Disparity Analysis: A Tale of Two Approaches

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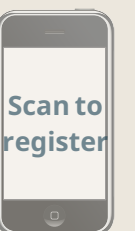**Room 422**
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Hybrid Mode | Face to Face &
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To understand the patterns and trends of various forms of inequality, quantitative social science research has typically relied on statistical models linking the conditional mean of an outcome of interest to a range of explanatory factors. A prime example of this approach is the widely used Kitagawa-Oaxaca-Blinder (KOB) method. By fitting two linear models separately for an advantaged group and a disadvantaged group, the KOB method decomposes the between-group outcome disparity into two parts, a part explained by group differences in a set of background characteristics and an unexplained part often dubbed "residual inequality." In this paper, we explicate and contrast two distinct approaches to studying group disparities, which we term the descriptive approach, as epitomized by the KOB decomposition and its variants, and the prescriptive approach, which focuses on the amount of disparity that would remain under a hypothetical intervention to one or more manipulable treatments. For the descriptive approach, we propose a generalized KOB decomposition that allows multiple sets of explanatory variables to be considered sequentially. For the prescriptive approach, we consider a variety of stylized interventions, such as lottery-type and affirmative-action-type interventions that close between-group gaps in treatment. We illustrate the two approaches to disparity analysis by considering the Black-White gap in college completion in the US, how it is statistically explained by racial differences in socioeconomic background, family structure, academic preparation, and college selectivity, and the extent to which it would be reduced under hypothetical reallocations of college-goers from different racial/income backgrounds into different tiers of college --- reallocations that could be targeted by race- or class-conscious admissions policies.

Xiang Zhou is an associate professor in the Department of Sociology at Harvard University. He is also a faculty affiliate at the Weatherhead Center for International Affairs, Harvard Institute for Quantitative Social Science, Harvard Center for Population and Development Studies, and Fairbank Center for Chinese Studies. His research broadly concerns quantitative methodology, economic inequality and mobility, and contemporary Chinese society. His work has appeared in American Sociological Review, American Journal of Sociology, Journal of Political Economy, Proceedings of the National Academy of Sciences, among other peer-reviewed journals. Before coming to Harvard, Zhou worked as a postdoctoral research associate at Princeton University. He received a PhD in Sociology and Statistics from the University of Michigan in 2015.

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