	4.6						
2008	8 310	5.0						
2009	7 620	4.6						
2010	7 410	4.4						
2011 ¹	7 300	4.3						
2012 ¹	7 020	4.2						
2013 ¹	6 530	3.9						
2014 ¹	6 540	3.9						

1 Calculations based on 2010 population.

Source: Table 1.4. Population, see *Population*, Methods p. 14.

Columns for hand-rolled cigarettes, for total cigarettes including hand-rolled, and for all tobacco products are shown as standard for all chapters, although for Slovakia no estimates are available, see *Notes on sources of sales data, Estimates of numbers of hand-rolled cigarettes*, p. 49.

Figure 2.3 Sales of manufactured cigarettes. Slovakia.
Average per adult (aged 15 years and over) per day



Source: Table 2.3.

Table 3 Manufactured cigarettes: percentage of total sales as filter cigarettes.
Czechoslovakia, Czech Republic and Slovakia

Year	% Filter	
	Czechoslovakia	
1966	18.0	
1967	26.0	
1968	24.0	
1969	30.4	
1970	36.5	
1971	46.4	
1972	55.6	
1973	65.9	
1974	75.0	
1975	81.3	
1981	90.0	
1982	90.0	
1983	85.1	
1984	86.2	
1985	88.0	
1986	89.0	
1987	100.0	
1988	100.0	
1989	99.0	
1990	98.8	
1991	99.2	
1992	99.3	
	Czech Republic	Slovakia
1993	92.0	100.0
1994	94.0	100.0
1995	94.1	100.0
1996	94.0	100.0
1997	94.0	100.0
1998	94.9	100.0
1999	95.4	
2000	95.2	

Source: see *Notes on sources of sales data: Plain/Filter cigarette sales*, p.50.
There is also limited information in the *Notes on Menthol cigarette sales*, p. 50, *Slim cigarette sales*, p. 50, and *Tar, nicotine and CO machine yields of cigarettes*, p. 50.

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Table 4M Prevalence of smoking, males: selected surveys by age
(continues on p. 24)

Czechoslovakia

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	
73	1	U	R	44																	
73	1	U	A	61																	
82	2	U	U	33																	
84	3	U	U	57																	
90	4	U	U	50																	

Czech Republic

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	9	UC	U	46																	
65	9	A	U	49																	
66	10	UC	*	56 55 50 47 51																	51
66	10	A	*	57 56 52 49 54																	53
66	11	U	U	54																	
66	12	U	U	41																	
69	13	U	U	43																	
71	14	U	U	52																	
71	15	U	U	59																	
72	16	U	U	64																	
72	19	UC	*	58 70 63 57 49 40																	57
72	19	A	*	58 71 64 58 51 46																	59
73	17	U	U	40																	
73	18	U	U	63																	
78	20	UC	U	23 8 6																	
83	21	UC	U	55 50 32																	
85	22	UC	R	55 55 40 33																	44
85	22	UC	A	61 60 43 35																	48
85	22	A	A	61 60 44 37																	48
85	23	UC	R	52 55 41 33																	46
85	24	U	A	37																	
87	25	U	U	23																	
87	26	U	U	59																	
88	22	UC	R	51 48 43 27																	41
88	22	UC	A	54 51 47 29																	44
88	22	A	A	54 51 46 29																	43
88	23	UC	R	50 47 43 26																	42
92	22	UC	R	43 45 42 25																	39
92	22	UC	A	50 49 46 28																	42
92	22	A	A	49 49 45 28																	42
92	23	UC	R	41 46 43 25																	40
92	27	U	U	49																	
92	28	UC	R	47																	
92	29	UC	R	38																	
93	24	U	A	38																	
94	5	U	R	7 16																	
94	24	U	A	51 *																	43
94	30	U	U	31																	
94	31	U	A	43																	
95	7	UC	*	27																	
95	7	UC	A	37																	
95	32	U	U	18 43																	
98	5	A	*	6 16																	
98	5	A	R	10 22																	

Table 4M (continued from p. 21, continues on p. 26)
Prevalence of smoking, males

Czech Republic (continued)

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+
99	7	UC	*				32																		
99	7	UC	A				46																		
02	5	A	*		6		20																		
02	5	A	R		14		29																		
02	42	U	U					49			48			55					38						47
02	44	UC	A			34																			
02	44	A*	A			36																			
02	46	U	R					32			35		41	36		29		13		11	*				32
02	46	U	A					41			46		48	39		33		17		*	*				38
03	7	UC	*				29																		
03	7	UC	A				43																		
03	40	U	R											33											
03	40	U	A											39											
05	42	M	R					17			38		44					26							33
05	42	T	R					16			39		45					26							33
05	42	A	R					16			39		46					27							34
05	42	M	U					23			43		47					29							37
05	42	T	U					23			44		49					30							37
05	42	A	U					23			45		49					30							38
06	5	A	*		4		15																		
06	5	A	R		8		20																		
06	42	M	R					17			34		41					17							29
06	42	T	R					19			34		42					19							30
06	42	A	R					19			34		43					19							30
06	42	M	U					26			39		45					19							33
06	42	T	U					28			39		46					21							34
06	42	A	U					28			40		47					23							35
07	7	UC	*				22																		
07	7	UC	A				34																		
07	44	UC	A			27																			
08	48	T	R					23			36		36		35		30		16		12	*			30
09	42	M	R					28			31		34					19							28
09	42	T	R					35			32		36					21							30
09	42	M	A					38			32		38					21							31
09	42	T	A					38			32		37					21							31
09	42	A	A					46			33		42					22							34
10	5	A	*		6		16																		
10	5	A	R		9		22																		
10	50	T	R											33											
10	50	T	A						22			47		41				17							36
11	7	UC	*				27																		
11	7	UC	A				42																		
11	44	UC	A			28																			
11	44	A*	A			35																			
12	42	M	R					20			47		31					24							32
12	42	T	R					20			49		31					26							33
12	42	A	R					20			49		31					26							33
12	42	M	A					24			48		36					27							35
12	42	T	A					24			49		36					27							35
12	42	A	A					24			50		36					27							36
14	5	A	*		3		8																		
14	5	A	R		4		11																		

Table 4M (continued from p. 24, continues on p. 28)
Prevalence of smoking, males

Slovakia

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
72	33	UC	U	54																			
72	33	A	U	56																			
79	34	U	R																				
79	34	U	A																				
81	35	UC	*	1		2																	
81	35	UC	R	1		2																	
81	36	UC	*				20																
81	36	UC	R				22																
83	37	UC	U	54												*		54					
83	37	A	U	56																			
86	38	UC	R	43																			
91	34	U	R	33																			
91	34	U	A	31					61								*		43				
92	39	U	R	43																			
93	6	U	R		5	19																	
95	8	UC	*				22																
95	8	UC	A				34																
95	34	U	U	39																			
96	38	UC	R				45	59	67	58	54	49	48						55				
98	6	A	*		4	20																	
98	6	A	R		7	28																	
99	8	UC	*				27																
99	8	UC	A				40																
02	43	U	U	48					46	47	24						41						
02	45	UC	*				5																
02	45	UC	A				26																
02	45	A	A				27																
02	47	U	R	23					29	31	34	18	*	*	*			28					
02	47	U	A	33					37	41	40	20	*	*	*			35					
03	8	UC	*				28																
03	8	UC	A				39																
03	41	U	R	25																			
03	41	U	A	32																			
05	43	M	R	31					31	33	19						29						
05	43	T	R	33					33	35	21						31						
05	43	A	R	33					33	35	22						31						
05	43	M	C	37					40	35	22						34						
05	43	T	C	39					41	38	24						36						
05	43	A	U	39					42	39	25						37						
06	6	A	*		4	15																	
06	6	A	R		7	18																	
06	43	M	R	17					33	34	19						27						
06	43	T	C	17					33	34	20						27						
06	43	A	R	17					33	34	20						27						
06	43	M	C	29					37	39	19						32						
06	43	T	C	29					37	39	20						32						
06	43	A	U	29					37	40	21						32						
07	8	UC	*				24																
07	8	UC	A				36																
07	45	UC	R				10																
07	45	UC	A				28																

Table 4F (continued from p. 25, continues on p. 29)
Prevalence of smoking, females

Slovakia

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+
72	33	UC	U																						
72	33	A	U																						
79	34	U	R												18										
79	34	U	A												33										
81	35	UC	*	0			1																		
81	35	UC	R	1			1																		
81	36	UC	*				9																		
81	36	UC	R				12																		
83	37	UC	U																						
83	37	A	U																						
86	38	UC	R												28										
91	34	U	R												16										
91	34	U	A					21			31			33						*					26
92	39	U	R												26										
93	6	U	R		2			5																	
95	8	UC	*				10																		
95	8	UC	A				20																		
95	34	U	U					16				25		27		17									
96	38	UC	R					29			33		32		42		36		29			11			30
98	6	A	*		2			10																	
98	6	A	R		3			18																	
99	8	UC	*				22																		
99	8	UC	A				34																		
02	43	U	U					5				28		35				5							18
02	45	UC	*				3																		
02	45	UC	A				23																		
02	45	A	A				23																		
02	47	U	R					13			10		16		11		8		*		*		*		12
02	47	U	A					27			20		28		17		10		*		*		*		21
03	8	UC	*				23																		
03	8	UC	A				36																		
03	41	U	R												12										
03	41	U	A												19										
05	43	M	R					20			24		17				3								15
05	43	T	R					19			23		18				4								16
05	43	A	R					19			23		18				4								16
05	43	M	U					31			26		20				5								20
05	43	T	U					31			26		21				6								20
05	43	A	U					31			26		21				6								20
06	6	A	*		2			10																	
06	6	A	R		4			15																	
06	43	M	R					13			24		18				5								15
06	43	T	R					13			24		19				5								15
06	43	A	R					13			24		19				5								15
06	43	M	U					20			27		24				6								19
06	43	T	U					20			28		24				6								19
06	43	A	U					20			28		24				6								19
07	8	UC	*				24																		
07	8	UC	A				38																		
07	45	UC	R				7																		
07	45	UC	A				24																		

