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Mathieu Bunel
Élisabeth Tovar



UMR 7235

Université de Paris Ouest Nanterre La Défense
(bâtiment G)
200, Avenue de la République
92001 NANTERRE CEDEX

Tél et Fax : 33.(0)1.40.97.59.07
Email : nasam.zaroualete@u-paris10.fr

université
Paris Ovest

Nanterre La Défense

Spatial Mismatch through Local Public Employment Agencies? Answers from a French Quasi- Experiment¹

Mathieu Bunel (corresponding author)

Université de Bourgogne, LEDi (UMR CNRS 6307) and TEPP (FR-3126)
mathieu.bunel@u-bourgogne.fr

Elisabeth Tovar

Université Paris Ouest, EconomiX (UMR CNRS 7235) and TEPP (FR-3126)
etovar@u-paris10.fr

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Abstract

Using the unanticipated creation of a new agency in the French region of Lyon as a quasi-natural experiment, we question whether distance to local public employment agencies (LPEAs) is a new channel for spatial mismatch. Contrary to past evidence based on aggregated data and consistent with the spatial mismatch literature, we find no evidence of a worker/agency spatial mismatch, which supports a resizing of the French LPEA network. However, echoing the literature on the institutional determinants of the local public employment agencies' efficiency, we do find detrimental institutional transitory effects.

Mots-clef: spatial mismatch, chômage, service public de l'emploi, expérience quasi naturelle

Résumé

Dans cet article, nous nous interrogeons sur l'effet de la distance aux agences de Pôle Emploi sur la probabilité de sortir du chômage. Pour ce faire, nous utilisons le cadre d'une quasi-expérience naturelle issue de la création d'une nouvelle agence Pôle Emploi à Belleville (Rhônes-Alpes) et nous croisons plusieurs bases de données exhaustives géolocalisées sur les demandeurs d'emploi et les agences Pôle Emploi. Contrairement à des résultats précédents obtenus sur données agrégées et conformément à la littérature théorique sur le spatial mismatch, nous trouvons que la distance à Pôle Emploi n'a pas d'effet sur la probabilité de sortir du chômage, ce qui plaide pour le redimensionnement du réseau des agences Pôle Emploi. Cependant, en écho à la littérature sur les déterminants institutionnels de l'efficacité des agences de Pôle Emploi, nous mettons également en évidence des effets transitoires délétères associés à la création d'une nouvelle agence.

Keywords: spatial mismatch, unemployment, public employment service, quasi-experiment

JEL codes: C218, J58, R53

1 Introduction

In many countries, the unemployment rates that soared after the 2008 financial crisis are still unprecedentedly high: 10.9% in the Eurozone, 22.2% in Spain, 9.5% in Ireland, 10.4% in France, 12.0% in Italy, and 9.7% in Finland (Eurostat data for July, 2015). In France, in particular, between January 2009 and January 2015, the number of jobseekers grew from 3.9 to 6.2 million (i.e., a 58% increase), while the number of completely unemployed jobseekers increased by 52%. At the same time, the average unemployment spell jumped from 390 to 542 days and the proportion of long-term jobseekers increased from 30.3 to 43.3% (Cour des Comptes, 2015).

In parallel, an extensive literature shows the mostly positive effects of the active labour market public policies implemented since the 1990s in OECD countries².

In this context, the role of local public employment agencies (LPEAs) in job matching efficiency has received increased attention in recent empirical literature.

First, some papers question caseworkers' marginal efficiency: using Dutch data, Koning (2009) finds that each additional marginal caseworker significantly increases the unemployment outflow rates for short-term jobseekers, reduces the inflow rate into social assistance protocols and increases the number of registered vacancies by agency. Although these effects are modest in absolute terms, he concludes that raising the number of caseworkers is cost-effective and that extra costs are compensated by the resulting reduction in assistance benefits expenses. Using Swedish data, Lagerstöm (2011) also shows that, when controlling for jobseekers' characteristics, caseworkers have a significant role in jobseekers' employment rates and future earnings.

Second, other papers focus on understanding the causes of the heterogeneous efficiency of the intermediation service provided by LPEAs (Rosholm, 2014). In this respect, two main dimensions are investigated: 1) institutional effects and 2) geographical spatial mismatch effects.

