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An Analysis of the Economic Effects of Wisconsin's Smokefree Municipal Ordinances on Alcohol Licensed Establishments: 2005-2009

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Executive Summary

Background: Despite the scientific consensus that second hand smoke is a significant health risk, some tavern owners have opposed proposed laws eliminating exposure to smoke due to concerns of adverse economic effects. Numerous studies on the economic effects of smoke-free laws on restaurants and bars have consistently found no industry-wide effects on bars or restaurants. Most recently, a five-year retrospective study of the Washington state smoking ban did not find a negative effect on any sector of the hospitality industry.

Methods: This analysis of economic effects focuses on the effects of smoke-free laws on a small number of Wisconsin municipalities with such laws in place in taverns. The areas focused on in this study are Madison, Appleton, Marshfield, Eau Claire, Fond du Lac, Shorewood and Verona. These cities and their respective home counties were analyzed for 1) changes in the number of alcohol licenses issued, 2) employment in sub-sectors of the hospitality industry, 3) the number of establishments and 4) citations for violations of the city ordinances. Data from federal and state databases were used as well as primary data from city clerks.

Results: Data indicated there was no change in the number of Class B alcohol licenses (for establishments that serve alcohol by the drink) in the year(s) following implementation in cities that pass smoke-free ordinances. There were no significant differences in employment in food service, drinking places or full-service restaurants between counties with smoke-free laws and those (control) without smoke-free laws. The lack of decline in this sector, especially in 2008 and 2009 during the recession, indicated the economic strength of this sector. Opponents of smoke-free laws have hypothesized that one measure of acceptance of the laws is the number and frequency of fines for violations by alcohol license holders. The data indicates that from the date of enactment to July, 2010 there have been only three instances of violations in five cities in the three and a half years under study.

Conclusion: The examination of effects of Wisconsin's municipal smoke-free ordinances indicates no adverse economic effects throughout the hospitality industry and its sub-sectors including drinking establishments. The number of alcohol licenses in municipalities remained constant before and after the implementation of the ordinances. Also, as indicated by the very low level of fines, there is no indication that alcohol license holders believed it was necessary to violate the law in order to maintain revenue. Finally, there was no significant difference in employment in any relevant sector of the hospitality industry when comparing counties with smoke-free ordinances and those without protections. We will continue to monitor data and trends as data becomes available at the state level in the next three to five years.

Background: Second hand smoke (SHS) has been recognized as a health hazard by all U.S. occupational, health and environmental regulatory authorities.¹²³⁴ SHS contains known carcinogens, as well as carbon monoxide, benzene, formaldehyde, respirable particulate matter, nicotine, hydrogen cyanide and more than 100 chemical toxins. Because, prior to the enactment of the Smoke-Free Act, smoking was allowed in about one-fifth of all Wisconsin workplaces. As such, SHS remained a significant health hazard for many workers due to its toxicity and the long duration of exposure throughout the workday. Until July, 2010, approximately, 500,000 members of the 2.7 million Wisconsin workforce were regularly exposed to smoking either directly in their work areas or in common areas such as dining rooms, rest rooms and lobbies.⁵

Of all employees exposed, of particular concern, because of the public's co-exposure to smoke, were employees in bars and restaurants that allow smoking. Approximately 250,000 workers were employed in eating and drinking establishments in the state. While most restaurants are smoke-free, the great majority of restaurants with bars, as well as stand-alone bars, allowed smoking through June, 2010.⁶

There is a substantial body of research documenting the effects of high levels of exposure to secondhand smoke over long duration on the health of restaurant and bar staff. A 2007 study of the effects of a smoke-free ordinance implementation in Madison and Appleton indicated that bartenders reported a significant reduction in upper-respiratory symptoms such as bronchitis after one year of a smoke-free workplace.⁷ Other studies have indicated health benefits to the patron population particularly in the area of reduction of heart attacks after implementation of smoke-free laws.⁸

These now-commonly acknowledged improvements to the health of employees and the public due to smoke-free workplaces were the primary reasons for passage of the Wisconsin Act 12 in 2009. The implementation date for the law was July 5, 2010.