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

Czechoslovakia: no data

Czech Republic

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
02	46	UC*					3.2				4.7		6.7		6.2		3.5		1.9	*	*	4.2	52%T
03	40	UC*													5.1								51%T
05	42	TC					2.9				6.4		4.2					3.1				4.1	46%T
06	42	TC					5.4				4.5		5.4					2.0				4.1	45%T
08	48	TC*					3.6				3.5		6.3		5.8		4.4		3.2	1.1	*	4.2	60%T
09	42	TC					3.8				5.0		5.2					2.7				4.0	56%T
10	50	TC											3.4										74%T
12	42	TC					3.7				3.2		4.1					2.5				3.2	72%T

Slovakia

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
96	38	UC													4.2								67% ^m
02	47	UC*					4.0				2.7		4.7		3.7		*	*	*	*	*	3.5	39% ^m
03	41	UC*													4.4								32% ^m
05	43	TC					2.6				3.8		2.7					0.5				2.3	65% ^m
06	43	TC					1.6				4.0		2.8					0.6				2.2	54% ^m
09	43	TC					2.5				3.5		2.3					1.4				2.4	63% ^m
09	49	TC*					1.7				2.8		2.7		3.1		2.4	*	*	*	*	2.2	65% ^m
12	43	TC					1.0				3.3		3.9					1.7				2.6	57% ^m

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. 51
 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. 51
 All ages: relates to ages reported; as given in original source
 % Total sales: Adjustment factor used, estimated % of total sales
 of M = manufactured or T = total cigarette consumption implied by survey, sexes combined
 -- = adjusted by original author

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

Czechoslovakia

Year	Source ²	Product ³	Prevalence ⁴				Number of cigarettes							
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		Unadjusted ⁷		Sales-adjusted ⁸			
			M	F	M	F	M	F	Number/ person/day	Total sales %	Manufactured cigarettes number/ person/day		Total cigarettes ⁹ number/ person/day	
						M	F		M	F	M	F		
1973	1	Ur			44	11				(8.8	1.8)			
		Ua			61	29								
1984	3	Uu			57	14				(11.9	2.3)			
1990	4	Uu			50	34				(8.6	4.7)			

Table 8 (continued)

Czech Republic

Year	Source ²	Product ³	Prevalence ⁴				Number of cigarettes							
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		Unadjusted ⁷			Sales-adjusted ⁸		
			M	F	M	F	M	F	Number/ person/day	Total sales %	Manufactured cigarettes/ person/day	Total cigarettes ⁹ person/day		
						M	F		M	F	M	F		
1969	13	U					43	1						
1971	14	U					50							
	15	U					57							
1972/10	19	UC+A			58	14	59	14				(11.3	2.2)	
1973	17	U					40	3						
1992/10	27	U					49	28				(7.4	3.4)	
	28	UC			45	18						(8.2	2.7)	
	29	UC			37	26						(6.9	3.9)	
1993	24	U					38	29				(6.6	4.0)	
1994	24	U					43	31				(8.6	5.0)	
	30	U					31	19				(9.1	4.5)	
	31	U					43	31				(8.6	5.0)	
1995	32	U					42	31				(8.8	5.1)	
2002	42	U					47	26						
	46	UC+U					32	19	4.7	2.1	52		9.1 4.2	
	46	U					38	24						
2003	40	UC+U					33	20	5.2	2.5	51		10.2 5.0	
	40	U					38	25						
2005	42	MC+TC+A	33	19	33	19	34	19	5.1	1.9	46	(10.1	4.7)	11.2 4.2
	42	MC+TC+A	37	25	37	25	38	25						
2006	42	MC+TC+A	28	19	29	19	30	19	4.1	1.8	45	(8.2	4.3)	9.0 3.9
	42	MC+TC+A	32	23	33	23	35	23						
2008	48	TC			30	19			5.1	2.5	60		8.5 4.2	
2009	42	MC+TC	28	17	30	18			4.5	2.2	56	(7.9	3.8)	8.1 4.0
	42	MC+TC+A	31	18	31	18	34	19						
2010	50	TC			33	21			5.7	2.5	74		7.7 3.4	
	50	TC			37	23								
2012	42	MC+TC+A	32	20	33	20	33	20	5.3	2.3	72	(6.3	3.1)	7.4 3.2
	42	MC+TC+A	35	23	35	23	35	23						

Table 8 (continued/2)

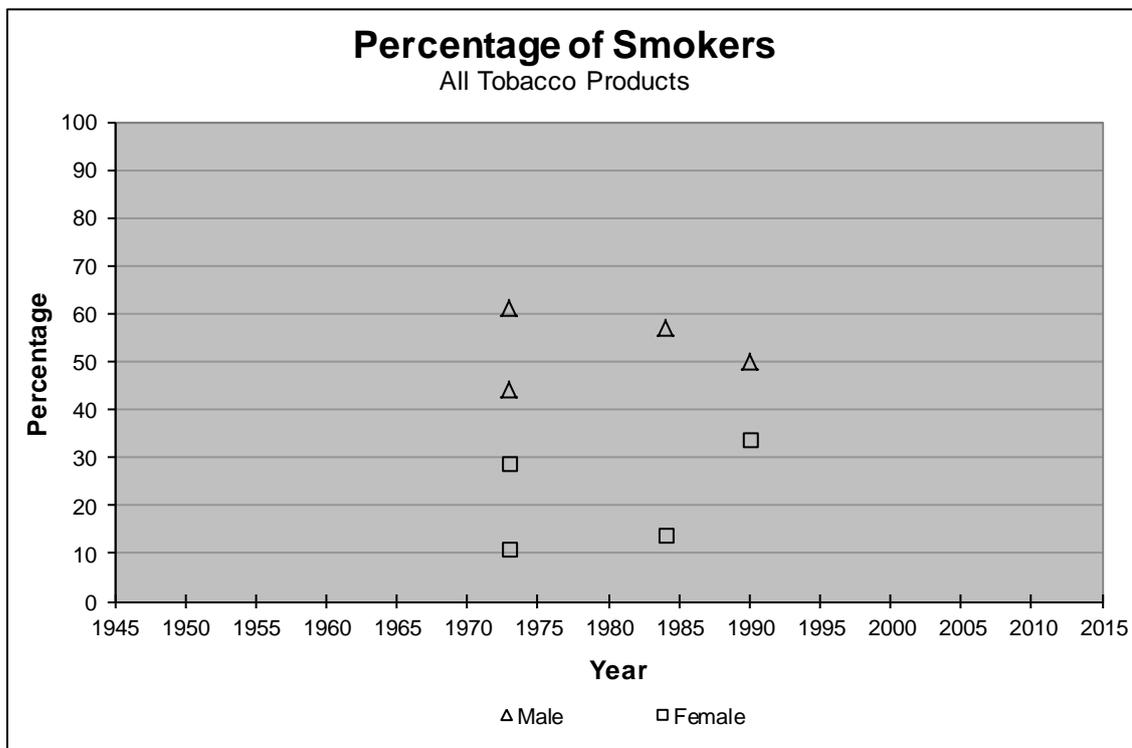
Slovakia

Year	Source ²	Product ³	Prevalence ⁴				Number of cigarettes							
			Manufactured cigarettes		Total cigarettes ⁵		All products ⁶		Unadjusted ⁷			Sales-adjusted ⁸		
			M	F	M	F	M	F	Number/ person/day	Total sales %	Manufactured cigarettes number/ person/day	Total cigarettes ⁹ number/ person/day	M	F
1972	33	<i>UC+A</i>			54		56							
1979	34	<i>U</i>					18							
	34	U					33							
1982	37	<i>UC</i>						12.2						
1983	37	<i>UC+A</i>			54		56							
1986	38	<i>UC</i>			43	28					(8.1	4.2)		
1991/10	34	<i>U</i>					33	16			(8.2	3.2)		
	34	U					43	26						
1992/10	39	<i>U</i>					43	26			(9.0	4.4)		
1996	38	<i>UC</i>			55	29			7.3	2.8	67	10.8	4.2	
2002	43	<i>U</i>					42	19			(11.6	4.1)		
	47	<i>UC+U</i>					28	12	4.7	1.4	39	12.2	3.5	
	47	U					35	21						
2003	41	<i>UC+U</i>					25	12	3.5	1.4	32	11.0	4.5	
	41	U					32	19						
2005/10	43	<i>MC+TC+A</i>	29	15	31	15	31	15	4.2	1.5	65	6.4	2.3	
	43	<i>MC+TC+A</i>	34	19	36	19	37	19						
2006	43	<i>MC+TC+A</i>	27	15	27	15	27	15	3.5	1.2	54	6.5	2.2	
	43	<i>MC+TC+A</i>	32	18	32	19	32	19						
2009	43	<i>MC+TC</i>	26	12	29	14			4.3	1.5	63	6.9	2.4	
	43	MC+TC+A	30	15	29	14	35	17						
	49	<i>TC</i>			27	12			4.6	1.4	65	7.1	2.2	
2012/11	43	<i>MC+TC+A</i>	27	14	27	14	27	14	3.4	1.5	57	5.9	2.6	
	43	MC+TC+A	30	16	30	16	30	17						

