The Role of Caseworkers in the Labor Market Integration of Unemployed Youths: Evidence from France

Jérémy Hervelin
THEMA, CY Université

Pierre Villedieu
LIEPP, Sciences Po

EEA-ESEM Congress

August 28, 2023

Some labor market frictions

- ▶ Few information on school-to-work transitions

- ▶ Direct transitions after graduation
  - ▶ Private job search, use of personal network
  - ▶ Retention after apprenticeships/internships

- ▶ But high unemployment rate among low-skilled youths
  - ▶ Difficulties to find job offers or getting job interviews
  - ▶ Present bias and lack of motivation
  - ▶ Lack of skills to compete for jobs

- ▶ Rely on public agencies (job centers) to receive job search assistance
  - ▶ Meetings and/or workshops to gather information/skills
  - ▶ Direction and matching assisted by caseworkers

Research question

- What is the impact of caseworkers on young people's labor market situation?

Related literature

1. Caseworker effects
   - Papers: Glover (2020), Schiprowski (2020), Cederlof et al. (2021), Rasmussen (2021), Dromundo and Haramboure (2022)
   - Main message: There are variations among caseworker effectiveness in helping job seekers find a (permanent) job

2. STW transitions and ALMPs
   - Papers: Centeno et al. (2009), Crépon et al. (2013), Behaghel et al. (2014), Manoli et al. (2018), Arni et al. (2020)
   - Main message: Job search assistance programs are more effective when there are numerous meetings with active caseworkers

$\rightarrow$ <u>Our contributions</u>: 1st study on a particularly vulnerable population (young NEET) + Analysis directly on both employment and training situations (extensive & intensive margins) + Look at job search assistance efficiency directly at the caseworker level with a focus on their practices (better caseworkers have distinct strategies than others and they differ across employment and training situations)

Background

- Decentralized network of agencies that provide assistance to young people out of school and aged between 16 and 25 years-old

- Several type of assistance
  - Job-related assistance: meetings with caseworkers, collective workshops, information sessions, enrollment in ALMPs...
  - Social assistance: social security, driving license, housing benefits...

- Some figures:
  - 439 centers and $\sim$ 7,000 agencies [see the map]
  - Budget: $\sim$ 700 M€/year (52% financed by the State)
  - > 1 M young people in individual meetings each year
  - > 400 K new young people who register each year [see the graph]

- Assistance is provided under the supervision of a "main caseworker"

Data
Administrative sources

1. Information system on the youth centers (IMILO)
   - Socio-demographic information on youths: *names, demographic information, education attainment, address, housing condition, ...*
   - Activity reports: *individual meetings, collective workshops, information sessions, enrollment in programs, ...*
   - Information on caseworkers: *names, date of birth, gender, activity*
   - Availability: 2015 Q1 - 2021 Q3

2. Information system on employment and training situations (FORCE)
   - Situations in the labor market: *labor contracts with dates and occupation, entry and exit of training with hours and types, ...*
   - Availability: 2017 Q1 - 2020 Q4

- Restrictions and conditions on a set of criteria to get an appropriate sample of analysis [see the restrictions]

Data
Descriptive statistics

- $\sim$ 75% of the youths are still in touch with their caseworker/agency one year after the first meeting against $\sim$ 25% after two years

- Youths request mostly about employment and training prospects

- Up to 1/3 of the youths don't participate to any program

- Large variations in assistance provided by caseworkers

- Caseworkers differ in the way they conduct their first meeting according to their own characteristics and styles, but not according to youths' characteristics (Adjeoda, 2021)
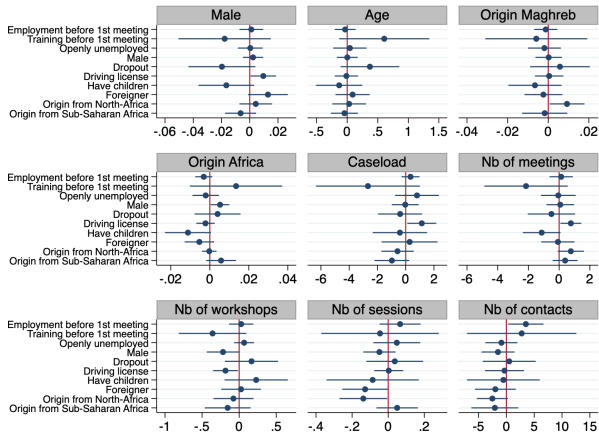
Empirical strategy

