

What are the effects of online job search on the labor market?

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Outline

What are the effects of online job search on the labor market?

Initial studies found no effect on matching quality.

- Basic idea: Online tools preferred by the least qualified workers.
- Identification issues: hard to control for all correlated variables.

More recent papers bring evidence of positive impacts.

- Better technology, widespread adoption of online tools.
- Methodological refinement: use of randomized control trials.

Looking forward: limits and possibilities.

- Online search is still cognitively costly.
- “Digital coaching” can accelerate reemployment.

Introduction

What do you mean by online job search?

Any online matching interaction between firms and workers:

- online interactive repositories of CVs and/or vacancies;
- job applications in corporate websites;
- employee search in social networks.

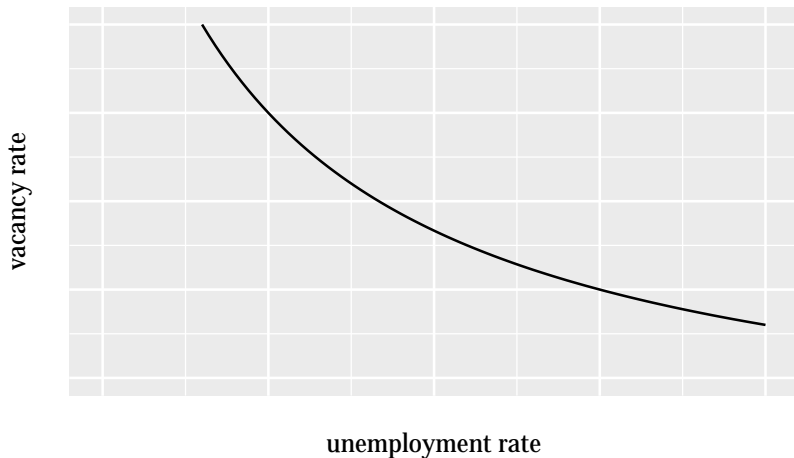
The screenshot shows the Indeed website's search results for 'Job D'été A' in Paris (75). The interface includes a navigation bar with links like 'Trouver des emplois', 'Recherche de CV', and 'Entreprises / Publier une annonce'. The search results are filtered by location (Paris) and distance (within 25 km). A table shows salary estimates for various job levels. The main job listing is for 'JOB D'ÉTÉ - LIVREUR DE JOURNAUX H/F - APRÈS-MIDI - BERCY', which is a seasonal position for newspaper delivery in Bercy, Paris, with 7 reviews and a 5-star rating. The job is sponsored by 'sauegarder'.

Estimation du salaire	
20 000 €	(319)
25 000 €	(175)
30 000 €	(95)
35 000 €	(58)
40 000 €	(33)

The screenshot shows the homepage of 'THE LOCAL fr', a website dedicated to English-language jobs in France. The header features the logo and a 'RECRUITING' button. The main banner reads 'ENGLISH-LANGUAGE JOBS IN FRANCE' with the tagline 'Find one you love.' and a 'Search' button. Below the banner, there are two featured job categories: 'Education & Teaching' and 'Software Engineering', each with a representative image.

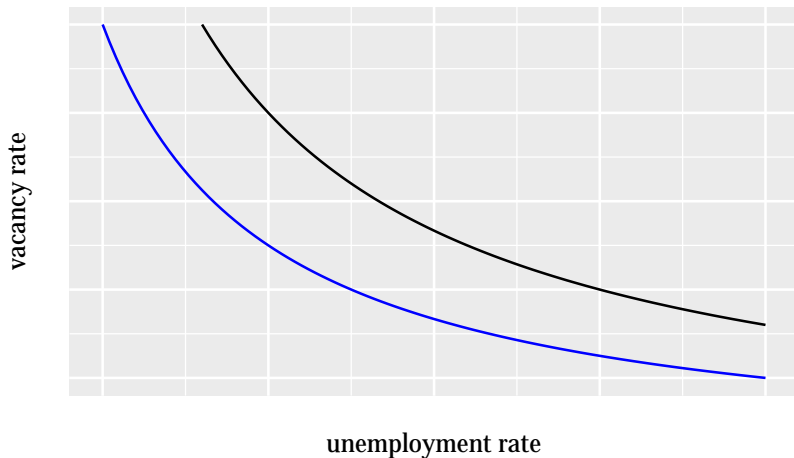
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The theoretical Beveridge curve