Opponents of smoke-free laws frequently argue that these restrictions have a negative effect on business and subsequently employment in the restaurant and bar industry. Many opponents have claimed that businesses typically "lose 30%" of their business as a result of smoke-free laws. Investigations of this oft-repeated claim have found that the statistic and related claim are without factual evidence.⁹

Research on economic effects of ordinances in Wisconsin, the US and internationally has consistently shown that this negative effect on business has not been the case. A review of 21 studies of economic impact of smoke-free policies found "no negative economic impact from the introduction of smoke-free policies in restaurants and bars."¹⁰ Similar studies were conducted in New York City one year after enactment of its smoke-free workplace law and found little change in bar patronage, employment and revenue.¹¹ Most recently, an analysis of the economic effects of the 2002 Washington state smoke-free law found no adverse effect on any sector of the hospitality industry.¹²

Analyses of the economic effects of Wisconsin's municipal smoke-free ordinances on restaurants and bars have had similar findings. In 1999, a five-year retrospective analysis of Madison's smoke-free restaurant ordinance found that per capita restaurant expenditures grew 16% in Dane County compared to 14% for the state. Overall revenue grew by 24% in the period under study compared to 19% for the rest of the state.¹³

Studies of economic indicators in Appleton two years after passage of its smoke-free law also found more robust growth in the bar and tavern industry following enactment as measured by the record number of liquor license applications, higher real estate values in the tavern-dense central business district and no bar closures on the city side of the border between Appleton and neighboring communities. These earlier reports also found that bars and restaurants on the outside periphery of the smoke-free jurisdictions often voluntarily opted to become smoke-free in order to better compete (with the smoke-free area establishments).

A two-year post study of Madison's tavern ordinance found that licensed establishments increased from 332 in July 2005 (implementation date) to 365 in January 2008. Consistent with business expansion was a substantial increase in employment in the industry. Few businesses closed in this period and a number of existing businesses either expanded to include patios or bought new property in suburban smoke-free communities.¹⁴

Since 2005 many cities in Wisconsin have passed ordinances requiring all workplaces including bars and restaurants to be smoke-free including Eau Claire (7/2008), Fond du Lac (1/2009), Marshfield (4/2008), Shorewood (7/2009) and Verona (8/2009).

The purpose of this analysis is to address the concerns voiced by the tavern industry that these ordinances would have a negative economic effect on the tavern industry through the examination of relevant economic factors.

Limitations: There are numerous limitations in analyzing the economic effects of a policy change one or two years after its implementation. The first and most immediate limitation is the availability of data. Most state and federal data is made available no earlier than two years after its occurrence. Thus, in mid-2010, data for 2008 has recently become accessible.

Second, trends are by definition more than one event. Typically, analysis of a policy requires the review of many years of data. This is especially important in understanding the effects of the institution of smoke-free workplaces. In many cases, it is possible that there is a period of adjustment after change when business lags and then recovers. Short-term analysis would mistakenly emphasize the lag and not fully account for the recovery.

The most direct measure of economic effect would be examination of the revenues of each establishment. The release of such information is voluntary for each business and is rarely available for public review. State tax returns only include the amount of tax paid. Obviously, many factors including debt, losses and disclosed income in a business where

a substantial portion of the business is transacted in cash make taxes paid an unreliable indicator.

The Department of Revenue does not release county-level excise taxes on alcohol sales because the taxes are paid by the manufacturer. Nor does it release sales tax receipts at the enterprise level or sales tax data by industry sub group such as “full-service restaurant” or “drinking places.”

Perhaps the most serious limitation to this analysis or any economic analysis during the recession-period of July, 2008 through the current and later quarters is separating the effects of the worst economic downturn since the Great Depression from the specific question of interest. It is very difficult to account for the effects of a relatively minor policy change in the midst of a transformative economic change that forced 10% of the workforce from their jobs and households collectively lost trillions of dollars savings and home equity. It is generally acknowledged that the consumer behavior, even for those who were relatively unaffected by the economic turmoil, changed, often becoming increasingly reticent to spend on non-essentials.

Finally, the five communities under review are relatively small. Three of the communities, Verona (Dane), Shorewood (Milwaukee) and Marshfield (Wood) have a combined population of 35,000 and total of 65 alcohol-licensed establishments. This constitutes a very small sample for analysis. In a sample of this size, very small changes due to non-relevant factors (e.g. a manufacturing plant shutdown) can have substantial changes in the outcome.

