

# New York's Smoke-free Regulations:

## Effects on Employment and Sales in the Hospitality Industry

Contrary to the alarms raised by the hospitality and tobacco industries, hospitality-industry sales and employment have not decreased in the wake of smoke-free regulations passed in New York State.

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Studies have shown that hospitality workers experience substantial exposure to secondhand smoke,<sup>1</sup> that they are at considerable risk for lung cancer,<sup>2</sup> and that workers' respiratory health improves following imposition of regulations that restrict smoking in hospitality operations.<sup>3</sup> As of December 2002, 232 jurisdictions in the United States have mandated smoke-free worksites, restaurants, or freestanding

bars, including the entire states of California and Delaware.<sup>4</sup> Several New York State counties have implemented smoke-free-restaurant regulations since 1995, and statewide regulations that eliminate smoking in most indoor public places including bars and restaurants are scheduled to take effect in July 2003. Despite the apparent health benefits, such regulations spur considerable debate over a potential side effect—which is that the local hospitality-industry economy will be adversely affected.<sup>5</sup>

<sup>1</sup> "Draft of Report on Secondhand Smoke Released," *Journal of the American Medical Association*, 227 (April 2, 1997), p. 1026.

<sup>2</sup> M. Siegel, "Involuntary Smoking in the Restaurant Workplace: A Review of Employee Exposure and Health Effects," *Journal of the American Medical Association*, Vol. 270 (1993), pp. 490–493.

<sup>3</sup> M.D. Eisner, A.K. Smith, and P.D. Blanc, "Bartenders' Respiratory Health after Establishment of Smoke-free Bars and Taverns," *Journal of the American Medical Association*, Vol. 280, No. 22 (1998), pp. 1909–1914.

<sup>4</sup> Americans for Nonsmokers Rights, "Municipalities with 100-percent-smoke-free Ordinances," [www.no-smoke.org/100ordlisttabs.pdf](http://www.no-smoke.org/100ordlisttabs.pdf) (as viewed December 2002).

<sup>5</sup> "Self-serving Surveys, the 30-percent Myth," *Consumer Reports*, March 1995, pp. 142–147.

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As of August 2002, a total of 86 published reports have examined economic effects of smoke-free regulations on hospitality businesses in 30 states or provinces in seven countries.<sup>6</sup> Studies that rely on objective measures have examined taxable sales receipts and employment levels, whereas studies that rely on subjective measures typically analyze survey data collected before or after smoke-free regulations are implemented.<sup>7</sup> All 18 studies that met the most rigorous study-design criteria by using objective mea-

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surements concluded that bars and restaurants experienced no negative sales or employment effects from smoke-free regulations. Studies that have found adverse effects, on the other hand, generally rely on subjective measurements (such as consumers' or restaurant owners' reports on changes in business), are not peer reviewed, and have been funded by the tobacco industry or a group that has received funding from the tobacco industry to conduct the project.<sup>8</sup>

As just one example, Corsun, Young, and Enz concluded that "on the whole, the population of New York City restaurants has not been negatively affected economically," based on survey work conducted in the months after New York's smoke-free regulation took effect in April 1995.<sup>9</sup> A subsequent critique funded by the National

Smokers Alliance found the Corsun *et al.* conclusion "...invalid for several reasons."<sup>10</sup>

While many studies exist, knowledge gaps include thorough examinations of how employment levels have changed following the implementation of smoke-free regulations. In jurisdictions that have large tourist industries, such as New York City, the usual argument is that smoke-free-restaurant regulations will diminish tourism, thereby decreasing hotel revenues and employment. Local policymakers and business owners desire information about what will happen in their jurisdiction if they implement smoke-free regulations. Results from other localities are often discounted as not being relevant. So, despite the existing literature that indicates that smoke-free regulations do not cause declines in sales and employment in the restaurant industry, additional research is still needed.

### Studying the Economics of Smoke-free Regulations

Despite the considerable evidence that smoke-free regulations are not bad for business, policymakers continually cite that concern as a major reason for not implementing such policies, and business owners are hesitant to implement them on their own. Consequently, we set out to assess changes in taxable sales and employment in restaurants and hotels in five counties in New York State that have implemented smoke-free dining regulations since 1995.

