Appendix to: Government spending and legislative organization: Quasi-experimental evidence from Germany

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In this appendix we provide some additional figures which graphically illustrate the data and specification checks. Note, Figure 3 (6) in this appendix corresponds to Figure 1 (2) in the paper.

1 Appendix: Graphical Illustration of Public Expenditures

Figures 1 and 2 provide a scatter plot of log total expenditure and log per-capita expenditure of municipalities over the sample period. As one may expect, the distribution is somewhat skewed towards smaller municipalities (and, consequently, council sizes), and total expenditures as well as total expenditures per capita rise in population size. The observations are too densely populated to eye-ball possible discontinuities around thresholds related to council size in the data.

insert Figures 1 and 2 here

2 Appendix: Alternative Window Size

Figures 3 to 6 show local polynomial regression plots of log normalized population $\ln \widetilde{N}_i$ and log normalized total expenditures $\ln \widetilde{G}_i$ using a window size of 0.15, 0.20, 0.25, and 0.30, respectively. Note that Figure 3 (6) in this appendix corresponds to Figure 1 (2) in the paper.

insert Figures 3 to 6 here

3 Appendix: Alternative Kernel and Bandwidth

Among the options of checking the robustness of the results, the choice of the kernel and, even more so, the bandwidth for the kernel smoothing algorithm of the local polynomial regressions are particularly important. In the paper we use a window of ± 0.15 around $\ln \widetilde{N}_i = 0$ and an Epanechnikov kernel with an endogenously chosen bandwidth as a reference point; see Figure 1 in the paper which corresponds to Figure 3 in this appendix. Using the same window size we apply an endogenously determined bandwidth for a Gaussian, a Triangular, and a Parzen kernel in Figures 7, 8, and 9, respectively. In Figures 10 to 12 we use an Epanechnikov kernel and choose a fixed bandwidth of 0.10, 0.05, and 0.02. The plots are qualitatively identical the one depicted in Figure 3.

insert Figures 3 and 7 to 9 and Figures 3 and 10 to 12 here

4 Appendix: Placebo Treatment

We now provide local polynomial plots which use placebo treatments to the left and to the right of $\widetilde{N}_i$. In Figure 13, we consider a placebo treatment at $\widetilde{N}_i = -0.06$ and plot local polynomial functions to the right and the left of it. In Figures 14, 15, and 16 we do the same for placebo treatments at $\widetilde{N}_i = 0.06$, $\widetilde{N}_i = -0.035$, and $\widetilde{N}_i = 0.035$, respectively. None of the plots suggests that there are relevant discontinuities at $\widetilde{N}_i = 0$.

