

*Very creative welfare economics is being used to justify government intervention.*

# The World Bank's Tobacco Economics

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**E**CONOMISTS HAVE ARGUED FOR TWO decades that smokers do not incur larger health care costs than non-smokers. That is because non-smokers, statistically, live longer than smokers and reach ages in which they incur large health care costs. What is more, smokers pay heavy tobacco taxes and draw less from public pensions than non-smokers. So, if we look at transfers between groups, smokers subsidize non-smokers, not the other way around.

But simple transfers within society cancel out each other: What one group loses, another one gains. The real issue, from an economic point of view, is whether production and consumption of tobacco leaves us with net social benefits or net social costs.

There is an economic presumption that a good freely produced and consumed on the market produces a net social benefit. Using creative economic analysis, World Bank researchers have attempted to show that this is not true for tobacco—that an optimal world is a world with no smoking. Although much better grounded in economic methodology than the previous public health literature, their efforts use creative welfare economics to bring us back to the old public health conclusion that the optimal consumption of tobacco is zero.

## WORLD BANK STUDIES OF TOBACCO

The World Bank's efforts to establish a net social cost of tobacco using welfare economics began about a decade ago. Welfare economics is the field of economic theory that is concerned with evaluating social benefits and social costs. More recently, the Bank has expended considerable resources on more extended welfare analyses involving some reputed economists. As we shall see, the analyses are still based on naïve hypotheses about markets and political processes.

**Barnum's numbers** In the early 1990s, a World Bank economist named Howard Barnum began publishing a series of articles on the benefits and costs of tobacco. Barnum argued that the benefits of tobacco—the sum of consumer surplus (the value that consumers receive over and above what they pay for tobacco) and producer surpluses (the profits producers earn over and above the minimum remuneration to factors of production)—were more than offset by direct and indirect morbidity and mortality costs from tobacco use. The costs were treated like externalities, i.e., costs that have to be deducted from private benefits.

In a 1993 study that was later described in an article in *Tobacco Control*, Barnum estimated the costs and benefits of a 1,000-ton increase in the world tobacco producing capacity. He then extrapolated his estimate to total tobacco production. His back-of-envelope calculations produced an implicit estimate of some \$20 billion per year (in 1990 dollars) for the sum of consumer and producer surpluses in the world.

Barnum argued that the sum should not be thought of as a net social benefit. Because “most smokers start young, become addicted, and then lose much of the power of choice after addiction,” he assumed that “only 25 percent of tobacco starts [are] made by well informed consumers.” Thus, in Barnum's perspective, some 75 percent of public health care costs and of lost production from smokers' diseases should be treated as external costs. Barnum estimated that the annual total of the two types of external costs were \$21 billion and \$173 billion, respectively. Deducting those numbers from the \$20-billion surplus (and making some adjustments), he got roughly \$200 billion a year in net social cost of smoking for the whole world.

Barnum's estimates imply not only that reducing tobacco production and consumption would increase social welfare, but also that the optimal consumption of tobacco is zero. That is because, given his estimates, any use of tobacco generates direct and indirect costs many times greater than the sum of the corresponding consumer and produc-

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er surpluses. Thus, a total worldwide ban on tobacco would increase social welfare, provided that enforcement costs were not too high.

**The Peck group** In preparation for its 1999 report *Curbing the Epidemic: Governments and the Economics of Tobacco Control*, the World Bank commissioned a large number of background studies on the costs and benefits of tobacco production and use. Those studies have recently been published in a volume titled *Tobacco Control in Developing Countries*. (The title is a misnomer because the 18 studies deal with all aspects of smoking, in developed as well as underdeveloped countries.) The book likely will become the economic bible of the anti-smoking movement because it con-

tains the most serious—and, on many topics, the only serious—anti-smoking economic analysis to date.

One of the studies, “A Welfare Analysis of Tobacco Use” by a group of researchers headed by Richard Peck, pursues and improves the cost-benefit work started by Barnum. Like Barnum, the Peck group uses estimated elasticities of demand and supply (i.e., ratios between proportional change in quantity and proportional change in market price) to calculate world tobacco consumer and producer surpluses. Assuming linear supply and demand curves, their base case implies a consumer surplus of \$119 billion, and a producer surplus of \$43 billion, for a total net private benefit estimate of \$162 billion per year in the world. (The large difference between that estimate and Barnum’s much smaller net private benefit estimate

appears to come mainly from Barnum’s use of only raw tobacco production in his calculation of consumer surplus rather than all tobacco products.)