**Data sources and variables.** Our data sources for the dependent variables for this study were restaurants' taxable sales and employment levels. The primary independent variable in our analysis is the presence or absence of smoke-free regulations.

**Taxable sales.** Semiannual data on taxable sales from "eating and drinking establishments" and "retail trade" were obtained from the New York State Department of Taxation and Finance for March 1990 through February 2000 for each county in New York State. Businesses were classified into a particular business according to the code reported on their income-tax returns using

<sup>6</sup> See: M. Scollo, A. Lal, A. Hyland, and S. Glantz, "A Review of the Quality of Studies on the Economic Effects of Smoke-free Policies on the Hospitality Industry," *Tobacco Control*, Vol. 12 (2003), pp. 13–20.

<sup>7</sup> As an example, see: D.L. Corsun, C.A. Young, and C.A. Enz, "Should NYC's Restaurateurs Lighten Up?," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 37, No. 2 (April 1996), pp. 25–33.

<sup>8</sup> For an example of an industry-sponsored rebuttal, see: M.K. Evans, "Review of Cornell Survey on Smoking Ban in New York City," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 37, No. 5 (October 1996), pp. 8–9.

<sup>9</sup> Corsun, Young, and Enz, p. 33.

<sup>10</sup> Evans, p. 8.

the Federal Standard Industrial Classification (SIC) coding system.<sup>11</sup>

**Employment.** Monthly data on the number of employees in restaurants (SIC code 58.12) and hotels (SIC code 70.11) were obtained for each county in New York State from the New York State Department of Labor (NYSDOL) from January 1990 through December 1999. Virtually any business that pays employees in a given quarter must submit a report to the NYSDOL stating the number of employees it had in each month during that quarter for the purposes of determining unemployment-insurance premiums.

**Smoke-free regulations.** We considered only counties with smoke-free regulations that require 100-percent smoke-free dining areas and prohibit smoking in restaurants unless the area has a separate ventilation system. We also required at least 12 months of available data following the implementation of the regulation. The counties that fit those criteria, Erie, Monroe, Suffolk, and Westchester, plus New York City (with five boroughs, which are treated as a single jurisdiction for this study), comprise New York State's largest urban centers and represent 63 percent of the state's total population. See Exhibit 1 for a summary of each county's laws, when they became effective, and the demographic characteristics of each county.

## Measures of Sales and Employment

The following five outcome measures were assessed for each county: (1) per-capita taxable sales from eating and drinking establishments; (2) the fraction of retail sales from eating and drinking places; (3) per-capita taxable sales from hotels; (4) per-capita restaurant employment; and (5) per-capita hotel employment. Data from all counties in New York State were also examined in a combined model that compared sales and employment outcomes in the five smoke-free venues after implementation of smoke-free regulations to outcomes in other counties where smoking was still permitted, and also to outcomes before the enactment of the smoke-free regula-

<sup>11</sup> The codes for "eating and drinking places" are 58.10–58.13, the codes for "retail trade" are 52.00–59.99, and the codes for hotels are 70.10–70.41.

## EXHIBIT 1

### Summary of selected smoke-free regulations in New York State

	Suffolk	New York City*	Westchester	Erie	Monroe
<i>Effective date</i>	Jan. 1995	April 1995	Sept. 1996	Jan. 1997, with a Jan. 1998 phase-in	Jan. 1998, with a Jan. 1999 phase-in
<i>Total population</i>	1,419,369	1,537,195	923,459	950,265	735,343
<i>Percentage male</i>	49.0	47.5	47.8	47.8	48.2
<i>Percentage white</i>	84.6	54.4	71.3	82.2	79.1
<i>Median age (years)</i>	36.5	35.7	37.6	38.0	36.1
<i>Median household income</i>	\$65,288	\$47,030	\$63,582	\$38,567	\$44,891

\*All five boroughs

*Notes:* These regulations typically eliminate smoking in the indoor dining areas of restaurants and require separately ventilated areas where smoking is allowed. Stand-alone bars are exempt. Population statistics are drawn from the 2000 U.S. Census.

tions in the five jurisdictions studied. Sales figures were adjusted for inflation to 2002 dollars, and population data come from the U.S. Census Bureau. We also examined trends in the number of restaurants and hotels, as well as the average annual payroll in these businesses in the five counties before and after smoke-free regulations were implemented.