Results and Discussion:

Industry overview: The hospitality industry (constituting all eating and drinking establishments) is a major industry in Wisconsin and the US. In May 2010, Wisconsin’s food service and drinking places employed 193,500 workers or 7% of the state’s workforce. Of this total, drinking places employed 21,500. During the winter season, the restaurant industry typically reduces employment by 5%.¹⁵ Employment in the industry is among the lowest paid of all economic sectors. Average restaurant cooks’ wages are \$11/hour, food preparation workers are \$8.09/hour and counter attendants/fast food cooks average \$8.30/hour. There is wide variation in the incomes of tipped employees such as bartenders and wait staff.

Despite reductions in the US, the retail alcohol sales industry in Wisconsin continues to thrive. For example, in 2008-2009, beer sales fell 2% in the US and are on-track to decline an additional 4% in 2010. In contrast, beer sales in 2008-2009 increased by over 3% in Wisconsin for a total difference (between the US and Wisconsin) of 5%. Sales of distilled spirits in Wisconsin in the period increased by over 30% in the period of 2000-2008 though declined slightly in 2009.¹⁶

On average, in March of 2009 and 2010 Wisconsin adults consumed an average of 3.1 gallons of beer, .2 gallons of distilled spirits and .2 gallons of wine. In July 2009, this

increased to 3.6 gallons of beer and .25 gallons of distilled spirits. (Three gallons are equivalent to six 6-packs of beer.) This data indicates not only the stability of the industry but the capacity of Wisconsin's alcohol-consuming population to defy the national trend of reducing alcohol use.

With the highest number of liquor licenses per capita in the nation, according to the Tavern League of Wisconsin, Wisconsin residents do not lack access to alcohol. In half of the state's counties, there is at least one tavern for every 400 adults.¹⁷ One could assume that in an economic environment saturated with suppliers, some contraction is inevitable.

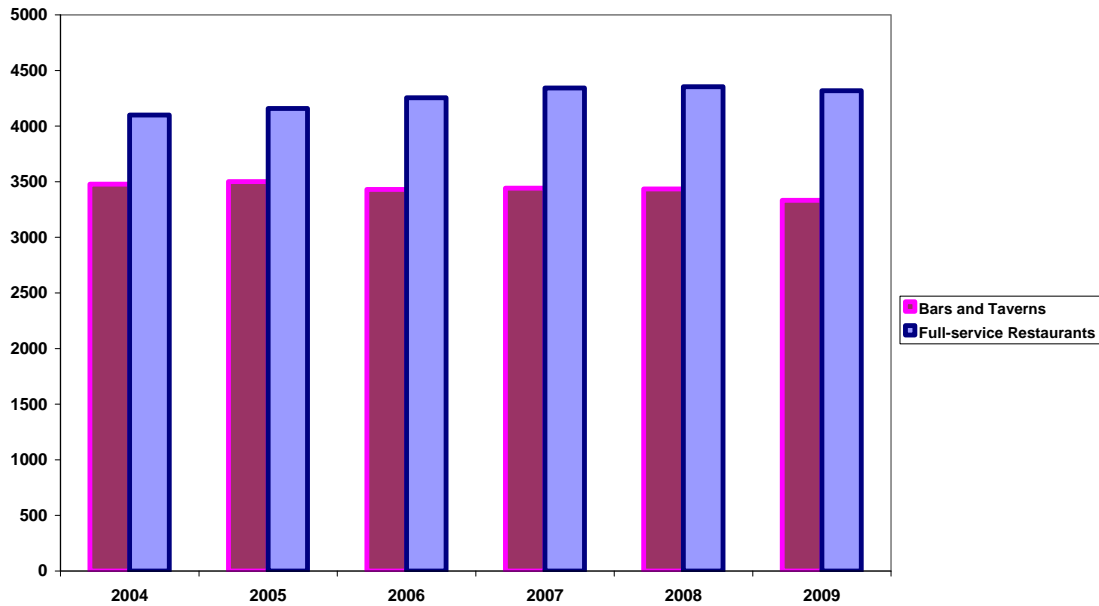
Although consumer demand for alcohol has remained unabated in Wisconsin through the current recession, the state tavern industry has been subject to a sustained historical decline. Most drinking places or taverns are small businesses, have few or no employees and are marginally profitable. In the past decades it has been subject to a number of significant cultural and legal changes that have negatively affected many in the industry. These changes include an increase in the drinking age to 21, increased social disapproval of drinking and driving represented to the recent passage of legislation that modestly enhances the penalties for repeated offenders, de-population of rural areas and heightened suburbanization that reduced the importance of taverns as a social hub, two-income families that reduced familial acceptability of male-only drinking and at the same time increased demand for meals outside the home (that may or may not include drinking), etc.¹⁸