Standard welfare or cost-benefit analysis would inquire whether externalities reduce (or increase) the “net” private benefits. The first candidate for external cost would come from the health effects of secondhand smoke – assuming that such effects do exist. Although the World Bank and its analysts do affirm that secondhand smoke is an external cost, Peck and his colleagues’ welfare analysis does not take it into account.

Instead, they argue that social benefits are reduced by “uninformed costs” that “arise from consumers’ lack of information about the health risks of tobacco. Most smokers start young, become addicted, and then face significant adjustment costs when trying to stop their addiction.” Because they are not taken into account by consumer choices, the “uninformed costs” play the same role as consumption externalities in standard welfare analysis: They create a divergence between the marginal social benefit curve and the consumers’ demand curve (which represents consumers’ marginal valuation). In a sense, uninformed consumers are imposing an externality on themselves by bringing to the market more demand than would exist if they were fully informed or not addicted.

Evaluating uninformed costs requires two types of estimates:

- The value of what consumers unwillingly lose when they make uninformed choices.
- The extent of the uninformed choices.



**NO VALUE?** Moslem women prepare tobacco leaves in the village of Kraiste, Bulgaria.

Peck and his colleagues make the first estimate in much the same way that Barnum did—they assume that the reduced income (or GDP per capita) of smokers, resulting from illness and early death, measures the losses of smokers. One can then project the estimated losses for every year in the future, multiply those values by the proportion of uninformed smokers, and calculate a discounted stream of uninformed costs.

Concerning the second estimate, the Peck group was more sophisticated than Barnum, who simply stipulated his 75 percent figure. Peck and his colleagues estimated how large the extent of uninformed choices must be, if the costs of the uninformed consumers are to exactly cancel the total value of consumer and producer surpluses (\$162 billion per year in the base case) so that the net social benefits of smoking are zero.

The Peck group's empirical estimates suggest that as long as the proportion of uninformed smokers is greater than 23

assessment that the world would be better off with no production or use of tobacco.

### BAD ECONOMICS

In presenting studies indicating that the world would be better off without any tobacco use, World Bank economists are faced with a difficult question: If tobacco ultimately proves costly to its users, why do people continue to use it? The Bank economists attempt to answer that question by making strange assumptions about information, addiction, and political processes.

**Perfect information** The World Bank studies argue, in fact, that if people had perfect information about tobacco, there would be no tobacco use. In other words, they assume that perfect information is optimal, and that only perfectly informed consumers make choices with normative standing.

Obviously, that argument is problematic. Information is a good that is produced with the utilization of resources (if only time), and information provides a net benefit only if the value of its advantages outweighs the cost of the resources. We seldom if ever pursue perfect knowledge as consumers—we do not get an advanced degree in computer science when we want to purchase a computer, or a doctorate in finance before buying life insurance, or an M.D. in orthopedics before skiing—because the benefits of

that knowledge would be outweighed by the cost of obtaining it. What we do want is an optimal amount of information—the amount that yields the most net benefits, i.e., benefits minus costs.

Moreover, we cannot argue that consumers are broadly ignorant of the health risk of smoking. For many decades, the press, public authorities, and competing tobacco companies that advertise “less tar” in their cigarettes have bombarded consumers with the message of tobacco's dangers. In fact, the message has probably gone out too much; according to research, U.S. smokers greatly overestimate the probability of smoking-related diseases.

**Free choice and consumption externalities** World Bank analysts also argue that smokers often start too young to make a sovereign decision, and become addicted by the time they realize their risks. The analysts embrace what Jacob Sullum calls the “voodoo pharmacology” conception of addiction as destructive of free will. That idea is contradicted by much evidence: Some quitters start to smoke again long after any pharmacological effect is gone, smokers appear to prefer cigarettes to nicotine gums or patches, and 50 percent of non-smokers are former smokers. Obviously, there is much more in smoking than addiction to nicotine: Smoking is just one of many individual lifestyle choices.