## Analysis

We analyzed each outcome variable by examining changes in sales and employment for the period one year before and one year after the smoke-free regulation became effective. For laws that were phased in over a period of time, we made comparisons one year before and one year after the phase-in began. Because treating individual phases of the law separately yielded similar conclusions, for simplicity, we present data only from the initial implementation period.

To control for other factors related to sales and employment, a multivariate linear-regression model was constructed to assess the level of each outcome as a function of four independent vari-

## EXHIBIT 2

## Eating and drinking places and hotels and their payrolls before and after implementation of smoke-free regulations

County	Eating and drinking places			Hotels		
	Number			Number		
	One year before law	One year after law	Change	One year before law	One year after law	Change
Erie County	1,724	1,648	-4.4%	82	78	-4.9%
Monroe County	1,134	1,088	-4.1%	55	48	-12.7%
New York City*	9,814	10,140	3.3%	374	376	0.5%
Suffolk County	2,003	2,007	0.2%	130	150	15.4%
Westchester County	1,398	1,389	-0.6%	43	42	-2.3%
County	Average annual payroll			Average annual payroll		
	One year before law	One year after law	Change	One year before law	One year after law	Change
	One year before law	One year after law	Change	One year before law	One year after law	Change
Erie County	\$271,314,673	\$297,667,127	9.7%	\$50,079,036	\$61,043,733	21.9%
Monroe County	\$232,492,395	\$251,264,609	8.1%	\$44,432,861	\$55,103,934	24.0%
New York City*	\$2,141,989,525	\$2,313,262,458	8.0%	\$1,064,993,279	\$1,181,766,397	11.0%
Suffolk County	\$309,090,354	\$320,303,685	3.6%	\$43,341,197	\$48,933,822	12.9%
Westchester County	\$248,554,434	\$254,465,666	2.4%	\$61,214,014	\$63,516,590	3.8%

All dollar amounts are adjusted to 2002 dollars.

\*All five boroughs

ables, namely, the presence of the smoke-free law, time, season, and unemployment rate. The main predictor variable in that model was the presence of the smoke-free regulation in a given time period in a given county. The other measures were the season (September to February or March to August for taxable sales; and September to November, December to February, March to May, and June to August for employment), the year, and the unemployment rate (obtained from the NYSDOL).

The effects of underlying economic trends were controlled for by the structure of both the outcome (i.e., by comparing eating and drinking sales to retail sales in a given county and by comparing sales in the same county over time) and the predictor variables (i.e., time, season, and unemployment).

## Results

Trends in the number of restaurants and hotels operating in the five jurisdictions before and af-

ter smoke-free regulations were implemented are presented in Exhibit 2. The number of restaurants and hotels typically remained nearly constant or decreased slightly. However, the annual payroll in those establishments increased in the test counties following the implementation of smoke-free regulations, even after adjusting for inflation.

The association between indicators of sales and employment and predictors of these outcomes for all of the counties in New York State is presented in Exhibit 3. Statistically significant increases in eating and drinking and hotel taxable sales were associated with the presence of the smoke-free regulations, while no association was observed between restaurant and hotel employment levels and smoke-free regulations. Although not consistently statistically significant, sales and employment increased in the summer months.

Changes in county-specific per-capita taxable sales from eating and drinking places and hotels are presented in Exhibit 4 (overleaf). Per-capita

taxable sales in eating and drinking establishments increased in three of the five counties studied, and the multivariate analysis indicated that Monroe County's increase was statistically significant. Hotel sales increased in all five counties, with the increases being statistically significant in Monroe County and Suffolk County. The presence of smoke-free regulations was not associated with changes in the fraction of retail sales that occurred in eating and drinking establishments.

