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The Economic Impact of Smoke-Free Policies on Business and Health

Exposure to secondhand smoke (SHS) is a significant public health concern affecting millions of Americans, many of whom are Hoosiers. A considerable amount of medical research has demonstrated that there is no safe level of secondhand smoke. According to the most recent report on SHS by the US Surgeon General, the best way to deal with the problem of SHS is to encourage states and local communities to enact ordinances which ban smoking in public places and all workplaces including restaurants, bars, and casinos—workplaces that are often exempt from smoke-free legislation.[1] The purpose of this brief report is to summarize what researchers have concluded regarding the economic impact smoke-free legislation has on the hospitality industry and on health-related expenditures both nationally and in Indiana.

What is Secondhand Smoke?

SHS contaminates indoor air spaces and outdoor environments, where it is inhaled by nonsmokers. This inhaled smoke is made up of a mixture of sidestream smoke released by the smoldering end of a tobacco product and mainstream smoke exhaled from the lungs by a smoker.

Cigarette smoking is the most common source of SHS in the United States, followed by pipes, cigars, and other products. Analyses of the chemical makeup of SHS show that it contains over 4000 chemicals, more than 50 of which are known cancer-causing agents. Due to its chemical makeup, the Environmental Health Information Service has classified SHS as a Group A carcinogen, a substance known to cause cancer in humans.[1]

Health Effects of Secondhand Smoke

The health effects of SHS have been extensively studied. In adults, SHS has definitively been linked to an increased risk for lung cancer and coronary heart disease, along with nasal sinus cancer and eye, nose, and throat irritation. SHS is also implicated in increasing the risk for stroke, subclinical vascular disease, chronic obstructive pulmonary disease, cervical cancer, and breast cancer.[1-4] In children, SHS exposure from a parent has been found to cause sudden infant death syndrome, lower birth weights, higher rates of respiratory illness, asthma, poorer lung function, and other breathing problems, and higher rates of middle ear infections, including otitis media.[1]

Clearly the most significant health consequence related to SHS is death. Some 50,000 nonsmokers die annually in the United States due to SHS-related illnesses.[2,4] In 2007, 1,194 Hoosiers died from diseases definitively tied to SHS.[5]

Because of the serious health problems that can result from SHS exposure, more and more states are working to deal with the issue by enacting ordinances that eliminate smoking in public places and workplaces. The goal of such measures is to provide workers, particularly nonsmoking workers, with a safe working environment. Restaurants, bars, and casinos are worksites and public places where smoking is often allowed, either throughout the premises or in restricted areas that do not effectively reduce exposure to SHS. Servers, bartenders, dealers, and other workers in these environments may regularly be exposed to high levels of SHS.[1] The levels of SHS smoke in bars are 240–1850% higher than those in other workplace smoking environments, such as offices, factories, warehouses, hotels, and other service-oriented places. Casinos have SHS levels 300–600% higher, while restaurant smoke levels are 160–200% higher than those in other workplace smoking environments.[1,6]

Because of the high SHS levels in these establishments, they have become the focus of many smoke-free ordinances being proposed nationwide. As of January 2009, 15 US states, the commonwealth of Puerto Rico, and

331 municipalities (cities, towns, or counties) have enacted 100% smoke-free laws in all workplaces, restaurants, and bars.[7] Within Indiana, nine cities have implemented smoke-free laws for all indoor workplaces, restaurants, and bars.[8]

Economic Studies of Hospitality Industry

The debate regarding the economic impact of smoke-free laws has focused on the hospitality industry, specifically restaurants, bars, and casinos. Business owners, especially owners of alcohol-serving restaurants where smoking is common, believe that smoke-free ordinances would discourage and alienate smoking customers, diminishing sales and resulting in higher unemployment rates among industry workers.[9] When surveyed about the potential impact of smoke-free ordinances, 39% of restaurant owners and 83% of bar and tavern owners believed they would lose revenues.[10] Similar fears were expressed by restaurateurs and bar owners in both Quebec, Canada, and Western Australia.[11,12] Owners also believe that enforcing smoking bans unfairly burdens restaurants.

