

CHAPTER 1

Global Trends in Tobacco Use

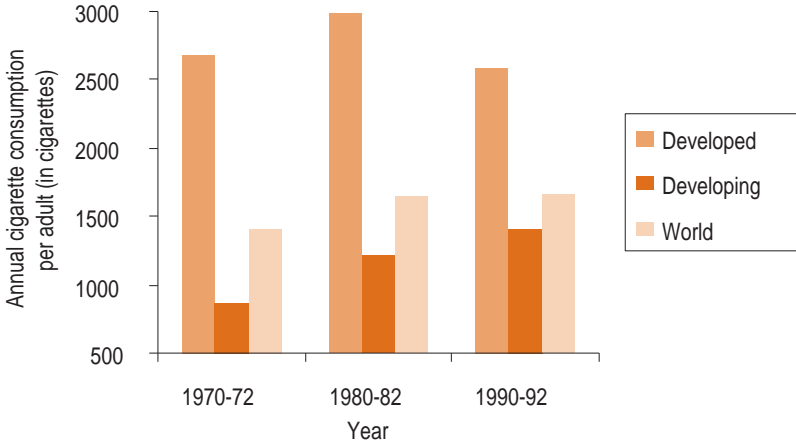
ALTHOUGH people have used tobacco for centuries, cigarettes did not appear in mass-manufactured form until the 19th century. Since then, the practice of cigarette smoking has spread worldwide on a massive scale. Today, about one in three adults, or 1.1 billion people, smoke. Of these, about 80 percent live in low- and middle-income countries. Partly because of growth in the adult population, and partly because of increased consumption, the total number of smokers is expected to reach about 1.6 billion by 2025.

In the past, tobacco was often chewed, or smoked in various kinds of pipes. While these practices persist, they are declining. Manufactured cigarettes and various types of hand-rolled cigarette such as *bidis*—common in southeast Asia and India—now account for up to 85 percent of all tobacco consumed worldwide. Cigarette smoking appears to pose much greater dangers to health than earlier forms of tobacco use. This report therefore focuses on manufactured cigarettes and *bidis*.

Rising consumption in low-income and middle-income countries

The populations of the low- and middle-income countries have been increasing their cigarette consumption since about 1970 (see Figure 1.1). The per capita consumption in these countries climbed steadily between 1970 and 1990, although the upward trend may have slowed a little since the early 1990s.

FIGURE 1.1 SMOKING IS INCREASING IN THE DEVELOPING WORLD
Trends in per capita adult cigarette consumption



Source: World Health Organization. 1997. *Tobacco or Health: a Global Status Report*. Geneva, Switzerland.

While the practice of smoking has become more prevalent among men in low- and middle-income countries, it has been in overall decline among men in the high-income countries during the same period. For example, more than 55 percent of men in the United States smoked at the peak of consumption in the mid-20th century, but the proportion had fallen to 28 percent by the mid-1990s. Per capita consumption for the populations of the high-income countries as a whole also has dropped. However, among certain groups in these countries, such as teenagers and young women, the proportion who smoke has grown in the 1990s. Overall, then, the smoking epidemic is spreading from its original focus, among men in high-income countries, to women in high-income countries and men in low-income regions.

In recent years, international trade agreements have liberalized global trade in many goods and services. Cigarettes are no exception. The removal of trade barriers tends to introduce greater competition that results in lower prices, greater advertising and promotion, and other activities that stimulate demand. One study concluded that, in four Asian economies that opened their markets in response to U.S. trade pressure during the 1980s—Japan, South Korea, Taiwan, and Thailand—consumption of cigarettes per person was almost 10 percent higher in 1991 than it would have been if these markets had remained closed. An econometric model developed for this report concludes that in-

creased trade liberalization contributed significantly to increases in cigarette consumption, particularly in the low- and middle-income countries.

Regional patterns in smoking

Data on the number of smokers in each region have been compiled by the World Health Organization using more than 80 separate studies. For the purpose of this report, these data have been used to estimate the prevalence of smoking in each of the seven World Bank country groupings.¹ As Table 1.1 shows, there are wide variations between regions and, in particular, in the prevalence of smoking among women in different regions. For example, in Eastern Europe and Central Asia (mainly the former socialist economies), 59 percent of men and 26 percent of women smoked in 1995, more than in any other region. Yet in East Asia and the Pacific, where the prevalence of male smoking is equally high, at 59 percent, just 4 percent of women were smokers.