insert Figures 13 to 16 here

Figure 1 - Log expenditure and log population

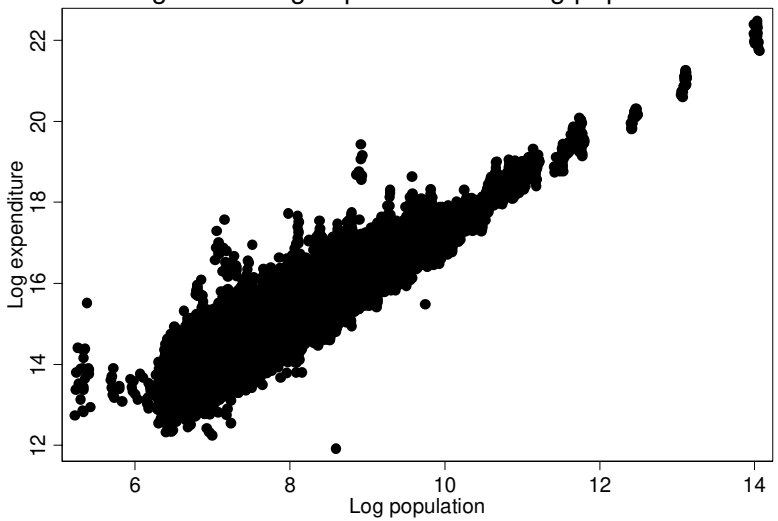

Figure 2 - Log per-capita expenditure and log population

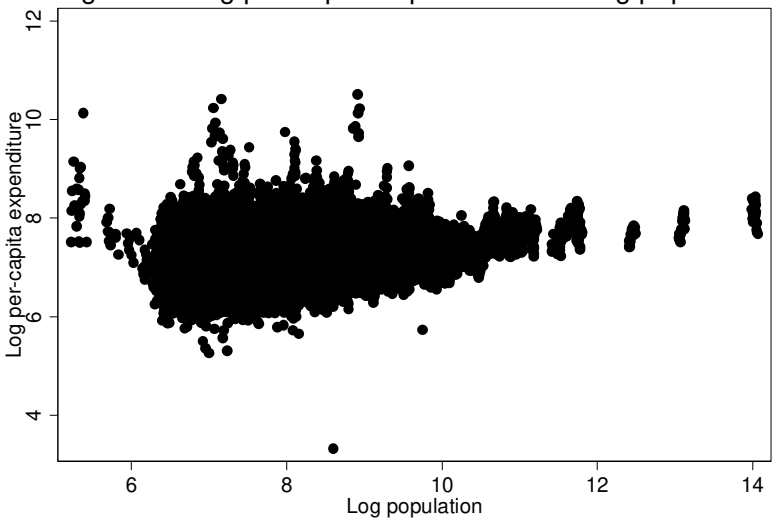

Figure 3 - Log expenditures and log population
around normalized thresholds
window=15%, Epanechnikov kernel

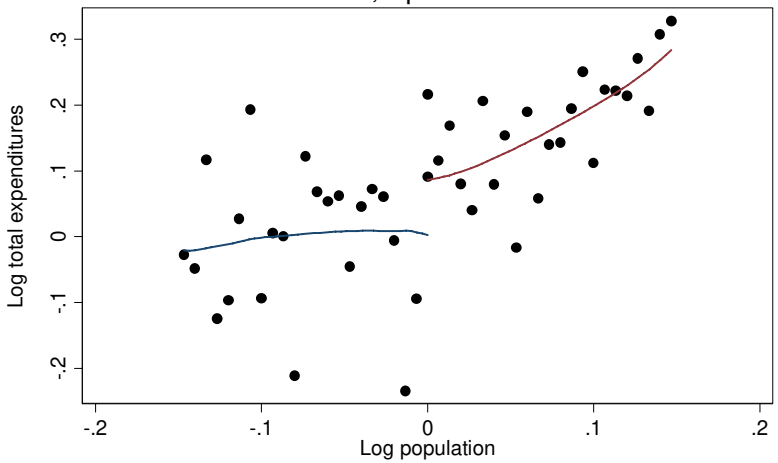

Figure 4 - Log expenditures and log population
around normalized thresholds
window=20%, Epanechnikov kernel

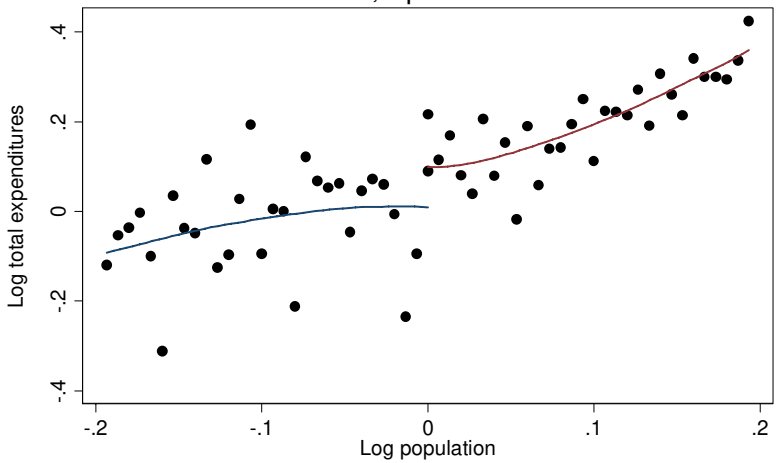

Figure 5 - Log expenditures and log population
around normalized thresholds
window=25%, Epanechnikov kernel