Institutional effects, such as heterogeneous caseload congestion between agencies (Hainmueller *et al.*, 2011), caseworker strategies (Behncke *et al.*, 2010a; Lagerstöm, 2011; Bech, 2015) and social proximity with her clients (Behncke *et al.*, 2010b), managerial governance of agencies (Hill, 2006) or residual effects resulting from a combination of these factors (Suárez Cano *et al.* 2015), have a significant influence on jobseekers' employment prospects. Launoy and Wälde (2015) show that organizing the work of a LPEA in a more

² Active labour market policies focus on affecting the behaviour of jobseekers to improve their job search efficiency and/or employability. Additionally, they involve a "mutual obligations" principle, in which jobseeker benefits are keyed to their compliance with the active programs, with possible temporary benefit suspensions and/or exclusions (OCDE, 2007). This paper is not focused on the evaluation of active labour market policies. For the latest literature reviews on these issues, see for example Parent *et al.* 2013; Fontaine and Malherbet, 2013; or Biewen *et al.*, 2014.

efficient way has a much better result for unemployment than creating pecuniary incentives through unemployment assistance benefits.

In parallel, a growing number of papers question the effects on unemployment of the geographical distance between jobseekers and LPEAs and show that the spatial distribution of local public good providers (and, in particular, LPEAs) does not match the distribution of these public goods recipients (Allard and Danziger, 2003; Joassart-Marcelli and Wolch, 2003; Bielefeld and Murdoch, 2004; Joassart-Marcelli and Giordano, 2006; Allard, 2009; Suárez Cano *et al.* 2012a, 2012b, 2015, Wathen and Allard, 2014).

This question of the effect of accessibility to LPEAs on unemployment is relevant in two regards.

First, from a public policy perspective, the link between distance to LPEAs and unemployment tends to support the preservation of a dense spatial network of LPEAs. In a context of scarce public spending, the cost of this network has recently been questioned. In the French context, the annual rent cost of maintaining the network of 900³ public employment agencies now exceeds 250 million euros (Cour des Comptes, 2015). Maintaining a dense local network is also a source of deleterious organizational effects, hampering, for example, the specialization of caseworkers. This is particularly the case in France, where 25.3% of the agencies have 15 or fewer caseworkers and 71.0% have 25 or fewer caseworkers (Le Monde, 2013). In public policy terms, examining whether distance to LPEAs affects jobseekers' employment prospects is relevant because it conditions the choice between two alternatives, equalitarian versus Rawlsian policy orientations. In the equalitarian scenario, equal accessibility to the public placement service is guaranteed to all jobseekers by financing a dense network of LPEAs. In the Rawlsian option, spatial accessibility differentials to LPEAs are tolerated; however, compensating schemes are put in place for jobseekers with less access to the agencies' network (e.g., payment of transportation costs, extra monitoring through Internet meetings).

Second, from a theoretical perspective, finding an effect of jobseeker/agency distance on unemployment suggests a new type of suboptimal friction in the matching process and creates a new source of Spatial Mismatch (Kain, 1968; Gobillon *et al.*, 2007).

In this paper, we rely on exhaustive French administrative geo-located data on both jobseekers' and LPEAs' location and characteristics to examine this issue. Measuring the effect of distance from LPEAs on unemployment has methodological pitfalls due to the potential endogeneity of the distance variable for two reasons. First, the agencies are not randomly distributed in space. Second, in most datasets, the true distance between agencies

³ The French local public agency network has 951 agencies for a population of 66.3 million and 2.9 million jobseekers; by comparison, the German network has only 621 local public employment agencies for a population of 81 million and 2.8 million jobseekers.

and jobseekers is affected by a measurement error bias: jobseekers are arbitrarily assigned to the centroid of their census tract. To address these methodological problems, we take advantage of a quasi-natural experiment with the installation of a new agency in the French region of Lyon.

The rest of the paper is organized as follows: in Section 2, we discuss the literature. In Section 3, we present the administrative datasets, the natural quasi-experiment and the econometric strategy. In Section 4, we present the results and discuss the findings. We conclude on public policy issues and further research in Section 5.

2 The Spatial Dimension of Public Intermediation in the Labour Market

2.1 Converging Empirical Evidence

Many recent papers place an emphasis on the spatial dimension of public intermediation in the labour market as an important factor in the efficiency of the job/worker matching process.

This concern is typically found in recent papers that focus on the evaluation of active labour market policies, where geographical differences are used to introduce variability in the labour market policy frameworks (Frölich and Lechner, 2010; Altavilla and Caroleo, 2013 and Ferracci *et al.*, 2014).

Other papers directly question the potentially detrimental effects of the geographical distance between LPEAs and their recipients.