Assignment mechanism

▶ Caseworkers plan the days where they will run first meetings one to two months prior based on their caseload and personal agenda

▶ Between 2016 and Covid start, youths could came to agencies for a first meeting without an appointment

▶ Caseworkers assignment is expected to be exogenous from youths characteristics only within a given agency $\times$ time cell
  ▶ Within agencies: most caseworkers are assigned to one agency only over the whole period (at least in terms of first meetings)
  ▶ Within time cells: the distribution of caseworkers' assignment is not homogeneous across the period

▶ Need to account for agency $\times$ time fixed effect ($\gamma_{a \times t}$)

Empirical strategy

Quasi-exogenous assignment of caseworkers

Figure 1: Correlation between youths' and caseworkers' characteristics

Note: Each square shows the estimates from an OLS regression of a specific caseworker characteristic on all its youths' characteristics. Paris sample.

Empirical strategy
Methodology

- ▶ The identifying assumption is that youths assigned to caseworkers, conditional on $\gamma_{a \times t}$, have similar potential labor market outcomes

- ▶ We follow the value-added estimation literature, in particular Chetty et al. (2014a, 2014b) [see the model]

- ▶ Importantly, we estimate the impact of caseworker j using *within-caseworker* variation to account for the potential sorting of youths to caseworkers based on VA, though exogeneity is expected

- ▶ Compute VA on two separate dimensions [see the distributions]
  - ▶ The number of days of employment during the following two years
  - ▶ The number of days of training during the following two years

Results

Impact on employment

$$Y_i = \alpha + \beta\hat{\mu}_{j,t} + \delta X_i + \gamma_{a \times t} + \epsilon_i$$

Table 1: Caseworkers impact on youth employment

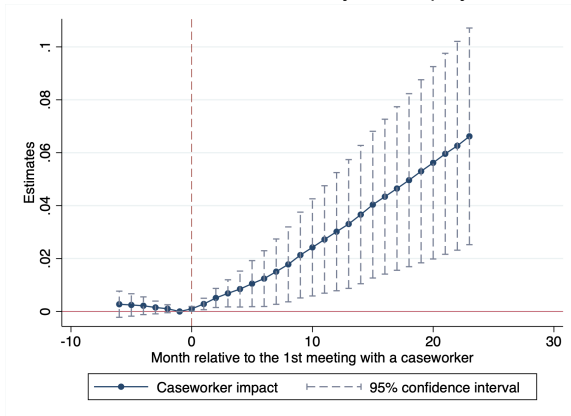| Employment (std)	Before 1st meeting		After 1st meeting			
	(1)	(2)	(3)	(4)	(5)	(6)
Caseworker VA (std)	0.0156	0.0110	0.0529***	0.0553***	0.0497***	0.0530***
	(0.0107)	(0.0122)	(0.0128)	(0.0150)	(0.0124)	(0.0145)
Employment before 1st meeting (std)					0.2030***	0.2036***
					(0.0058)	(0.0060)
Outcome mean	19.1	19.1	210.3	210.3	210.3	210.3
Outcome standard deviation	41.4	41.4	225.9	225.9	225.9	225.9
Individual characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Agency x Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
95% Winsorization of VA	No	Yes	No	Yes	No	Yes
R-squared	0.0927	0.0926	0.0859	0.0852	0.1272	0.1268
Observations	47,297	44,808	47,297	44,808	47,297	44,808

Note: Estimates are obtained with OLS regressions. Standard errors are below coefficients in parentheses and clustered at the caseworker. Caseworker VA is computed on the cumulative number of days of employment 24 months after the first meeting. * significant at 90%. ** significant at 95%. *** significant at 99%. Paris sample.