Smoking and socioeconomic status

Historically, as incomes rose within populations, the number of people who smoked rose too. In the earlier decades of the smoking epidemic in high-income countries, smokers were more likely to be affluent than poor. But in the

TABLE 1.1 REGIONAL PATTERNS OF SMOKING

Estimated smoking prevalence by gender and number of smokers in population aged 15 or more, by World Bank region, 1995

| World Bank Region | Smoking prevalence (%) | | | Total smokers | |
|------------------------------------|------------------------|---------|---------|---------------|--------------------|
| | Males | Females | Overall | (millions) | (% of all smokers) |
| East Asia and Pacific | 59 | 4 | 32 | 401 | 35 |
| Eastern Europe and Central Asia | 59 | 26 | 41 | 148 | 13 |
| Latin America and Caribbean | 40 | 21 | 30 | 95 | 8 |
| Middle East and North Africa | 44 | 5 | 25 | 40 | 3 |
| South Asia (cigarettes) | 20 | 1 | 11 | 86 | 8 |
| South Asia (<i>bidis</i>) | 20 | 3 | 12 | 96 | 8 |
| Sub-Saharan Africa | 33 | 10 | 21 | 67 | 6 |
| Low/Middle Income | 49 | 9 | 29 | 933 | 82 |
| High Income | 39 | 22 | 30 | 209 | 18 |
| World | 47 | 12 | 29 | 1,142 | 100 |

Note: Numbers have been rounded.

Source: Author's calculations based on World Health Organization. 1997. *Tobacco or health: a Global Status Report*. Geneva, Switzerland.

past three to four decades, this pattern appears to have been reversed, at least among men, for whom data are widely available.² Affluent men in the high-income countries have increasingly abandoned tobacco, whereas poorer men have not done so. For example, in Norway, the percentage of men with high incomes who smoked fell from 75 percent in 1955 to 28 percent in 1990. Over the same period, the proportion of men on low incomes who smoked declined much less steeply, from 60 percent in 1955 to 48 percent in 1990. Today, in most high-income countries, there are significant differences in the prevalence of smoking between different socioeconomic groups. In the United Kingdom, for instance, only 10 percent of women and 12 percent of men in the highest socioeconomic group are smokers; in the lowest socioeconomic groups the corresponding figures are threefold greater: 35 percent and 40 percent. The same inverse relationship is found between education levels—a marker for socioeconomic status—and smoking. In general, individuals who have received little or no education are more likely to smoke than those who are more educated.

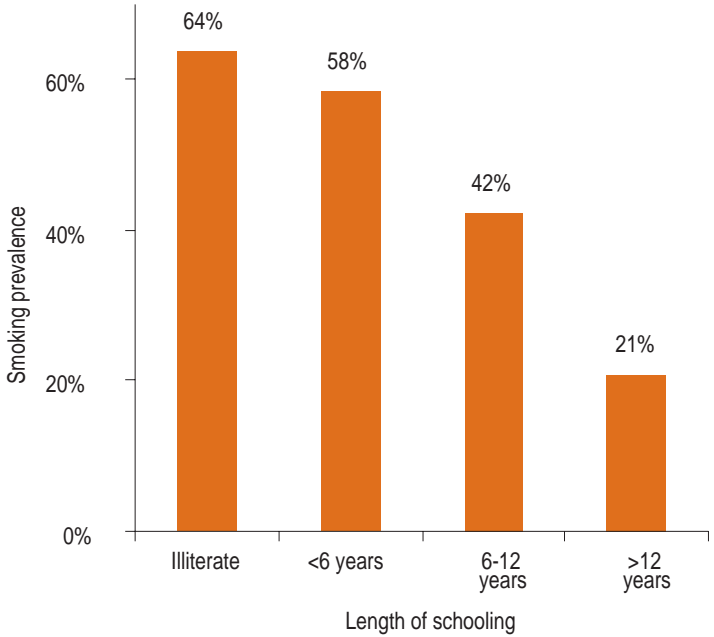
Until recently, it was thought that the situation in low- and middle-income countries was different. However, the most recent research concludes that here too, men of low socioeconomic status are more likely to smoke than those of high socioeconomic status. Educational level is a clear determinant of smoking in Chennai, India (Figure 1.2). Studies in Brazil, China, South Africa, Vietnam, and several Central American nations confirm this pattern.

While it is thus clear that the *prevalence* of smoking is higher among the poor and less educated worldwide, there are fewer data on the *number of cigarettes smoked* daily by different socioeconomic groups. In high-income countries, with some exceptions, poor and less educated men smoke more cigarettes per day than richer, more educated men. While it might have been expected that poor men in low- and middle-income countries would smoke fewer cigarettes than affluent men, the available data indicate that, in general, smokers with low levels of education consume equal or slightly larger numbers of cigarettes than those with high levels of education. An important exception is India, where, not surprisingly, smokers with college-level education status tend to consume more cigarettes, which are relatively more expensive, while smokers with low levels of education status consume larger numbers of the inexpensive *bidis*.

