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The Economic Impact of the 2008 Pennsylvania Clean Indoor Air Act

Executive Summary Report

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Authors:

John A. Tauras, Ph.D.

Frank J. Chaloupka, Ph.D.

Jennifer Keith, M.P.H., C.P.H.

Deborah Brown, M.S., C.H.E.S.

Joy Blankley Meyer

Gary Klein, Ph.D.

Executive Summary

Pennsylvania's Clean Indoor Air Act (CIAA) took effect in September 2008. Numerous stakeholders – legislators, media and businesses – expressed interest in understanding the economic impact on drinking establishments and restaurants subsequent to the legislation. The Pennsylvania Department of Health (DOH) funded the Pennsylvania Alliance to Control Tobacco (PACT) to conduct a CIAA Economic Impact Study.

Methods

- Economic impact analyses were based on two primary data sets: Department of Revenue (DOR) county-level quarterly taxable sales in eating and drinking establishments for 2002-2009; and DOH CIAA exception records for 2008-2009.
- Prais-Winsten regressions were employed to assess effects of CIAA and law exceptions on taxable sales in restaurants and drinking establishments. To increase the reliability of these analyses, regressions controlled for general economic activity, trends in eating/drinking establishment sales, seasonality and county characteristics.

Results

- CIAA had no significant effect on taxable sales in full/limited service restaurants or drinking establishments; this was true in counties with both high and low rates of venue exceptions.
- Restaurant and drinking establishment taxable sales were strongly related to overall economic conditions; sales increased during times of general economic prosperity and declined with downturns in the economy.
- Seasonality played a significant role on drinking establishment and restaurant taxable sales (e.g., individuals go out less in colder inclement weather and more during warmer weather).

- Findings from this study are consistent with findings from the large and growing set of peer-reviewed studies for other jurisdictions, concluding smoke-free policies have no negative effects on economic activity in eating and drinking establishments.

Conclusion

Pennsylvania's 2008 CIAA had no negative economic impact on full/limited service restaurants or drinking establishments.

Study Limitations

- DOR excluded tax information in counties with few venues due to confidentiality concerns. To address this, counties without data were excluded from regressions, as appropriate.
- DOR records show large variance between even and odd quarters in the total number of venues. To address this, interpolation was used to estimate odd quarter data to be consistent.
- DOR and DOH data combined in some cases to demonstrate more than 100 percent of venues with exceptions. To address this, corrections were made to 100 percent and readers are cautioned regarding interpretation of findings related to county exception percentages.

Background

Pennsylvania's CIAA was enacted on June 10, 2008, and took full effect on September 11, 2008. Act 27 of 2008 bans smoking in all enclosed workplaces, including restaurants and drinking establishments, except as legally excepted. The law has numerous exceptions, including two types of exceptions for drinking establishments: Type I (drinking establishment only) and Type II (restaurants with attached bar). To be eligible for an exception, drinking establishments must have 20 percent or less of sales from food and must not allow persons under 18 to be present.¹ Prior to the enactment of Pennsylvania's CIAA, Philadelphia banned smoking in all indoor workplaces, including restaurants and drinking establishments. Philadelphia's ban, effective January 8, 2007, is the only local smoking ban in Pennsylvania, as other local governments are preempted from regulating smoking more stringently than CIAA.

Pennsylvania joined an ever growing number of countries, states and cities around the world that protect workers and patrons from the ill effects of secondhand smoke. According to the Americans for Nonsmokers' Rights Foundation (ANRF), as of January 2, 2011, a total of 35 states and the District of Columbia, as well as 922 municipalities, have laws in effect that require 100 percent smoke-free workplaces and/or restaurants and/or bars (ANRF, 2011a). ANRF estimates that as of January 2, 2011, 63.7 percent of the total US population is covered by a state or local policy making restaurants and bars smoke-free (ANRF, 2011b).

While the prevalence of states and municipalities with smoke-free policies covering eating and drinking establishments continues to increase, tobacco companies, or others acting with support of the tobacco industry, continue to maintain that these policies will lead to reductions in the sales in establishments covered by policies (United States Department of Health and Human Services [USDHHD],

¹ For more information on Pennsylvania's Clean Indoor Air Act visit: <http://www.pactonline.org/tobacco-control/implementation> and http://www.portal.state.pa.us/portal/server.pt/community/clean_indoor_air/14187/clean_indoor_air_-_menu/557664.