Changes in county-specific per-capita restaurant and hotel employment are also presented in Exhibit 5 (overleaf). Per-capita restaurant and hotel employment increased in three counties and decreased in two others. Multivariate analyses indicated statistically significant increases in per-capita restaurant employment in New York City, statistically significant decreases in Monroe County and Westchester County, and no association in Erie County and Suffolk County. Multivariate analysis of per-capita hotel employment indicated statistically significant increases in New York City, Monroe County, and Suffolk County; a statistically significant decrease in Erie County; and no association in Westchester County.

## Discussion

When considering all of the counties in New York State, smoke-free regulations were not associated with adverse economic outcomes in restaurants and hotels. On the contrary, sales and employment generally increased in counties that implemented smoke-free regulations (when controlling for underlying economic trends). County-specific analyses generally reach the same conclusion—namely, that sales and employment stayed constant or increased. Out of the 25 county-specific statistical tests conducted, seven were associated with increased business following smoke-free regulation, fifteen showed no association, and three were associated with decreased business.

**Looking at restaurants.** Our results do not support the claim that smoke-free regulations are bad for the restaurant business. To the contrary, our findings are consistent with several previously published reports in peer-reviewed scientific journals on the economic effect of smoke-free regulations in New York State and other

### EXHIBIT 3

## Results of multivariate analysis

### Restaurant employment per 1,000 people\*

Variable	Coefficient	95% confidence interval
Smoke-free regulations	-1.56	-3.71, 0.60
Year	0.09	-0.15, 0.37
Per season:		
Winter (Dec to Feb)	<i>Referent</i>	<i>Referent</i>
Spring (Mar to May)	0.01	-1.92, 1.94
Summer (Jun to Aug)	0.51	-1.42, 2.43
Fall (Sep to Nov)	-0.27	-2.20, 1.67
Unemployment	-2.16	-2.45, -1.87

### Semiannual per-capita eating and drinking sales\*\*

Variable	Coefficient	95% confidence interval
Smoke-free regulations	59.24	38.05, 80.43
Year	-14.85	-18.39, -11.32
Per season:		
Fall–Winter (Sept to Feb)	<i>Referent</i>	<i>Referent</i>
Spring–Summer (Mar to Aug)	44.03	29.81, 58.26
Unemployment	0.80	-3.16, 4.75

### Hotel employment per 1,000 people\*

Variable	Coefficient	95% confidence interval
Smoke-free regulations	0.36	-0.62, 1.34
Year	-0.08	-0.26, 0.08
Per season:		
Winter (Dec to Feb)	<i>Referent</i>	<i>Referent</i>
Spring (Mar to May)	-0.03	-0.91, 0.85
Summer (Jun to Aug)	0.10	-0.77, 0.98
Fall (Sept to Nov)	-0.02	-0.90, 0.86
Unemployment	-0.33	-0.46, -0.20

### Semiannual per-capita hotel sales\*\*

Variable	Coefficient	95% confidence interval
Smoke-free regulations	37.39	14.59, 60.20
Year	0.81	-2.99, 4.62
Per season:		
Fall–Winter (Sept to Feb)	<i>Referent</i>	<i>Referent</i>
Spring–Summer (Mar to Aug)	6.22	-9.10, 21.53
Unemployment	15.17	10.91, 19.42

\* For employment analyses,  $N = 1,200$  (120 months of study for nine smoke-free jurisdictions [five NYC boroughs plus four other counties] plus the rest of NYS)

\*\* For taxable sales analyses,  $N = 120$  (20 semi-annual periods of study for each of five smoke-free jurisdictions and the rest of NYS)

## EXHIBIT 4

## Changes in per-capita taxable sales for eating and drinking places and hotels

Jurisdiction	Semiannual per-capita eating and drinking sales				Semiannual per-capita hotel sales				Eating and drinking sales compared to retail sales			
	One year before law	One year after law	Change	P-value*	One year before law	One year after law	Change	P-value*	One year before law	One year after law	Change	P-value*
Erie County	\$396	\$402	1.7%	0.82	\$63	\$72	13.8%	0.62	0.144	0.147	2.1%	0.58
Monroe County	\$362	\$387	7.1%	0.02	\$68	\$72	6.4%	0.02	0.124	0.141	13.3%	0.87
New York City	\$434	\$436	0.5%	0.36	\$182	\$188	3.4%	0.83	0.227	0.227	0.2%	0.28
Suffolk County	\$363	\$330	-9.0%	0.35	\$49	\$50	2.9%	0.01	0.106	0.097	-8.6%	0.98
Westchester County	\$421	\$380	-9.8%	0.12	\$84	\$110	31.6%	0.06	0.116	0.106	-8.6%	0.23