Given these social changes, the number of drinking places in Wisconsin has declined while the number of full-service restaurants that serve alcohol (Applebee's, Red Lobster, TGIF, etc.) increased. As indicated in **Figure 1**, the number of full-service restaurants has increased 5% while drinking places declined slightly (4%) from 2004-2009.* These data indicate a slow decline that is consistent with state historical trends. For example, from 1985 to 1995, the number of drinking establishments declined by 14% (from 14,700 to 12,700. In the period, 1997 to 2002, the number of drinking establishments declined by an additional 5%.¹⁹

* Categories of "full-service restaurants" and "drinking places" are used in the Bureau of Labor Statistics' industry code. Full service restaurants offer several menu options and patrons are typically offered table service with a waiter or waitress. Alcoholic beverages are often part of the menu offerings. Drinking places are primarily for the sale and consumption of alcoholic beverages. Some drinking places may offer patrons limited dining services.

Figure 1

Taverns and Full-service Restaurants: Wisconsin, 2004-2009



Source: BLS: Quarterly Census of Employment and Wages

Effect of recent ordinances on Wisconsin industry:

As indicated above, specific data at the enterprise level are not available for analysis in understanding the effects of municipal smoke-free ordinances.

However, even in the absence of this data a critical indicator of the effect of proposed and actual implementation of ordinances on the hospitality industry are the number of licenses issued by municipalities. Businesses are required to obtain a Class B license from their municipality in order to sell alcohol either as a “packaged good” or wine, beer or distilled spirits by the drink. Each municipality is allowed to issue no more than a specific number of licenses.

As indicated in **Table 1**, there was no change in the number of liquor licenses issued in municipalities after passage of its smoke-free ordinance. In many cities, there was a substantial lag-time between the date of passage and implementation. The stable number of licenses indicates that there was not a significant loss of sales due to smoking restrictions which would cause businesses to fail and thus surrender their licenses. Indeed, when businesses were given long-term notice that they would be subject to this new restriction there was no indication that business as a whole or in part contracted.

Table 1: Number of Class B Liquor Licenses Before and After Passage and Implementation of a Smoke-free Ordinance.

	Passage	Implemented		Class B Liquor Licenses	
				Pre	Post
Madison	Apr.- 04	July 05	2005 2008	332	365
Marshfield	Apr.-08	Apr.-08	2007 2008 2009	39 39	38
Eau Claire*	Mar.-08	July-08	2008 2009 2010	82	82 82
Fond du Lac	Nov.-07	Feb.-08	2007 2008 2009	82 81	81
Shorewood	Feb.-07	July -09	2007 2008 2009	12	12 12
Verona	Mar.-09	Aug.-09	2008-09 2009-10	19	19