2006). However, the consensus from numerous peer-reviewed studies on the impact of smoke-free policies on restaurant and/or drinking establishment revenues is that these policies have no negative effect on sales, with many studies finding that smoke-free policies have a small, statistically significant positive impact on sales. Similar conclusions are reached when looking at the impact of smoke-free policies on other indicators of economic activity, including employment and business openings/closings.² Indeed, the 2009 systematic review by the International Agency for Research on Cancer concluded, assigning its highest classification for the quality and consistency of evidence, that smoke-free air legislation does not have an adverse economic impact on the hospitality industry (including restaurants, drinking establishments/bars, hotels and tourism).

To the best of our knowledge, no peer reviewed studies have examined the economic impact of the Pennsylvania CIAA on eating and drinking establishments. This project addresses this by assessing the impact of the smoke-free policy on taxable sales in restaurants and drinking establishments. The results from this study are consistent with previous peer reviewed studies for other jurisdictions and suggest that, after controlling for several factors, the Pennsylvania CIAA had no negative impact on overall sales in eating and drinking establishments in Pennsylvania.

Data

1) The primary source of data used for analyses was DOR quarterly taxable sales figures for full service restaurants, limited service restaurants and drinking establishments for every county³ in Pennsylvania for the first quarter of 2002 through the fourth quarter of 2009.

2) To account for overall economic activity within counties, comparisons were made to DOR total taxable sales data for every county in Pennsylvania.

² For a comprehensive review of these studies see the 2006 Surgeon General's report (USDHHS, 2006), and the International Agency for Research on Cancer's Handbook on the effectiveness of smoke free policies (IARC, 2009).

³ Due to confidentiality concerns (given the small number of establishments in some counties), the Pennsylvania Department of Revenue did not provide complete taxable sales data in some cases. In each of these cases the counties without data were excluded from relevant regressions.

3) DOH and DOR data were used to create a variable to capture the percent of venues with Type I exceptions (drinking establishments) and Type II exceptions (restaurants with attached bars) in each county.⁴

4) Additional data were obtained to: estimate quarterly population (U.S. Census); adjust for inflation (Consumer Price Index, Bureau of Labor Statistics); classify the six Pennsylvania Health Districts (DOH); and identify rural/urban counties (U.S. Census).

5) Additional variables were created to capture timing of Pennsylvania and Philadelphia smoke-free policy enactments (e.g., the number of days a law was in effect per quarter).

Statistical Methods

We employed two alternative fixed-effects regression techniques in the analyses. The approaches controlled for health district-specific or county fixed effects, year-specific and quarter-specific determinants of eating and drinking establishment taxable sales. The parameters under both approaches are estimated by Prais-Winsten regression.⁵

Results

The results suggest that the Pennsylvania CIAA and the Philadelphia smoke-free air policy have had no negative effects on per-capita restaurant and drinking establishment taxable sales. There is some evidence that the Pennsylvania CIAA had a significant positive impact on per-capita drinking establishment sales and a nearly significant positive impact on per-capita full service restaurant sales. Moreover, there is some evidence that the smoke-free air law in Philadelphia had a positive impact on per-capita full service restaurant sales.

⁴ Because of inconsistencies in available data, caution should be used when interpreting findings related to county exception percentages.

⁵ We also estimated the parameters by Prais-Winsten regressions to control for first-order autocorrelation where the coefficient of the AR(1) process is specific to each panel. While Beck and Katz (1995) make a strong case against estimating panel-specific AR parameters, the estimates from these regressions are similar to the estimates presented in Tables 1-3 and are available upon request.

Overall economic activity had an impact on venues, meaning that eating and drinking establishment revenues increase during times of general economic prosperity and decline with downturns in the economy. Similarly, seasonality was found to play an important role in eating and drinking establishment revenues (e.g., individuals go out less in colder inclement weather and more during warmer weather). The percentage of establishments with Type I and Type II exceptions was found to be an insignificant determinant of restaurant and drinking establishment sales.

Conclusions

After controlling for confounding factors, and consistent with the weight of the evidence from the large existing literature on the economic impact of smoke-free policies in other jurisdictions, our study concludes that the Pennsylvania CIAA and the Philadelphia smoke-free air policy had no negative effects on per-capita restaurant and drinking establishment taxable sales. These findings clearly counter tobacco industry and hospitality sector claims that smoke-free policies have a negative economic impact on restaurants and drinking establishments, and the findings provide new evidence to state and local policy makers on the economic effects of enacting these policies. Pennsylvania's CIAA is not comprehensive; consequently, study findings can inform efforts to update CIAA to protect more Pennsylvanians from the dangers of secondhand smoke.

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