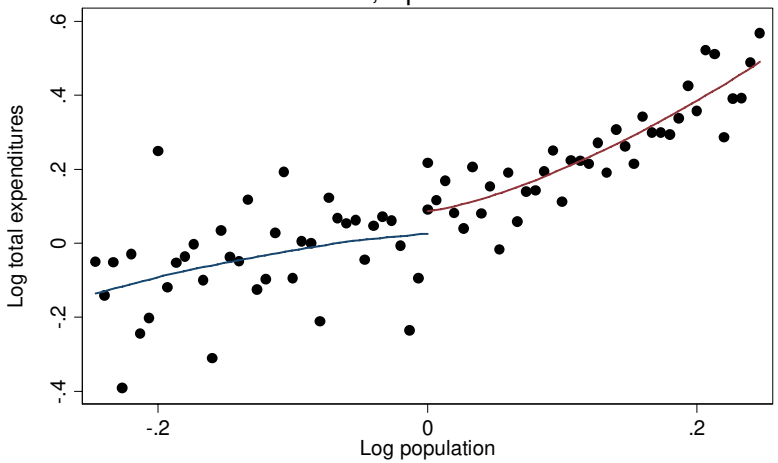

Figure 6 - Log expenditures and log population
around normalized thresholds
window=30%, Epanechnikov kernel

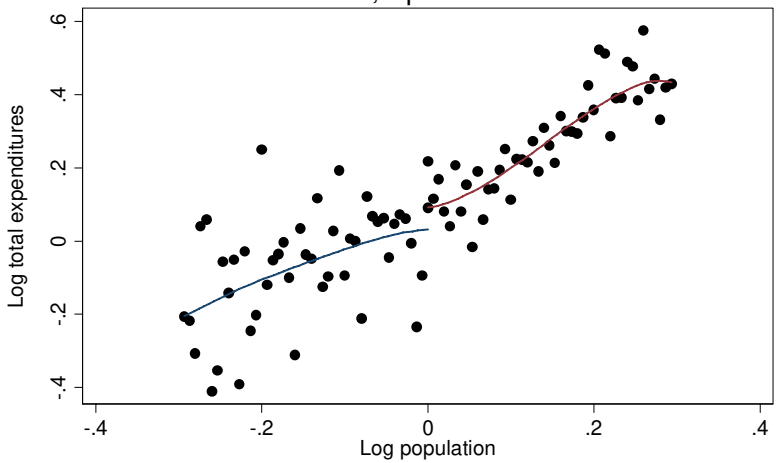

Figure 3 - Log expenditures and log population
around normalized thresholds
window=15%, Epanechnikov kernel

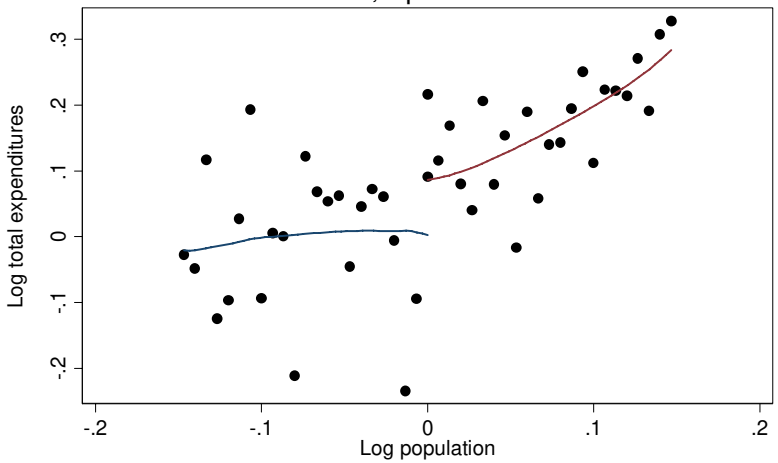

Figure 7 - Log expenditures and log population
around normalized thresholds
window=15%, Gaussian kernel