These papers echo the twin literatures on the spatial distribution of local public goods produced by non-profit organizations, in which converging papers unearth spatial discrepancies between the spatial distribution of the non-profit agencies and the distribution of their clients. Many papers show that when relative needs are considered, the density of non-profit agencies is lower in poorer neighbourhoods than in more affluent communities. See for example, Allard and Danziger (2003) for the Detroit metropolitan area; Joassart-Marcelli and Wolch (2003) for Southern California; Bielefeld and Murdoch (2004) for the metropolitan areas of Boston, Dallas/Fort Worth, Indianapolis, Memphis, Minneapolis/Saint Paul, Orlando, Pittsburgh, Portland (Oregon), and San Diego; Allard (2009) for Chicago, Los Angeles and Washington DC and Wathen and Allard (2014) for a comparison between the United States and Russia.

For LPEAs, Joassart-Marcelli and Giordano (2006) find a significant negative link between accessibility to LPEAs and unemployment. At the census tract level, they show accessibility differentials by race/ethnicity, age, and location. They also find that access to Californian

Table B. Means of the covariates after matching for the three control groups

	T=1 and t=1	T=1 and t=0			T=0 and t=0			T=0 and t=1		
	mean	mean	Difference	P value	mean	Difference	P value	mean	Difference	P value
[25-35[years old	0.284	0.290	-0,006	0.639	0.292	-0,008	0.518	0.289	-0,005	0.699
[35-45[years old	0.255	0.268	-0,013	0.313	0.264	-0,009	0.468	0.237	0,018	0.140
[45-55[years old	0.235	0.242	-0,007	0.537	0.238	-0,004	0.749	0.240	-0,006	0.627
Men	0.439	0.430	0,009	0.530	0.423	0,016	0.267	0.469	-0,030	0.035
Education : Superior	0.178	0.181	-0,003	0.799	0.188	-0,010	0.383	0.196	-0,018	0.110
> [25-35[years old	0.077	0.075	0,002	0.785	0.082	-0,005	0.524	0.081	-0,004	0.640
> [35-45[years old	0.047	0.050	-0,003	0.578	0.048	-0,002	0.781	0.049	-0,002	0.734
> [45-55[years old	0.020	0.021	0,000	0.944	0.022	-0,002	0.600	0.025	-0,005	0.277
Education : A-level	0.209	0.208	0,002	0.895	0.202	0,008	0.513	0.204	0,005	0.648
A-level x [25-35[years old	0.072	0.069	0,002	0.767	0.073	-0,001	0.891	0.069	0,003	0.708
A-level x [35-45[years old	0.042	0.041	0,000	0.933	0.040	0,002	0.778	0.039	0,003	0.610
A-level x [45-55[years old	0.032	0.035	-0,003	0.520	0.030	0,001	0.775	0.031	0,001	0.890
Never Unemployment in previous 2 years	0.081	0.080	0,001	0.911	0.088	-0,007	0.391	0.079	0,002	0.845
Unemployment in the previous 2 years less than 6 months	0.074	0.074	-0,001	0.942	0.076	-0,002	0.767	0.084	-0,011	0.171
Inter in unemployment in December -January-February	0.253	0.258	-0,005	0.700	0.269	-0,016	0.208	0.269	-0,016	0.212
Inter in unemployment in March- April -May	0.276	0.278	-0,002	0.862	0.287	-0,011	0.382	0.271	0,005	0.702
Inter in unemployment in Jun- July -August	0.220	0.220	0,000	0.972	0.229	-0,009	0.469	0.228	-0,008	0.521
No experience in the researched job (Nexpe)	0.178	0.177	0,001	0.929	0.186	-0,007	0.495	0.190	-0,011	0.316
[25-35[*Nexpe	0.048	0.049	-0,001	0.834	0.049	-0,002	0.792	0.050	-0,003	0.667
[35-45[*Nexpe	0.034	0.036	-0,002	0.758	0.036	-0,002	0.754	0.031	0,003	0.570
[45-55[*Nexpe	0.025	0.022	0,003	0.511	0.026	-0,001	0.813	0.027	-0,002	0.670
N obs	2,460	1,229			15,174			29,038		

Source: FHS-Pôle Emploi, first spell per individual.

Table B presents means of matching propensity score of control groups treated versus non-treated and before versus after. Our results reveal a high levels of covariate balance between treatment and matched comparison groups. All standardized differences produced coefficients with absolute values less than 0.1 and the p-values are all over the 0.15 threshold.

Finally to test the sensitivity of our results to possible unobserved variables we use the usual Mantel-Haenszel procedures (Mantel and Haenszel, 1959; Becker and Caliendo, 2007). In fact, propensity score matching gives biased estimates if unobserved characteristics influence either the probability to be treated or the probability to be observed before the arrival of the new LPEA and the outcome (the probability to exit unemployment).

