

## Preface

Almost all smoking habits begin in either adolescence or young adulthood. Thereafter, some smokers decide to quit, often experiencing considerable hardship in doing so, as the descriptive title of a recent book, *Dying to Quit* (Brigham 1998) implies. Smoking is the leading cause of preventable death throughout the world. Although public policies focus on many risks to life and health far lower than smoking, the smoking habit has been not only tolerated, but historically, even encouraged in the form of public subsidies of cigarettes (Tate 2000).

This book provides a detailed analysis of the price of smoking, both in terms of the burden imposed on the smoker and his or her family and the burden imposed on other members of society. Private costs are those accruing to the individual smoker. In economic jargon, these are termed "internal costs." As a rule, economists have considered all costs to families as internal. The argument is that even if individual family members bear specific costs, through various processes, including intrafamily bargaining, these costs are distributed within the household in a way that maintains the family as a unit. For example, a husband may smoke but his nonsmoking wife engages in shopping sprees. Given the high rates of marriage dissolution at the end of the twentieth century and the effects of smoking on innocent children who clearly are ill positioned to bargain with parents, there is reason to question whether costs imposed by secondary smoke are really internal.

Costs of one's activity imposed on others are external costs. Such costs may reflect the adverse effects of an individual's activity (smoking, in our context) on survival and on health, as well as on others' financial status. The financial externalities reflect the impacts of the activity on payments made by government programs, such as Medicare, Medicaid, and Social Security, as well as payments made by taxpayers to these public programs. Also included are contractual

arrangements among private parties such as private health insurance, life insurance, and private pension plans. The sum of private or internal cost and external cost is social cost.

In this book, we take a somewhat agnostic view about costs of smoking imposed on others within the same household, classifying such costs as “quasi-external” with external cost representing all other external cost. Social cost is thus the sum of three rather than two types of cost.

Economics defines a social optimum as the point at which marginal social cost equals marginal social benefit. If the marginal social cost (that is, in the context of this book) from adding another twenty-four-year-old to the pool of smokers is high, as we show it to be, then what is the marginal social benefit? Presumably, marginal benefit is reflected in the lift one gets from lighting up the first cigarette of the morning, relief from stress, appearing “cool” or “with it,” having something to do with one’s hands, and so on. Particularly in the state in which all but one of us live, North Carolina, some people may continue to argue that tobacco yields a community benefit by sustaining small farms and some local communities. Biological and psychological addiction may explain why some people continue to smoke, but there must be at least some of the above benefits that contribute to its starting.

We do not attempt to quantify the benefits of smoking in this book. At best, that would be a highly complex undertaking. Yet, as our results on cost imply, either such benefits are high or there is indeed a massive misallocation of resources.

At the time some of us wrote our last book on smoking (Sloan, Smith, and Taylor 2003), there were nearly seven hundred books in our Duke University library on the topic of smoking. Admittedly, Duke is located in the heart of tobacco country. But nevertheless, this is a lot of books. In the preface to the previous book, we asked “why another book?” The last book was on information, risk perception, and choices smokers make. One of our main findings was that, for many mature smokers, it takes an adverse health event, such as lung cancer or a heart attack, to induce them to quit smoking. Less severe personal health signals, such as beginning to have difficulty walking up a flight of stairs, are typically insufficient to motivate successful cessation.

In this book, we have a different focus. We quantify the private costs that a man or woman aged twenty-four who smokes at this age may be expected to incur over his or her lifetime, and quasi external and pure external costs such a person imposes on others, ranging from costs

associated with secondary smoke for spouses or partners, to financial externalities involving private health insurance, life insurance, private pensions, Medicare, Medicaid, and Social Security.

As we discuss in chapter 3, not only have many books been written on smoking, but there have been many previous studies of the cost of smoking as well. Many of these studies have been published. Other studies have been conducted for specific purposes, such as for use in tobacco litigation. Most studies have used a cross-sectional approach. By contrast, our study is longitudinal. Compared to other research on the cost of smoking, we consider more effects and examine these effects in greater depth.

Our study is the first to quantify the effect of smoking on:

- Life years spent with disabilities. This cost is surprisingly small.
- Earnings over the life cycle. The loss due to smoking is considerable for men but virtually nil for women.
- Contributions and benefits from Social Security and Medicare using data on actual contributions to these public programs that sample persons actually made.
- Spouse mortality, morbidity, and disability. These effects are large, but, of course, not as large as the effects smokers impose on themselves.
- A comprehensive list of outcomes, holding other factors associated with smoking constant. We incorporated a comprehensive list of other factors that are likely to be correlated with smoking but that have been left out of previous studies, such as risk preferences and time horizon, problem and heavy drinking, and obesity. Accounting for these other factors reduces the estimated effects of smoking on various outcomes, but large effects remain.

This book has several different audiences. We hope our study will be of interest to researchers in the field of smoking and other health behaviors. Such persons should find our results interesting, and may want to use some material, such as the smokers' life table in chapter 4, in their own work. Also, the framework used in this book could be applied to other health behaviors, such as lack of exercise and excessive consumption of alcoholic beverages. Specialists in the field of tobacco control may want to use our estimates of the private and social cost of smoking in developing antismoking messages. For example, our finding that a twenty-four-year-old who smokes can expect to

incur about \$140,000 in supporting his or her habit over the life cycle, which is equivalent to a cost per pack of nearly \$33, even considering that many such persons will eventually quit, should provide food for thought. State policymakers may be interested in our estimates for purposes of setting cigarette excise taxes. Depending on whether or not the quasi-external costs are included, external cost amounts to \$6.88 (included) or \$1.44 per pack (excluded). Even the latter estimate substantially exceeds excise taxes on cigarettes currently.

Some state and federal policymakers might not be happy with our estimates of the effects of smoking on Medicare and Medicaid, which are much lower than have been alleged. Finally, our results may be useful for parties involved in litigation, including the attorneys who represent these parties.