

Problem Set IV
Econ 350, Winter 2021
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- I. Bayer and Charles (2018) analyze earnings differences between Black men and White men from 1940-2010 using quantile regression.
- (a) Using your previous answers to Question 1 in Problem Set II, what is the justification (if any) for comparing quantiles across the two race groups? How do the wage quantiles map into skill prices (S_1, S_2) ? Are persons at the same quantile of the same skill level?
 - (b) Suppose that in the labor market, there are at least two tasks (T_1, T_2) and two or more skills (S_1, S_2) per task. Using a simple Roy model, compare the quantiles of Black and White earnings in terms of (T_1, T_2) and (S_1, S_2) skills. Do inequalities in quantiles imply discrimination in the payment of skills?
 - (c) How sensitive are their comparisons to the differential rates of employment decline for the two groups? (They document the decline.)
- II. In a two-sector Roy model with employment and nonemployment, are the nonparticipants the ones with the lowest potential market wages? As employment \uparrow , does the average wage necessarily decline, holding the prices of skills constant?

Use your analysis to examine Mulligan and Rubinstein (2008) and the analysis in Maasoumi and Wang (2019) on the wage

growth of women. How much is real and how much is a selection bias effect?

- III. Define systemic discrimination and discuss how to test for its presence. Is it a testable hypothesis? Show why or why not.
- IV. Explain how task skill requirements are determined in a competitive hedonic model with heterogenous firms and heterogenous workers. Relate this to the definition of tasks and skills in Caines et al. (2017). Specifically, in what sense are “skill requirements” determined by the availability of the supply of skills?

References

- Bayer, P. and K. K. Charles (2018, 01). Divergent Paths: A New Perspective on Earnings Differences Between Black and White Men Since 1940. *The Quarterly Journal of Economics* 133(3), 1459–1501.
- Caines, C., F. Hoffmann, and G. Kambourov (2017). Complex-task biased technological change and the labor market. *Review of Economic Dynamics* 25, 298–319.
- Maasoumi, E. and L. Wang (2019). The gender gap between earnings distributions. *Journal of Political Economy* 127(5), 2438–2504.
- Mulligan, C. B. and Y. Rubinstein (2008). Selection, investment, and women’s relative wages over time. *Quarterly Journal of Economics* 123(3), 1061–1110.