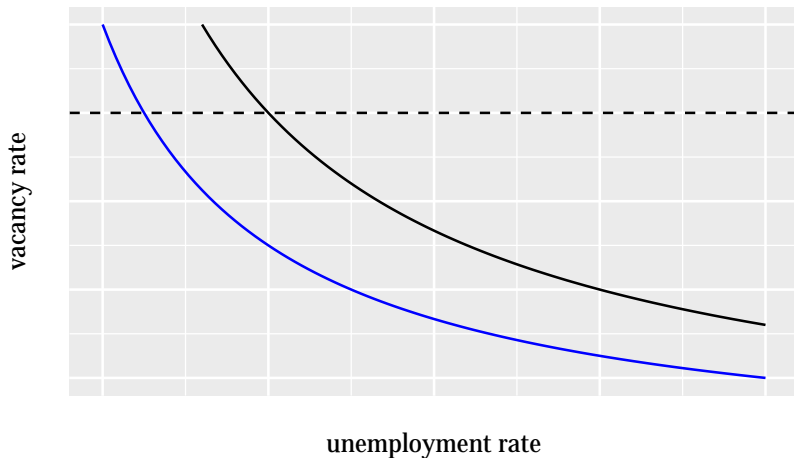
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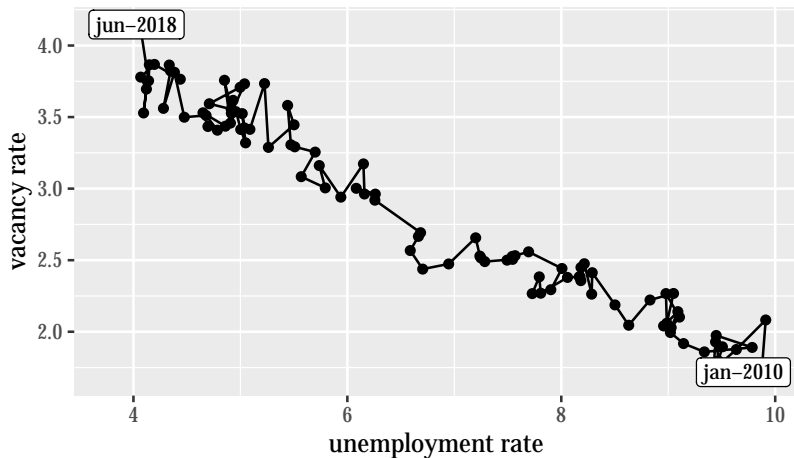
Introduction

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Introduction

Actual U.S. Beveridge curve (2010-today)



Looking for "quasi-experiments"

Kroft & Pope (2014)

Key strategy:

- Craigslist entry into different US areas in 2005-07.

Findings:

- Reduction in apartment and house rental vacancy rate
- No effect on unemployment rate.

Why?

- Structural difference in the market responsiveness to online ads.
- No effect of online job search, or no effect of Craigslist? Growth at expenses of other similar online boards active in those areas.

The empirical problem of unobservables

Kuhn & Skuterud (2004)

Key strategy:

- Probability of being unemployed one year later, conditional on job seeking strategy and individual characteristics (US CPS 1998-2000).

Findings:

- People who look for jobs online have characteristics positively associated to lower unemployment duration (e.g. higher education);
- Controlling for those factors, the difference vanishes or increases.

Why?

- Online job seekers can be **adversely selected on unobservables**: have poor social connections, have private information on their poor qualification and are more likely to use the low cost search method.

“Is Internet Job Search Still Ineffective?”

Kuhn & Mansour (2014)

Findings:

- Although online job search appeared to be either ineffective or counterproductive a decade earlier, more recently it is associated with 25% reduction in unemployment duration.

What has changed?

- Change in the correlation with omitted variables? Impossible to know.
- Development in technology, job board functionalities.
- Widespread adoption, network externalities: online tools now connects each worker to larger number of firms and vice-versa.

The burden of cognitive costs

Brenčič (2014)

Theoretical justification:

- **Order effect:** Since it is costly to process a full list of alternatives, an agent can incur in less costs by reviewing only the options at the top.

Key strategy:

- Regressing the number of posts hosted by a site on
 - 1 the number of visitors it attracts and
 - 2 the number of consults in a typical visit.

Findings:

- Significant network effects, as expected.
- No link between data available and data effectively reviewed.

Limitation: Not an experimental setting.

Hello, digital coaching

Belot, Kircher & Muller (2015)

Key strategy:

- RCT in local Job Centers in Edinburgh. Treatment group randomly assigned to an online tool that provided advice using an algorithm. Effects measures with diff-in-diff model.

Findings:

- Increase in number of job interviews among treated.
- Increase in breadth in occupations considered by the job-seeker.

Strengths:

- Controlled randomization. Researcher observe the search behavior of the job-seeker and subsequent job applications, interviews and job offers (but not hirings).

Conclusions

Common challenges in the literature:

- **Endogeneity**, self-selection. Need for Randomized Control Trials.
- Matching quality is a **multidimensional** object: conclusions are uncertain and comparison across studies is difficult.
- External validity of any empirical finding becomes weak when the effect of interest (online job search) is under **rapid evolution**.

Key takeaways:

- Recent evidences that online services can ease job search friction.
- Effects are stronger if the tools **increase data availability** and adopt algorithms to **lower the cognitive cost of searching**.
- **Policy recommendation:** low cost, large scale digital coaching mechanisms could shorten unemployment duration.