

Academia or Industry?

Ability, Preferences, and STEM Doctorate Early Career Choices

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ABSTRACT

In recent decades, an increasing share of STEM doctorates have entered employment in industry. A common explanation for this trend is that the rapidly growing number of doctorates are competing over a limited number of tenure-track faculty positions, with the highest ability doctorates staying in academia while lower ability doctorates seeking employment in “alternative” careers in industry. Recent evidence, however, suggests that many doctorates prefer to work in industrial R&D rather than stay in academia. As such, it is unclear whether ability or preferences explain who obtains a tenure-track faculty position and who leaves for industry. We explore this question using longitudinal survey data from a cohort of more than 3,000 STEM doctorates surveyed while in graduate school and then again in full-time employment. These data allow us to observe both ability and stated preferences prior to graduation, thereby enabling us to tease apart their separate effects in determining employment in tenure-track faculty or industrial R&D positions. We find that *ex ante* stated career preferences, rather than ability, explain which doctorates enter industry positions relative to those who become tenure-track faculty. At the same time, among doctorates who remain in academia ability strongly predicts who obtains a tenure-track faculty position over a non-tenure track research or teaching position. In other words, career preferences predict of who remains in academia or leaves for industry, but among those who stay in academia ability predicts who becomes a tenure-track faculty. In ongoing analyses (to be completed soon), we explore underlying mechanisms including job applications and job offers, as well as additional outcomes such as job satisfaction in different careers. Overall, our results suggest that future research as well as policy discussions should consider more explicitly the role of individual preferences for different types of careers, and that the role of ability may be less clear than assumed in discussions focusing on limited labor market opportunities.

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