Spillover effects of local human capital stock on adult obesity:
evidence from German neighborhoods

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Abstract

This paper adds to the literature on human capital externalities. I test the hypothesis that college educated neighbors exerts positive external effects on weight loss. I use the geo-referenced German Socio-Economic Panel (GSOEP) for year 2008 and year 2010 enriched with zip code level social contexts and demographic information generated from the administrative employment register of the German Federal Employment Agency; and the housing price data in Germany. A key issue is the presence of the individual and neighborhood unobserved heterogeneity that may influence body weight and be correlated with the local share of college graduates. Following Bayer and Ross (2009), I estimate a hedonic rental price regression as a control function to account for neighborhood unobserved heterogeneity affecting households’ sorting into neighborhoods in the obesity regression. Then I use average neighborhood attributes of grouped individuals with identical observables to instrument for each neighborhood observables. OLS regressions show negative correlation between neighborhood share of college graduates and individual probability of being overweight or obese. Instrumental variable estimations yield heterogeneous education externalities on obese for individuals with different education level. I find that an increase in the neighborhood share of college graduates by 10 percentage points decreases individual probability of being obese by 1.8 percentage points for high school graduates, and 4.5 percentage points for college graduates.

Keywords: Obesity, Local human capital externalities, Germany, Control function

JEL-Classification: I00, R23

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