Do Labor Market Policies Have Displacement Effects? Evidence from a Clustered Randomized Experiment

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Outline

Motivation

- ▶ High unemployment: a promising labor market policy is job placement assistance (Card Kluve Weber, 2010)
- ▶ An important criticism against the existing evaluations of these programs: gains can be offset by displacement effects (queue-jumping)
- ▶ Displacement effects are hard to estimate: requires exogenous variation of the proportion of treated

Two-step RCT

- ▶ We take advantage of a large-scale search assistance program which was implemented in France in 2007 (targeted half of administrative regions)

- ▶ Two-step RCT: randomly assign the proportion of treated to areas ; randomly assign treatment status to individuals within areas

Results preview

- ▶ The program increases the durable employment rate of treated wrt untreated individuals
- ▶ There exist large externalities that reduce significantly the positive impact of the program
- ▶ Externalities appear to be larger when labor market conditions are weaker

Outline

Conceptual framework

- ▶ When should we expect externalities to occur?
- ▶ When should we expect these externalities to be stronger?
- ▶ Matching model inspired by Michaillat (2012) and Landais, Michaillat, and Saez (2012)
    - ▶ Key assumption is that the technology of production exhibits decreasing return in labor
    - ▶ Direct extension of the idea that the number of job available is given
   - ▶ Very different mechanism compared to the standard matching model

Beveridge curve

- ▶ Beveridge curve expressed as a increasing mapping between the market tightness and the employment rate
- ▶ The program increases the search efficiency of treated job seekers: shifts the curve to the right
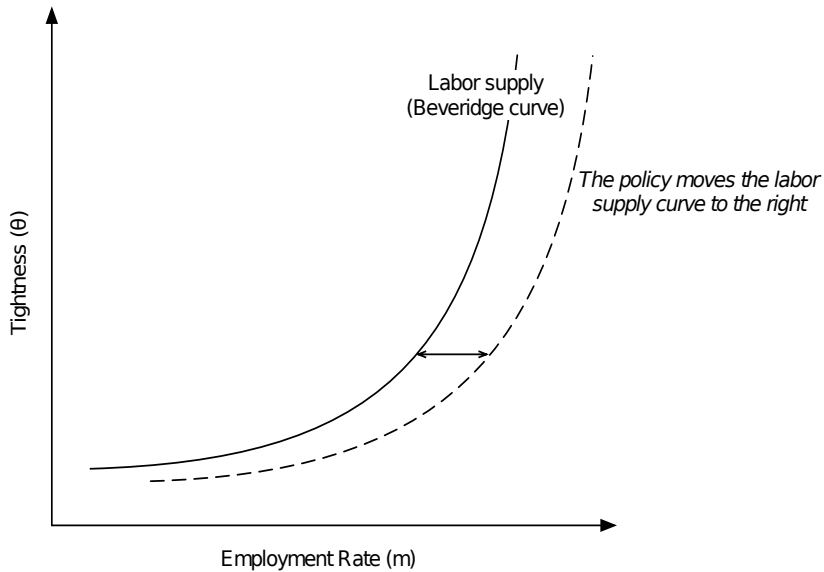
Labor demand