If one assume that the unobserved covariate is a dummy variable and α the influence of this variable on the participation decision. If $\alpha=0$ we have no selection bias. Conversely if $\alpha \neq 0$ we have either a positive unobserved selection or a negative one. $Q+$ is a test given that we overestimated the treatment effect and $Q-$ is the case where we have underestimated the treatment effect.

Note for $e^\alpha = 1$ the case with no unobserved bias the treatment effect are significant for the three control groups. When e^α increase similar individuals in terms of observable covariates could differ in their odds to be member of the treated group.

According to table C, even for a large value of e^α the treatment effect stay significant for the first group of control (T=1 and t=1 versus T=1 and t=0). For the second group (T=1 and t=1 versus T=0 and t=0) the treatment effect becomes insignificant when e^α reach 1.95. This threshold is 1.2 for the third group (T=1 and t=1 versus T=0 and t=1)

Table C. Mantel-Haenszel statistic indicating the significance of the treatment for different values.

e^{α}	T=1 and t=1 versus T=1 and t=0				T=1 and t=1 versus T=0 and t=0				T=1 and t=1 versus T=0 and t=1			
	Q+	Q-	p+	p-	Q+	Q-	p+	p-	Q+	Q-	p+	p-
1	13,02	13,02	0,00	0,00	16,29	16,29	0,00	0,00	5,458	5,458	0,000	0,000
1,05	13,72	12,32	0,00	0,00	17,43	15,16	0,00	0,00	6,605	4,314	0,000	0,000
1,1	14,39	11,66	0,00	0,00	18,52	14,09	0,00	0,00	7,701	3,225	0,000	0,001
1,15	15,03	11,03	0,00	0,00	19,57	13,07	0,00	0,00	8,751	2,185	0,000	0,014
1,2	15,65	10,42	0,00	0,00	20,58	12,09	0,00	0,00	9,759	1,191	0,000	0,117
1,25	16,25	9,85	0,00	0,00	21,55	11,16	0,00	0,00	10,730	0,238	0,000	0,406
1,3	16,82	9,29	0,00	0,00	22,49	10,27	0,00	0,00	11,665	0,635	0,000	0,263
1,35	17,37	8,76	0,00	0,00	23,40	9,41	0,00	0,00	12,569	1,517	0,000	0,065
1,4	17,91	8,25	0,00	0,00	24,28	8,58	0,00	0,00	13,442	2,366	0,000	0,009
1,45	18,43	7,76	0,00	0,00	25,14	7,79	0,00	0,00	14,289	3,187	0,000	0,001
1,5	18,93	7,29	0,00	0,00	25,97	7,03	0,00	0,00	15,109	3,980	0,000	0,000
1,55	19,42	6,83	0,00	0,00	26,78	6,29	0,00	0,00	15,906	4,748	0,000	0,000
1,6	19,90	6,38	0,00	0,00	27,56	5,57	0,00	0,00	16,681	5,493	0,000	0,000
1,65	20,36	5,96	0,00	0,00	28,33	4,88	0,00	0,00	17,435	6,216	0,000	0,000
1,7	20,81	5,54	0,00	0,00	29,08	4,21	0,00	0,00	18,170	6,918	0,000	0,000
1,75	21,25	5,14	0,00	0,00	29,81	3,56	0,00	0,00	18,886	7,602	0,000	0,000
1,8	21,67	4,75	0,00	0,00	30,52	2,93	0,00	0,00	19,585	8,267	0,000	0,000
1,85	22,09	4,36	0,00	0,00	31,22	2,31	0,00	0,01	20,267	8,915	0,000	0,000
1,9	22,50	3,99	0,00	0,00	31,91	1,72	0,00	0,04	20,934	9,547	0,000	0,000
1,95	22,90	3,63	0,00	0,00	32,58	1,13	0,00	0,13	21,587	10,164	0,000	0,000
2	23,29	3,28	0,00	0,00	33,23	0,57	0,00	0,29	22,226	10,767	0,000	0,000

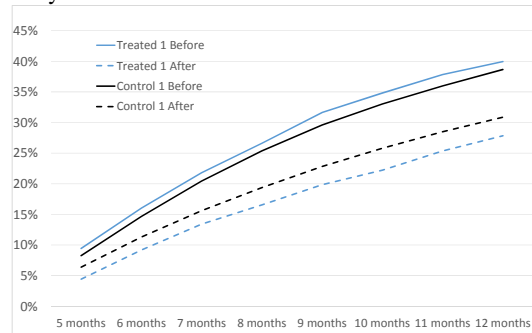
Source: FHS-Pôle Emploi, first spell per individual.

