Pre-registration: Skills, Beliefs and Choices

Jesper Eriksen, Franziksa Valder
University of Copenhagen, Department of Economics

Last updated: February 10, 2026

In this pre-registration plan, we describe the research question and study content, the data collection and survey design, and our experimental design.

1 Research Question and Study Content

The task-skill literature states that in a job, skills are used to solve job tasks in return for wages. These skills develop through education and on-the-job learning. While the vast focus of this literature is on specific skills and regular employment, we expand this literature by focusing on study jobs and the relatedness of study job skills to skills that are relevant for future employment. Study jobs often constitute the first labor market experience for students and are thus an important investment.

The choice of study jobs is, however, not well-understood, and previous research has suggested that students may be making sub-optimal decisions about which study job to pursue, perhaps due to biased beliefs about the returns to specific skills associated with different study jobs. First, from the literature in education, we know that individuals make study program choices based on perceived returns to study programs, but that these perceptions are often biased. This suggests that also perceptions about labor market returns to skills might not be not well-defined at that life-stage. Second, descriptive evidence suggests that students often make study job choices that forego a substantial later wage premium.[1] Thus, while observably "poor" choices might reflect a range of job-related factors, however, the may also be driven by misperceptions of returns to skills.

This study sheds light on the perceived returns to study jobs and the role of these beliefs in choice making and later labor market outcomes. We elicits perceived wage-premia of having study jobs requiring skills associated with skills in those jobs typically held by graduates from the same program. We use a vignette study which is to Bachelor and Master's students, where we vary study job characteristics. In addition to eliciting wage premia, we also elicit additional beliefs. On the one hand, study job choices could reflect preferences (e.g., I enjoy bartending), beliefs about other difficult-to-observe attributes correlated with study jobs (e.g., a professional

[1] See a report by Joensen and Mattana, published in Samfundsøkonomen 2022, titled "Studying and Working: Your Student Job Affects Your Future Labor Market Outcomes."

network, perceived labor market tightness, prestige, etc.), or private information. Observably "poor" choices, however, could also reflect misperceptions about returns to skills or about required job skills. The misperceptions of skill-premia are at the core of our analysis. Using an information provision experiment, we will elicit the role of misperceptions in skill premia for expected wage premia and hypothetical study job choice.

2 Data Collection

- Population: Students enrolled at the Bachelor and Master level in Economics in January 2026, at the University of Copenhagen.
- Contact protocol: We contact students through their student email address provided by the administration. We administer the survey to them via a link. The survey is available both in Danish and in English.
- Incentives: Students who complete the questionnaire will enter a lottery of gift vouchers. Details of the incentive schemes are communicated in the invitation. Those who complete the questionnaire will enter a lottery raffling vouchers for 2 lunches at the university canteen. Every fifth completed response will receive a voucher.
- Data restrictions: We will base our analyses on both students who have finished the questionnaire and those who have not. We will drop respondents who have completed the survey in less than 2 minutes, as these respondents are likely inattentive to the survey.
- Start of survey data collection: Tuesday, February 10, 2026
- Survey mode: Online survey
- Expected sample size: We will send our survey to approximately 2,000 students in total (Bachelor and Master in Economics). We will use one round of reminders after the initial invitation to increase the overall response rate. We have no data to predict the response rate in this sample with a survey like ours.

3 Survey Design

The full instructions for our survey can be found in an attached document, both in the Danish and English versions.

The survey consists of four blocks:
(A) Demographics
(B) Current work and study situation and beliefs about future work
(C) Vignette on study jobs
(D) Information treatment on treatment group and second vignette on study jobs
(E) Study program vignette
(F) End.

Block (A) elicits age and gender. Block (B) elicits whether the respondent currently works (if so, for how many hours per week) or if they plan to do so in the future. Block (B) further elicits beliefs on GPA upon completion of their current program, distribution of time between studying, working, and leisure, as well as beliefs on skills that are relevant in jobs of graduates of their own study program. We also ask respondents to indicate their dream job.

Blocks (C), (D), and (E) follow a similar structure - with some exceptions. In all blocks, respondents are presented with 2 hypothetical choices: in (C) and (D), it is the choice between two study jobs, in (E), it is the choice between two master's programs. In the study job vignettes, we vary 3 components independently: hours worked and a schedule, hourly wage, and study job content. For the latter, we vary the share of two types of tasks that the job contains: The share of routine-based tasks and the share of tasks that have a large overlap with the skills required in jobs in which graduates from the same program typically work in. In the study program vignette, we vary the number of courses in the program, the schedule of lectures, and the hourly income earned in either a regular study job or in an integrated job. We elicit several outcomes: in all three vignettes, we elicit the expected wage (excl. pensions) 5 years after graduating from a master's degree for each of the two shown options - study jobs or study programs. In all three vignettes, we also elicit uncertainty about expected wages. In block (D), we also elicit the expected wage of a typical student from the program. In the study job and study-program (blocks C and E), we further elicit the expected probability of being employed 6 months after finishing a master's degree. In blocks (C) and (D), we also elicit beliefs about further factors related to the 2 study jobs from the vignette. We ask to assess the difficulty of obtaining the job, the importance of the professional network created, the pleasantness of the job, the importance of skills for future income, and the importance of prestige.

We further elicit 2 open text questions: one asks about the reasoning for wage differences for the two study jobs from block (C). The other one asks about factors that would make it more likely to choose a job integrating study program. We will design a coding scheme and score responses using large language models.

3.1 Experimental Design

In Block (D), half of the respondents are provided with additional information. Using Danish registry data on all graduates from Danish University Economics programs, we estimate that study jobs that have a large skill overlap (less than a 30% difference in skills) with graduate jobs are associated with a 7% wage premium 5-years out of studies - even conditional on high school GPA.[2] We provide this information to our treatment group.[3] We then show them another study job vignette, similar to the one in (C). The control group does not receive any additional information.
Using linked register data, we will also study whether this information affected study job choice.

[2]These estimates are based on cohorts starting the bachelor's in Economics in the years 2008-2011.

[3]The estimated returns are in line with previous findings by Joensen and Mattana, published in Samfundsøkonomen 2022, in a report titled "Studying and Working: Your Student Job Affects Your Future Labor Market Outcomes."

4 Hypotheses

In our study, we will test the following hypotheses:
1. Students perceive a wage and employment premium to study jobs that have a larger overlap in skills with graduate jobs.
2. Perceived wage and employment premia will predict hypothetical choice.
3. High overlap in skills with graduate jobs is related to other positive job components, such as prestige or professional networks.
4. Students are, on average, able to assess relevant skills for graduates of their program.

Regarding our information provision treatment, we hypothesize the following:

1. Students from the treatment group perceive more realistic self and population wage premia to working in a study job with a larger overlap in skills with graduate jobs.
2. Students from the treatment group will be more likely to choose a study job that has a larger overlap in skills with graduate jobs. 3. Students from the treatment group will be more likely to choose a study program that integrates jobs.