Extended Abstract

Racial gap in the Distribution of Body Mass Index in the United States from 1987-2011

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Introduction

What explains the body mass index gap among racial groups over the last several decades? Prior research suggests that the socioeconomic disadvantaged position of minorities explains why non-Hispanic Blacks have higher prevalence of obesity than non-Hispanic Whites. The explanation is plausible and is supported by empirical evidence, but it is still not conclusive. First, we shouldn’t ignore the fact that the income distribution has changed dramatically within and across racial groups in the last several decades. How is changing in the distribution of income associated with the changing in distribution of BMI among racial group over period is still not clear.

Secondly, existing literature mainly examines the association between covariates of interest and mean BMI by using OLS regression based analysis. There is little research pays attention to how socioeconomic status is associated with the relative position in the distribution of BMI. In addition, the distribution of BMI has changing over time across racial groups. Using OLS regression estimate will lead to bias results because of ignoring the facts that the distribution of BMI is not the same across time period due to the rapidly weight gain in US population.

To address these two questions, I will apply quantile regression to estimate the association between socioeconomic status and the quantiles of BMI. Second, I will apply oaxaca-like decomposition to separate the changing gap in BMI distribution across racial groups into two factors: the difference in magnitude of covariates of interest and the difference in changing distribution of income over the last several decades.

Data and Method

I will apply quantile regression to estimate the association between socioeconomic status and the quantiles of BMI. Next step of the analysis, I will apply counterfactual decomposition to separate the changing gap in BMI across into two factors: the magnitude of covariates of interest over the survey period and the changing distribution of income over the last several decades. The counterfactual decomposition is Oaxaca-like decomposition and proposed by Machado and Mata (2005). Researchers have applied this method to explain the change in wage
inequality in Russia and Sweden (Albrecht, Bjorklund, and Vroman, 2009; Dohmen, Lehmann and Zaiceva, 2008).

I will use the National health interview survey from 1987 to 2011. The advantage of this data is that it includes anthropometric height and weight. I can calculate the accurate BMI for each individual. In addition, the data captures the trends in income inequality among racial groups and increasing prevalence of obesity over last 20 years.

**Expected findings**

I expect that the results from quantile regression would be difference from OLS estimation, because the distribution of BMI for each racial group has changing over time. Comparing coefficients from OLS estimation over period may lead to bias results due to the changing distribution of BMI in the U.S. Besides, the association between BMI and individual’s income and educational level may vary across different quantiles.

**Reference**