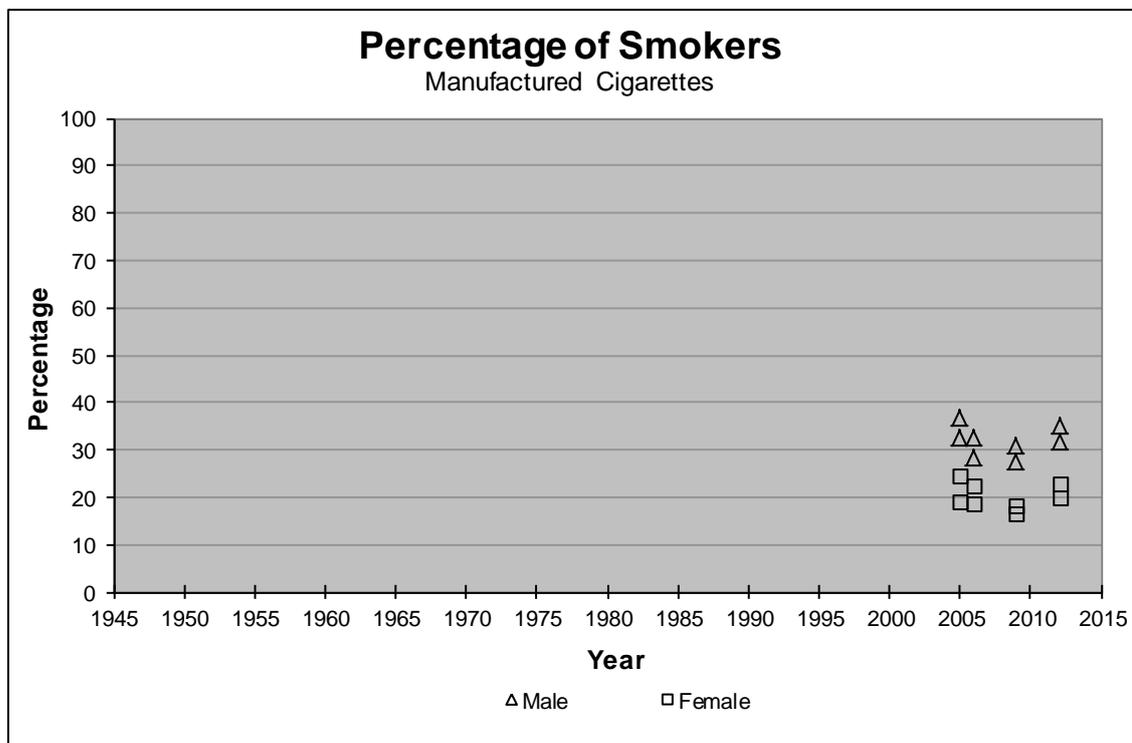
- 1 Surveys covering an age range of at least 21-64 are included. Any gaps in the data for ages 15-20 and 65 years and over are filled in by assumed extensions to the age distribution, shown in the extended versions of Tables 4 and 6 in the Excel tables workbook. Method: see *Summary of adult smoking*, 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. 51.
- 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 As no estimates of hand-rolled cigarettes are available until 1997 (Czech Republic only), all sales-adjustment prior to that year, and for all years for Slovakia, is to manufactured cigarettes. For Czech Republic for 1997 onwards, number of cigarettes classified as UC = cigarettes (type unspecified) has been adjusted to total cigarette sales and included in this column.
- 10 Sales-adjustment calculations based on sales data from nearest available year.
- 11 Calculations based on 2010 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

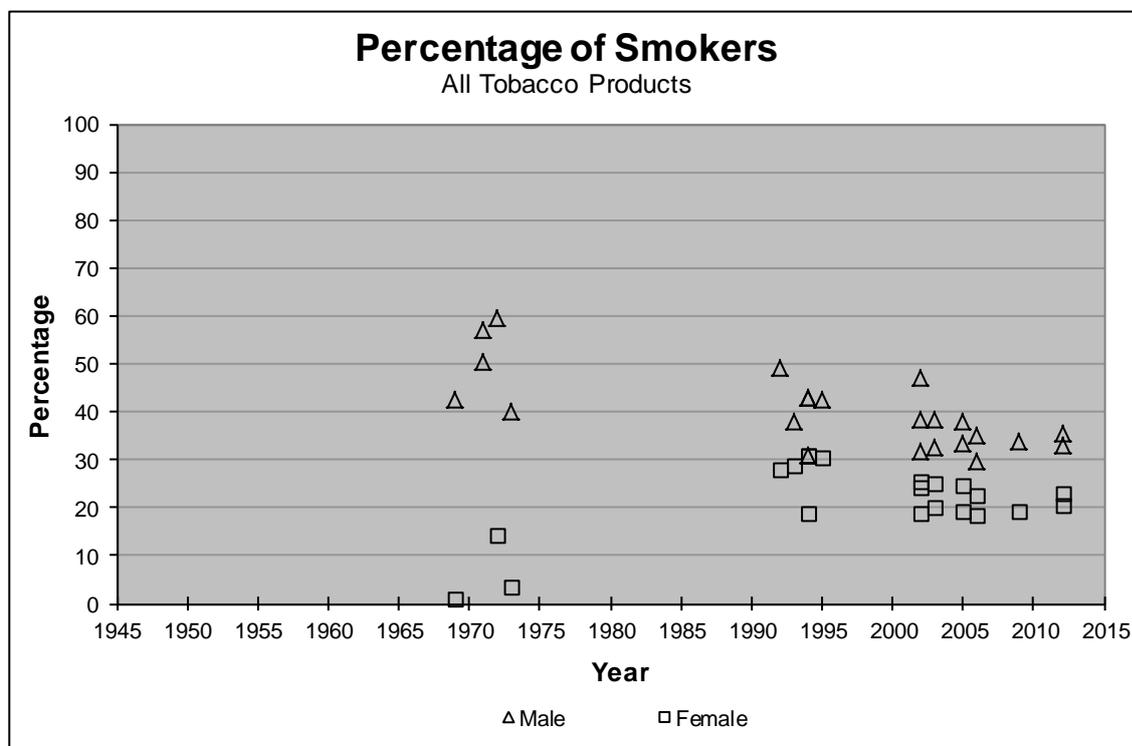
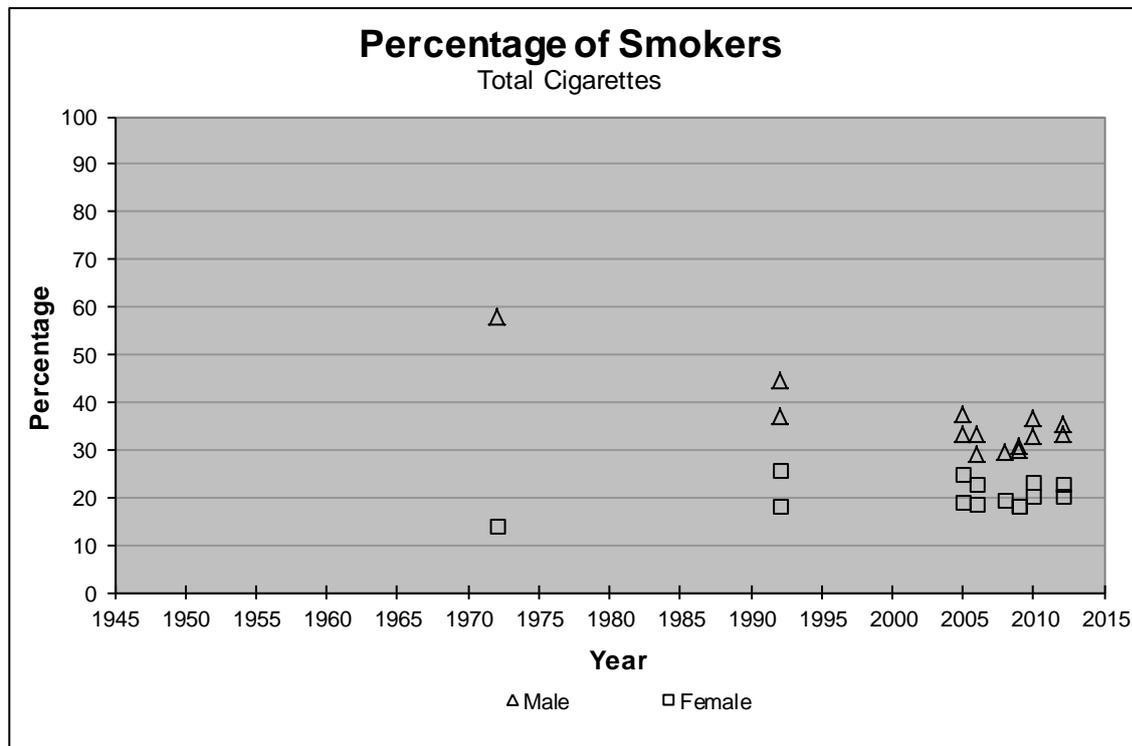
Czechoslovakia