Even if the philosophical concerns about the meaning of free will are put aside and the costs that the uninformed

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percent, smoking generates a net social cost given the actual level of tobacco consumption in the world. The authors do not provide us with the data necessary to calculate what level of uninformed smokers would lead to the optimal level of tobacco consumption being zero—i.e., what level of uninformed smokers would lead to a net social cost at any level of consumption. Using Peck et al.'s estimated linear demand and supply and making back-of-envelope calculations in the same manner as Barnum, we can estimate that that proportion is even lower than Barnum's assumed 75 percent. So, if we accept Barnum's assumed proportion of uninformed smokers, there is still, in the Peck analysis, no level of tobacco consumption that would generate a net social benefit.

That becomes even more obvious if, following a footnote suggestion by the authors, we take the value of a life to be equivalent to 14 times the gross national product per capita, which implies that any proportion of uninformed smokers greater than three percent would generate a net social cost at the actual level of tobacco consumption. Then, of course, a smaller proportion of uninformed smokers is required to bring the optimal tobacco consumption to zero. Thus, despite claims to the contrary made elsewhere in World Bank background studies, the results reached by Peck and his colleagues suggest that the “socially-optimal level of consumption of tobacco” is indeed zero. In other words, they implicitly agree with the Barnum



impose on themselves are treated as a sort of negative consumption externality, once we start second-guessing consumers, where do we stop? Although some consumption externalities—related to “public goods”—have good standing in neoclassical economics, the notion is almost indefinitely flexible.

What is more, if we are to consider negative externalities, should we not also consider the positive externalities of smoking? The use of tobacco is well known for enhancing meals, friendly conversations, and activities in public places such as shopping centers, office buildings, dance clubs, and lounges. If we want to be creative in finding negative externalities, we should at least look as hard for positive ones.

**The perfect state** According to World Bank economists, another reason that tobacco use persists is because imperfect markets make decisions that should be made by perfect governments. A telling illustration is given in the World Bank background study “The Economic Rationale for Intervention in the Tobacco Market”:

*A priori, parents would ideally always be willing and able to protect children from tobacco themselves. If this happened, there would be little need for government to duplicate such efforts... Perfect parents, however, are rare.*

That perspective assumes that political leaders should make welfare decisions for their constituents just as parents do for their children. What is more, it assumes that the leaders will choose optimal solutions as calculated by omniscient bureaucrats and recommended by disinterested experts.

Such a notion of an all-knowing, impartial government conflicts with Public Choice theory. Public Choice theory has shown that political and bureaucratic processes are often more imperfect than the market. To justify government intervention, it is not enough to show that market failures exist, but also that the cost of a public policy will not exceed its benefits. The World Bank’s economists do not make that demonstration in regard to tobacco use.

World Bank analysts justify government intervention with so-called “existence values,” a sort of consumption externality felt by whoever defines what social welfare means. According to the analysts, “Part of the external cost of tobacco smoking may arise because of the value placed on the existence of human life, that is, so called existence value.” Such a viewpoint leads us to ask why paternalistically guided human life has an “existence value,” but individual liberty does not. Such issues put us outside the realm of economics, but they should be acknowledged as such, and not be unquestionably left for the World Bank to decide.

**Private property** Alternatives to public policy solutions to market failures are private-property solutions. Externalities are inseparable from social interaction, and property rights are generally the most efficient way to bring decision-makers to incorporate externalities into their choices.

In non-technical parlance, private property minimizes

clashes in social interactions. Consider smoking regulations or bans on smoking in public places. To the extent that many “public places” such as restaurants are actually private property, regulations or bans are equivalent to nationalization, and prevent property owners from responding in diversified ways, and with the right incentives, to conflicting preferences.

## CONCLUSION

However incomplete, questionable, or biased its arguments are, the World Bank feels obliged to use economics to justify government intervention in smoking. To their credit, the World Bank and its analysts do acknowledge much economic theory and evidence that the public health literature has tried to suppress for decades, such as that “smokers clearly receive benefits from smoking,” or that addiction is not necessarily irrational.

Yet, the World Bank has continued to move in the camp of the anti-smoking movement. Its analysts may dig even deeper into welfare economics to find justifications for government intervention. But that is politics and bureaucracy, not good economics. **R**

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