Project proposal:

Understanding Job Seeker Behaviour; a Field Experiment in Online Job Advice

Searching for new employment is a complex dynamic process requiring unemployed workers to take numerous different decisions. So far, the economic literature has identified several aspects of search behaviour that have an important influence on a job seeker's reemployment prospects. This involves the number of applications (Blau and Robins, 1990), the usage of different search channels (van den Berg and van der Klaauw, 2006), the potential commuting time (van den Berg and Gorter, 1997) or reservation wages (Krueger and Mueller, 2012). At the same time, however, it seems that job seekers fail to choose search strategies maximizing their reemployment prospects. A particularly challenging task in this respect is finding the "right" vacancies to apply to, i.e., the vacancies that best match a job seeker's set of skills and characteristics. Indeed, a recent study by Belot and Kircher (2015) documents that many job seekers tend to search "too narrowly" in terms of the occupations that they consider to apply. At the same time, the study shows that simple low-cost advice can help job seekers to adjust their behaviour and enhance their overall employment prospects.

Against this background, we aim at designing an enhanced online recommendation tool that provides job seekers with information to optimize their job search strategy. Specifically, the tool will assist job seekers in identifying particularly promising vacancies. The core idea behind the recommendation tool is to exploit Danish register data, in order to identify occupational transitions that have been particularly successful in the past. Based on this information, the tool will provide recommendations for current job seekers with respect to the occupations in which each job seeker has particularly high chances of employment. Hence, knowledge of previous employment transitions will be used to reduce the search cost for current job seekers. Beside this basic occupational advice that is only based on the universe of previous job transitions (and that has proven successful in the Scottish study by Belot and Kircher, 2015), we will also design a variant of the tool that takes into account additional individual-level information of job seekers, e.g. their individual skills, labour market experience, and other personal characteristics. Thereby we will additionally provide job search advice that is strongly personalized and accounts for the job seeker's individual situation.

In the main part of the project, we will test the impact of the recommendation tool on job search behaviour and subsequent labour market outcomes in a large-scale randomized controlled trial (RCT) with job seekers in Denmark. Within the RCT, we compare different treatment groups:
- A first group receives general suggestions on occupations that provide high re-employment chances for the job seeker, based on successful transitions by job seekers with a similar occupational background.
- A second group receives more strongly personalized suggestions, which take into account the job seekers' occupational background as well as other individual-level characteristics (e.g., age, gender, education, and experience in different occupations).
- A third group receives a placebo message in order to test whether sending a message itself has an effect apart from the actual information treatment, e.g. reducing search costs in general (since the treatment might contain a link to the search platform) or general motivation effects.
- Finally, there will be also a fourth group, which does not receive any message/recommendation.

The project will be carried out in collaboration with the Danish Agency for Labour Market and Recruitment who are responsible for the common public job portal, Jobnet, where we aim at conducting our in the field experiment. The information treatments (the two treatment- and the placebo group) will be implemented as a message send to treated job seekers through the internal Jobnet mailbox system.

The objectives of the recommendations are to improve individuals' reemployment prospects and the subsequent job match quality. These outcomes will be measured by the unemployment duration, job-finding probabilities, realized wages, and the duration of subsequent employment spells. Moreover, we aim to consider realized job mobility between occupations and regions.

In order to understand the actual effect mechanisms, it is crucial to additionally measure individual search behaviour. Furthermore, it is necessary to gather information on job seekers' search behaviour before the experiment, to test whether suggestions have a particularly strong effect among job seekers who initially searched "too narrow".

To shed light on the individuals' job search behaviour we will exploit a novel, yet un-explored data source on the individual jobseekers' applied applications. This new data originates from a requirement introduced in 2015, where it became mandatory for Danish UI-recipients to register applied applications in a job-log in order to claim benefits. This has given rise to a structured data source containing information on the type of job the unemployed job seeker applied to, and further allow us to directly monitor each individual's search activity in coherence with their unemployment spell. Additionally we are currently working in a close collaboration with the Danish Agency for Labour Market and Recruitment to enrich the structured data on search behaviour by retrieving information on saved searches, marked vacancies as favorite jobs and other intermediate steps before actually sending an application. This information is, likewise job-log, available through the public job portal Jobnet.

References

[1] Belot, M and Kircher, P. (2015). Providing Advice to Job Seekers at Low Cost: An Experimental Study on On-Line Advice. Working Paper in Economics.

[2] Blau, D. and Robins, P. (1990). Job Search Outcomes for the Employed and Unemployed. *Journal of Political Economy,* 98(3), pp. 637-655.

[3] Krueger, A. and Mueller, A. (2012). The Lot of the Unemployed: A Time Use Perspective. *Journal of the European economic Association.* 10(4), pp. 765-794.

[4] van den Berg, G. and van der Klaauw, B.(2006). Counseling and Monitoring of Unemployed Workers: Theory and Evidence from a Controlled Social Experiment. *International Economic Review.* 47(3), pp. 895-936

[5] van den Berg, G. and Gorter, C. (1997). Job Search and Commuting Time. *Journal of Business & Economic Statistics.* 15(2), pp. 269-281.