Proponents argue that nonsmokers, who outnumber smokers 3 to 1, would recover or increase any sales lost from smokers, because nonsmokers have been avoiding establishments that allow smoking.

Smoke-free laws add value to establishments. Restaurants in smoke-free cities have a higher market value at resale (an average of 16% higher) than comparable restaurants located in smoke-filled cities.[4]

Although restaurant and bar owners may fear losing business in the face of smoke-free workplace ordinances, most customers expect to continue patronizing restaurants and bars at the same rate, even if these establishments go smoke-free. The 2006 Zagat Survey of 115,000 Americans reported that 58% of respondents would dine out just as often if restaurants were smoke-free, and 39% would dine out more. Only 3% said they would dine out less often.[13] Prior to Massachusetts implementing its ordinance to ban smoking in all workplaces, including bars and restaurants, Biener and Siegel demonstrated that 61% of surveyed residents would not change their use of restaurants; 30% believed they would increase their use. Only 8% predicted a decrease in their patronage of restaurants. Similarly, when discussing their use of bars, 69% of surveyed Massachusetts residents predicted no change if a smoke-free ordinance went into effect; 20% thought they would visit bars more frequently; and 11% stated they would visit bars less frequently.[14] Nearly identical results have been found from surveys conducted in Hong Kong prior to its smoke-free workplace ordinance and in various parts of Australia.[12,15,16]

Studies analyzing the economic impact of smoke-free workplace ordinances have shown that, contrary to the fears of business owners, the hospitality industry has not lost revenue; in some cases, such as in New York City, sales have improved. Economic studies conducted in the state of New York and the cities of Lexington, KY, have demonstrated that smoking bans do not adversely affect the hospitality industry's revenue and employment.

New York

In 2003, the state of New York passed one of the strongest smoke-free ordinances in the country, banning smoking in all public and private restaurants, bars, bowling facilities, taverns, and bingo halls. Studies in 1999, 2000, and 2003, including a study on New York City's original 1995 partial smoke-free ordinance, concluded that smoke-free ordinances were not economically harmful.[17-19]

In 2004, a Department of Health study found that the city's restaurants and bars prospered despite the smoking ban, demonstrating increases in liquor licenses, jobs, and business tax payments. The report stated that tax receipts increased 8.7 percent from April 1, 2003, to January 1, 2004, compared to the same period in 2002–2003. Furthermore, employment in restaurants and bars increased by about 10,600 jobs (about 2800 seasonally adjusted positions) between March and December 2003.[20] A 2006 study by the state of New York found similar results: Business had improved despite the smoking ban, and the law had not had an adverse financial impact on bars and restaurants.[21]

Additionally, the studies showed a 97% compliance rate, with the vast majority of New Yorkers supporting the ban.[19] Respondents also indicated they were more likely to patronize establishments that were smoke-free. A Zagat survey in 2004, which polled nearly 30,000 New York City restaurant patrons, showed that New Yorkers eat out six times more often now because of the city's smoke-free policy, and 58 percent say they would frequent bars less often if smoking was permitted.[13]

Support has also grown among bar and restaurant owners. On February 6, 2005, James McBratney, President of the Staten Island Restaurant and Tavern Association, was quoted in the *New York Times* saying, "I have to admit, I've seen no falloff in business in either establishment [restaurant or bar]." According to *The Times*, "He went on to describe what he once considered unimaginable: Customers actually seem to like it, and so does he."[22]

Lexington, Kentucky

Since April 2004's inception of a comprehensive law making restaurants, bars, pool halls, and bingo parlors completely smoke-free, businesses in Lexington-Fayette County's bars and restaurants have remained stable.

In 2007, a study published in *The Journal of Tobacco Control* found that employment in Lexington restaurants grew by 3 percent after the smoke-free law went into effect, with approximately 400 employees added per month, while bar employment remained steady; no changes in employment occurred in either restaurants or bars in the six counties neighboring Lexington-Fayette. There also was no significant difference between restaurant and bar openings and closings before and after the law's enactment, regardless of whether or not the establishment served alcohol.[23] Although Lexington is located in a tobacco-producing state with high rates of smoking, the study concluded that no significant economic harm had resulted from the smoke-free legislation.