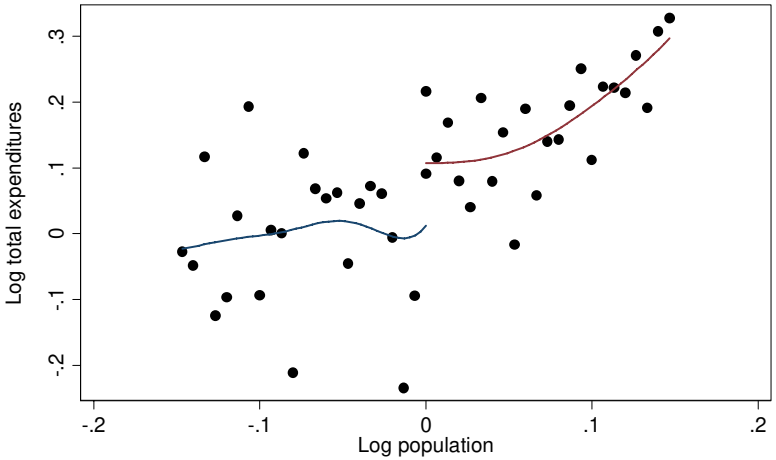

Figure 8 - Log expenditures and log population
around normalized thresholds
window=15%, Parzen kernel

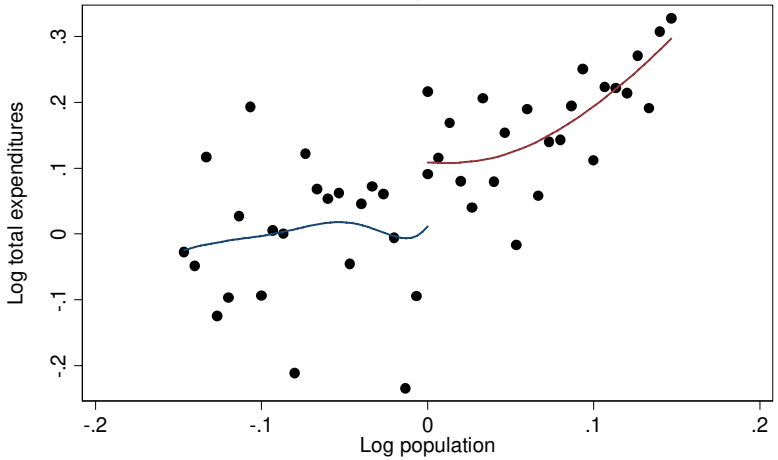

Figure 9 - Log expenditures and log population
around normalized thresholds
window=15%, Triangular kernel

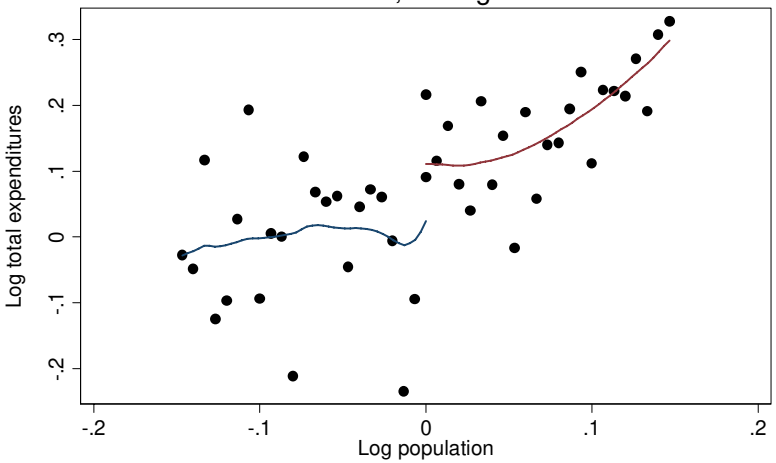

Figure 3 - Log expenditures and log population
around normalized thresholds
window=15%, Epanechnikov kernel

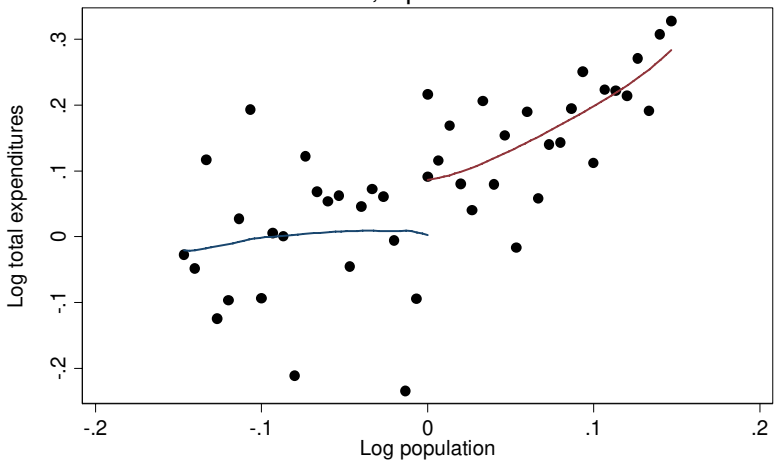

Figure 10 - Log expenditures and log population
around normalized thresholds
window=15%, bandwidth=0.10