\* Multivariate linear regression model of each outcome as a function of the presence of the law (before or after initial implementation), year, season, and unemployment rate. P-values represent the significance of the "law" variable in modeling the level of each outcome while controlling for these covariates.

locations.<sup>12</sup> Published studies in California,<sup>13</sup> Massachusetts,<sup>14</sup> Colorado,<sup>15</sup> Texas,<sup>16</sup> and Arizona<sup>17</sup> that examine taxable sales data all reach the same conclusion as well, that restaurant sales are not in-

fluenced by the presence of smoke-free regulations. Given that the data are specific to New York State, where numerous counties have either enacted stringent smoke-free regulations that include stand-alone

<sup>12</sup> With regard to New York, see: A. Hyland and K.M. Cummings, "Restaurant Employment before and after New York City's Smoke-free Air Act," *Journal of Public Health Management and Practice*, Vol. 5, No. 1 (1999), pp. 22–27; A. Hyland, K.M. Cummings, and M. Wilson, "Compliance with the New York City Smoke-free Air Act," *Journal of Public Health Management and Practice*, Vol. 5, No. 1 (1999), pp. 43–52; A. Hyland and K.M. Cummings, "Restaurateur Reports of the Economic Impact of the New York City Smoke-free Air Act," *Journal of Public Health Management and Practice*, Vol. 5, No. 1 (1999), pp. 37–42; A. Hyland and K.M. Cummings, "Consumer Response to the New York City Smoke-free Air Act," *Journal of Public Health Management and Practice*, Vol. 5, No. 1 (1999), pp. 28–36; A. Hyland, K.M. Cummings, and E. Nauenberg, "Analysis of Taxable-sales Receipts from New York City: Has the New York City Smoke-free Air Act Affected the City's Restaurant Business?," *Journal of Public Health Management and Practice*, Vol. 5, No. 1 (1999), pp. 14–21; A. Hyland, C. Vena, K.M. Cummings, and A. Lubin, "The Effect of the Clean Air Act of Erie County, New York, on Restaurant Employment," *Journal of Public Health Management and Practice*, Vol. 6, No. 6 (2000), pp. 76–85; and A. Hyland and J. Tuk, "Restaurant-employment Boom in New York City," *Tobacco Control*, Vol. 10 (2001), p. 199.

<sup>13</sup> See: S. Glantz, "Effect of Smoke-free Bar Law on Bar Revenues in California," *Tobacco Control*, Vol. 9, No. 1 (2000), pp. 111–112; S. Glantz and L. Smith, "The Effect of Ordinances Requiring Smoke-free Restaurants on Restaurant Sales," *American Journal of Public Health*, Vol. 84, No. 7 (1994), pp. 1081–1085; and S. Glantz and L. Smith, "The Effect of Ordinances Requiring Smoke-free Restaurants and Bars on Revenues: A Follow-up," *American Journal of Public Health*, Vol. 87, No. 10 (1997), pp. 1687–1693.

<sup>14</sup> See: W. Bartosch and G. Pope, "The Economic Effect of Smoke-free-restaurant Policies on Restaurant Businesses in Massachusetts," *Journal of Public Health Management Practices*, Vol. 5, No. 1 (1999), pp. 53–62; and W. Bartosch and G. Pope, "The Effect of Smoking Restrictions on Restaurant Businesses in Massachusetts, 1992–1998," *Tobacco Control*, Vol. 11, Suppl. II (2002), pp. 38–42.

<sup>15</sup> Hyland, Cummings, and Nauenberg, pp. 14–21.