▶ Mean effect in line with the literature where $0.03 \leqslant \hat{\beta} \leqslant 0.08$

▶ This effect corresponds to a relative effect of $\sim 6\%$

Results

Impact on employment

Figure 2: Effect on the number of days of employment over time

Note: Month 0 corresponds to the month of the first meeting. Paris sample.

Results

Impact on training

Table 2: Caseworkers impact on youth training

| Training (std)	Before 1st meeting		After 1st meeting			
	(1)	(2)	(3)	(4)	(5)	(6)
Caseworker VA (std)	0.0109	0.0057	0.0386***	0.0330***	0.0383***	0.0329***
	(0.0115)	(0.0130)	(0.0119)	(0.0113)	(0.0119)	(0.0114)
Training before 1st meeting (std)					0.0221***	0.0220***
					(0.0042)	(0.0043)
Outcome mean	1.0	1.0	30.8	30.8	30.8	30.8
Outcome standard deviation	10.2	10.2	79.9	79.9	79.9	79.9
Individual characteristics	Yes	Yes	Yes	Yes	Yes	Yes
Agency x Quarter FE	Yes	Yes	Yes	Yes	Yes	Yes
95% Winsorization of VA	No	Yes	No	Yes	No	Yes
R-squared	0.0158	0.0163	0.0253	0.0241	0.0258	0.0247
Observations	47,297	44,954	47,297	44,954	47,297	44,954

Note: Estimates are obtained with OLS regressions. Standard errors are below coefficients in parentheses and clustered at the caseworker level. Caseworker VA is computed on the cumulative number of days of training 24 months after the first meeting. * significant at 90%. ** significant at 95%. *** significant at 99%. Paris sample.

▶ This effect corresponds to a relative effect of ∼ 8.5%

Results

Impact on training

Figure 3: Effect on the number of days of training over time
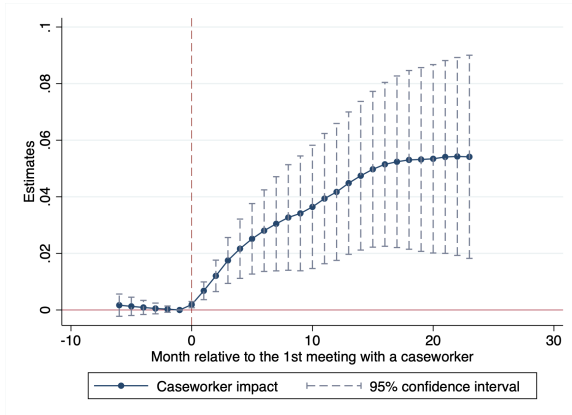
Note: Month 0 corresponds to the month of the first meeting. Paris sample.

Results

Robustness

- ▶ Impact are significant both at the intensive and extensive margins

- ▶ Some heterogeneity appears: Assignment to a higher employment VA caseworker is more beneficial (see the graphs)
    - ▶ For male; younger; middle-educated
    - ▶ In areas where the unemployment rate is high

- ▶ Assignment to a higher training VA caseworker is more beneficial
    - ▶ For female; older; low-educated
    - ▶ In areas where the unemployment rate is not too low, nor too high

- ▶ Results are robust to several tests:
    - ▶ Alternative placebo tests
    - ▶ Alternative definition of value-added
    - ▶ Alternative outcomes that are stricter
    - ▶ Alternative sample including only Paris where exogeneity is certified

Mechanisms

▶ Similar young people who are assigned to different caseworkers end up with different labor market trajectories
  ▶ Is it because of the personality of the caseworkers?
  ▶ Or is it because of their practices? Or both?

