

Does self-sorting impact group-based differences in labor market exclusion? A simulation experiment

Abstract

Ethnic and gender inequality are well researched social problems. Both discrimination and group-based productivity differences have been identified as explanations for the maintenance of these inequalities, impacting both access to, and the hierarchical sorting of groups in, the labor market (Blau & Kahn 2017; Pager & Small 2020). It is also well known that group-based self-sorting processes, such as gender-typical occupational choices (Charles & Grusky 2005), contribute to labor market inequality.

The study focuses on the rather overlooked effect of self-sorting on employment chances *within* occupations. Within-occupation self-sorting affects employment chances to the extent that competition varies across vacancies. Competition affects the likelihood of getting a job by raising the bar for what it takes to be highly ranked in an application process. It also affects the labor queue (Reskin & Roos 1998) which increases the scope for employers to discriminate.

We study if self-sorting contributes to gender and ethnic exclusion in the likelihood of reaching different stages of the recruitment process. The study is based on recruitment data from a large Swedish company that uses a partially automated, test-based recruitment process, in which the assessment of candidates up to the shortlist is handled by algorithms.

In a previous study based on the same data, we found that women reached the shortlist to a greater extent than men, and that applicants with European names and women were overrepresented among those who reached the interview stage (Bursell & Roumbanis 2024). In the current study, we scrutinize these findings further, focusing on the extent to which the company's measure of productivity, self-sorting and what we refer to as 'exclusion' (demographically explained differences), have contributed to the overall result.

In order to disaggregate the effects of exclusion, productivity differences and self-sorting, we fit a multinomial logit model to model employer choice behavior. By then simulating what the outcome would be if different coefficients of the model were set to zero or the distribution of applicants were different from what it was, we are able to distinguish between the effects of the observed variables and the self-sorting of applicants.

The results show that productivity differences have the largest impact in shortlist selection (the automated phase). In the stages controlled by the managers, i.e. in selection to interview and in hiring offers, self-sorting and exclusion have a significantly larger impact. Self-sorting is favorable to women, in particular women with non-European names, and exclusion influences men and applicants with non-European names negatively. Overall, we find that self-sorting mediates differences in group-based employment opportunities.

References

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