<sup>16</sup> P. Huang, S. Tobias, S. Kohout, M. Harris, D. Satterwhite, D. Simpson, *et al.*, "Assessment of the Impact of a 100-percent-smoke-free Ordinance on Restaurant Sales—West Lake Hills, Texas, 1992–1994," *Morbidity and Mortality Weekly Report*, Vol. 44, No. 19 (1995), pp. 370–372.

<sup>17</sup> J. Sciacca and M. Ratliff, "Prohibiting Smoking in Restaurants: Effects on Restaurant Sales," *American Journal of Health Promotion*, Vol. 12, No. 3 (1998), pp. 176–184.

bars or are debating implementing such regulations, our findings are particularly salient to business owners and policymakers there.

**Looking at hotels.** This study is one of few that have examined economic trends in hotels following the implementation of smoke-free regulations. Results from this study generally show higher levels of per-capita hotel employment and sales compared to levels observed before the implementation of smoke-free regulations when all NYS counties are considered. This finding is consistent with previous reports by Glantz and Charlesworth,<sup>18</sup> who examined hotel sales in nine localities and found that sales increased in four, remained the same in four, and slowed in the ninth; and by Hyland *et al.*, who found that hotel sales in New York City far outpaced those in the rest of New York State that did not have stringent smoke-free regulations.<sup>19</sup>

While use of employment and taxable-sales data to examine the economic effect of smoke-free regulations is subject to limitations, those measures are among the best indicators available to detect evidence of an adverse economic effect of smoke-free regulations.<sup>20</sup> That is especially true because those data are collected in a uniform and consistent manner for all businesses in New York State. One potential limitation is that examining aggregate data might mask trends in specific business segments, but the primary concern typically raised by policymakers is the aggregate loss of revenue and jobs, rather than on the effects to industry segments. A second potential limitation is that the aggregate data may include some businesses that are exempt from the smoke-free regulations. For example, the taxable-sales data for eating and drinking establishments include sales from freestanding bars, which are not included in any of the smoking regulations

## EXHIBIT 5

### Changes in per-capita restaurant and hotel employment

Jurisdiction	Restaurant employment per 1,000				Hotel employment per 1,000			
	One year before law	One year after law	Change	P-value*	One year before law	One year after law	Change	P-value*
Erie County	26.9	27.4	1.9%	0.748	3.5	3.4	-3.4%	<0.001
Monroe County	29.2	28.4	-2.6%	<0.001	3.7	3.8	3.0%	0.037
New York City	15.0	15.9	6.1%	0.001	4.1	4.3	5.7%	0.033
Suffolk County	15.7	16.0	2.3%	0.097	1.5	1.8	19.7%	0.033
Westchester County	16.9	16.2	-3.9%	<0.001	2.9	2.7	-7.5%	0.823

\* Multivariate linear regression model of each outcome as a function of the presence of the law (before or after initial implementation), year, season, and unemployment rate. P-values represent the significance of the "law" variable in modeling the level of each outcome while controlling for these covariates.

that we examined. This potential bias is alleviated by also specifically examining restaurant-employment data (thereby excluding bars). Moreover, the fact that the conclusions reached by examining the taxable sales and employment data are similar suggests that this potential bias is not large.

One other possible explanation for our findings is that other factors not included in our analysis may have influenced sales and employment. For example, a general upward economic trend may have masked the regulations' potential negative effects. Because our analysis compared restaurant sales to total retail sales and found no adverse effect, that argument is not supported. Furthermore, the year each piece of data was collected was included in the regression models as a covariate to control for a time trend. Some observers have warned of a 30-percent decrease in revenue in the wake of smoke-free regulations.<sup>21</sup> If sales and employment were diminished to such a great extent, we would expect to see evidence of the damage in these data. No such evidence is present, however.

One study that examined a variety of factors thought to be related to customer spending found that check averages were higher in restaurants that had a dress code and offered parking, while the pres-

<sup>18</sup> S. Glantz and A. Charlesworth, "Tourism and Hotel Revenues before and after Passage of Smoke-free-restaurant Ordinances," *Journal of the American Medical Association*, Vol. 281, No. 20 (1999), pp. 1911–1918.