▶ First, caseworkers with high-value added in employment are different from those with high-value added in training [see the graph]

▶ We do not have the necessary data to answer the first question → The literature is mitigated and results tend to indicate that the effects are mostly driven by practices rather than personality

▶ First elements related to caseworkers practices
  ▶ Difficult to analyze them properly because of dynamic effects
  ▶ At the moment: simple OLS correlations [see table 1] [see table 2]

Mechanisms
Caseworkers' practices

- ▶ Regarding the employment VA distribution:
    - ▶ Higher VA caseworkers do more job propositions but the magnitude is very small: providing 10 additional job propositions would increase the probability to go from the 1st to the 3rd tercile by 1 pp
    - ▶ They mostly assist youths under a specific and intensive job placement program (AIJ): assisting 10 additional youths under this program would increase the probability to go from the 1st to the 3rd tercile by 20 pp
    - ▶ They also do less administrative tasks

- ▶ Regarding the training VA distribution:
    - ▶ Higher VA caseworkers do more training propositions: providing 10 additional training propositions would increase the probability to go from the 1st to the 3rd tercile by 10 pp
    - ▶ They also animate more collective workshops and less project propositions

Conclusion
Take-Away Messages

1. **Young people** assisted by a caseworker whose VA is 1 standard deviation above the average (top 20% vs top 50%) have **better job opportunities**, both at the intensive margin ($+6\%$) and the extensive margin ($+3\%$), two years after their initial meeting.

2. **Young people** assisted by a caseworker whose VA is 1 standard deviation above the average (top 20% vs top 50%) have **better training opportunities**, both at the intensive margin ($+8.5\%$) and the extensive margin ($+4\%$), two years after their initial meeting.

3. **Caseworkers** who have a higher value added in terms of employment and training **differ in practices**.

Conclusion
Next Steps

▶ Apply ML algorithms to detect deeper heterogeneous effects and dive into the mechanisms to better define and understand the practices related to high-value added caseworkers

▶ Look at potential externalities $(+/-)$ across caseworkers

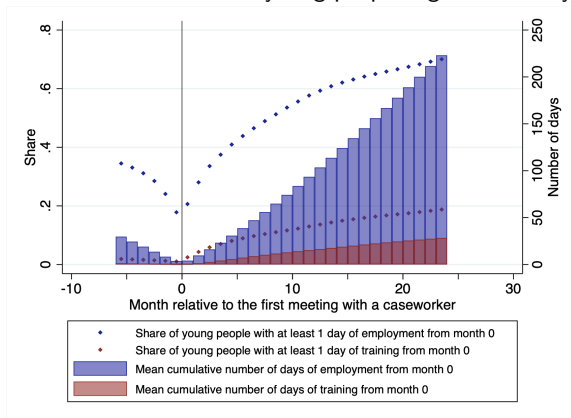▶ Balance the benefits of higher VA caseworkers vs their costs

<div align="center">

Thank you for your attention!
Please, feel free to email me at jeremy.hervelin@me.com

</div>

Appendix

A difficult labor market integration

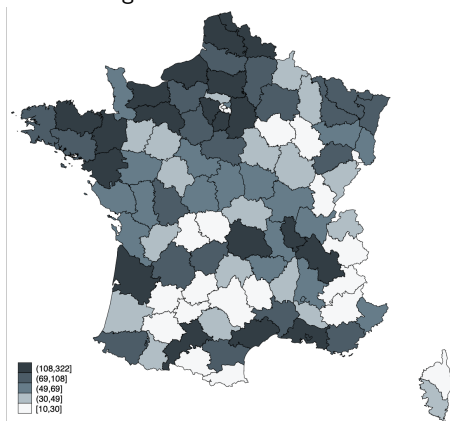Figure 4: Labor market situation of young people registered in a youth agency

Note: Month 0 is the month of the first meeting with a caseworker.
Source: IMILO-FORCE (2021), authors' calculations.