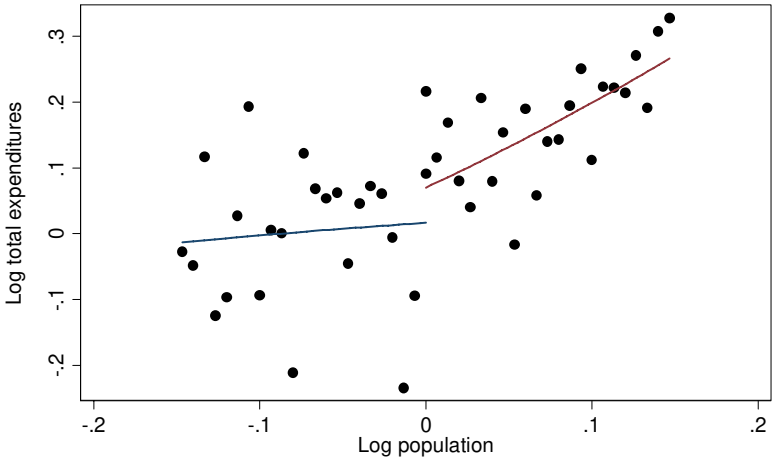

Figure 11 - Log expenditures and log population
around normalized thresholds
window=15%, bandwidth=0.05

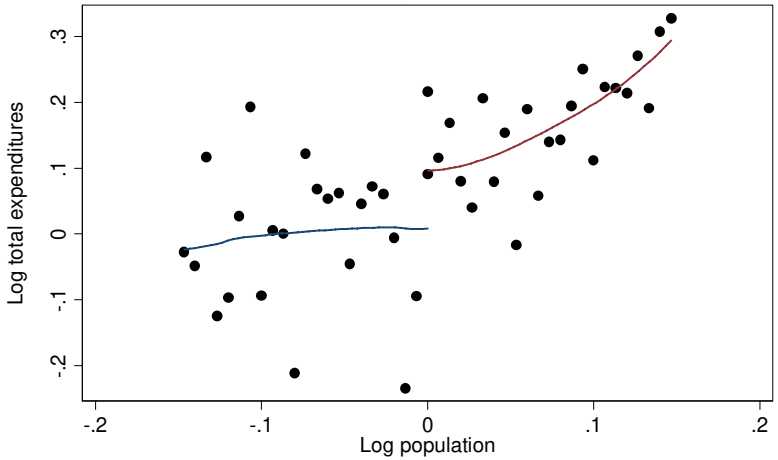

Figure 12 - Log expenditures and log population
around normalized thresholds
window=15%, bandwidth=0.02

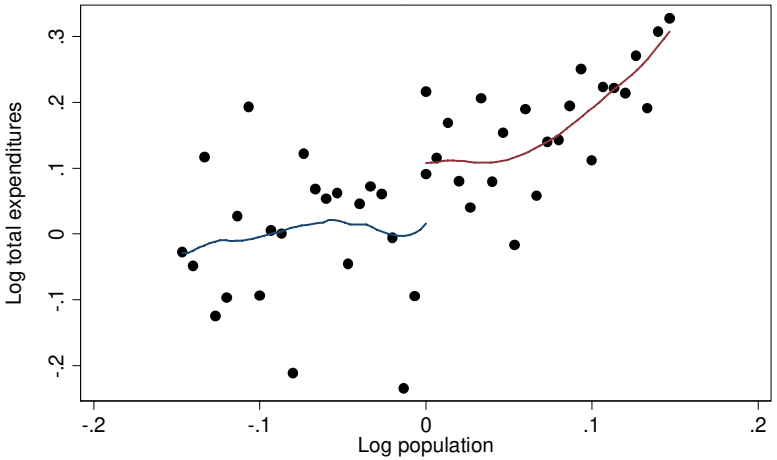

Figure 13 - Log expenditures and log population placebo treatment to the left of normalized thresholds (-0.06) - Epanechnikov kernel

