

## **Review of Economic Studies on Smoking Bans in Bars and Restaurants**

Several researchers have examined the economic effects of smoking bans on bars and restaurants. This information brief summarizes researchers' findings.

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Public health advocates and smoking ban opponents have debated the economic effects of smoking bans in bars and restaurants. Advocates of smoking bans argue that secondhand smoke has a negative effect on health and thus, smoking should be banned. Opponents suggest that smoking bans restrict the choice of bar and restaurant owners and ultimately lower their sales and profits.

Several researchers have studied the effects of smoking bans on bars and restaurants. Most studies of smoking bans reviewed in this information brief find no significant decrease in bar or restaurant sales, especially when measured in the aggregate over an entire county. However, these studies cannot rule out the possibility that a few communities may be adversely impacted, and that some individual businesses in any community may suffer losses.

### **Governments have banned smoking to curtail adverse health effects of secondhand smoke.**

Secondhand smoke is believed to be related to several physical disorders including lung cancer, atherosclerotic cardiovascular disease, asthma, and other respiratory illnesses. Researchers suggest that secondhand smoke is the third leading cause of preventable death. In response, state and local governments have enacted laws to curtail the incidence of secondhand smoke in public

spaces.<sup>1</sup> Smoking was banned in schools, government worksites, private worksites, childcare centers, restaurants, and bars. In recent times, Minnesota and other governments across the nation have considered 100-percent smoking bans in bars and restaurants.<sup>2</sup>

Money from tobacco industries has fueled heated debates among researchers over this issue; tobacco companies have sponsored research and advocated against any tobacco restrictions.

This information brief summarizes the results of all peer-reviewed, published papers on smoking bans. These studies examine individual smoking bans in a number of communities. The smoking bans themselves vary. Even in cases where studies suggest they examine 100 percent smoking bans, there may be slight exceptions to the rules. For this reason, all smoking ban studies reviewed here are considered regardless of type. The conclusion reached here is the same regardless of what type of smoking bans were considered.

### **Economists wrestle over the need for intervention.**

Researchers find positive health benefits from smoking bans in bars and restaurants. Smoke-free worksites have been associated with decreased personal and secondhand smoke consumption. Researchers find decreased respiratory illnesses and lower chances of having sore eyes, sore throats, and a cough with phlegm.<sup>3</sup> A study of bartenders finds reduced exposure, measured by saliva samples.<sup>4</sup> Youths in towns with strong smoking restrictions were found less likely to progress onto established smoking habits.<sup>5</sup>

Economists do not dispute these health findings, but focus on whether there is a need for government intervention.<sup>6</sup> They recognize that bars and restaurants engage in what's known as monopolistic competition. That is, bar and restaurant owners compete based upon quality—differences in location, food, ambiance, and presentation. In many cities, there are a variety of types of bars and restaurants—steak houses, pancake diners, Mexican restaurants, sushi bars, bars with jazz music, bars with alternative rock, and bars with big booths and no music.

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<sup>1</sup> M. D. Eisner, A. K. Smith, and P. D. Blanc, "Bartenders' Respiratory Health after Establishment of Smoke-free Bars and Taverns," *Journal of American Medical Association* 280 (1998) 1909-14.

<sup>2</sup> National Cancer Institute, Number of states with clean indoor air act laws for specified locations, State Cancer Legislative Database Program (Bethesda, 2005).

<sup>3</sup> M. Wakefield, M. Cameron, G. Inglis, T. Letcher, and S. Durkin, "Secondhand Smoke Exposure and Respiratory Symptoms Among Casino, Club and Office Workers in Victoria, Australia," *Journal of Sociological and Environmental Medicine* 47:9 (2005) 698-703.

<sup>4</sup> M. C. Farrelly, J. M. Noumemaker, R. Chou, A. Hyland, K. K. Peterson, and U. E. Bauer. "Changes in Hospitality Workers' Exposure to Secondhand Smoke Following the Implementation of New York's Smoke-free Law," *Tobacco Control* 14 (2005) 236-41.