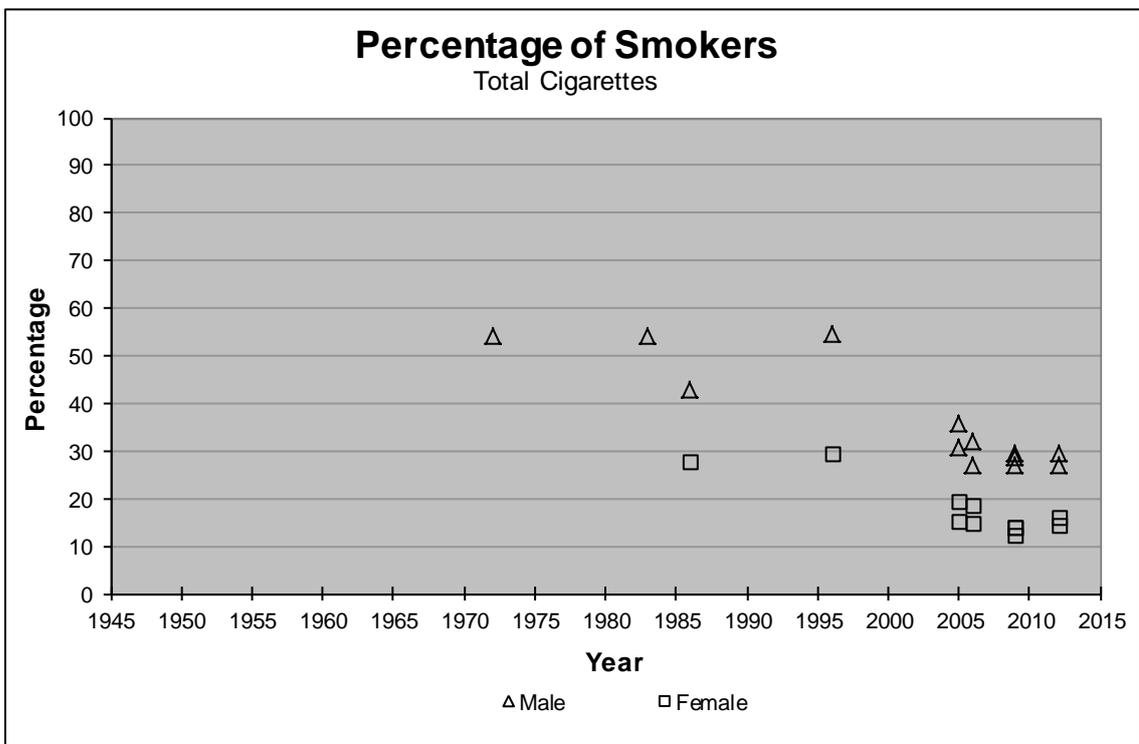
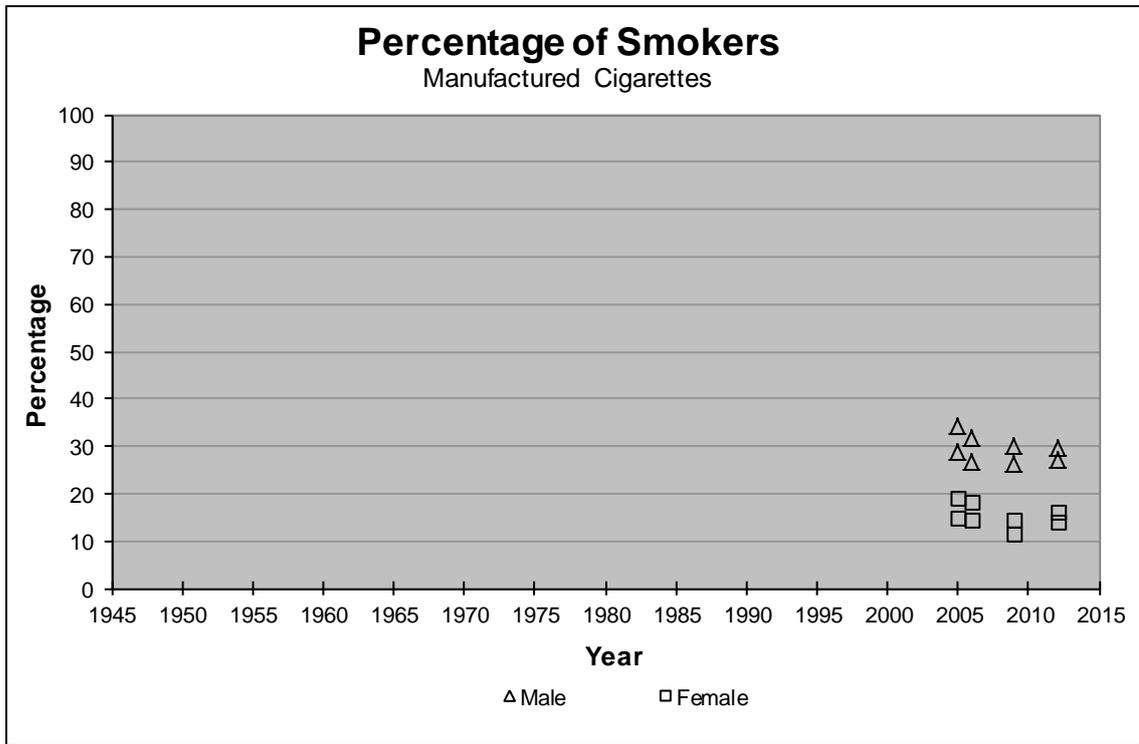
Czech Republic



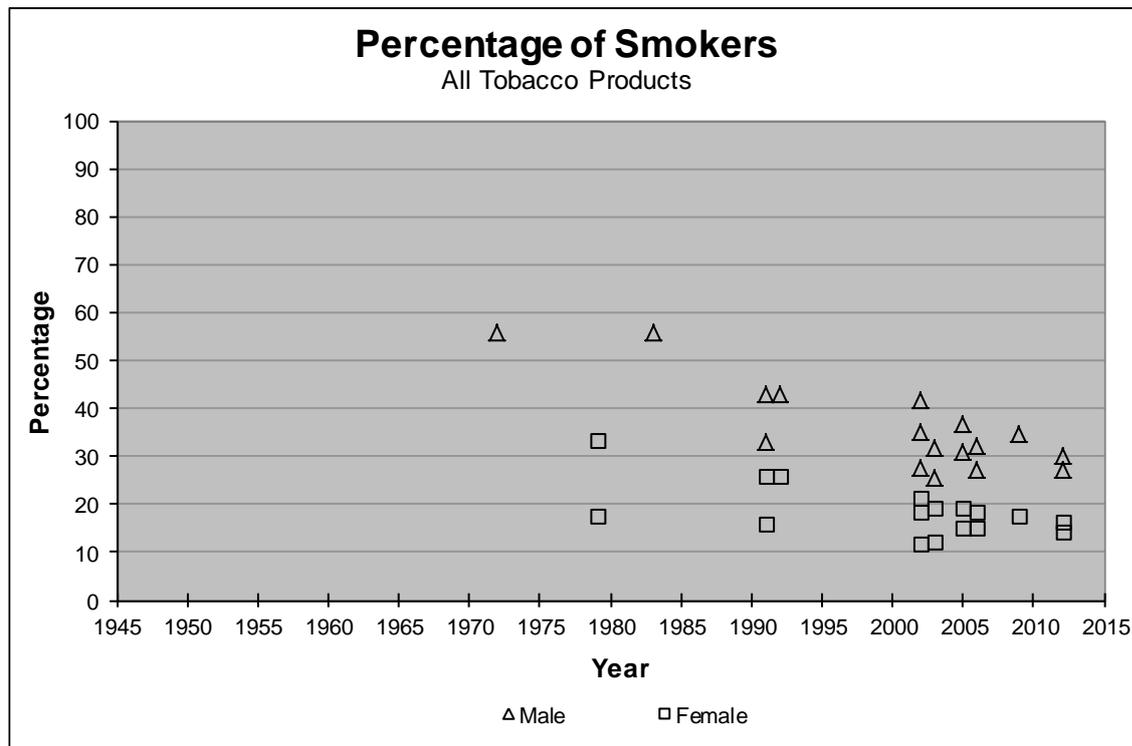
Czech Republic (continued)



Slovakia



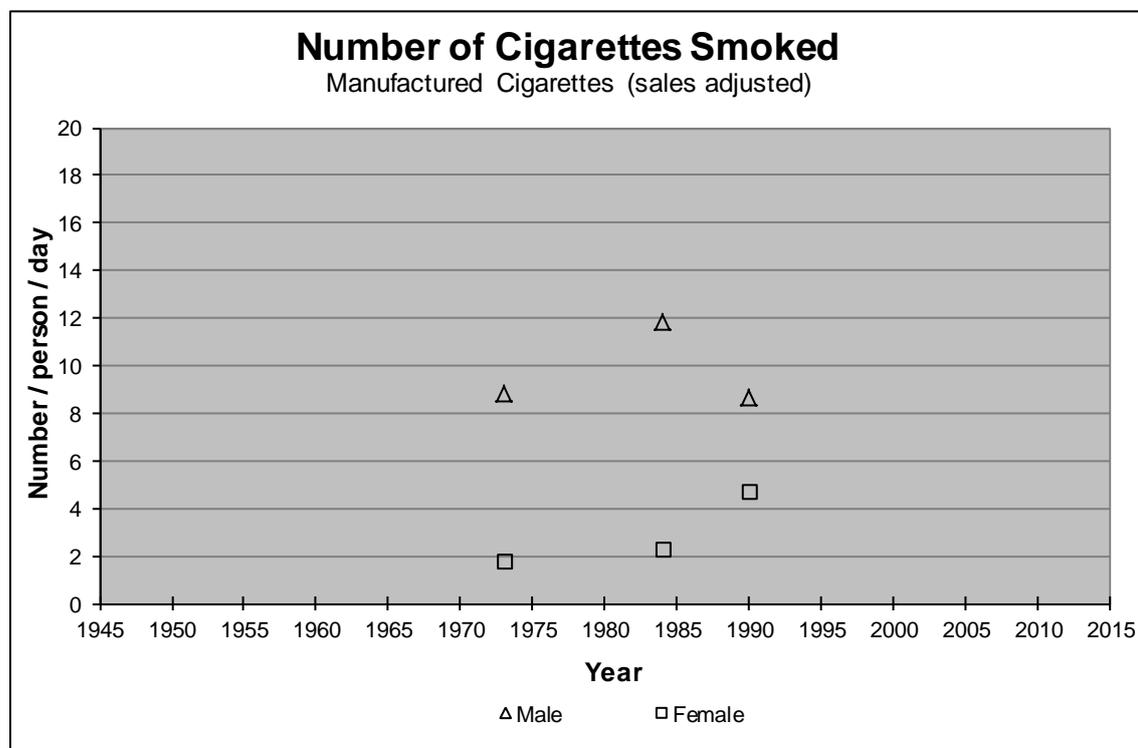
Slovakia (continued)