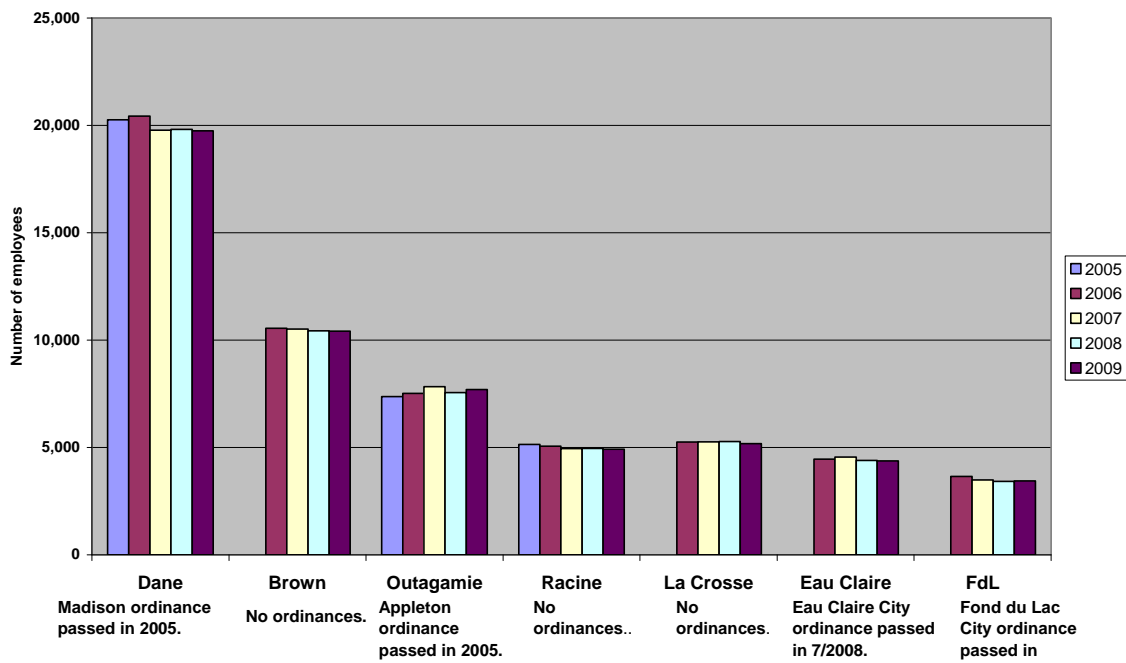
Source: City Clerks, 2010

* Eau Claire City has issued the maximum number of Class B licenses allowed under law. There are now eight licenses under “reserve.”

Employment in Industry: Comparison of employment data in counties with ordinance as compared to counties without significant ordinances indicates no discernible effect. (For purpose of this analysis, counties with dominant cities such as Eau Claire City, Fond du Lac and Appleton (Outagamie) are used as proxies for data for the cities which is not available.)

Figure 2 (employment in Wisconsin food service and drinking places) indicates that employment in this industry increased from 2005 to 2006 in Dane and Outagamie Counties following implementation of their comprehensive ordinances in July 2005. No change occurred in Eau Claire and Fond du Lac in 2008-2009 following implementation of their ordinances in early 2008. This was consistent with the experience of similar “control counties” of Brown, Racine and La Crosse, which had little change.

