

How Effective are Public Health Education, Unregulated Farm Markets, and Single-Sex Schools?

My dissertation examines the effectiveness of three policy choices in meeting socio-economic goals. The first analyzes the impact of public health education and poverty relief on child mortality in the early twentieth century. A recurring criticism of the social health care system in the United States has been that too large a share has been devoted to health education, doctor training and facility construction, and not enough has been put into the actual provision of care to individuals. The early public health programs focused on health education. Evaluating the success of these early programs helps us understand the methods used to reduce mortality in American history. Additionally, they offer tests of how well these types of low-cost policies might work in reducing child and infant mortality in countries facing conditions similar to those faced by industrializing cities in the U.S. in the early 1900s.

The second examines the sensitivity of agricultural prices and output to local and non-local weather fluctuations in the United States prior to 1932, when markets were relatively open and largely unfettered by modern farm programs. Current concerns related to global warming have raised questions about how best to deal with increasing fluctuations in weather. Meanwhile, less developed countries have increased pressure on the developed countries to eliminate many of their farm programs that prevent the LDCs from competing in their markets. Should the LDCs succeed in their efforts, studies of less regulated historical markets will provide valuable information about how different types of crop markets will respond to weather fluctuations.

The third study examines the returns to education when people are taught in same-sex schools. In particular, I examine the impact on future wages for women who attend a college with predominantly females. Given the surge of interest in single-sex high schools and colleges, and the reversal of the college gender gap, it is important to see how different educational processes influence future labor market outcomes.

*Public Health Movements, Local Poor Relief, and Child Mortality in American Cities: 1923-1932*

In the early 1900s, infant and child mortality rates in the United States were among the highest in the developed world. During the 1920s and early 1930s, the rates dropped significantly. Only part of the declines can be attributed to major sanitation and water projects in cities. Public health historians assert that one reason for the decline was improvements in the education of the population about simple health procedures like hand washing and boiling water, but as yet they have not been able to directly test the success of these programs. I have put together a panel data set with information on infant and child mortality and expenditures on public health education and poverty programs for 67 large American cities between period 1923 through 1932. I stopped in 1932 to avoid the confounding effects of the large-scale infusion of federal spending of all during the New Deal. Using a combination of city and year fixed effects, along with random city-specific trends, I estimate the relationship between child mortality and the public health and relief programs while controlling for a rich set of socioeconomic covariates. Fixed effects estimates suggest that the public health education was much more effective than the poverty relief spending at reducing mortality. About 12,400 in 1982-84 dollars in

public health education spending, and about 350,000 1982-84 dollars in poverty relief spending were each associated with an infant death avoided. In comparisons with many modern programs, the program costs associated with saving infant lives in the early 1920s were very low. After including city-specific trends, the relationship of mortality with poverty relief programs stays roughly the same, while the effects of public health education are greatly attenuated. Part of the reason for the attenuation of the public health education variables may be that the diffusion of public health knowledge in the cities was influenced by the stock of knowledge provided in the early phases of the program. I am currently developing ways to measure these changes.

*The Economic Response to Climate Change in the Farm Sector: The United States 1895-1932*

To evaluate how unregulated farm markets would be influenced by anticipated increases in the fluctuations in weather associated with global warming, I developed a panel data set for U.S. states for the 37 years preceding the introduction of the New Deal programs. Using data from the U.S. Department of Agriculture and the National Climatic Data Center, I identify the effects of weather fluctuations on two major types of agricultural commodities that are sold in international markets: crops that are consumed locally, like corn and hay, and those with weak local markets, like cotton and wheat. The analysis examines the impact on state farm-gate prices of both local weather and of weather in the producing areas outside each state. The results indicate that for corn and hay, crops with local uses and high transport costs, weather fluctuations will lead to opposing fluctuations in local farm output and state farm-gate prices. In such markets, increasing fluctuations in weather may lead to bigger fluctuations in crop prices but not necessarily matching fluctuations in farm incomes. Meanwhile, in the wheat and cotton markets, local weather had very little impact on state farm-gate prices. The fluctuations in local output thus led to more fluctuations in farm income than for the crops where local markets were important. The next phase of the study will examine the early years of the U.S. farm programs and examine carefully the impact of the new programs on crop price variability in response to weather shocks.

*The Labor Market Returns to Attending a Female Dominated School*

The final section examines the differences in labor market outcomes between women who attended schools with a high concentration of females versus those who attended more coeducational institutions. Using the program evaluation framework, I use a wide variety of econometric methods to examine the differences in educational returns for women in different types of schools; these range from ordinary least squares methods to instrumental variables, to regression adjustment and propensity score weighting.

Data on enrollments, institutional control (public versus private), and other school information are gathered from the Integrated Postsecondary Education Data System (IPEDS) and then combined with information from the 2003 follow-up of the Baccalaureate and Beyond (B&B:93/2003) survey. Results from each of the estimation procedures suggest that attending a female-dominated school yields positive labor market effects on the order of about 15 percent upon first entry into the labor market.