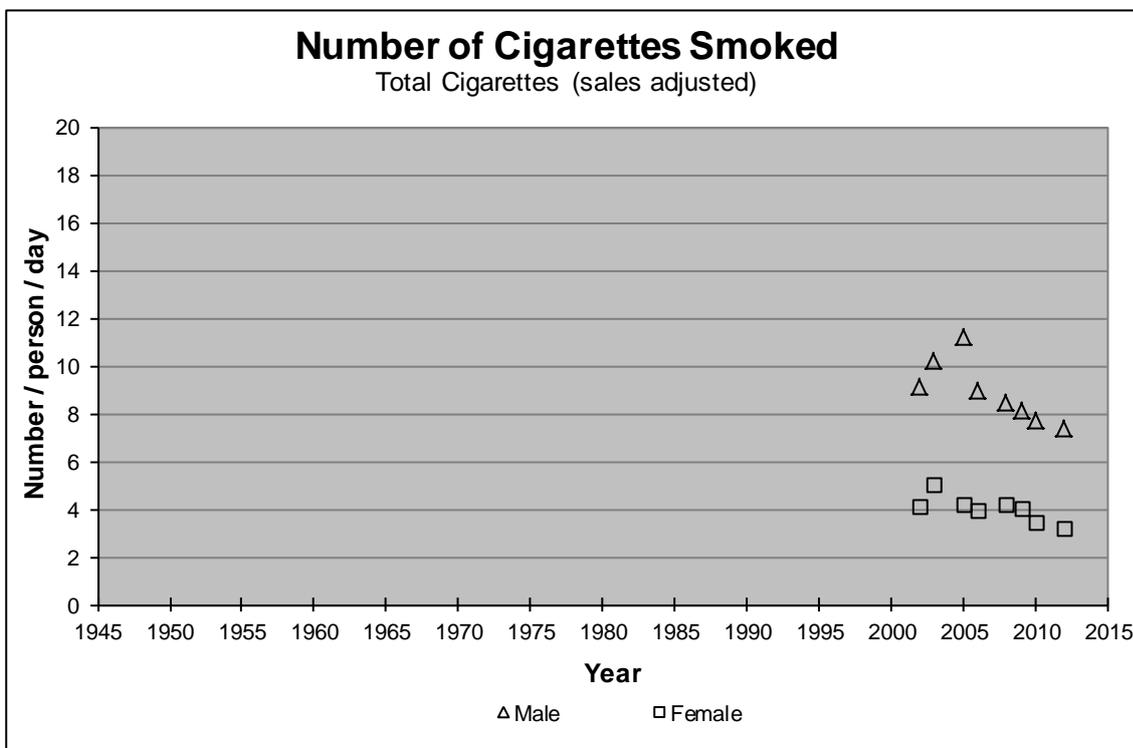
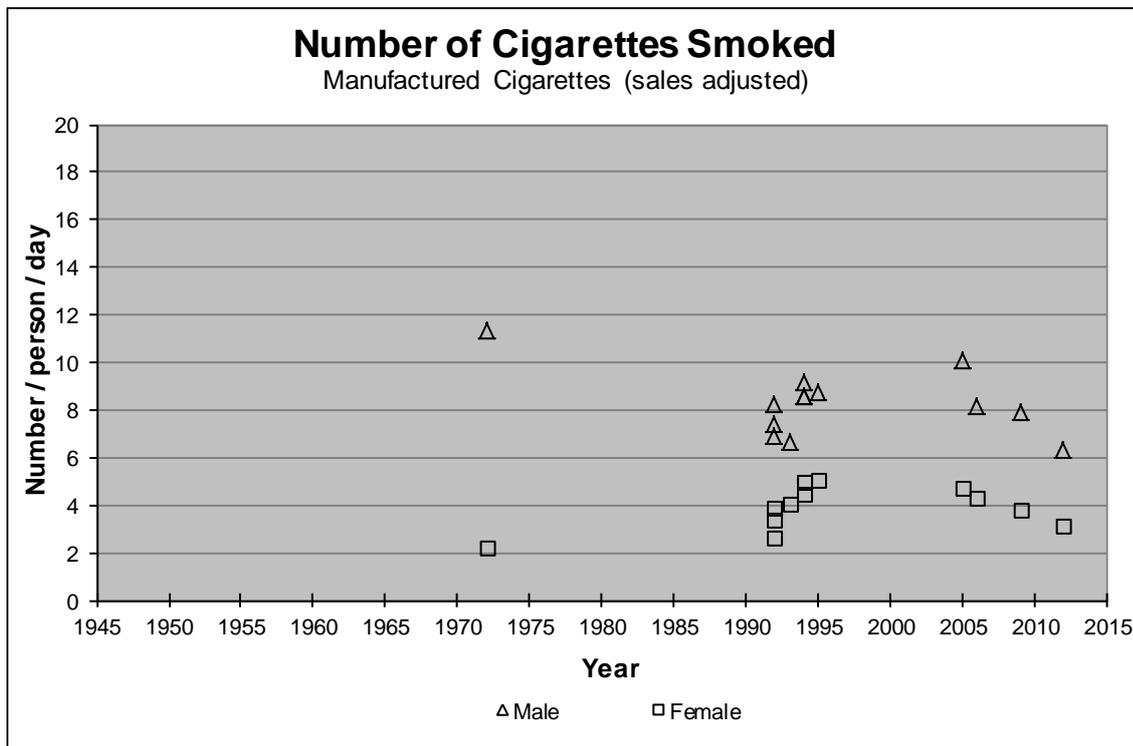
Source: Table 8.
See also customisable version of Figure 3 in the Excel workbook.

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

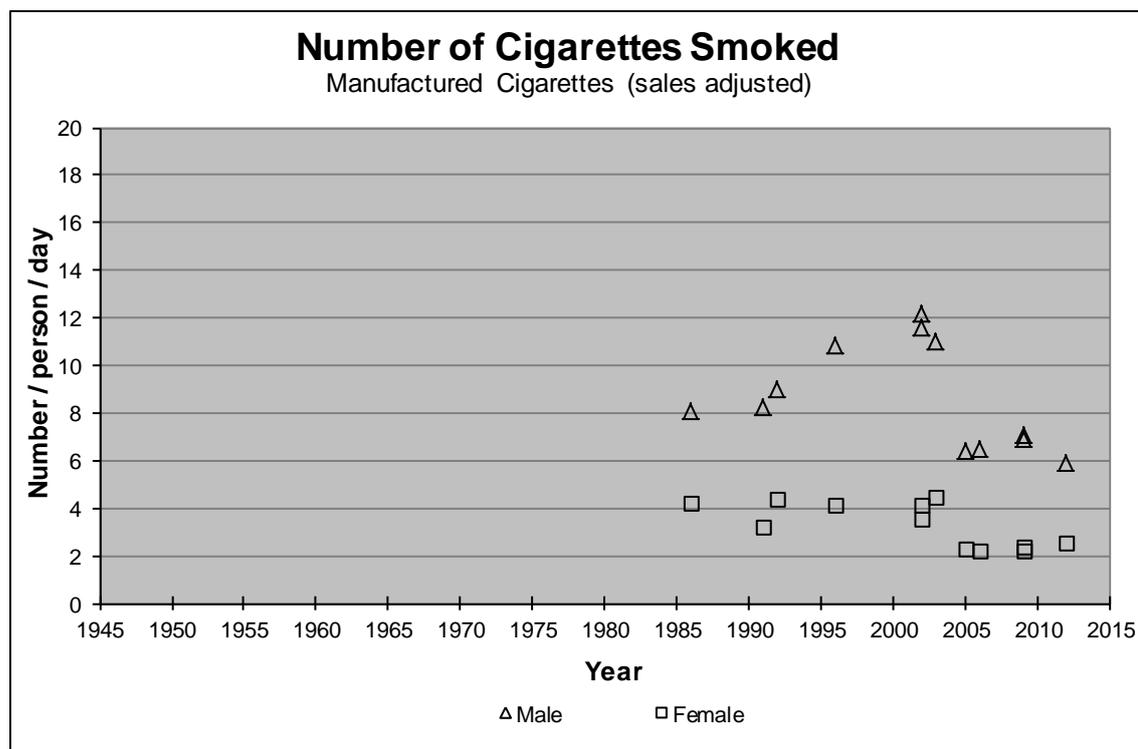
Czechoslovakia



Czech Republic



Slovakia



Source: Table 8.

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. 58 under *References*.

This chapter covers Czechoslovakia up to 1992, and its successor countries Czech Republic and Slovakia thereafter. Some data for the separate republics before that date, or for the combined countries after that date are included if provided by the original data sources. The sales data have been fully updated for this edition.

Consumption data to 1934

1923-1934: Hutson (1937)
Table 1.1

These data refer to consumption. Data were originally given to the nearest 1 000 pounds. They have been converted to tonnes (1 000 lbs = 0.45359 tonnes) and given to the nearest tonne. For conversion from weights to numbers we assumed an average cigarette weight of 1 g.

Consumption and production data 1937-1996

Cigarettes before 1960, and other products: Federální Statistický Úřad (Federal Statistical Office) (1985, 1990)

Cigarettes 1960-1996: US Department of Agriculture (USDA) Economic Research Service (1996), USDA (2005)

See Tables 1.2 (Czechoslovakia), 1.3 (Czech Republic) and 1.4 (Slovakia)

The data from USDA refer to production for 1960-1980 and thereafter to consumption, calculated as production plus imports minus exports. Those from Federální Statistický Úřad refer to production. Data before 1981 for cigarette production are probably close to consumption as Hutson, writing in 1937, noted that there was “no export trade of importance... [and imports] ... are kept within reasonable bounds by an import duty ... plus ... tax, applied when imports are made by any agent other than the monopoly”.

As consumption data for products other than cigarettes are not available after 1934, we have included production figures for Czechoslovakia for 1983-1989 in Table 1.2. The production was shown as being wholly in Slovakia, but we have not included the data in Tables 1.3-1.4 as there is no indication where consumption occurred.

Data for cigarettes and cigars were given as numbers. For conversion to weight, we have used the standard assumption of 1g per cigarette, and have arbitrarily assumed 3g per cigar. No information on smokeless tobacco is available, and it has been ignored in the calculation of total tobacco.

Estimates based on per-capita data from the Federal and Czech Statistical Offices are shown in the text table below for selected years 1980-1995, for comparison with the USDA series. (Later years from this series are shown in Table 1.3, see *Consumption data for 1997 onwards, Czech Republic*, p. 47 for details of sources):

Year	Cigarette consumption, millions	
	Czech Republic	Slovakia
1980	19 170	9 261
1985	19 409	8 522
1990	22 290	8 626
1995	22 573	

Consumption data for 1997 onwards, Czech Republic

Cigarettes, official estimates: Český Statistický Úřad (Czech Statistical Office) (2003, 2010, 2014, 2015)

Manufactured cigarettes, alternative estimates: KPMG (2013, 2015)

Cigars: Bundesverband der Zigarrenindustrie (2011, 2013)

Smoking tobacco:

1997: Coresta task force on roll-your-own (fine cut) tobacco (1999)

2003-2012: KPMG (2012, 2013)

See Table 1.3.