- ▶ Key assumptions:
    - ▶ decreasing return to scale in the technology of production
      $Y = AL^{\beta}$
    - ▶ sluggish adjustment in the wage
- ▶ Labor demand equation: decreasing mapping between the market tightness and the employment rate
    - ▶ Search costs associated to opened vacancies enter the labor demand in the same way as wages
    - ▶ If wages are fixed an increase in employment has to be associated with a decrease in market tightness so as to reduce the search cost
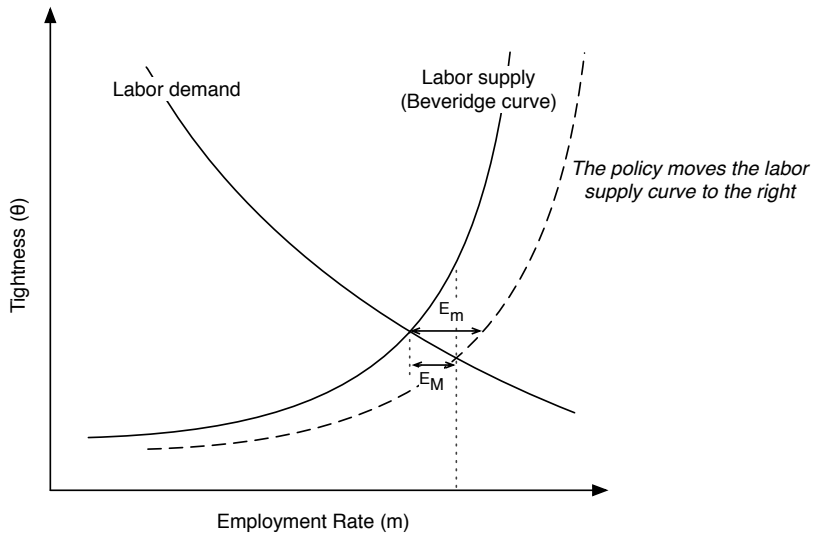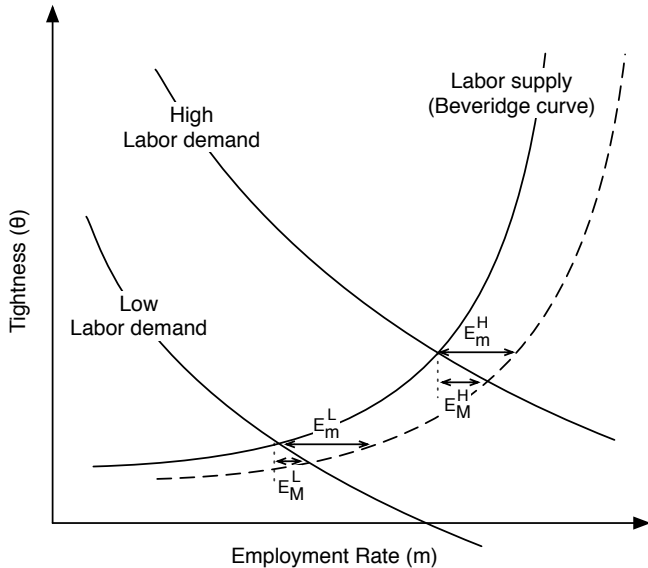
Predictions

- ▶ The magnitudes of displacement and net effects depend on the strength of labor demand
  - ▶ Displacement effects are large in weak labor markets
  - ▶ Micro effects are large in weak labor markets
  - ▶ Macro effect are small in weak labor markets

Outline

A program for young and educated job seekers

- ▶ Youth unemployment an important issue in many countries (18% in the US, 23% in France or the UK, 36% in Italy, more than 50% in Spain and Greece)
- ▶ In 2007, new job search assistance program for 10,000 young job seekers
  - ▶ Less than 30 years old
  - ▶ Unemployed for more than 6 months (or cumulating more than 12 months over the last 18 months)
  - ▶ Diploma after 2 years of college

Counseling firms

- ▶ Private counseling firms contracted with the objective to bring job seekers back to long-term jobs (idea of stepping stone)
- ▶ Payment conditional on objectives:
    - ▶ 25% if the job seeker enrolled
    - ▶ 40% if the job seeker signed a stable contract within less than 6 months
    - ▶ 35% if the former job seeker is still employed six months after the job has been found
- ▶ Total fee around 1800 euros
- ▶ Compare to an order of magnitude of 350 euros for a six month standard counseling program by the PES service

Job Placement and Displacement: A Randomized Experiment

Outline

Two-step randomization

1. At the local employment agency (LEA) level:
   - One LEA in each city of more than 30,000 inhabitants
   - Partition 235 LEAs into 47 homogenous quintuplets
   - Randomly assign within each quintuplet the assignment proportions 0%, 25%, 50%, 75% and 100%