The recent report's findings parallel those of a 2005 study by the University of Kentucky. According to the study, which looked at employment figures, business openings and closings, and payroll withholding taxes for restaurants and bars before and after the ban, the smoke-free ordinance did not unfavorably affect Lexington's hospitality industry. The study found restaurant employment increased while the number of bar employees remained constant, and the number of licensed restaurants and bars opening and closing remained stable.[26]

A public opinion study conducted by the University of Kentucky also found a significant increase in public support for the smoke-free law: an increase from 56.7 percent before the legislation to 64.0 percent six months after the ordinance took effect in April 2004.[26]

Fort Wayne and Plainfield, Indiana

On June 1, 2007, Fort Wayne expanded its existing smoking ban to include all bars and private clubs. One month after Fort Wayne's ban, bar and restaurant receipts increased 39% across the county compared to sales the same month for the previous year, according to the Allen County Auditor's office. The *Journal Gazette* reported that the August food and beverage tax collections reflected sales from June, the month the ban took effect. Republican City Councilman John Crawford, who supported the ban, believes that the ban has not dissuaded customers and that many businesses are adapting to the ban by building outdoor patios and decks. He also stated that he has visited more places since the ordinance.

The numbers surprised Republican Councilman Tom Didier, who opposed the ban. He indicated that seeing the breakdown of taxes between city and county businesses may be useful in determining the effects of the ban on small businesses.[24]

In late 2006, the town of Plainfield, IN, adopted a local smoking ban that was met with similar resistance and concerns about bars and restaurants losing business. But since the ordinance, the amount of money collected from food and beverage taxes has increased, indicating a positive impact on businesses, according to Plainfield's Town Clerk-Treasurer, Wes Bennett. Other Town Council members look at the growth of food and beverage collection as an indication that the ordinance has not hurt sales. Revenue has steadily increased over the years since the tax was enacted 14 years ago, according to an *Indianapolis Star* article.[25]

Economic Impact on Casinos

Casinos and gaming venues have become large businesses, employing thousands of workers while bringing in significant revenues to local and state economies and Native American communities. As more cities, counties, and states enact smoke-free workplace laws, casinos and gaming venues such as racetracks, racinos (racetrack establishments that include other types of gambling), and bingo and card clubs have been receiving more attention. Currently, 15 states and the Commonwealth of Puerto Rico have enacted 100% smoke-free laws for gaming establishments, with more anticipated in 2009.[6]

Casinos, like restaurants and bars, have been concerned with losing revenue as gamblers step outside – away from the tables and slots – to have a cigarette. Many casino operators fear that by alienating smokers, they will lose longtime customers; they doubt that nonsmokers will be able to replace loyal patrons. However, in a 2006 study by University of Nevada, Reno researchers concluded that four out of five casino patrons are nonsmokers; casino customers do not smoke any more than the average US population smokes.[27] In Nevada, the percentage of gamblers who are also smokers is roughly 21 percent in both Reno and the Las Vegas Strip tourist areas.

News report headlines reading "Smoking ban may be to blame for Illinois casino revenue declines," coupled with studies reporting similar findings by economist Michael Pakko and researcher Richard Thalheimer, both of whom have strong ties to the tobacco industry, have continued to fuel concerns and resistance toward smoke-free legislation.[28-33] But studies finding an adverse impact on casino, bar, and restaurant revenue have been criticized regarding potential bias and questionable funding sources. For example, in a study examining the impact smoke-free ordinances had on bar and tavern revenus in California, Marlow[34] concluded that 82% of bar owners predicted that a smoke-free ordinance would hurt their business. This study relied entirely on the opinions of bar and tavern owners and did not take into account any revenue-related data.[35] In a recent report, Pakko[36] determined that bars and restaurants in Columbia, Missouri had experienced a 5% drop in business since the city's smoke-free restaurant and bar law went into effect on January 9, 2007. Pakko's analysis of Columbia, Missouri's data has been criticized for not following best practices for economic data

review. Pakko did not analyze data from a complete, one-year business cycle, making accurate comparisons with previous business cycles impossible. Additionally, Pakko, attributed a 2006 flattening of revenue trends to the smoke-free law, which did not go into effect until January 2007.[32] Lastly, in a 2005 report regarding the effect of the Lexington-Fayette County, Kentucky smoking ban on alcohol sales, Thalheimer reported a 9.8% to 13.3% drop in on-premises alcohol sales after implementation of the ban. Thalheimer's conclusions have been dismissed for a number of methodological reasons including poor sampling of alcohol distributors, a lack of a comparison group, failure to analyze food sales which could compensate for any alcohol-related losses, and changes in the price of alcohol over time.[33]