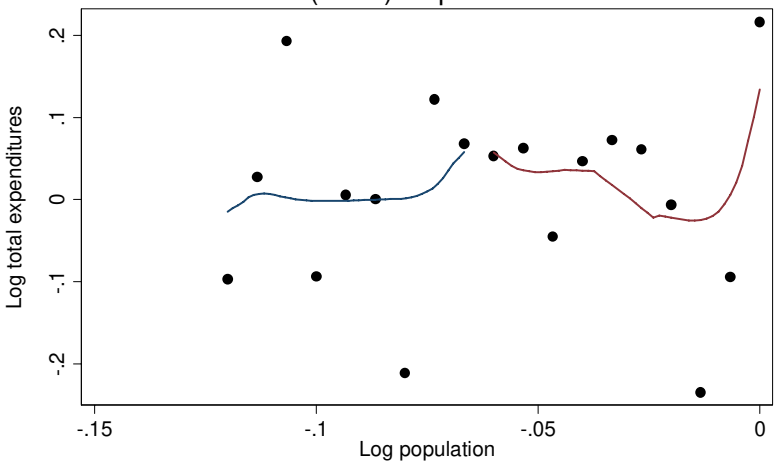

Figure 14 - Log expenditures and log population placebo treatment to the right of normalized thresholds (+0.06) - Epanechnikov kernel

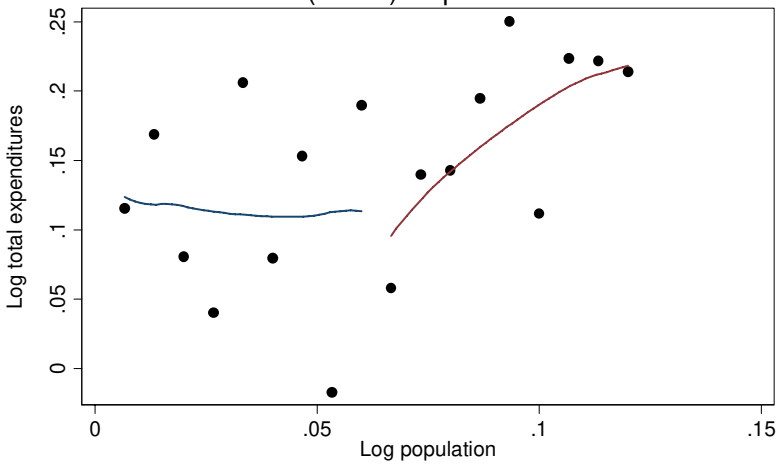

Figure 15 - Log expenditures and log population placebo treatment to the left of normalized thresholds (-0.035) - Epanechnikov kernel

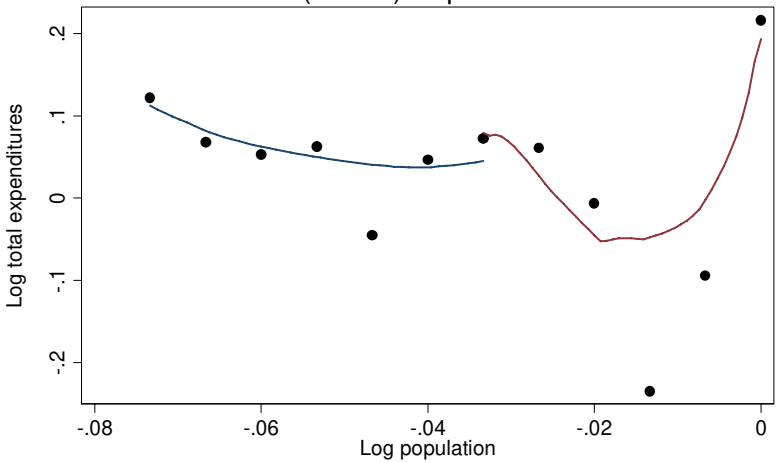

Figure 16 - Log expenditures and log population placebo treatment to the right of normalized thresholds (+0.035) - Epanechnikov kernel