Figure 2
Employment in Wisconsin Food Services and Drinking Places: 2005-2009

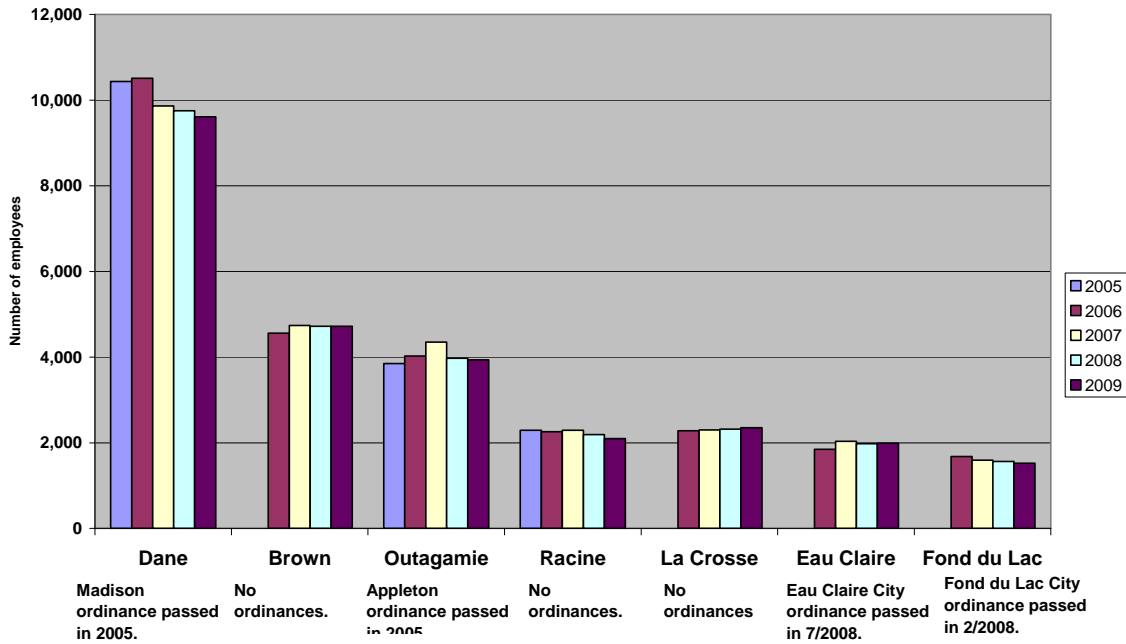


Source: BLS Quarterly Census of Employment and Wages

As indicated in **Figure 3** (employment in Wisconsin full-service restaurants) below, employment in full-service restaurants, which includes bar and table-services, increased slightly in Dane and Outagamie Counties following passage of their ordinances. Brown County had a slight increase while the other counties had no change in employment during the period 05-06. Similarly there was no change in employment from 2008-2009 in either ordinance or non-ordinance counties despite the recession that had catastrophic effects on other industries.

Figure 3

Employment in Wisconsin Full-service Restaurants: 2005-2009

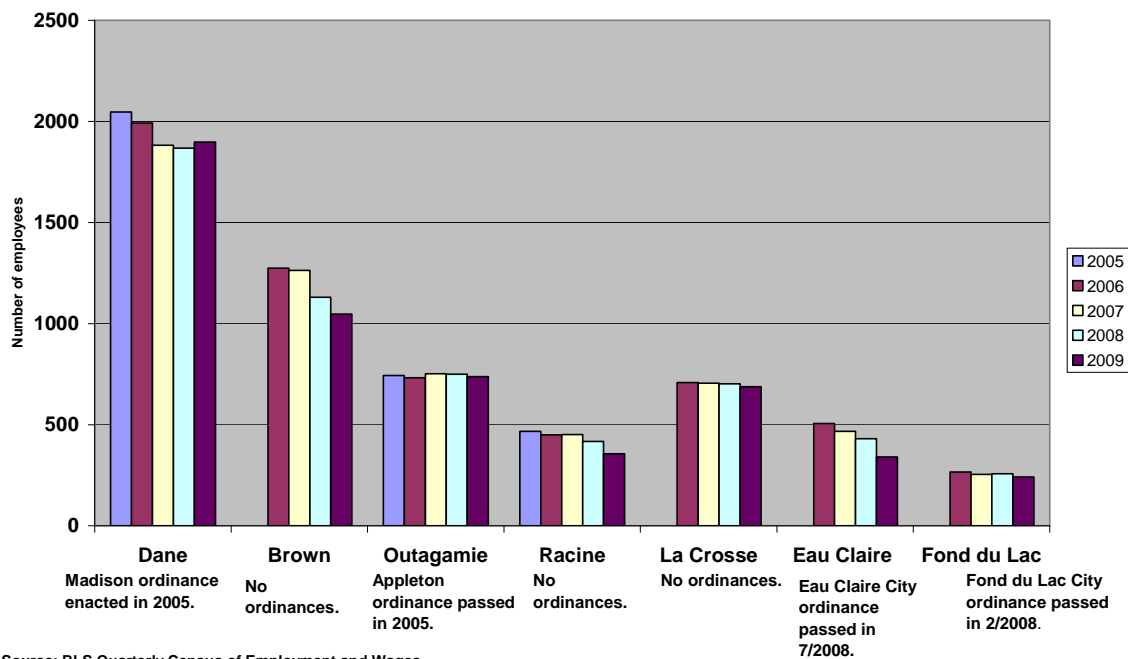


Source: BLS Quarterly Census of Employment and Wages

Comparison of counties with ordinances and those without ordinances does not indicate discernible effects of ordinances on employment in bars and taverns (**Figure 4**). From 2005-2006 there was very little or no change in employment in Dane and Outagamie counties which was consistent with non-ordinance counties. From 2008-2009 there was a small decline in employment in Eau Claire, however, most of the change occurred in 2009, the year after the ordinance and during the period of deepest recession. Brown and Racine Counties, which had no ordinances, had similar levels of decline.