2. Next, at the individual level: each individual is randomly assigned to the treatment or control, the assignment rate depending on the LEA to which he belongs

The experimental design : 47 such quintuplets

Job Placement and Displacement: A Randomized Experiment
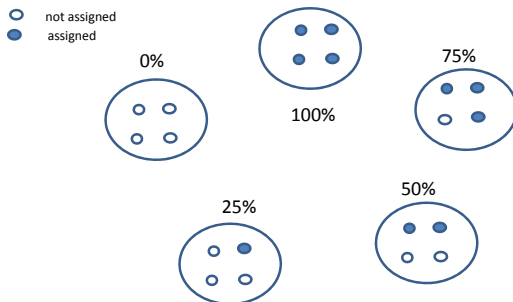
A specific design to identify displacement effects

- *Super control group*: individuals in 0% assignment areas
- Comparing assigned to control and super control
    - → Displacement effect
- Comparing assigned to treatment and super control
    - → Effect on the treated

Data collection

- ▶ PES administrative files: contact details, main characteristics, job sought
- ▶ Counseling firms administrative files: identifying who took up
- ▶ Endline surveys: 8, 12, 16 and 20 months after random selection
  - ▶ Response rate close to 80% (quite good for such a population)
  - ▶ Well balanced between treated vs. control populations
- ▶ Focus:
  - ▶ Outcome: long term contract or fixed-term contract of at least 6 months, 8 months after random assignment : contractual outcome for private operators
  - ▶ Population: individuals that were unemployed at the time of program assignment

Outline

	Unemployed
Program Participation	0.434*** (0.009)
Number of meetings with a counselor Control mean	0.601*** (0.083) 3.444
Received help with CV, coaching for interviews, etc. Control mean	0.113*** (0.009) 0.285
Help with matching (identify job offers, help with transportation) Control mean	0.008 (0.008) 0.199
Observations	11806

Preliminary evidence

Ignore first the two steps design and just use assignment variable as an instrument for treatment

fixed-term contract with a length of more than 6 months				
	REduced	Take-up		IV
Assigned to program	0.017*** (0.006)	0.434*** (0.009)	Treatment	0.039*** (0.015)
Control mean	0.167	0	Observations	11806

Pooled reduced form

$$y_{ic} = \alpha_1 + \beta_1 Z_{ic} P_c + \delta_1 P_c + X_{ic}\gamma_1 + \omega_{ic}$$

- P_c is a dummy variable for market (*cities*) where the program has been developed
- Z_{ic} a dummy variable for being assigned to treatment in these areas
- β_1 is the difference between being assigned to treatment and to control in a treated area
- δ_1 is the effect of being untreated in a treated area
- $\beta_1 + \delta_1$ is the net effect of program assignment: difference between treated and super control individuals

Pooled reduced form : Long Term Fixed Contract (LTFC)

		All	Men	Women
Assigned to program	β_1	0.023***	0.043***	0.013
		(0.008)	(0.013)	(0.010)
In a program area	δ_1	-0.013	-0.036***	-0.001
		(0.009)	(0.013)	(0.012)
Net effect of	$\beta_1 + \delta_1$	0.010	0.007	0.012
program assignment		(0.008)	(0.011)	(0.011)
Control Mean		0.16	0.131	0.177
Observations		11,806	4,387	7,419

Long Term contract (LT)

		All	Men	Women
Assigned to program	β_1	0.025**	0.037**	0.019
		(0.012)	(0.018)	(0.014)
In a Program area	δ_1	-0.021*	-0.043**	-0.010
		(0.013)	(0.020)	(0.018)
Net effect of	$\beta_1 + \delta_1$	0.003	-0.006	0.009
program assignment		(0.011)	(0.018)	(0.016)
Control Mean		0.365	0.372	0.36
Observations		11,806	4,387	7,419