Although limited research has been conducted on smoke-free laws' economic impact on casinos and the gaming industry, the available research shows no negative revenue impact. A 2005 study by Mandel, Alamar, and Glantz showed no effect on total gambling revenues, nor on the average revenue per machine.[38] Another study released the same year on the Massachusetts Smoke-Free Workplace Law concluded that the regulation has not adversely affected keno sales or the number of dollars waged each month.[39] In 2003, 16 years of charitable bingo economic trends were examined in Massachusetts before and after the smoke-free ordinances took effect; a decline in revenue occurred before the ban, and it was determined that the ordinance had no effect on bingo revenues.[40] Furthermore, the California Board of Equalization found that bars, casinos, and gambling clubs continued to enjoy increased revenues, based on sales tax receipts in establishments serving alcohol, since the smoke-free law took effect in 1998.[41]

Lastly, smoke-free laws in casinos and gaming facilities have received significant support from the public. In New Jersey, 70% of voters supported extending smoke-free laws to cover casino gaming floors. Additionally, 91% of Californians indicated that they would be more likely to visit smoke-free tribal casinos, or that their patronage levels would stay the same.[42,43]

Literature Analysis Indicates No Significant Economic Impact

An analysis of the studies conducted and published on the economic impact on the hospitality industry found that 47 of the 49 studies concluded that smoke-free laws had not adversely affected the industry. Researchers used objective measures to compare the studies, including sales receipts, data before and after the ordinances, and application of appropriate statistical methods to control for trends, economic conditions, and fluctuations. The two studies that met the criteria but found a negative impact had significant limitations. One study had a biased sample; the other measured the effects of smoking policies implemented in conjunction with other laws to control spending among low-income patrons in gaming venues. Other studies showing a negative economic impact have been based on subjective information, have included estimates based on unverified data, have been published in journals that are not peer-reviewed, and have mostly been funded by the tobacco industry or its affiliates.[42]

Based on these and other economic impact studies, The Surgeons General's 2006 Report on *The Health Consequences of Involuntary Exposure to Tobacco Smoke* concluded that: "Evidence from peer-reviewed studies shows that smoke-free policies and regulations do not have an adverse economic impact on the hospitality industry."[1]

Other Economic Costs/Benefits for Smoke-Free Business

Although the debate on the economic impact of tobacco-free workplaces has focused primarily on customer-based revenues, businesses may overlook other ways in which a tobacco-free ordinance could help their bottom line. Both smoking and nonsmoking employees who work in environments where smoking is permitted report a number of health complaints including runny nose, irritated eyes, sore throat, cough during the day or night, shortness of breath, wheezing, and other sensory and respiratory problems.[45-47] Such health complaints can lead to more medically-related absences. In fact, smokers and workers exposed to SHS take more days off due to chest-related illness and have more absences overall than workers in smoke-free workplaces.[48-50]

Smoke-free workplaces are estimated to save employers $1,045.46 in medical expenses on average for each nonsmoking employee and $2,069.42 in medical expenses on average for each smoking employee.[51,52] Savings come primarily from improved health after businesses go smoke-free and from improved productivity and attendance.[45,46,49,53] By going smoke-free, businesses can reduce the health risks for all their employees, including those who smoke. Over time, smokers who work in smoke-free workplaces reduce the number of cigarettes they smoke per day,

experience a reduced desire to continue smoking, experience more quit attempts, and are more likely to succeed at quitting.[54-60]

Both the elimination of SHS and the reduction in the amount of cigarettes consumed by employees create a healthier workforce, which in turn can result in employers' paying less in workers' compensation premiums and insurance payments.[61,62]