Appendix
Localization of agencies

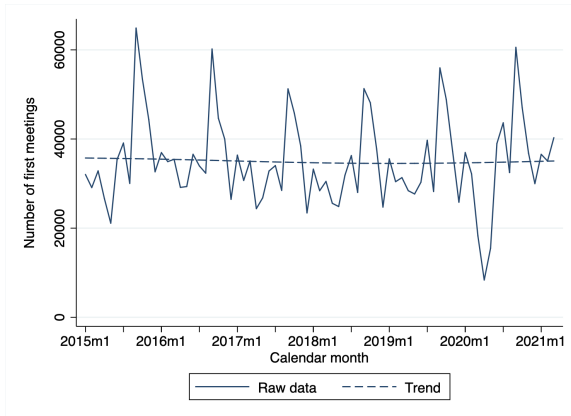Figure 5: Number of agencies in each mainland French department

Note: Number of agencies in each mainland French department.
Source: IMILO (2021), authors' calculations.

Appendix

Number of first meetings

Figure 6: Evolution of the number of first meetings from 2015 to 2021

Note: Number of monthly first meetings in "missions locales" agencies.
Source: IMILO (2021), authors' calculations.

Appendix

Sample analysis

Table 3: Construction of the samples and related number of observations

Filters	Selected (1)	Paris (2)
0. Initial number of observations	426,372	17,832
1. No missing value in characteristics	374,065	17,681
2. Only regular first meetings	221,068	12,131
3. Econometric feasibility	59,745	6,862
Min date of the first meeting $= 01/01/2017$		
Max date of the first meeting $= 12/31/2018$		
Min number of youths by cell $= 4$		
Min number of caseworkers by cell $= 2$		
Min number of youth per caseworker by cell $= 2$		
Min number of years by caseworker $= 2$		
Min number of quarters by caseworker $= 8$		
Min number of quarters per year by caseworker $= 4$		
Min number of months by caseworker $= 8$		
Min number of months per year by caseworker $= 6$		
Min number of caseworkers by agency overall $= 3$		

Note: This table reports the number of observations in our samples after each step of the construction for the econometric analysis and some statistics to check the consistency with the filters. The extended sample includes Paris center.

▶ Back

Appendix

Sample verification

Table 4: Related number of observations given sample restrictions

Filters	Selected	Paris
	(1)	(2)
Over 01/2017-12/2018		
Number of centers	53	1
Number of agencies	95	6
Number of caseworkers	436	36
Min number of years per caseworker	2	2
Min number of quarters per caseworker	8	8
Min number of months per caseworker	13	15
Min number of months per year per caseworker	6	7
Min number of quarters per year per caseworker	4	4
Min number of 1st meetings per caseworker	38	64
Min size of caseload per caseworker	45	65
Min number of caseworkers per agency	3	4
Per cell (Agency $\times$ Month)		
Min number of caseworkers per cell (Agency $\times$ Month)	2	8
Min number of youths per caseworker per cell (Agency $\times$ Month)	2	2

Note: This table reports the number of observations in our samples after each step of the construction for the econometric analysis and some statistics to check the consistency with the filters. The extended sample includes Paris center.

Appendix
Statistical model

▶ Agencies assigned each youth i to a caseworker j

▶ Denote μ_{jt} the caseworker's value-added in period t (i.e. caseworker's j impact on employment or training)

▶ VA measures are normalized such that the average caseworker has value 0 and the effect of a one-unit increase is 1

▶ Youth i's outcome in period $t + s$, $A^*_{i,t+s}$, is given by

$$A^*_{i,t+s} = \beta X_i + \nu_{i,t+s}$$

▶ where

$$\nu_{i,t+s} = \underbrace{\mu_{jt}}_{\text{caseworker VA}} + \underbrace{\epsilon_{i,t+s}}_{\text{idiosyncratic shock}}$$
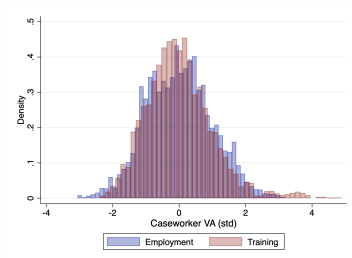
Appendix
Value-added estimation