<sup>5</sup> M. Siegel, D. M. Cheng, L. Biener, and N. A. Rigotyi, "Effect of Local Restaurant Smoking Regulation on Progression to Established Smoking Among Youths," *Tobacco Control* 14 (2005) 300-06.

<sup>6</sup> R. H. Coase, "The Problem of Social Cost," *Journal of Law and Economics* 3 (1960) 1-44; W. J. Boynes and M. L. Marlow, "The Public Demand for Smoking Bans," *Public Choice* 88:1-2 (1996) 57-67; B. Alamar and S. Glantz, "Smoke-free Ordinances Increases Restaurant Profit and Value," *Contemporary Economic Policy* 22 (2004) 520-25.

Economists, using this laissez-faire standard, suggest that smoking is just another tool for bar and restaurant owners to maximize profits if left unregulated. For instance, owners can allocate floor space between smokers and nonsmokers to find their profit-maximizing niche. Armed with information about the deleterious health effects of secondhand smoke, consumers would choose to patronize bars and restaurants based upon their preferences for food, music, ambiance, and secondhand smoke. Those who do not want to be around secondhand smoke will not patronize places that allow smoking. Also, workers who do not want to work in secondhand smoke, will find employment elsewhere.

Under this scenario, economists argue that smoking bans will lower profits and lower the overall economic activity within a community because the bans restrict bar owners' freedom to choose whether to allow smoking and limit their ability to find a market niche.<sup>7</sup> A 100-percent smoking ban completely takes the tool out of the owner's hands. For this theory to work, economists suggest that there must be no transaction costs. That is, bar owners must know perfectly well what their customers want, hospitality workers must know what the risks are and can work somewhere else, and customers must know which restaurants allow smokers and what their risks are of exposure to secondhand smoke.

In the end, economists acknowledge that these conditions may not exist in the real world. They suggest that bar owners may have been dissuaded by tobacco-sponsored studies.<sup>8</sup> They suggest consumers may not know how much more risk they subject themselves to by patronizing establishments that permit smoking. Finally, waiters and bartenders in small towns may have restricted choices of where they work because there may be few employers within reasonable access. For all of these reasons, this market niche theory is still disputed among economists.

### **Debates over theory underscore the need to find out what actually happens. Several researchers have examined the effect of smoking bans on bar-restaurant sales and profits.**

Reviewers of bar-restaurant smoking bans recognize that some previous studies may be biased because the research was sponsored by tobacco interests.<sup>9</sup> Some suggest that to keep the reviewed studies free of biased research, studies should meet all of researcher Siegel's four methodological criteria: (1) use of objective data; (2) inclusion of all data points; (3) use of regression or other statistical methods; (4) appropriate control for overall economic trends. To help guarantee these criteria, some researchers have limited their studies to peer-reviewed journal articles.<sup>10</sup> Some also note in the text when a study is sponsored by a tobacco industry. This analysis is restricted to peer-reviewed articles and provides additional critique with the other criteria in mind.

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<sup>7</sup> Boynes and Marlow, "The Public Demand."

<sup>8</sup> Alamar and Glantz, "Smoke-free Ordinances."

<sup>9</sup> Ibid.

<sup>10</sup> M. Scollo, A. Lal, A. Hyland, and S. Glantz, "Review of the Quality of Studies on the Economic Effects of Smoke-free Policies on the Hospitality Industry," *Tobacco Control* 12 (2003) 13-20.

Almost all the reviewed studies reported, on average, no net loss and sometimes net increases in bar or restaurant sales after smoking bans went into effect.<sup>11</sup> These estimates are for total sales and for the proportion of sales within a county.

