Robustness Data Appendix to "Effects of Venue-Specific State Clean Indoor Air Laws

on Smoking-Related Outcomes" in *Health Economics*

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We estimate a battery of additional specifications to test the robustness of our venue-specific models in equation (1). For example, we also estimate models where—for specific venues of interest—we control for whether the venue has a 'strong' 100% smoke-free ban (as opposed to weaker restrictions such as requiring separate ventilation systems or designated smoking areas). One might expect these stronger bans to have relatively larger effects on workplace restrictions and own smoking outcomes. It is also possible, however, that weak bans will have a larger effect on workplace restrictions, as the outcome measure in the CPS covers any policy restricting smoking. We also considered models that include linear state trends. To do so we construct a variable *Trend* which equals 1 in 1992, 2 in 1993, and so forth, and we interact the trend variable with each of the state dummy variables. In models that include these smooth state trends, the effects of SCIALs are identified from sharp changes in outcomes relative to smooth underlying trends for each state coincident with adoption of the venue-specific policy. We also estimated specifications controlling for preemption laws (as coded by ImpacTeen), which restrict local areas from enforcing laws that are stricter than the statewide law.

ImpacTeen codes policies in a few venues as 3* (generally not as strong as 3 but still much stronger than 2). It usually means a ban in areas open to the public but allows for separate ventilated areas. In our main results, we code polices denoted as 3* as 3. We also tested the robustness of our findings to coding policies denoted as 3* by ImpacTeen to 2 instead of 3, all

results reported in the tables are robust to this. (This affects from 1 state for public transit to 6 states for malls.) Lastly, we explored one other robustness issue with the ImpacTeen coding. Their own documentation indicates that public transit should range from 0–3, but there are two states with public transit coded as a 5 or as a 3*, deviating from the ImpacTeen codebook description. Ohio passed a balled measure in 2006 that banned smoking almost everywhere. In the ImpacTeen public data base, they coded public transit as a 5 for that year. Oregon codes public transit as a 3* for some years. We estimate our main models setting this public transit variable to 3 for Ohio and Oregon for the relevant years, and the results are unchanged.

To allay any concerns about policy multicollinearity, we estimated a series of models. We estimated models controlling for the own ban and the statewide measure of smoking sentiment described in DeCicca, Kenkel, Mathios, Sin, and Kim's 2008 article in *Economic Inquiry* for the period through the 2003 data. We estimated principal components for the 12 smoking bans, and controlled for both the own specific venue ban and the first principal component (the only one with an eigenvalue above 1) for each of our venues. We estimated models controlling only for the own venue ban or controlling for it and the sum of the other venue bans.

We also tested the robustness of our results to not turning on the bar SCIALs until they actually were implemented (i.e., only for the months in a year after they went into effect instead of for the full year in which they were implemented regardless of the month of actual implementation, as in the ImpacTeen data). These results were nearly identical to the results reported in the text. For example, for the specification reported in column 1 of Table IV, the point estimate on the bar SCIAL variable that takes into account the implementation date is .107 (SE of .044) compared to the estimate of .113 (SE of .041) reported in column 1 of Table IV.

We use information on MSA of residence for individuals in the CPS TUS data matched to coverage of local smoking ordinances from the American for Nonsmokers' Rights Foundation (ANRF). The ANRF data track local ordinances covering private workplaces, restaurants, and bars.[1] The CPS implemented the new 2000 Geographic concepts in May 2004. This means that the ANRF robustness tests are only conducted through the 2003 data.

We performed two last robustness checks. First, we verified that the results are robust to leaving out the dummy for not living in an MSA, to allay concerns that the changed geographic concepts may introduce bias. Second, we estimated our main models leaving out the income dummies.

Our main findings are robust to all of these alternative specifications.

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[1] The ANRF policy tracking system has some disadvantages, including the fact that it is passive as opposed to active. We obtained a data extract from ANRF that included local coverage of smoking ordinances for private workplaces, restaurants, and bars. We did not obtain information on local coverage of ordinances covering government workplaces, although other research has used this information (see, for example, Shipan and Volden's 2006 article in *American Journal of Political Science*).