▶ We construct the VA estimator in three steps

1. We regress outcome $A_{i,t+s}$ on X_i and compute outcome residuals adjusting for observables

2. We estimate the best linear predictor of mean outcome residuals in period t based on mean outcome residuals in other periods, using a technique analogous to an OLS regression

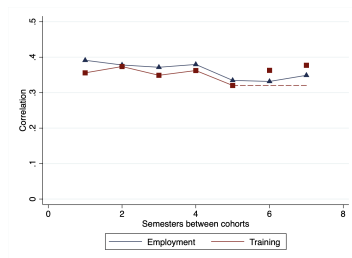3. We use the coefficients of the best linear predictor to predict each caseworker's VA in period t

Appendix

Distribution of value-added

(a) Distribution of VA estimates   (b) Auto-correlation vector

Figure 7: Distribution of VA estimates and auto-correlation vector
Note: The VA estimates are obtained with equation (**??**).

▸ Back

Appendix

Impact on employment

Table 5: Caseworkers impact on other youth employment outcomes

Outcome	Mean	Sd	Caseworker VA	ATT	Significance
	(1)	(2)	(3)	(4)	(5)
Working at least 1 day	.6646	.4721	.1429	+10.2%	***
Working at least 1 day per month	.2825	.4502	.0916	+14.6%	**
Number of days of employment per month	7.33	12.61	.0902	+15.5%	**
Cumulative number of days of employment	202.08	226.11	.1253	+14.0%	***
Cumulative number of days of employment in stable job	151.35	213.29	.1002	+14.1%	**
Cumulative number of days of employment in permanent job	93.98	179.23	.0892	+17.0%	**

Note: Estimates are obtained with OLS regressions including individual characteristics, agency × quarter fixed effects, employment situation before the first meeting, and caseworkers winsorized at the 95% level. Standard errors are below coefficients in parentheses and clustered at the caseworker. Permanent job include CDI contract. Stable job include CDI contract and CDD that lasts more than six months. * significant at 90%. ** significant at 95%. *** significant at 99%. Paris sample.

Appendix
Impact on training

Table 6: **Caseworkers impact on other youth training outcomes**

Outcome	Mean	Sd	Caseworker VA	ATT	Significance
	(1)	(2)	(3)	(4)	(5)
Training at least 1 day	.1814	.3854	.0906	+19.3%	***
Training at least 1 day per month	.0414	.1992	.0639	+30.7%	***
Number of days of training per month	1.07	5.48	.0633	+32.4%	***
Cumulative number of days of training	31.76	85.04	.0951	+25.5%	***
Cumulative number of days of training in long-duration training	17.41	69.29	.0786	+31.3%	**
Cumulative number of hours of training	13.57	45.90	.0788	+26.7%	**
Cumulative number of hours of training in long-duration training	8.54	41.24	.0563	+27.2%	*

Note: Estimates are obtained with OLS regressions including individual characteristics, agency × quarter fixed effects, training situation before the first meeting, and caseworkers winsorized at the 95% level. Standard errors are below coefficients in parentheses and clustered at the caseworker. Long-duration training are training that lasts more than six months. * significant at 90%. ** significant at 95%. *** significant at 99%. Paris sample.
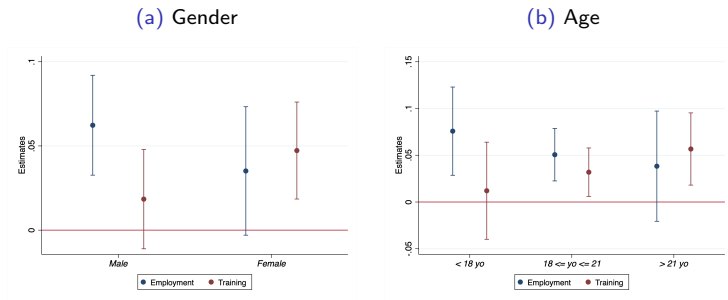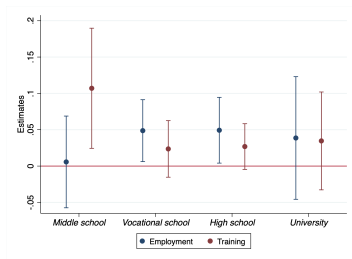
Appendix