Pooled IV regression

$$y_{ic} = \alpha_2 + \beta_2 T_{ic} P_c + \delta_2 P_c + X_{ic}\gamma_2 + \omega_{ic}$$

- β_2 is the difference between being treated or being untreated in a treated area
- δ_2 is the effect of being untreated in a treated area
- $\beta_2 + \delta_2$ is the net effect of treatment: being treated in a treatment area vs being in a control area
- However requires assumptions displacement effect homogeneous between compliers and never-takers
- To be taken with caution - not our main result

Pooled IV regression Long Term Fixed Contract (LTFC)

		All	Men	Women
Assigned to program	β_2	0.054***	0.095***	0.030
		(0.018)	(0.030)	(0.023)
In a Program area	δ_2	-0.014	-0.036***	-0.001
		(0.009)	(0.014)	(0.012)
Net effect of	$\beta_2 + \delta_2$	0.040***	0.060***	0.029
program assignment		(0.014)	(0.023)	(0.019)
Control Mean		0.16	0.131	0.177
Observations		11,806	4,387	7,419

Other outcome variables

- ▶ Earnings : no significant effect.
  - ▶ Informative to notice that there is no earning effect : alternative explanation of displacement effect point to wage increase for the treated, making vacancies less profitable. No evidence of such effect here

- ▶ Longer term employment outcomes (employment at 12, 16 or 20 months): no significant effect.
  - ▶ Real policy issue: most ALMP assume stepping stone effect. Experience gathered as an effect of policy should improve durably employability of program beneficiaries. No such effect here

Stratifying by job type

- ▶ Externalities may not be limited to the population included in the experiment
- ▶ Less skilled youth may compete with the young graduates we have considered

Job	Share of job seekers who are skilled
Jobs with lowest shares	
Needlewoman	0.007
Cooking assistant	0.011
Construction vehicle driver	0.012
Jobs with highest shares	
Technical production manager	0.977
Lawyer	0.979
Actuary	1.000

Unemployed above third quartile, Long Term Fixed Contract (LTFC)

	All	Men	Women
Assigned to program	0.040**	0.072**	0.021
	(0.016)	(0.029)	(0.022)
In a Program area	-0.040*	-0.086**	-0.013
	(0.021)	(0.035)	(0.027)
Net effect	0.000	-0.014	0.008
of program assignment	(0.019)	(0.031)	(0.024)
Control Mean	0.19	0.161	0.204
Observations	3,066	1,016	2,050

Unemployed above third quartile, Long Term contract

	All	Men	Women
Assigned to program	0.019	0.059	0.000
	(0.021)	(0.039)	(0.028)
In a Program area	-0.005	-0.081*	0.033
	(0.023)	(0.047)	(0.032)
Net effect	0.014	-0.022	0.033
of program assignment	(0.019)	(0.037)	(0.026)
Control Mean	0.403	0.408	0.401
Observations	3,066	1,016	2,050

Labor market conditions and externalities

▶ Prediction: externalities should be larger when labor market
  conditions are weaker

▶ Interact the program and the externalities with dummies
  indicating whether labor market conditions are weak or strong

  ▶ some areas experience higher unemployment rates
  ▶ some cohorts have been more affected by the 2008 recession
    than others : last cohorts assigned to the program, April ti
    July 2008

Labor market conditions: weak areas

	LTFC	LT	LTFC	LT
	Men and women		Men	
bad area and bad cohort				
Program participation	0.055***	0.066***	0.082***	0.110***
	(0.018)	(0.023)	(0.030)	(0.036)
In a program area (δ_1)	-0.042*	-0.077**	-0.043	-0.144***
	(0.024)	(0.030)	(0.032)	(0.044)
good area or good cohort				
Program participation	0.015*	0.015	0.033**	0.019
	(0.008)	(0.013)	(0.015)	(0.021)
In a program area (δ_2)	-0.009	-0.009	-0.036**	-0.017
	(0.010)	(0.014)	(0.015)	(0.024)
test ($\delta_1 = \delta_2$)	0.202	0.05	0.867	0.017

