The Effect of Municipal Water Filtration on Children’s School Enrollment and Employment in American Cities, 1880–1920

Numerous studies show that access to clean water reduces child mortality and morbidity, but little work has been done on the consequences for schooling and child labor. The effects are theoretically ambiguous because improved child health can raise schooling (e.g., better health makes education investments more productive) or lower it (e.g., the opportunity cost of attending school increases because there is a wage premium for healthier workers). I examine the effect of municipal provisions of clean water—installation of water filtration plants—on school enrollment and child labor in American cities from 1880 to 1920. Applying a difference-indifferences strategy which exploits variation of water filtration adoption across time and across cities, I find that municipal water filtration has a positive and statistically significant effect on school enrollment. Also, I find a negative effect on child labor, but it is not significant at conventional levels. These effects are most pronounced at ages 14 and 15, which map into the last years of elementary school and are beyond compulsory schooling age in some states. Additionally, I find that effects are larger for children who are exposed at an earlier age, can legally drop out of school, are from lower socioeconomic status families, or are female.