Heterogeneity

(a) Gender

(b) Age

Figure 8: Heterogeneous effects of caseworker on employment and training

Back

Appendix
Heterogeneity

(a) Education

(b) Unemployment rate

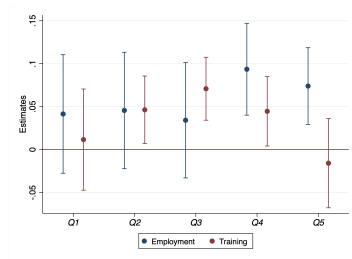

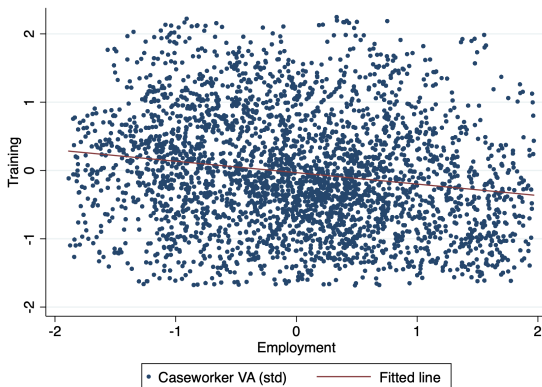Figure 9: Heterogeneous effects of caseworker on employment and training

Appendix
Value-added correlation

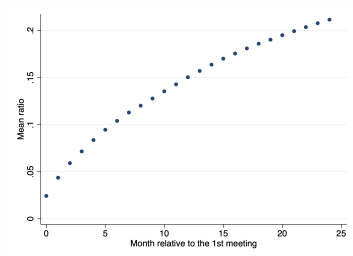Figure 10: Correlation between VA measures on employment and training

Note: Value added is measured on the cumulative number of days of employment 24 months after the first meeting (x-axis), and on the cumulative number of days of training 24 months after the first meeting (y-axis). Paris sample.
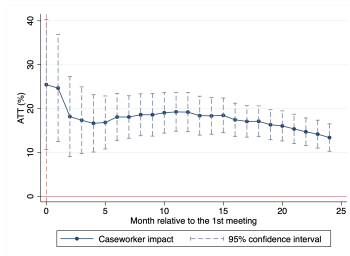
▸ Back

Appendix

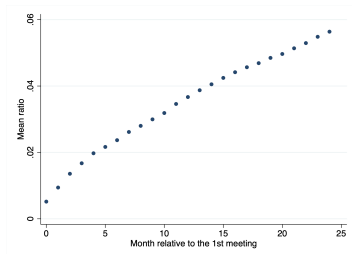Discrete treatment

(a) Outcome mean

(b) ATT

Figure 11: Effect of High vs Low VA caseworker on permanent employment
Note: The estimates are obtained from regressions equivalent to Column (6) in Table 1. Caseworker VA is computed on employment. The outcome is the ratio of the number of days of employment under permanent contract over the number ot days of employment under any contract.

▸ Back

Appendix

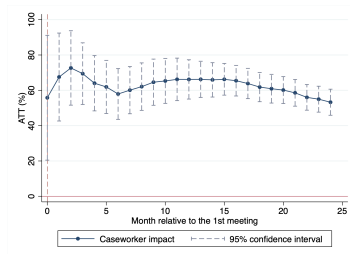Discrete treatment

(a) Outcome mean (b) ATT

Figure 12: Effect of High vs Low VA caseworker on long-duration training
Note: The estimates are obtained from regressions equivalent to Column (6)
in Table 2. Caseworker VA is computed on training. The outcome is the ratio
of the number of days of training under long-duration training over the number
of days of training under any duration.