Outline

Cost effectiveness

Difficult to perform a real **cost benefit analysis** because of poor wage and UI data
Still difficult but easier to perform **cost effectiveness analysis**

Based on the employment profile in the super control group and the profile in assigned to treatment and to control groups, compute the marginal cos of one treated to be around 600 euros

Interesting to compute the number of LT jobs found by treated, by untreated and the net number of jobs for 100.000 euros invested in the program1000 individuals assigned to the treatment

Do the same for 1000 individuals assigned to the treatment

Results show that for 1000 treated:

- 36 jobs are found by the treated due to the program
- 48 are not found by the control due to program implementation
- making a net number of jobs of -12 in area where the program has been developed

Similarly, for 100.000 euros invested in the program:

- 6 jobs are found by the treated due to the program
- 8 are not found by the control due to program implementation
- making a net number of jobs of -2 in area where the program has been developed

If these computations had been done based on an evaluation ignoring externalities we would have obtained a very different picture

- for 1000 treated we would have conclude that 57 of them had found a job due to the program
- for 100.000 euros invested in the program 10 treated would have found a job due to the program

Outline

Conclusion

- ▶ Unique opportunity to identify both direct program and displacement effects, using a two-step randomization design

- ▶ Positive effects of the program on the probability to hold a long-term contract 8 months after assignment

- ▶ Among men, evidence for displacement effects: the program came at the expense of the untreated job seekers that belonged to same labor markets

- ▶ Displacement effects are stronger in weaker labor markets

- ▶ Net effect is a small non significant reduction of 2 in the number of job placement for an investment of 100.000 euros

- ▶ Even ignoring displacement effects would have lead to an evaluation of just 10 job placements

Conclusion

▶ On the methodological side point to the interest of randomized evaluation
  ▶ Need of evidence in the effect of programs
  ▶ Also show the interest in evaluation starting from a policy/research questions: are there displacement effects? and to build the design and the experiment so as to be able to answer that question : "*smart experiment* "

▶ On the policy side results not so much in favor of counseling programs, especially in weak labor market
  ▶ Call on the opposite to look at policies fostering demand
  ▶ Reduction in the cost of vacancies : offering matching services to firm
  ▶ Well in line with the predictions of the matching model developed
  ▶ Look at firm outcomes: vacancies, hire, fire, quit...

Unconstrained reduced form

	Unemployed		Unemployed males		Unemployed females	
	All	For-profit	All	For-profit	All	For-profit
$Z = 1$, 25% area	0.023	0.043*	0.008	0.039	0.032	0.049*
	(0.015)	(0.025)	(0.023)	(0.042)	(0.020)	(0.029)
$Z = 1$, 50% area	0.010	0.020	0.011	0.069	0.011	-0.006
	(0.015)	(0.025)	(0.026)	(0.052)	(0.019)	(0.025)
$Z = 1$, 75% area	0.012	0.033*	0.003	0.009	0.016	0.050*
	(0.012)	(0.017)	(0.018)	(0.031)	(0.016)	(0.027)
$Z = 1$, 100% area	0.028**	0.074***	0.022	0.047	0.033*	0.095***
	(0.012)	(0.022)	(0.015)	(0.030)	(0.017)	(0.028)
$Z = 0$, 25% area	-0.021	-0.007	-0.048**	-0.085**	-0.005	0.040
	(0.013)	(0.022)	(0.022)	(0.039)	(0.016)	(0.026)
$Z = 0$, 50% area	-0.004	-0.005	-0.022	-0.017	0.010	0.006
	(0.015)	(0.023)	(0.022)	(0.050)	(0.021)	(0.027)
$Z = 0$, 75% area	0.016	0.032	-0.063**	-0.094**	0.046	0.089**
	(0.024)	(0.033)	(0.031)	(0.038)	(0.029)	(0.044)