7.3 Gross exits from unemployment

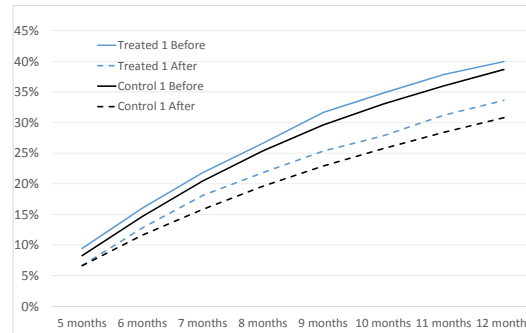
Figure B. % of workers who have not been unemployed in the 5 to 12 months after exiting unemployment (durable exits)

Part 1 – Control 1 versus Treated 1

All years

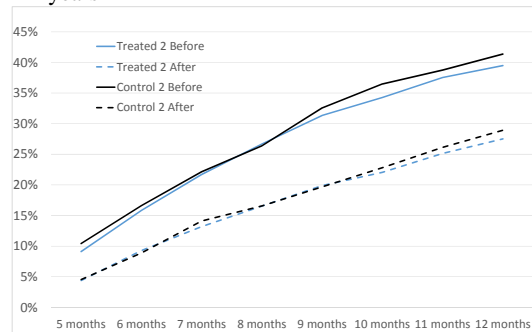


2010-2011

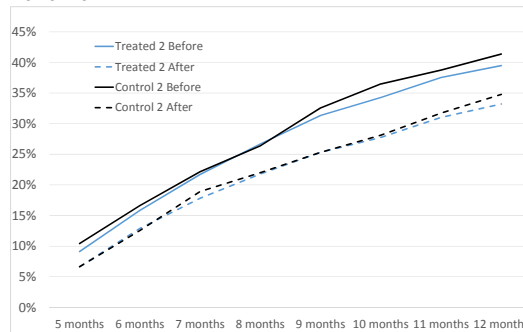


Part 2 – Control 2 versus Treated 2

All years



2010-2011

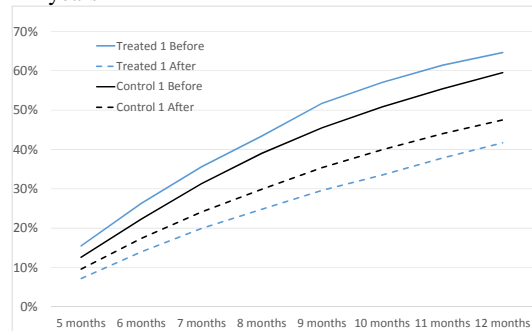


Source: FHS-Pôle Emploi, first spell per individual.

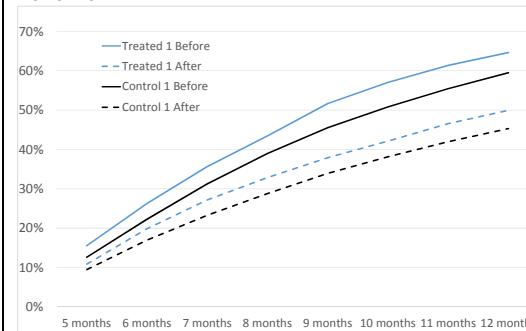
Figure C. % of workers who have exited unemployment after 5 to 12 months long unemployment spells (gross exits)

Part 1 – Control 1 versus Treated 1

All years

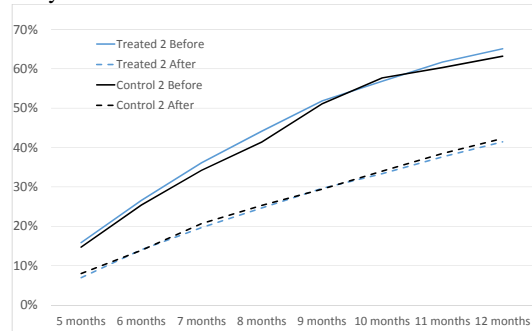


2010-2011

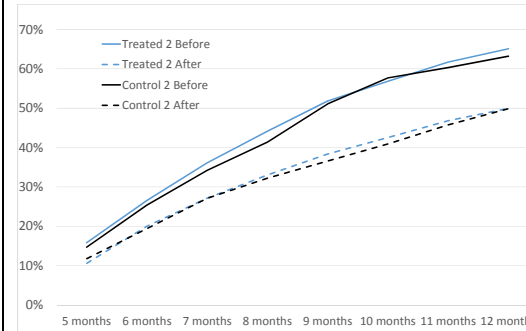


Part 2 – Control 2 versus Treated 2

All years



2010-2011



Source: FHS-Pôle Emploi, first spell per individual.