▸ Back

Appendix

Caseworkers assistance

Table 7: Correlation of caseworkers VA with practices

High vs Low VA caseworker	Employment		Training	
	(1)	(2)	(3)	(4)
Nb of individual meetings	0.00123	0.00334	-0.000821	-0.000605
	(0.00299)	(0.00283)	(0.00268)	(0.00271)
Nb of collective workshops	0.0140	0.0111	0.0243***	0.0232**
	(0.0101)	(0.00962)	(0.00905)	(0.00896)
Nb of information sessions	-0.00589	-0.0370	-0.0175	-0.0216
	(0.0308)	(0.0230)	(0.0324)	(0.0329)
Nb of administrative tasks	-0.0110	-0.0166**	-0.00575	-0.0103
	(0.00811)	(0.00731)	(0.00803)	(0.00779)
Nb of digital contacts	0.00105	0.000419	0.000866	0.00134
	(0.00473)	(0.00453)	(0.00397)	(0.00381)
Nb of job propositions	0.00107***	0.000985***	0.000582	0.000667
	(0.000342)	(0.000344)	(0.000415)	(0.000420)
Nb of training propositions	-0.00266	-0.00294	0.0105***	0.0103***
	(0.00221)	(0.00224)	(0.00331)	(0.00342)
Nb of project propositions	-0.00236	-0.00221	-0.00290*	-0.00266*
	(0.00142)	(0.00144)	(0.00149)	(0.00147)
Nb of other propositions	-0.00183**	-0.00203**	-0.00142*	-0.00147*
	(0.000902)	(0.000925)	(0.000797)	(0.000823)
Observations	40,110	37,727	39,783	37,242
R-squared	0.111	0.138	0.118	0.141
Agency x Quarter FE	Yes	Yes	Yes	Yes
95% Winsorization of VA	No	Yes	No	Yes

Note: Estimates are obtained with OLS regressions. Standard errors are below coefficients in parentheses and clustered at the agency × quarter level. Caseworker VA is computed on the probability of employment 24 months after the first meeting. * significant at 90%. ** significant at 95%. *** significant at 99%. Paris sample.

Appendix

Program enrollment

Table 8: Correlation of caseworkers VA with placement in programs

High vs Low VA caseworker	Employment		Training	
	(1)	(2)	(3)	(4)
Program: Diagnosis	-0.00780	-0.00156	0.0206	0.00778
	(0.0212)	(0.0205)	(0.0208)	(0.0205)
Program: PACEA	-0.0169	0.00340	0.0985	0.132*
	(0.0609)	(0.0627)	(0.0837)	(0.0769)
Program: CEP	0.00154	-0.0197	-0.0934	-0.123
	(0.0585)	(0.0604)	(0.0849)	(0.0783)
Program: PPAE	0.0215	0.0220	-0.0130	-0.0161
	(0.0152)	(0.0159)	(0.0160)	(0.0167)
Program: GJ	-0.0121	-0.0165	-0.0117	-0.0108
	(0.0122)	(0.0124)	(0.0130)	(0.0134)
Program: AIJ	0.0287**	0.0324***	0.0108	0.0148
	(0.0116)	(0.0118)	(0.0131)	(0.0129)
Program: Other	-0.00986	-0.0104	0.0323*	0.0175
	(0.0103)	(0.0107)	(0.0187)	(0.0136)
Observations	40,110	37,727	39,783	37,242
R-squared	0.110	0.135	0.116	0.138
Agency × Quarter FE	Yes	Yes	Yes	Yes
95% Winsorization of VA	No	Yes	No	Yes

Note: Estimates are obtained with OLS regressions. Standard errors are below coefficients in parentheses and clustered at the agency × quarter level. Caseworker VA is computed on the probability of employment 24 months after the first meeting. * significant at 90%. ** significant at 95%. *** significant at 99%. Paris sample.

▸ Back