

Empirical studies on information, beliefs, and choices in education and work

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Summary

This thesis sheds light on how information affects beliefs and choices about education and work. It consists of four chapters written by the author of this thesis, in collaboration with several co-authors. The first two chapters cover educational choices. The two chapters thereafter are about work. On both topics, one chapter is based on observational data, and another on a field experiment. The two types of studies complement each other; the field experiments allow for cleaner identification of the causal impact of information provision, while the observational studies provide higher external validity. Together, they provide a comprehensive look into the impact information has on individuals' beliefs and choices about education and work.

Chapter 2 studies the impact of published student satisfaction scores (ranging from 1 to 5) on enrollment of first-year students for the near universe of existing higher education programs in the Netherlands between 2011 and 2019. To determine each programs' closest substitutes, the author uses pageview data from the largest Dutch educational information website. This allows for an analysis of the impact of changes in a program's own published student satisfaction score, but also the impact of changes in the student satisfaction scores of its substitutes. The author analyzes the impact of these satisfaction scores using fixed effects Poisson regressions and exploits rounding discontinuities to identify causal effects. On the whole, the findings show that student satisfaction scores matter for enrollment. An increase in a program's student satisfaction score leads to higher levels of enrollment, whereas

an increase in the student satisfaction scores of substitutes leads to lower levels of enrollment. Point estimates of the impact of a program's student satisfaction score being rounded up to the next tenth on first-year enrollment range between 1.70% and 3.52%, depending on the bandwidth around the threshold we consider. Conditional on being above the rounding threshold, a program being rounded up over at least one of its closest substitutes increases first-year enrollment by up to 4.37%.

Chapter 3 presents the results of a large-scale field experiment in which the author provides students at randomly selected schools with information about the job opportunities and hourly wages of a set of occupations they are interested in. The experiment takes place on an online career guidance counseling platform that is widely used in the Netherlands, and involves 28,267 pre-vocational secondary education students in 243 schools over a period of 2 years. The information improves the accuracy of students' beliefs, both in the short run (for job opportunities and hourly wages) and in the long run (for job opportunities only). Students who receive the information also change their favorite occupation 0.88 to 2.16 percentage points more often, and switch towards an occupation with better labor market prospects when they do so. Last, and most importantly, they select secondary school specializations related to occupations with better labor market prospects (1.5% and 0.3% – €0.05 an hour – higher than the control group mean for job opportunities and wages, respectively) and choose post-secondary education programs with higher expected wages (2.5% – approximately €0.40 an hour – higher than the control group mean).

In **Chapter 4**, the author uses data from the New York Federal Re-

serve's Survey of Consumer Expectations to study how the United States Bureau of Labor Statistics' Employment Situation Reports (Jobs Reports) affect individuals' expectations about the likelihood of losing their own job. This happens in two steps. First, the author estimates the information shocks of the jobs reports on expectations about the development of the national unemployment rate in the next twelve months by comparing survey responses shortly before and after publication of the reports. Second, the author estimates how these shocks affect individuals' expectations about losing their own job in the same time frame. The results show that when a report is estimated to increase beliefs about the likelihood of the unemployment rate increasing by 1 percentage point, beliefs about the likelihood of personal job loss during that time increase by up to 0.22 percentage points. The information shock further negatively affects individuals' beliefs about the likelihood of finding a new job if they were to lose their current one, but surprisingly has a positive effect on their beliefs about the likelihood of voluntarily leaving their job. The results are robust to the use of different bandwidths around the reports' publication dates and placebo treatments provide reassurance that the information shock is indeed the mechanism driving the result.

Chapter 5 studies the impact of online information provision to job seekers who are looking for work in occupations with relatively poor labor market prospects. The author provides the information through a personalized email containing suggestions about suitable alternative occupations and how the prospects of these alternatives compare to the job seekers' current occupation of interest. A second treatment adds a motivational video aimed at addressing the psychological hurdles of switching to a different occupation. The author evaluates the

interventions using a randomized field experiment with 30,129 unemployed job seekers, and acquires additional descriptive information on beliefs and job search. The results show no impact on received benefits and earnings in the first eight months after the treatment. The findings do show that treated individuals are 1.79 percentage points more likely to have found a job seven months after the intervention, although this difference decreases to 1.19 percentage points four months later. Moreover, treated individuals are between 5 and 6 percentage points more likely to have done so in an occupation different from their initial occupation of interest. This may be promising for their longer-term prospects.

To conclude, this thesis shows that information matters in important ways for beliefs and choices about education and work.