Data for cigarettes and cigars were given in numbers. For conversion to weight, we have used the standard assumption of 1g per cigarette, and have arbitrarily assumed 3g per cigar.

The official cigarette estimates were provided on a per capita basis, from which we estimated the total consumption. Up to 2010, the basis of the estimates was not defined, and they are assumed to refer to manufactured cigarettes. From 2011, they are stated to include home produced (assumed to mean hand-rolled) cigarettes.

The alternative estimates of manufactured cigarettes shown in Table 1.3 refer to legal sales, and to total consumption taking into account outflows, legal cross border purchases, and counterfeit and contraband. KPMG (2015) commented that outflows, predominantly to Germany, are a large proportion of legal sales, and that there have been large fluctuations in these outflows in recent years. The data for cigarettes (but not smoking tobacco – see below) were adjusted (by KPMG) to smooth out a peak in sales at the end of 2007 ahead of an excise tax increase at the start of 2008 (KPMG (2011)).

USDA (2005) also provided cigarette consumption data for 1997-2004 (not shown); the figures for 1997-2000 were similar to the official estimates, while those for 2001-2004 were identical to the 2000 figure.

Data on smoking tobacco were given as tonnes in 1997, and as cigarette equivalents thereafter; for 2003-2011 the source data were based on an assumption of 0.75 g per stick (KPMG (2012)), with data for 2012 based on an assumption of 0.6 g per RYO (roll-your-own) cigarette or 0.73 g per MYO (make-your-own) cigarette (KPMG (2013)). We used a conversion factor of 0.73 g to convert back to tonnes, based on an average for the preceding years.

No data on smoking tobacco are available for earlier years, and for later years the available information is conflicting. In 2001, Czech News Agency quoting Reemstma International Praha reported that many smokers smoked hand-rolled cigarettes due to the lower excise on pipe tobacco than on cigarettes, and that the price differential continued despite an increase in the excise rate for pipe tobacco in mid-2001. The following year, CTK Business News reported that pipe tobacco, used to make hand-rolled cigarettes, made up around 20% of Czech cigarette sales around that time. Elsewhere, commenting on 2006 sales data, Prague Daily Monitor (2007) reported that until 3 years previously, smoking tobacco had made up a negligible proportion of overall tobacco sales. However Euromonitor International (2015d) reported that smoking hand-rolled cigarettes has a long tradition in the Czech Republic.

Euromonitor International (2015b) noted that there is no culture of smokeless tobacco usage in Czech Republic and that sales are negligible. We have ignored it in the calculation of total tobacco.

In Table 2.2 and Figure 2.2, we use the official estimates of manufactured cigarettes to 2005; although, as described above, these figures include hand-rolled cigarettes from at least 2010, their number then is assumed to have been small. We use the KPMG estimates of total consumption from 2006. The apparent drop in cigarette consumption at that time is largely an artefact of the change in source. For the calculation of total tobacco, we have used the KPMG estimates of total consumption for 2006 onwards, to avoid double-counting the hand-rolled cigarettes.

Consumption data for 1997 onwards, Slovakia

Cigarettes:

Consumption

1997-2004: USDA (2005)

2006-2014: KPMG (2013, 2015)

Legal sales

1997-2014: KPMG (2013, 2015)

Cigars: Bundesverband der Zigarrenindustrie (2011, 2013)

See Table 1.4

All data were given in numbers. For 1999-2004, all USDA figures (for cigarette consumption, as shown in italics in Table 1.4, and also for other measures not shown) are identical to the 1998 figures, and should be regarded with caution.

Two sets of data from KPMG are shown in Table 1.4 for cigarettes. The first, for 2006-2014, refers to total domestic consumption (i.e. legal domestic sales adjusted to allow for estimated legal cross-border purchases, and counterfeit and contraband), and these are used in subsequent Tables and Figures. The alternative estimates, for 1997-2014, refer to legal domestic sales. SITA (2001) commented that sales in 1999 were inflated ahead of a tax increase at the start of 2000.

KPMG (2011) stated that a robust source of legal sales of smoking tobacco in Slovakia was not available, but that such sales made up less than 5% of total sales of tobacco products in 2008. However Euromonitor International (2015c, 2015a) noted that RYO smoking and pipe tobacco usage have a long tradition in Slovakia, while there is no tradition of smokeless tobacco use, and no retail sales. We have not attempted to estimate total tobacco.

Estimates of smuggling and cross-border sales

The table below summarises estimates of the market share (%) of non-legal sales of cigarettes as a proportion of total cigarette sales for the whole of the Czech Republic and Slovakia. The sources and basis of the percentages are described below the table.

Source:	Czech Republic							Slovakia								
	1	3	7	8	9	10	11	1	2	4	5	6	7	8	9	10
1995	7							3								
2000-4									25-49.9							
2001		5								10						
2003											15					
2004												16-40				
2006			20	0.3									1.7	4.5		
2007				0.3										1.7		
2008				6.5										5.3		
2009				5.8										1.0		
2010				5.5	10	9.1								1.3	15	18.6
2011				3.6										0.7		
2012				2.2										0.8		
2013				3.1										1.7		
2014				3.1										0.9		
2015							4.6									

Sources:

- Merriman *et al* (2000) quoting World Tobacco File (1994). Smuggling, as % of sales. However around the same time, Honzátková (1995) stated that for Slovakia it is possible to assume that cigarette consumption is much higher [than the official figure of 1 600 pieces per capita per year] due to uncontrolled imports of cheap high-tar cigarettes from other countries.
- Mackay *et al* (2006) quoting ERC (2004), Slovakia was shown as in a category of 25-49.9% but no detail given. Smuggled cigarettes, as % of total sales
- Interfax (2001). Smuggling, as % of sales.
- SITA (2001). Smuggled cigarettes, as % of legal sales.
- SITA (2003) quoting Tobacco Producer Association. Illegal cigarettes, as approximate % of overall cigarette sales. In some regions, especially in the east of the country, the percentage may be as high as 50%.

- 6 SITA (2004) quoting tobacco manufacturers. Smuggled cigarettes as % of market. In eastern Slovakia the proportion was 56%. At the same time, USDA (2004) reported that the sale of smuggled cigarettes was growing, and their selling price was half that of legally sold cigarettes.
- 7 Shafey *et al* (2009). Czech Republic: quoting ERC (2007). Smuggling, as % of overall consumption. Slovakia: quoting Euromonitor International (2007). Smuggling, as % of legal sales.
- 8 KPMG (2013, 2015). The share of total cigarette consumption that is counterfeit or contraband, based on KPMG's EU Flow Model and manufacturers' data.
- 9 Eriksen *et al* (2012) quoting ERC (2010). Illicit cigarettes, as % of total cigarette market.
- 10 Gilmore *et al* (2014) quoting Euromonitor International (2013). Illicit cigarette trade volume as % total volume. Gilmore *et al* (2014) noted that concerns have been raised by Skafida *et al* (2014) and Blecher *et al* (2015) about the quality of Euromonitor data on illicit trade.
- 11 CIA - Daily News (2016). Illegal cigarettes, as % of the market.

CTK Business News (2003) reported that, prior to joining the EU, the sale of forged cigarettes in borderland open-air markets was a particular problem in the Czech Republic with counterfeit products accounting for up to 95% of all cigarettes sold in those areas.

It was estimated that some 0.15 billion (1.1%) of the cigarettes consumed in the Czech Republic in 2014 were "illicit whites" (defined as brands manufactured legally, usually outside the EU, and smuggled into another market where they have limited or no legal distribution and are sold without payment of tax), up from 0.09 billion in 2013. It is also believed that untaxed, unbranded green leaf tobacco has also recently become available, although there are no official consumption estimates. In Slovakia, illicit white consumption stood at 0.10 billion cigarettes (1.5% of the total cigarettes consumed) in 2014, up from 0.04 billion in 2012 (KPMG (2013, 2015)).

Some Eurobarometer surveys enquired about contact with smuggled cigarettes and cross border purchasing. In 2008, 3.9% of Czech respondents had, in the previous 6 months, often seen cigarettes being sold that they thought were smuggled, with a further 8.9% seeing them occasionally (Gallup Organisation Hungary (2009)). In Slovakia, 5.2% of respondents had often seen smuggled cigarettes and 15.1% had seen them occasionally. In 2012, 7% of Czechs and 9% of Slovaks reported having purchased tobacco products abroad in the previous year (European Commission (2012)).

The Czech Republic participated in a multinational survey in 2010 by PPACTE, reported by Gallus *et al* (2012) and Joossens *et al* (2014). The Czech sample size was 1 000, of which 290 were current smokers who reported their sources of cigarettes bought in the previous 30 days (as percentages of the total number bought), summarised as follows:

Source	Proportion of cigarettes bought (%)	
	Smokers aged 15-24	All smokers
Legal shops	74.3	76.6
Vending machines	2.9	2.9
Internet	1.6	0.2
Other countries/duty free	0.4	1.5
Smuggled (markets, door-to-door sellers etc.)	9.9	11.2
Offered by peers	11.0	7.6

34.4% of current smokers reported having bought smuggled cigarettes (more than 1% of their total purchasing) in the previous 30 days. Participants were asked to show their most recently bought pack. 10.0% of packs were 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).

KPMG (2013) estimated that legal non-domestic sales, i.e. cross-border and duty-free sales, made up only around 1% of total sales in the Czech Republic, and 1% - 3.6% of total sales in Slovakia, during 2006-2012.

Estimates of numbers of hand-rolled cigarettes

The estimates shown in Table 2.2 for the Czech Republic for 2003 onwards were made by KPMG (2012, 2013). For 2003-2011 these were based on an assumption of 0.75g per stick (KPMG (2012)). For 2012 they were based on an assumption of 0.6g per RYO cigarette or 0.73g per MYO cigarette (KPMG (2013)); the proportions of each type were not stated, but data for 2006-2011 on the same basis (not shown) imply that RYO were the main type. These assumptions are generic and not specific to the Czech Republic.