The exception is a study by Pakko, who finds counterevidence to a study that finds that a smoking ban did not affect gaming in Delaware.<sup>12</sup> As a researcher for the Federal Reserve Bank of St. Louis, he found smoking bans negatively affected sales. Moreover, the results depend upon the regression technique and its selection of variables. If differences in results are dependent solely on methodology and technique, then it raises uncertainty of whether the smoking ban decisively left revenue unaffected. Another study by Dunham and Marlow<sup>13</sup> finds that although, on average, communities may benefit with cleaner air and largely unaffected revenue, inevitably some bar and restaurant owners may lose sales due to a smoking ban. However, Scollo et al.<sup>14</sup> question the merits of this study because one of the authors worked for the Phillip-Morris Company, representing a potential conflict of interest.

This review is limited to studies of economic effects, and even though the majority of studies find overall positive economic effects of smoking bans, there is uncertainty. Part of the uncertainty stems from methodological shortcomings. These studies often use sales tax data, which is often underreported, or survey data, which can be unrepresentative of the community. Also, communities may self-select themselves out of considering a smoking ban because they know it would likely harm their communities, and those communities that do pass smoking bans are therefore more likely less harmed by negative effects because of this bias. Also, the studies often fail to account for other economic factors, such as increased employment, increased earnings, or increased population, which may raise sales and profits to area restaurants and bars, thereby washing out the negative effects of a smoking ban with the overall good local economy at the time. Even if study methodologies were found reliable, a few communities may still experience reduced bar and restaurant sales. As the Pakko study<sup>15</sup> implies, to some extent, each community is unique with residents who may have different preferences regarding smoking than residents in other communities.

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<sup>11</sup> Alamar and Glantz, "Smoke-free Ordinances"; D. W. Cowling and P. Bond, "Smoke-free Laws and Bar Revenues in California—the Last Call," *Health Economics* 14:12 (2005) 1273-81; W. J. Bartosch and G. C. Pope, "The Economic Effect of Smoke-free Restaurant Policies on Restaurant Business in Massachusetts," *Journal of Public Health Management and Practice* 5 (1999) 53-62; S. A. Glantz and A. Charlesworth, "Tourism and Hotel Revenues, Before and After Passage of Smoke-free Restaurant Ordinances," *Journal of the American Medical Association* 281 (1999) 1911-18; A. O. Goldstein and R. A. Sobel, "Environmental Tobacco Smoke Regulations Have Not Hurt Restaurant Sales in North Carolina," *North Carolina Medical Journal* 59 (1998) 284-88; S. A. Glantz and L. R. A. Smith, "The Effect of Ordinances Requiring Smoke-free Restaurants and Bars on Revenues: A Follow-up," *American Journal of Health* 87 (1997) 687-93; J. Sciacca and M. I. Ratliff, "Prohibiting Smoking in Restaurants: Effects on Restaurant Sales," *American Journal of Health Promotion* 12:3 (1998) 176-84; A. Hyland, K. M. Cummings, and E. Nauenberg, "Analysis of Taxable Sales Receipts: Was New York City's Smoke-free Air Act Bad for Restaurant Business?" *Journal of Public Health Management and Practice* 5:1 (1999) 14-21.

<sup>12</sup> M. R. Pakko, "Smoke-free Law Did Affect Revenue from Gaming in Delaware," Letter, *Tobacco Control* 15 (2006) 68-69.

<sup>13</sup> J. Dunham and M. Marlow, "Sentencing Laws and Their Differential Effects on Restaurants, Bars, and Taverns," *Contemporary Economic Policy* 18:3 (2000) 326-33.

<sup>14</sup> Scollo, et al., "Review of the Quality of Studies."

<sup>15</sup> Pakko, "Smoke-free Law."

Therefore, if there is any conclusion to draw from this literature review, it is that most studies find that smoking bans leave restaurant, bar, or gaming revenue unaffected. However, as in most things in real life, there are no sure bets, and in some cases, a few owners or even entire communities may see an overall decline in revenue. Also, more independent research might help policymakers more fully judge the economic effects of bans on smoking.