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What Can We Learn About the Racial Gap in the Presence of Sample Selection?

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Abstract

We examine the distance and relations between the distributions of wages for two exogenously identified groups (black and white women here). The literature commonly employs decomposition methods for the conditional means, to propose explanations for observed wage differentials, as "structural" components, attributable to difference in market structures, and the "composition" components, attributable to difference in characteristics and skills. Estimation of these components is often hampered by restrictive wage structure assumptions, and sample selection issues (wages are only observed for those working). We address these issues by first utilizing modern strategies in the treatment effects literature to identify the entire distributions of wages and counterfactual wages among working women, which afford a separation of composition and market effects. We avoid restrictive wage structure modeling by nonparametric inverse probability weighting methods. This approach allows for decomposition beyond the gap at the mean, and can deliver distributional statistics of interest, such as inequalities and target quantiles. Accounting for selection, we extend the basic framework to provide a computationally convenient way to identify bounds on the decomposed components for the whole population. We employ these methods to understand the sources and dynamics of the racial gap in the U.S.. Our analysis reveals that what may be learned about racial gap is impacted by labor force participation, and is also sensitive to the choice of population of interest. Our results question what may be gleaned from the commonly reported point estimates when sample selection is neglected.

JEL Classifications: C13; C14; C21; J31

Keywords: Decomposition, Distributional Analysis, Racial Wage Gap, Sample Selection, Partial Identification, Treatment Effects, Women

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† Corresponding address: Esfandiar Maasoumi, Department of Economics, Emory University. E-mail: esfandiar.maasoumi@emory.edu. This paper is in celebration of Robert (Bob) Basmann, great friend and mentor, and renowned econometrician/economist. We hope our work demonstrates the continuing central importance of Robert Basmann tradition of rigorous examination of underlying statistical distributions, and of his care for formal decision/welfare theoretic analysis of observed data. His enduring standards are exemplified by his pioneering work on finite sample distribution theory and identification (Basmann (JASA (1960), Econometrica 1962a-b), and on innovative utility functions and inequality measurement (e.g, Econometrica 1956). The authors would also like to thank Dan Slottje and two anonymous referees for their helpful comments and suggestions.