For 1997, we followed KPMG (2012) and used a factor of 0.75g, and assumed that all smoking tobacco was used as hand-rolled cigarettes.

Český Statistický Úřad (Czech Statistical Office) (2015) assumed a weight of 0.56g per home produced cigarette.

We have not made any estimates of hand-rolled cigarette consumption for Slovakia. As mentioned above, a tradition of hand-rolled smoking was noted by Euromonitor International (2015c, 2015a) but no consumption data are available.

Plain/Filter cigarette sales

1966-1975: Maxwell (Successive years)

1981 onwards: USDA (2005)

See Table 3.

For 1981 onwards the data represent percentages of production rather than of sales. For Czech Republic from 2000, and for Slovakia from 1999, data given by USDA were identical to the preceding year.

Menthol cigarette sales

Around 1999-2001, menthol cigarettes accounted for 4.9% of the total cigarette market in the Czech Republic (Giovino *et al* (2004) quoting ERC Group PLC (1999, 2001)). By 2010, this had dropped to 2.6% of market share (Oxford Economics (2012)), and by 2012 it had reduced further, to 2% (KPMG (2013)).

In 2010, menthol cigarettes accounted for 0.5% of cigarette sales in Slovakia (Oxford Economics (2012)). By 2012, market share was still below 1% (KPMG (2013)).

Slim cigarette sales

In 2012, slim cigarettes accounted for 12% of cigarette sales in the Czech Republic and 7% of cigarettes sales in Slovakia (KPMG (2013)).

Tar, nicotine and CO machine yields of cigarettes

No data on sales-weighted machine yields are available.

World Health Organization (1997) reported that the tar content of cigarettes decreased from 20 mg to 16 mg in 1993, while the average nicotine content was about 1 mg, although no details of the methodology was given. Kubík *et al* (1993) quoted data published by the Czech Tobacco Industry in 1991, giving the range of tar yields of 14 types of cigarettes as 16-27 mg (mean 20.8 mg).

Franceschi and Naett (1995) reported that in the Czech Republic, in the previous 2 years (presumably 1993 and 1994), the tar levels in full flavour cigarettes had dropped from between 22 and 23 mg to 16 mg and light products had between 10 and 12 mg of tar.

During the years 2000-2003 in the Czech Republic and 2002-2003 in Slovakia, ultra-light cigarettes (1-3 mg tar) held less than 1% of market share in both countries (Philip Morris International (2004)). See also Table xiv in *Comparisons between countries* chapter.)

Since joining the EU in 2004, the Czech Republic and Slovakia have implemented 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 (ASPECT (Analysis of the Science and Policy for European Control of Tobacco) Consortium (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. 58 under *References*.

As mentioned in the introduction, the survey data in this chapter are largely reproduced from the 2nd (print) edition, which covered the years up to 1995, subject to a few amendments for consistency with the Web edition, most notably using more recently published material for sources 22-23 (MONICA). For the subsequent years, only certain multinational surveys have been added (extending sources 5-8, and adding sources 40-49). No searches for country-specific sources or surveys were undertaken.

Source number

- 1 Svobodová (1975) quoting J Vrchota (no details)**
 - a. Representative study of Czechoslovak population, carried out in 1963 and then at 5-yearly intervals. Only results from latest (1973) available.
- 2 Geizerova and Masironi (1988)**
 - a. Czechoslovakia. No original source given.
- 3 Masironi and Rothwell (1988)**
 - a. Czechoslovakia. No original source, age group not stated.
- 4 Zatonski (1991)**
 - a. Estimates for Czechoslovakia by Institute of Health Education, Prague. Age group not stated. Year not stated: 1990 assumed.
- 5-6 King *et al* (1996), Currie *et al* (2000, 2004, 2008, 2012), Inchley *et al* (2016)**
 - 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.

		Mean age		Sample size	
		Target age 13	Target age 15	Target age 13	Target age 15
5 Czech Republic	1994	14.0	16.0	1 290	1 201
	1998	13.4	15.3	1 290	1 229
	2002	13.5	15.4	1 661	1 660
	2006	13.4	15.4	1 601	1 665
	2010	13.5	15.4	1 456	1 522
	2014	13.4	15.4	1 721	1 760
6 Slovakia	1993	13.7	15.6	1 352	934
	1998	13.4	15.2	1 543	843
	2006*	13.4	15.3	1 327	1 252
	2010	13.5	15.3	1 940	1 914
	2014	13.5	15.3	2 407	1 835

* Dates of fieldwork not stated

- b. Number of cigarettes per smoker per day (Table 5, 1998 only) is derived from the median number smoked per week.
- c. Results for the 2001-2002 wave for Slovakia are not available from the international report as the sample size was considered too small.
- d. Smokers marked as frequency *: smoked daily. Regular smokers: smoked once a week or more. All smokers: includes those smoking less than once a week.

7-8 Hibell *et al* (1997, 2000, 2004, 2009, 2012), Andersson *et al* (2007)

- a. Nationally representative surveys forming part of ESPAD (European School Survey Project on Alcohol and Other Drugs). In the Czech Republic (source 7), survey of pupils in secondary and vocational school grade 2 (1995), grades 1-3 (1997), grade 1 (2003), grades 9 and 1 (2007, 2011), selecting those born within a target year, thus age 15-16 at the time of the survey. At least 90% of 15-16 year-olds were still in school in each survey year, with at least 68% in the surveyed grade. Anonymous questionnaire completed and sealed in an envelope by the pupil, in class. The survey was administered by research assistants with teachers usually choosing to leave. In Slovakia (source 8), methods were similar with all secondary school grades (1-4) surveyed (also primary grade 9 in 2007 and 2011), 95% still in school and at least 95% in the survey grades except in 2007 when it was only 67%. Teachers were not present.

	Date	Sample size		Participation rate (%)			Target year of birth	Average age
		Males	Females	Schools	Classes	Pupils		
7 Czech Republic	Apr 1995	1 626	1 336	-	100	90	1979	-
	May-Jun 1999	- 3 579 -		99	99	81	1983	15.4
	Apr 2003	1 472	1 723	100	100	95	1987	15.7
	Mar-Apr 2007	1 852	2 049	100	100	89	1991	15.7
	May-Jun 2011	1 906	2 007	99	98	89	1995	15.8
8 Slovakia	Apr 1995	1 262	1 114	-	99	96	1979	-
	Mar 1999	1 149	1 293	100	100	91	1983	15.2*
	Mar 2003	1 056	1 220	99	97	87	1987	15.7
	Mar 2007	1 218	1 250	99	100	89	1991	15.7
	Apr 2011	1 004	1 005	100	100	82	1995	15.8

* as given by Hibell *et al* (2000), although the 2004 report said that ages as given in the 2000 report were systematically 0.5 years too low.

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

9 Boudik *et al* (1970)

- a. Study of all men (excluding those with active pulmonary tuberculosis) aged 50-65 on election list of Prague 2, a district in central Prague with predominantly manual workers. Nov 1964-July 1965. Sample size 8 292, response rate 73%.

10 Kubík *et al* (1970)

- a. Baseline of prospective study of lung cancer, in Kolín, an industrial and agricultural district 50 km east of Prague. Sept 1965-Jan 1967. Results are restricted to those with normal photofluorogram.
b. Cigarette smokers: current regular cigarette smokers who have smoked at least 1 000 cigarettes, including the 'very few' mixed smokers (cigarette + pipe/cigar), and those who had given up less than 6 months ago. All smokers: additionally includes all smokers (current and ex) of pipe/cigars only.

11-18 Novák *et al* (1975)

- a. Review of regional studies of chronic bronchitis over 10 years. The studies covered the whole population or representative samples:

	Location	Period	Sample size	
			Males	Females
11	Brno (urban)	1966	2 736	
12	Brno (urban)	1966-1967	801	4 491
13	Blansko	1969-1970	4 968	5 671
14	Prague 7	1970-1972	3 520	
15	Zatec	1970-1972	1 296	
16	Kutná Hora (urban)	1972-1973	1 783	1 947
17	Brno (rural)	1973-1974	2 221	2 506
18	Ostrava	1973-1974	2 097	

- c. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

19 Kubík (1984)

- a. Study in Kolín. Results are restricted to those with normal photofluorogram.
- b. Cigarette smokers: current regular cigarette smokers who have smoked at least 3 cigarettes per day for at least a year (i.e. 1 000 cigarettes), and those who had given up less than 6 months ago. All smokers: additionally includes all smokers (current and ex) of pipe/cigars only.

20 Ždichynec (1980)

- a. Study conducted in Semily, Eastern Bohemia, a mountainous industrial-agricultural area with a high population of very elderly people. Sampling based on Social Security and Municipal records.

Age	Target (% of population)	Sample size		Response rate (%)
		Males	Females	
70-79	12.5	253	327	77
80-89	33.3	283	651	82
90+	100	24	68	66

Sample sizes not available for the younger groups. Year not stated.

- b. Results shown in the 80+ column in Table 4 are for 80-89-year-olds. There were no smokers aged 90+.

21 Kozák (1986)

- a. A study carried out in seven districts representing the population of CSR (Czech Socialist Republic) within the framework of the Integrated Programme for the Prevention of Non-Infectious Diseases (IPP). Sample size (males) 1 054 and (females) 999.
- b. Consumption category estimation based on 1-10, 11-20, 21+ cigarettes/smoker/day.

22-23 Tolonen *et al* (2000), Kuulasmaa *et al* (1998), Wolf *et al* (1998), Molarius *et al* (1999), Škodová *et al* (1991, 1993)

- a. Surveys using interviewer-administered questionnaires carried out in three phases, forming part of WHO MONICA Project. Carried out in 6 districts of the Czech Republic (Prague-East, Cheb, Chrudim, Jindřichův Hradec, Benešov and Pardubice).

