

Institution: University of Edinburgh		
Unit of Assessment: 16 Economics and Econometrics		
Title of case study: Providing Advice to Job Seekers at Low Cost		
Period when the underpinning research was undertaken: September 2013 – July 2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Michèle Belot Philipp Kircher	Professor of Economics Professor of Economics	Since 1 st September 2012 Since 1 st September 2012
Period when the claimed impact occurred: September 2015 – December 2020		
Is this case study continued from a case study submitted in 2014? N		
1. Summary of the impact		
<p>Research by Michèle Belot and Philipp Kircher led to the development of a digital tool which presents job seekers with search advice based on up-to-date labour market statistics and occupation similarity. Their study showed that exposure to the tool provides a low cost and effective way to help job seekers. The job searches of individuals who used the tool resulted in a larger number of interviews, especially among the long-term unemployed. The research led to a collaboration with the private-sector company Ingeus UK Ltd., who are contracted to run part of the Work and Health Programme for the Department of Work and Pensions (DWP). The Work and Health Programme is designed to help find employment for difficult-to-place job seekers. By July 2020, nearly 1,400 job seekers had used the tool, and Ingeus confirms that learnings from the collaboration have been essential for the new digital services the company is rolling out in the wake of the Covid-19 pandemic.</p>		
2. Underpinning research		
<p>The aim of the research carried out by Belot and Kircher was to investigate the effects of personalised job advice, delivered in a low-cost manner through a digital tool. In many countries, job seekers are told they should search ‘broadly’ for jobs, meaning they should not only look for the types of jobs they have had before. Yet economic theories and existing evidence provide little guidance on how exactly they should broaden their search, and whether broader searching is effective in practice.</p> <p>Belot and Kircher (with Paul Muller of the University of Amsterdam) developed a search tool to provide automated advice to job seekers about potential alternative occupations. It was tested using a randomised study in which 295 unemployed job seekers used the search tool in the School of Economics’ Behavioural Laboratory at the University of Edinburgh (BLUE lab) for at least half an hour per week over a 12-week period in 2013/14.</p> <p>The search tool was incorporated into a standard job search engine. Job seekers specify their preferred occupation. Based on this occupation, they receive a list of suggested alternative occupations. The alternative occupational suggestions are generated by two aspects of the labour market.</p> <ul style="list-style-type: none"> • The first is a measure of similarity of occupations. The tool uses all skills attributed to the preferred occupation and finds alternative occupations with the largest overlap in required skills. • The second is observed transitions between occupations. The tool uses data from longitudinal labour market surveys to suggest alternatives based on the most commonly observed transitions between occupations. <p>Importantly, whilst the first aspect is based purely on the resemblance of two occupations, the second includes an additional notion of job availability. If an occupation requires very</p>		

similar skills but is rarely available, very few transitions would be observed, and it would not be included as a suggestion.

The search tool approach has two main advantages compared to traditional interventions with an individual advisor.

- It can be implemented at a low cost per job seeker and advice tailored to the job seeker and local labour market.
- It gives control to the job seeker and avoids any element of compulsion. Individuals voluntarily decide whether to incorporate acquired information into their job search strategy. This improves the experience for job seekers.

The research was supported by Kircher's ERC Starting grant (2012-17, £875k). Results from the initial study showed that the alternatives suggested by the search tool do significantly affect job search behaviour. On average, job seekers who receive suggestions consider a more diverse set of occupations in the vacancies that they look at. The impact differs depending on the initial search strategy. Those who are searching for a narrow set of occupations initially become 'broader' after receiving suggestions, while those who already searched broadly become narrower after seeing the suggestions. The same changes were found for job applications as well as job searches. Participants who were exposed to the search tool received on average 44% more job interviews: the increase was 75% for those who had previously searched narrowly and the increase was as high as 150% for those who had been unemployed for more than two and a half months and had previously searched narrowly. Overall, the study showed there can be considerable benefits to be had from the search tool at a low marginal cost.

The findings were published in the *Review of Economic Studies* (2019) [3.1]. Prior to publication, Belot and Kircher were invited to present the research at several prestigious conferences including the NBER Summer Institute in 2015 [3.2].

3. References to the research (indicative maximum of six references)

- [3.1] Belot, M., Kircher, P. and P. Mueller, 2019. "Providing Advice to Job Seekers at Low Cost: An Experimental Study on Online Advice," *The Review of Economic Studies*, Vol. 86 (4), July, pp 1411–1447.
<https://doi.org/10.1093/restud/rdy059> (funded by ERC-2011-StG_20101124)
- [3.2] P. Kircher, NBER Summer institute 2015, National Bureau of Economic Research, Cambridge, Massachusetts, USA; Session on *Macro Perspectives*, on 13th-17th July 2015.
<https://conference.nber.org/confer/2015/SI2015/EFMPL/EFMPLprg.html>

4. Details of the impact (indicative maximum 750 words)

Upon completion of the original experiment outlined above and the initial analysis, Belot and Kircher embarked on a programme of knowledge-exchange activities devised to disseminate the findings of their research to policymakers and governmental departments in the UK and beyond. The dissemination programme included presenting the research at the 2015 Behaviour Exchange conference in London – organised by the UK government's Behavioural Insights Team –, and at the 2015 Experimental Methods in Policy conference in Cancun [5.1]. Belot and Kircher also organised a policy forum in London on 30 November 2016, which centred on the design and findings of their experimental study. The forum included a roundtable discussion on "Client Self-Service: How Can Modern Technology Enable Clients in Their Journey Back to Work in Their Own Time?" The forum was attended by representatives from the Department of Work and Pensions (DWP) and the Behavioural Insights Team [5.2].