Figure 4

Employment in Bars and Taverns: 2005-2009



Source: BLS Quarterly Census of Employment and Wages

Ordinance Compliance: Some economists have been critical of the “community effects” method of analysis generally used in reviewing the effects of smoke-free ordinances. Using the “community effects” method, the gross sales or tax income for an industry over a geographic area is analyzed for a trend. Individual businesses that may have lost income or gained significant income are subsumed into the total revenue. As noted previously, using an individual “enterprise-level” analysis would be preferable, but due to restrictions on access to such data and concerns on to its reliability, this method is a practical impossibility.

Further, it has been argued that the community effects approach ignores the negative effects on individual business enterprises. Rather than using revenue or employment data, opponents of smoke-free ordinances argue, “Noncompliance data indicate that smoking bans economic harm on some bars, restaurants and organizations.... Owners who do not find it profitable to comply with a ban will predictably be those with the most to lose from fuller compliance...”²⁰ Under this theory, bar-owners will violate (or non-comply) with ordinances when the loss to their business (or their anticipation of gain) is greater than the cost of the fine. As such, the number of business experiencing economic harm can be measured by counting the number of violations.

This measure of economic effects, most recently posited by an economist who has received multiple grants from Altria Co. was employed to analyze the effects of smoke-free ordinances. The analysis of non-compliance does not account for a number of confounding variables such as the amount of the fines, effects of fines and violations on licensure, effectiveness of the regulating agency, etc.

Nonetheless, for this analysis we will accept the hypothesis that a low level of compliance indicates significant economic harm and that high level of compliance indicates little or no economic harm.

Table 2: Number of licensed establishments receiving a citation for violation of ordinance.

City	2007	2008	2009	2010
Madison	0	0	0	0
Appleton	0	1	0	0
Shorewood			0	0
Eau Claire		1	1	0
Fond du Lac		0	0	0
Dane Co municipalities		0	0	0

Source: Municipal Environmental Health Officers

According to the hypothesis posited by Marlow, et al. it appears that the smoke-free ordinances caused virtually no economic harm to holders of Class B alcohol licenses in Wisconsin. Indeed, only one-tenth of one percent of all businesses (based on approximately 800 licensed establishments) received a fine for violations of the law. Given the fact that there is no fine for the first offense and only \$100 for the second offense, under the hypothesis a business that wanted to overcome economic harm would have purposefully violated the smoking ban to reduce its perceived losses. However, those losses are either non-existent or so small that bar owners have consistently chosen to comply with municipal laws.

Conclusion:

The hospitality industry in Wisconsin and the US is undergoing major changes due to social and economic transformations of community and family life. These changes are indicated by a slow and slight decline of the number of taverns in Wisconsin and an increase in the number of full-service restaurants in the last twenty years. It is likely that this decline has been accelerated by the current recession which is characterized by job loss and reductions in household income.

However, it should be noted that as a result of this major economic recession, though the hospitality industry has been adversely affected by the major economic recession, it has been among the least affected sectors. Despite the reduction in the number of taverns, the data indicates that the number of tavern employees has been fairly constant. From 2007 to 2009, employment in administrative services declined 11%, employment in construction declined 19%, and the durable goods sector (the largest in Wisconsin) fell by 17%. During the same period, employment in food service and drinking places declined by only 3%. This is consistent with the stable volume of alcohol sales in Wisconsin.

The holders of Class B licenses for alcohol sales for use in either restaurants or bars voiced concerns that municipal smoke-free ordinances would have a negative effect on their sales because customers who smoke would either go to bars and restaurants in other communities or drink at home. Many predicted that this would lead to the loss of their business. This fear has been sustained by the tobacco industry and has been repeated for decades despite hundreds of studies and more pointedly, the actual experience of their colleagues in near-by cities and states.²¹

The data based on issuance of Class B licenses strongly indicates that there was no individual (enterprise-level) or industry level effect from the ordinances. Reductions of licensing for Class B establishments would have indicated the lack of viability of these businesses. First, in almost all instances the number of licenses grew- in some cases substantially- after the implementation of the ordinances. Second, the virtually uniform compliance with smoke-free ordinances in every major city over the last four years is a further indication of the lack of negative effect. This finding is consistent with prior studies of Wisconsin and national law. Third, our comparison of employment in potentially affected industries and sub-industries (e.g. taverns) between “ordinance” and “non-ordinance” counties indicates no changes in employment in the year in which an ordinance is implemented.