Businesses that go smoke-free report lower overhead and maintenance costs than those that continue to permit smoking. According to the US Environmental Protection Agency, a smoke-free restaurant can save approximately $190 per 1,000 square feet each year due to lower cleaning and maintenance costs.[63] In a survey of cleaning and maintenance costs of 2,000 companies that went smoke-free, 60% reported a decrease in expenditures. Additionally, companies like Unigard Insurance and Merle Norman stated that after going smoke-free, their cleaning and maintenance costs declined significantly.[63,64]

Another significant advantage of smoke-free laws is the value they add to establishments. Restaurants in smoke-free cities have a higher market value at resale (an average of 16% higher) than comparable restaurants located in smoke-filled cities.[65]

National Economic Impact

Nationally, SHS creates a tremendous economic burden on the healthcare system. A recent study by the American Academy of Actuaries estimated that the medical costs and economic losses to nonsmokers who are suffering from lung cancer or heart disease due to SHS is nearly $6 billion a year. During 2004, close to $2.6 billion was spent on the medical care of nonsmokers who had developed lung cancer or cardiac illness due directly to SHS exposure. Behan et al. determined that in 2004, the total cost due to premature death, disability, lost wages, and fringe benefits resulting from exposure of nonsmokers to SHS totaled at least $3.2 billon.[66]

Citing the staggering SHS health-related costs to the US, Ong and Glantz (2004) attempted to predict the cardiovascular health and economic impact if all workplaces in the US went smoke-free. According to their estimates, if all worksites in the US became smoke-free, a total of 6,250 myocardial infarctions and 1,270 strokes would be prevented in both smokers and nonsmokers exposed to SHS over a 7-year period. Ong and Glantz determined that within seven years of implementing a 100% smoke-free workplace law, a total of $280 million in healthcare costs could be saved, $132 million of which would be accounted for by savings for nonsmoking workers exposed to SHS.[67]

Implementing a strong tobacco control program which emphasizes smoke-free workplaces can also help states save money. When California was compared to states that did not have significant comprehensive tobacco control programs, it was found that California's tobacco control program was associated with healthcare expenditures that were $86 billion lower over a 15-year period than would have been expected without the program.[68]

Economic Costs to the State of Indiana

An analysis of the SHS costs to the State of Indiana determined that the overall cost of SHS-attributed hospitalizations for adults in Indiana was $61.51 per capita, based on the estimated population of 6,345,289 in 2007.

Table I: Costs of SHS-Attributed Healthcare in Indiana for Adults and Children, 2007[5]

Total healthcare costs attributable to secondhand smoke = 282.5 million dollars
Total loss of life costs attributable to secondhand smoke = 107.8 million dollars
Overall cost of healthcare and premature loss of life attributed to secondhand smoke for Indiana residents in 2007 = $390.3 million dollars.

Hoosiers Support Smoke-Free Venues

Community support for laws eliminating smoking in workplaces has increased over time. Recent data from the Indiana Tobacco Prevention and Cessation's 2008 Adult Tobacco Survey (ATS) indicate that three out of four Hoosiers support a law in their community that would eliminate tobacco smoke from all indoor workplaces. Similarly, 72.3% of the respondents in the survey said they would support a state law that would eliminate tobacco smoke in all workplaces, including casinos. The results indicate that most residents of Indiana would support a ban on smoking in all workplaces, including hospitality venues.

Conclusions

SHS is a significant public health concern leading to an increased risk of lung cancer, cardiovascular disease, and other health problems. One way to curb the problems associated with secondhand smoke is to pass ordinances requiring all businesses to provide completely smoke-free workplaces to their employees. The hospitality and gaming industries are two where the rates of SHS exposure are generally high. For that reason, considerable effort has been placed on making restaurants, bars, and casinos smoke-free. While owners of these businesses often fear that they will lose profits due to a loss of clientele, there is strong evidence that smoke-free laws do not harm restaurants, bars, or casinos, nor do they affect tourism and other sectors of business. In fact, smoke-free workplaces reduce absenteeism due to smoking-related illnesses and can help employers save money by reducing insurance rates and maintenance costs. Implementing smoke-free workplaces statewide could help Indiana significantly reduce the $390 million dollars spent on SHS-related healthcare costs.

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