Belot and Kircher published non-technical summaries of their research and findings on the policy portal VoxEU, and in Open Access Government [5.3]. VoxEU is a website for the

dissemination of research to economists in government, international institutions and the private sector. The VoxEU website records half a million page views per month, and the article by Belot and Kircher had received a total of 9,500 reads within 18 months of its publication. Open Access Government is a digital journal which publishes policy insights from research, as well as contributions from active policymakers. It receives about 10,000 website views per issue.

Following the presentation at the 2015 Behaviour Exchange conference, Belot and Kircher were approached by the Head of Service Design for the private-sector company Ingeus UK Ltd. Ingeus is a company that specialises in providing support and services to the long-term unemployed. At the time, Ingeus was preparing a bid to run part of DWP's Work and Health Programme – a programme which aims to assist difficult-to-place job seekers. Those job seekers were among the groups that had benefited most from the use of Belot and Kircher's search tool in the experimental study cited above [5.4].

Ingeus proposed including the use and further testing of the tool in its prospective bid. Belot and Kircher agreed and entered a collaboration agreement in 2016. Subsequently, Ingeus was successful in its bid for three contract package areas – the North West of England, Greater Manchester, and Central London. The testimonial by the company's Head of Service Design states that the “three commissioners in question, [namely] DWP, Central London Forward and GMCA were all impressed by the collaborative approach with an academic organisation [the University of Edinburgh] that led to evidence-based service design solutions” [5.5].

As part of the collaboration, the University of Edinburgh's Information Services Applications Management Team was commissioned to design an updated version of the Belot-Kircher tool for use by Ingeus. Work on the software began in July 2016 and was completed in August 2018. Ingeus was granted a licence to the tool in early 2019 [5.6]. The new tool was integrated into the existing digital infrastructure of Ingeus and designed to accommodate use by a much larger sample of job seekers than were exposed to the tool during the original research experiment.

In September 2018, Ingeus projected that under the contract it was awarded by DWP “in the region of 60,000 job seekers will be referred” to Ingeus up to end July 2020. Of these, 15,000 were to be exposed to the tool during the initial roll-out [5.7]. The purpose of this roll-out was to permit an ex-post evaluation of the effects of exposure to the tool on the outcomes for job seekers from a comparison of a treated sample with an untreated control group. Eventually, the tool was to be made available to all job seekers referred to Ingeus.

Due to the disruption caused by the Covid-19 pandemic, only 1,395 job seekers were ultimately exposed to the tool by July 2020. These individuals submitted a total of 14,000 search queries through the tool, and 597 had found a new job by July 2020 [5.8]. While it has not yet been possible to carry out a formal ex-post evaluation of the performance of the tool, the findings from the pilot study would suggest that up to 180 of these new matches between job seekers and employers may be attributable to its use.

Since the Covid-19 pandemic and subsequent 2020 UK lockdown significantly increased the demand for the digital delivery of its services, Ingeus is now in the process of extensively upgrading the platform through which it matches job seekers with job opportunities. An IT Business Partner at Ingeus confirms that, considering these changes, the collaboration with Belot and Kircher “was a success in identifying new sectors to work in – the idea behind the tool is something that, in the current climate, has become imperative.” The testimonial further suggests that, among the group of treated job seekers, Ingeus “did see an increase in job starts whilst this tool was being used”, and the company is looking to secure funding to use the tool for its new programmes [5.9].

5. Sources to corroborate the impact (indicative maximum of 10 references)

- [5.1] Behaviour Exchange 2015, Behavioural Insights Team, London, UK; on 2nd-3rd September 2015.
<https://www.bi.team/blogs/behavioural-exchange-2015-hosted-by-the-behavioural-insights-team/>
Experimental Methods in Policy Conference 2015, Cancun, Mexico; on 3rd 8th February 2015.
<https://sites.google.com/site/experimentalmp/registration-1/website-builder>
- [5.2] MacCaLM Policy Forum, London, 30th November 2016.
<http://www.maccalm.org/news/client-self-service-how-can-modern-technology-enable-clients-in-their-journey-back-to-work-in-their-own-time/>
- [5.3] Belot, M., Kircher, P., and P. Mueller, 2016. "How Low-Cost Labour Market Information Benefits Job Seekers," VoxEU.org, CEPR, 10th March 2016.
<https://voxeu.org/article/how-low-cost-labour-market-information-benefits-job-seekers>
Read Statistics are archived from 11th October 2017 at
<https://web.archive.org/web/20171011181048/http://voxeu.org/article/how-low-cost-labour-market-information-benefits-job-seekers>
Kircher, P., 2018. "Improving Job-Search Through Better Information: A Low-Cost Approach," Open Access Government, 15th January 2018.
<https://www.openaccessgovernment.org/improving-job-search-better-information-low-cost-approach/41171/>
- [5.4] Information about the Work and Health Programme, INGEUS Website
<https://ingeus.com/uk/what-we-do/employability/outstanding-employability-services>
- [5.5] Letter on file from 18th August 2018, by the former Head of Service Design at Ingeus UK Ltd., confirming the collaboration with Belot and Kircher and providing feedback.
- [5.6] Collaboration agreement from October 2016, and draft license agreement from September 2018 on file. License agreement signed 16th January 2019 also on file.
- [5.7] E-mail on file from 13th September 2018, by the then Mobilisation Director at Ingeus UK Ltd., relaying these predictions and plans.
- [5.8] Data collected on job seekers using the tool, as well as their searches and outcomes, are on file.
- [5.9] Letter on file from 2nd December 2020, by a current IT Business Partner at Ingeus UK Ltd., detailing the collaboration with Belot and Kircher and providing an evaluation of its outcomes.