While we have established the lack of negative effects, we will continue to monitor trends to further investigate potential positive, as well as negative, effects when data related to the state Smoke-Free law becomes available in the next three to five years.

References:

- ¹ Surgeon General: The health consequences of involuntary exposure to tobacco smoke. A report of the Surgeon General. US Dept of Health and Human Services. Centers for Disease Control and Prevention, Atlanta, GA. 2006.
- ² NIOSH. Current Intelligence Bulletin #54. Environmental tobacco smoke in the workplace, lung cancer and other health effects. US Dept of Health and Human Services. NIOSH, Cincinnati, OH. 1991.
- ³ Occupational and Safety Health Administration, Department of Labor. Indoor Air Quality. 29 CFR Parts 1910, 1915, 1926, 1928. Federal Register Vol. 59, No. 65. April 5, 1994.
- ⁴ US EPA. Health effects of passive smoking: Assessment of lung cancer in adults and respiratory disorders in children. EPA/600/6-90/006F. 1992.
- ⁵ Hinterthuer Cr, Palmersheim KA, Anderson KG, Glysch RL, Remington PL. "Smoking Allowed"- Trends in policies that allow smoking in the workplace: Wisconsin and the United States. Madison, Wisconsin: University of Wisconsin Paul P. Carbone Comprehensive Cancer Center. Tobacco Surveillance and Evaluation Program; 2009.
- ⁶ Renfro-Sargent M, Riemer A, Christiansen A. Results of 2002 Wisconsin Restaurant and Bar Smoking Policy Survey. Madison, Wisconsin: University of Wisconsin Paul P. Carbone Comprehensive Cancer Center. Tobacco Surveillance and Evaluation Program; 2002.
- ⁷ Palmersheim KA, Remington PL, Wegner MV. The Impact of a Smoke-free Ordinance on the Health and Attitudes of Bartenders, One Year Later. Tobacco Surveillance and Evaluation Program, University of Wisconsin Paul P. Carbone Comprehensive Center, Madison, WI: March, 2007.
- ⁸ Lightwood JM, Glantz SA. Declines in acute myocardial infarction after smoke-free laws and individual risk attributable to secondhand smoke. *Circulation*. 2009;120:1373-1379.
- ⁹ Self-serving surveys: The 30% Myth. *Consumer Reports*, May 1994.
- ¹⁰ Scollo M, Lal A, Hyland A, Glantz S. Review of the quality of studies on the economic effects of smoke-free policies on the hospitality industry, *Tobacco Control*. 2003. 12, 13-20.
- ¹¹ RTI International. First annual independent evaluation of New York's tobacco control program. Research Triangle Park, NC. RTI International 2004.
- ¹² Boles M, Dilley J, Maher JE, Boysun MJ, Reid T. Smoke-free law associated with higher-than-expected taxable retail sales for bars and taverns in Washington State. *Prev Chronic Dis* 2010;7(4). http://www.cdc.gov/pcd/issues/2010/jul/09_0187.htm. Accessed July 1, 2010.
- ¹³ Dresser L. Clearing the air: the effects of smokefree ordinances on restaurant revenues in Dane County (WI). TFWC, Madison, WI. 1999.
- ¹⁴ Madison/Dane County Public Health Dept. City of Madison Fact Sheet on Economic and Health Effects. Jan 2009.
- ¹⁵ Wisconsin Department of Workforce Development, Worknet, Current Employment Statistics.

http://worknet.wisconsin.gov/worknet_info/downloads/CES/cesmsa_2000-2009_09bm.xls

¹⁶ <http://www.beerinstitute.org/statistics.asp?bid=198>

¹⁷ Poston B. Iron County leads state in taverns per capita. *Milw Journal Sentinel*. Oct. 16, 2008.

¹⁸ Ryan Bill, Wisconsin's Tavern Industry. Challenges Facing a Main Street Institution. Center for Community Economic Development, UW-Cooperative Extension. No. 8. April 1997.

¹⁹ US Census. Accessed July 1, 2010.

http://www.census.gov/epcd/ec97/wi/WI000_72.HTM

²⁰ Marlow ML, The economic losers from smoking bans. *Regulation*. Summer 2010; 14-19.

²¹ Chamberlain Consultants, Smoking Issues in Wisconsin, 1998. Madison, WI. Study funded by Philip Morris Accommodation Program.