Shift-Share Instruments and the Impact of Immigration on Wages

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Many studies in the immigration literature rely on geographic variation in the concentration of immigrants to identify the impact of immigration. National flows of immigrants are often interacted with their past geographic distribution to create an instrument, in the hopes of breaking the endogeneity between labor market conditions and the location choice of immigrants. We present evidence that estimates based on this "shift-share" instrument are subject to bias from the conflation of short- and long-run responses to local shocks. The bias stems from the interplay of two factors. First, local shocks may trigger adjustment processes that gradually offset their initial impact. Second, the composition of U.S. immigrants has been almost perfectly serially correlated in recent decades, and the *same* cities repeatedly receive large immigrant inflows. Estimates based on the conventional "shift-share" instrument are therefore unlikely to identify a causal effect. We propose a "double instrumentation" solution to the problem that — by isolating spatial variation that stems from *changes* in the country-of-origin composition on the national level — produces estimates that are likely to be less biased than those in the previous literature. Our results are a cautionary tale for a large body of empirical work (not just on immigration) that rely on "shift-share" instruments for causal identification.