Phase	Participation rate (%)		Sample used*		Date
	Males	Females	Males	Females	
1	84	87	1 248	1 307	Mar 1985-Nov 1985
2	85	87	1 357	1 412	Mar 1988-Nov 1989
3	76	79	1 140	1 210	Mar 1992-Dec 1992

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

- b. Results shown as source **22** are taken from Tolonen *et al* (2000); *All ages* column relates only to age 35-64 and is standardized to world population. Results shown as source **23** are taken from Škodová *et al* (1991, 1993); *All ages* column relates to age 25-64 and is standardized to the Czechoslovak (1985, 1988) or Czech (1992) population. As well as discrepancies between these two sources, there are also minor unexplained discrepancies with results presented by Bobak *et al* (1997) and Škodová *et al* (1988) (not shown).
- c. Regular cigarette smokers: smoked cigarettes daily. All smokers: smoked cigarettes daily or occasionally, or smoked 1 g pipe tobacco or 1 cigar per week.
- d. For phase 1, there are minor discrepancies between the data shown in Table 4 and equivalent data taken from World Health Organization (1989) used in earlier editions of this report.

24 World Health Organization (1997)

- a. Czech Republic. No original source.
- b. The *All ages* values refer to ages 18+; age-specific data are not available for the age groups marked *.

25-26 Omelka *et al* (1988)

- a. Questionnaire study as part of myocardial infarction and stroke prevention programme. Year not stated. 1987 assumed.

		Sample size	
		Males	Females
25	Students	81	102
26	Apprentices	68	43

27 Piha *et al* (1993)

- a. WHO data for Czech Republic. Age group not stated (adults).

28-29 Vondra *et al* (1996)

- a. Epidemiological study carried out in 2 districts of the Czech Republic.

		Sample size	
		Males	Females
28	Uherské Hradiste, South Moravia	284	338
29	Prague 8	2 618	3 384

- b. Assumed extensions to age distribution for percentage smokers are shown in the extended version of Table 4 in the Excel tables workbook.

30 Franceschi and Naett (1995)

- a. Quoting 'most recent survey data' for Czech Republic, but no original reference. Age group and year not stated: age 15+ and year 1994 assumed.

31 Harkin *et al* (1997)

- a. Czech Republic. Age group not stated (adults).

32 Kozák *et al* (1996)

- a. Czech Republic. Year not stated.

33 Bajan *et al* (1976)

- a. Study in 1971-1973 in an area of Western Slovakia with population 20 000. Sample size 5 753.

34 Honzátková (1995, 2000)

- a. Representative surveys of Slovak population by the Institute of Health Education, Bratislava.
b. The *All ages* values refer to ages 18+; age-specific data are not available for the age groups marked *.

35-36 Babál *et al* (1986)

- a. Study in 1981-1982 of 12-year-olds (6th form pupils), 15-year-old students and 15-year-old apprentices.

		Sample size	
		Males	Females
35	Pupils	203	190
35	Students	202	485
36	Apprentices	256	88

- b. Smokers marked as frequency *: smoked daily. All smokers: smoked daily or weekly.
c. Consumption category estimation based on 1-5, 5-10 (assume 6-10), >10 cigarettes/smoker/day. Results only presented for apprentices as the number of smokers were very small for other groups.

37 Kandráčová *et al* (1984)

- a. Part of a clinical-epidemiological study of chronic bronchitis in South Slovakia by Institute for Tuberculosis and Respiratory Diseases, Bratislava. Date uncertain: 1983 assumed. Sample size 5 753.
b. The *All ages* values refer to ages 18+; age-specific data are not available for the age groups marked *.
c. Consumption category estimation based on <10, 10-14, 15-30, >30 cigarettes/smoker/day.

38 Urban and Luha (2000), and personal communication

- a. No source stated for 1986 estimates. Survey in Slovakia in 1996 including all regions and socioeconomic groups, by the Slovak Research Institute of Public Opinion. Sample size 1 322.
- b. Regular cigarette smoker: smoked 1 cigarette per day or 7 per week.
- c. Results after the period usually considered in this report have been included, since very few age-specific data are available for Slovakia.
- d. Consumption category estimation based on 1-5, 6-10, 11-20, 21-30, 31+ cigarette/smoker/day. The % total sales (Table 6) could not be calculated due to lack of suitable sales data.

39 Harkin *et al* (1997)

- a. Slovakia, 1991-1992. Age group not stated (adults).
- b. A further 10% (sexes combined) are reported to be occasional smokers.

40-41 World Health Organization (2012)

- a. 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. See also Table xi in the *Comparisons between countries* chapter.

	Sample size	Response rate (%)	
		households	individuals
40 Czech Republic	935	24	99
41 Slovakia	2 461	71	99

- b. Regular smokers: smoked daily. All smokers: smoked daily or not daily.
- c. Calculation of cigarettes per person based on percentage smokers of all products, and number of cigarettes per cigarette smoker, so may overestimate.
- 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.

42-43 Mohedano-Brethes and Soufflot de Magny (2005), Papacostas (2008, 2009, 2012), European Commission: TNS Social and Opinion (2014)

- 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. Results shown as Source 42 refer to Czech Republic, source 43 to Slovakia.
- 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. Frequency U (in Table 4) represents positive answers to questions such as “Do you smoke cigarettes?” or “You smoke packeted cigarettes”. From 2005-2006 an additional question made it possible to identify regular smokers also; our estimates of regular cigarette smoking assume that the proportion smoking regularly applies equally to smokers of each product, which may cause anomalies. From 2009 the questionnaire format clearly asked about regular and occasional smoking and so frequency codes R and A are used.
- e. In 2012, questions on what product or amount “do/did you smoke” were put to both current and ex smokers, and our estimates of prevalence for products TC and MC (Table 4), and of cigarettes per smoker (Table 5), assume that responses by current smokers relate to their smoking habits at the time, rather than throughout their lives.
- f. Consumption category estimation based on <5, 5-9, 10-14, 15-19, 20-24, 25-29, 30-34, 35-39 and 40+ cigarettes/smoker/day. Exact values for cigarettes/smoker/day are available for 2009 (see also Appendix III) and 2012.

44-45 Centers for Disease Control and Prevention (CDC) (2016), Warren *et al* (2008), Sovinová and Csémy (2004), Baška *et al* (2010)

- a. Global Youth Tobacco Survey (GYTS). National school-based surveys targeting ages 13-15, using standardised data collection procedures. We show results restricted to 13-15 year olds where available, although it is not always clear from the original sources whether the whole sample or only ages 13-15 are included.

		Response rate (%)				Sample size (age 13-15)
		Schools	Classes	Students	Overall	
44 Czech Republic	2002	100	-	88	88	4 149
	2007	100	100	85	85	3 191
	2011	-	-	-	83	3 350
45 Slovakia	2002	98	100	87	86	3 693
	2007	100	-	86	-	4 696
	2011	-	-	-	81	3 957

b. Smokers marked as frequency *: smoked daily. Regular smokers: smoked on 20 + days in the past month. All cigarette smokers: smoked on at least one day in the last 30 days. Prevalence for product A* refers to current users of any tobacco product (i.e. may include smokeless tobacco users).

c. The prevalence (%) of usage of any tobacco products other than cigarettes was as follows

		Males	Females
44 Czech Republic	2002	11.5	5.5
	2007	17.5	11.8
45 Slovakia	2002	14.7	11.2
	2002 (cigars)	12.3	10.5
	2011 (cigars)	9.7	7.8

Among current cigarette smokers, the % smoking hand-rolled or manufactured cigarettes were as follows:

		Hand-rolled		Manufactured	
		Males	Females	Males	Females
45 Slovakia	2002	21.4	15.1	92.3	92.5

46-47 Eurostat (2007)

a. Surveys collated by Eurostat as the 2004 round of data collection on Health Interview Surveys.

46 Czech Republic: Sample Survey of the Health Status of the Czech Population. National survey, including residents of homes for the elderly, and monasteries and convents. Target sample 3 500 persons age 15+. Response rate 71%. Achieved sample 2 476.

47 Slovakia: Health Monitor Survey. National survey, including residents of homes for the elderly. Target sample 3 100 persons. Response rate 50%. Achieved sample 1 569 persons aged 15+.

b. The *All ages* values refer to ages 15+; age-specific data are not available for the age groups marked *. The highest age groups shown are 75-84 and 85+.

c. Consumption category estimation based on two categories, 1-19 and 20+ cigarettes/cigarette smoker/day, and resulting figures should be regarded with caution.

d. Calculation of cigarettes per person based on percentage smokers (product unspecified), and number of cigarettes per cigarette smoker, so may overestimate.

48-49 Eurostat (2013)

a. European Health Interview Surveys, coordinated by EUROSTAT, Wave 1. Smoking behaviour was obtained through self-completion questionnaires.

48 Czech Republic: Conducted in Jun-Oct 2008. Individuals living in private households, nursing homes, convents and monasteries. Sample size 1 955, response rate 56%, no proxy respondents.

49 Slovakia: Conducted in Sep-Oct 2009. Individuals living in private households. Sample size not stated, response rate 66%, no proxy respondents.

b. The *All ages* values refer to ages 15+; age-specific data are not available for the age groups marked *. The highest age groups shown are 75-84 and 85+.

c. Regular cigarette smoker: smoked manufactured or hand-rolled cigarettes daily.

d. Consumption category estimation based on two categories, 1-19 and 20+ cigarettes/smoker/day, and resulting figures should be regarded with caution.

50 Gallus *et al* (2012, 2014)

- 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. The survey in the Czech Republic used stratified random sampling with quota support. Age range 15+. Sample size 1 000, response rate 25%.
- b. One section of the survey involved asking to see the subject's most recently bought pack of cigarettes or hand-rolling tobacco. Among smokers (sexes combined), the type of pack bought most recently was:

Pack type	Proportion (%)
Cigarettes, 20-pack	95.0
Cigarettes, 10-pack	1.7
Hand-rolling tobacco	2.8
Other	0.3

- c. Among current cigarette smokers, 94% smoked only factory made cigarettes, 2% smoked only roll-your-own, and 4% smoked both types.
- d. Use of smokeless tobacco was reported by 3.5% of men and 0.8% of women.
- e. Cigarettes per smoker relates to all smokers rather than regular smokers.

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