<sup>19</sup> Hyland, Cummings, and Nauenberg, pp. 14–21.

<sup>20</sup> M. Siegel, "Economic Impact of 100% Smoke-free-restaurant Ordinances," in: *Smoking and Restaurants: A Guide for Policymakers* (Berkeley: UC Berkeley/UCSF Preventative Medicine Residency Program; American Heart Association, California Affiliate; Alameda County Health Care Services Agency, Tobacco Control Program, 1992).

<sup>21</sup> See: *Consumer Reports*, pp. 142–147.

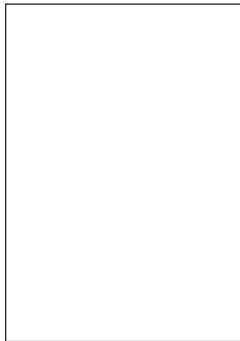
ence of smoking was unrelated to check averages.<sup>22</sup> This finding suggests that many factors are related to business indicators, but that the presence of smoking in the facility is not related to revenue.

Our study uses each county as its own control for many of the analyses. We chose this study design rather than use as a control group the rest of the counties that do not have smoke-free regulations because the proliferation of smoke-free regulations has created an imbalance between the characteristics of smoke-free counties and those that have not adopted a stringent regulation. The remaining 53 counties have comparatively few people, accounting for just over one-third of the state's population. Sixteen of those 53 counties have fewer than 100 licensed restaurants, whereas the smallest smoke-free county has more than 10 times that number, and New York City has 100 times that number. Even though our study did not use an external control group, previous studies in New York State (conducted prior to the population imbalance) considered control groups. Consistent with our results, those studies found that restaurant employment and taxable sales were comparable or greater in the smoke-free counties than in locations that were not smoke-free.<sup>23</sup> We attempted to address this issue in our study by combining the data from all counties and assessing changes in sales and employ-

ment in all places that had implemented smoke-free regulations compared to

those places that did not implement such regulations (see Exhibit 3). Statistically significant increases were observed in two of the four outcomes, with no effect in the other two outcomes.

Many communities outside of New York State are currently considering implementing smoke-free regulations that essentially restrict smoking in all indoor public areas. The data presented in this paper—together with the wealth of published data on this topic—show that, despite the dire predictions of revenue and job losses, the hospitality industry does not suffer adverse economic consequences after smoke-free regulations are implemented. Evaluations have been conducted in different types of communities; different types of businesses have been evaluated; and different outcomes have been studied. Throughout those studies the data show that smoke-free regulations are not bad for business. Many other factors appear to affect the hospitality industry, including the general economic environment and secular changes in travel and dining behavior. Policymakers should not avoid implementing smoke-free regulations because of fears of lost business. Instead, legislators should pass smoke-free regulations because they reduce workers' and patrons' exposure to secondhand smoke and are good for public health. New York State recently became the third state to pass smoke-free bar and restaurant legislation based on health data and with the support of the New York State Restaurant Association<sup>24</sup> and consumer groups.<sup>25</sup> Business managers should welcome the opportunity to protect the health of their workers and patrons by going smoke-free without fears of lost patronage or revenue. ■



<sup>22</sup> A.M. Susskind and E.K. Chan, "How Restaurant Features Affect Check Averages," *Cornell Hotel and Restaurant Administration Quarterly*, Vol. 41, No. 6 (December 2000), pp. 56–63.

<sup>23</sup> See: Hyland, Cummings, and Nauenberg, pp. 14–21; and A. Hyland, C. Vena, K.M. Cummings, and A. Lubin, pp. 76–85.

<sup>24</sup> "NYS Restaurant Association Backs Smoking Ban," *Business Review*, January 15, 2003. [www.bizjournals.com/albany/stories/2003/01/13/daily39.html](http://www.bizjournals.com/albany/stories/2003/01/13/daily39.html) (as viewed March 13, 2003).

<sup>25</sup> "Most New Yorkers Support Smoke-free Law," <http://smokefree.net/JoeCherner-announce/messages/246776.html> (as viewed March 13, 2003).

*Pictured clockwise, from top left:*

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