Age and the uptake of smoking

It is unlikely that individuals who avoid starting to smoke in adolescence or young adulthood will ever become smokers. Nowadays, the overwhelming majority of smokers start before age 25, often in childhood or adolescence (see Box 1.1 and Figure 1.3); in the high-income countries, eight out of 10

FIGURE 1.2 SMOKING IS MORE COMMON AMONG THE LESS EDUCATED
Smoking prevalence among men in Chennai (India) by education levels



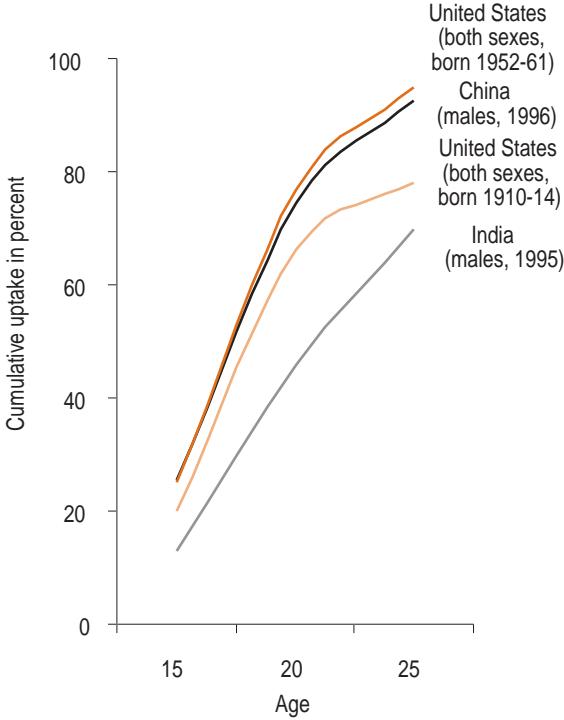
Source: Gajalakshmi, C. K., P. Jha, S. Nguyen, and A. Yurekli. *Patterns of Tobacco Use, and Health Consequences*. Background paper.

begin in their teens. In middle-income and low-income countries for which data are available, it appears that most smokers start by the early twenties, but the trend is toward younger ages. For example, in China between 1984 and 1996, there was a significant increase in the number of young men aged between 15 and 19 years who took up smoking. A similar decline in the age of starting has been observed in the high-income countries.

Global patterns of quitting

While there is evidence that smoking begins in youth worldwide, the proportion of smokers who quit appears to vary sharply between high-income countries and the rest of the world, at least to date. In environments of steadily

FIGURE 1.3 SMOKING STARTS EARLY IN LIFE
Cumulative distribution of smoking initiation age in China, India, and the United States



Sources: Chinese Academy of Preventive Medicine. 1997. *Smoking in China: 1996 National Prevalence Survey of Smoking Pattern*. Beijing. Science and Technology Press; Gupta, P.C., 1996. "Survey of Sociodemographic Characteristics of Tobacco Use Among 99,598 Individuals in Bombay, India, Using Handheld Computers." *Tobacco Control* 5:114-20, and U. S. Surgeon General Reports, 1989 and 1994.

increased knowledge about the health effects of tobacco, the prevalence of smoking has gradually fallen, and a significant number of former smokers have accumulated over the decades. In most high-income countries, about 30 percent of the male population are former smokers. In contrast, only 2 percent of Chinese men had quit in 1993, only 5 percent of Indian males at around the same period, and only 10 percent of Vietnamese males had quit in 1997.

BOX 1.1 HOW MANY YOUNG PEOPLE TAKE UP SMOKING EACH DAY?

Individuals who start to smoke at a young age are likely to become heavy smokers, and are also at increased risk of dying from smoking-related diseases in later life. It is therefore important to know how many children and young people take up smoking daily. We attempt here to answer this question.

We used (1) World Bank data on the number of children and adolescents, male and female, who reached age 20 in 1995, for each World Bank region, and (2) data from the World Health Organization on the prevalence of smokers in all age groups up to the age of 30 in each of these regions. For an upper estimate, we assumed that the number of young people who take up smoking every day is a product of 1*2 per region, for each gender. For a lower estimate, we reduced this by region-specific estimates for the number of smokers who start after the age of 30.

We made three conservative assumptions: first, that there have been minimal changes over time in the average age of uptake. There have been recent downward trends in the age of

uptake in young Chinese men, but assuming little change means that, if anything, our figures are underestimates. Second, we focused on regular smokers, excluding the much larger number of children who would try smoking but not become regular smokers. Third, we assumed that, for those young people who become regular smokers, quitting before adulthood is rare. While the number of adolescent regular smokers who quit is substantial in high-income countries, in low- and middle-income countries it is currently very low.

With these assumptions, we calculated that the number of children and young people taking up smoking ranges from 14,000 to 15,000 per day in the high-income countries as a whole. For middle- and low-income countries, the estimated numbers range from 68,000 to 84,000. This means that every day, worldwide, there are between 82,000 and 99,000 young people starting to smoke and risking rapid addiction to nicotine. These figures are consistent with existing estimates for individual high-income countries.

Notes

1. These groupings are shown in Appendix D. In sum, they are as follows: (1) East Asia and the Pacific, (2) Eastern Europe and Central Asia (a group that includes most of the former socialist economies), (3) the Middle East and North Africa, (4) Latin American and the Caribbean, (5) South Asia, (6) Sub-Saharan Africa, and (7) the high-income countries, broadly equivalent to the members of the Organization for Economic Cooperation and Development (OECD).

2. Research into women's smoking patterns is much more limited. Where women have been smoking for decades, the relationship between socioeconomic status and smoking is similar to that seen in men. Elsewhere, more reliable information is needed before conclusions can be drawn.