

Make IT Work: The Labor Market Effects of Information Technology Retraining in the Netherlands

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Make IT Work

- Active Labor Market Policy in the Netherlands
- IT retraining (6 months) + internship (6 months)
- Target group: higher educated workers
- **Main question:** is ALMP in the market sector for high educated workers more effective?
- Heckman, LaLonde and Smith (1999): ALMP is not effective because of low returns and low ability of participants with respect to private training
- Vooren et al. (2019): ALMP is not very effective

Selection procedure

1. Apply online and make test (a.k.a. TalentPitch)
2. Attend event (if ability score > 50%)
3. Internship offer (pledged by an employer)
4. Program
5. Back on labor market

Linear probability model for program take-up (step 4)

ability score	0.053*** (0.011)
problem analysis	0.032*** (0.013)
verbal communication	0.009 (0.015)
sensitivity	-0.01 (0.014)
persuasiveness	-0.006 (0.018)
teamworking	0.027* (0.015)
initiative	-0.024 (0.017)
age	-0.058*** (0.011)
female	-0.010 (0.023)
constant	0.186*** (0.013)
N	1352
R ²	0.063

Data and evaluation strategy

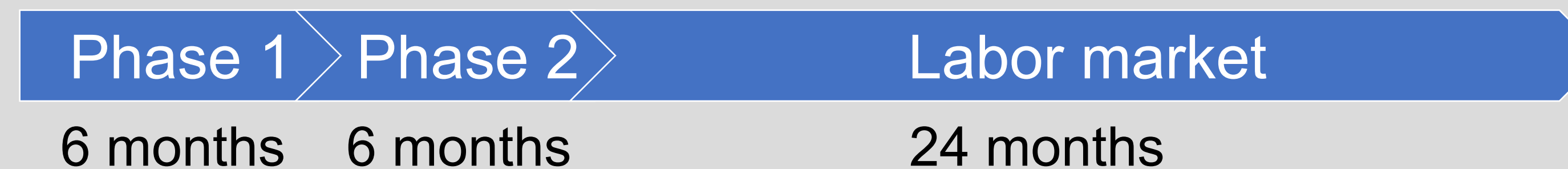
Data

- I. Application data from the Make IT Work program
Includes ability and personality scores that employers seem to select on (see Table 4)
- II. Outcome variables: Statistics Netherlands, monthly register data
 - i. Earnings per month
 - ii. Working days per month (fte)

Sample: 242 observations distributed over 14 quarterly cohorts, starting in September 2015

We observe individuals up to 36 months with respect to month of program start ($t \in 0,35$)

Evaluation timeline:

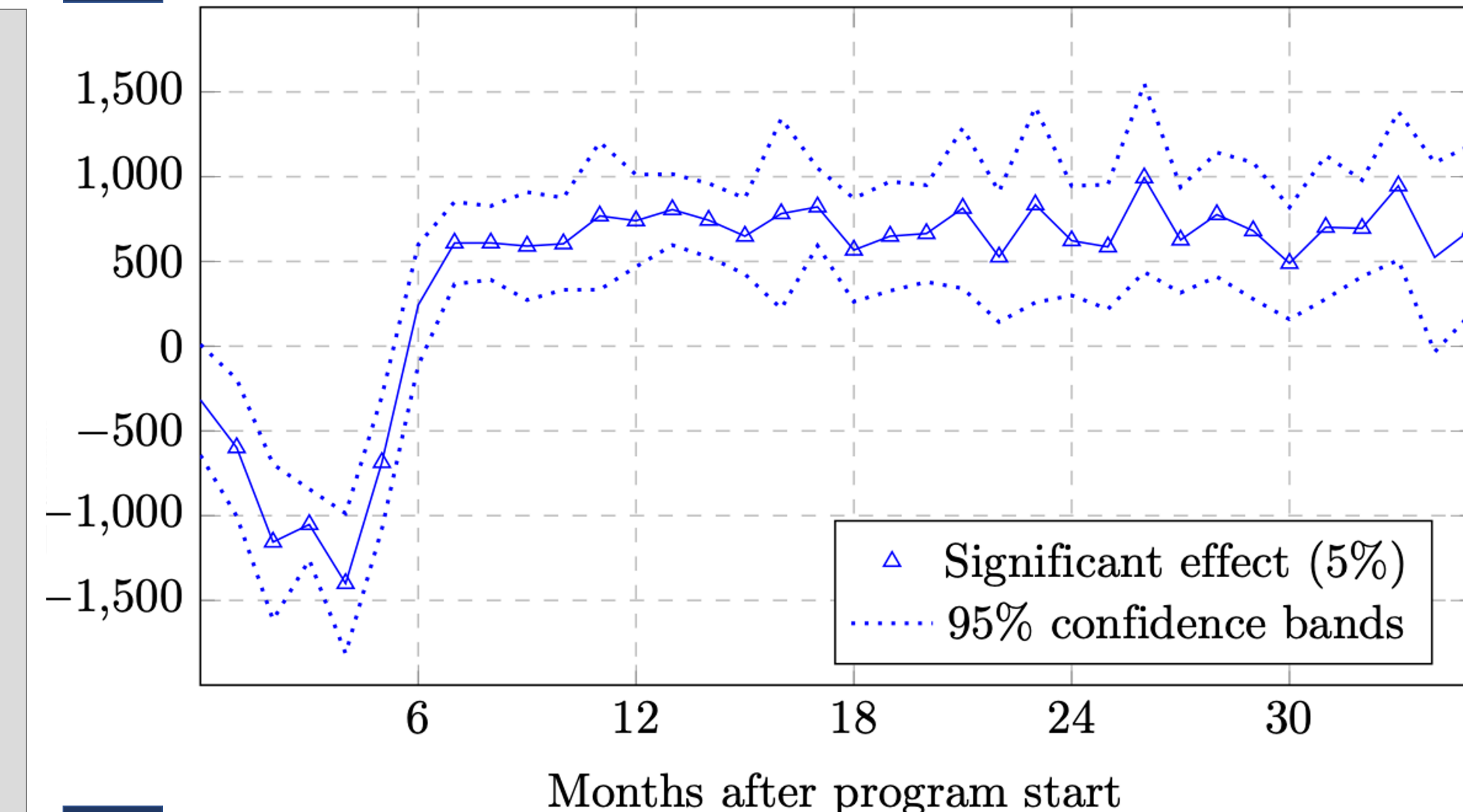


Matching methods: 1st-nearest neighbor matching

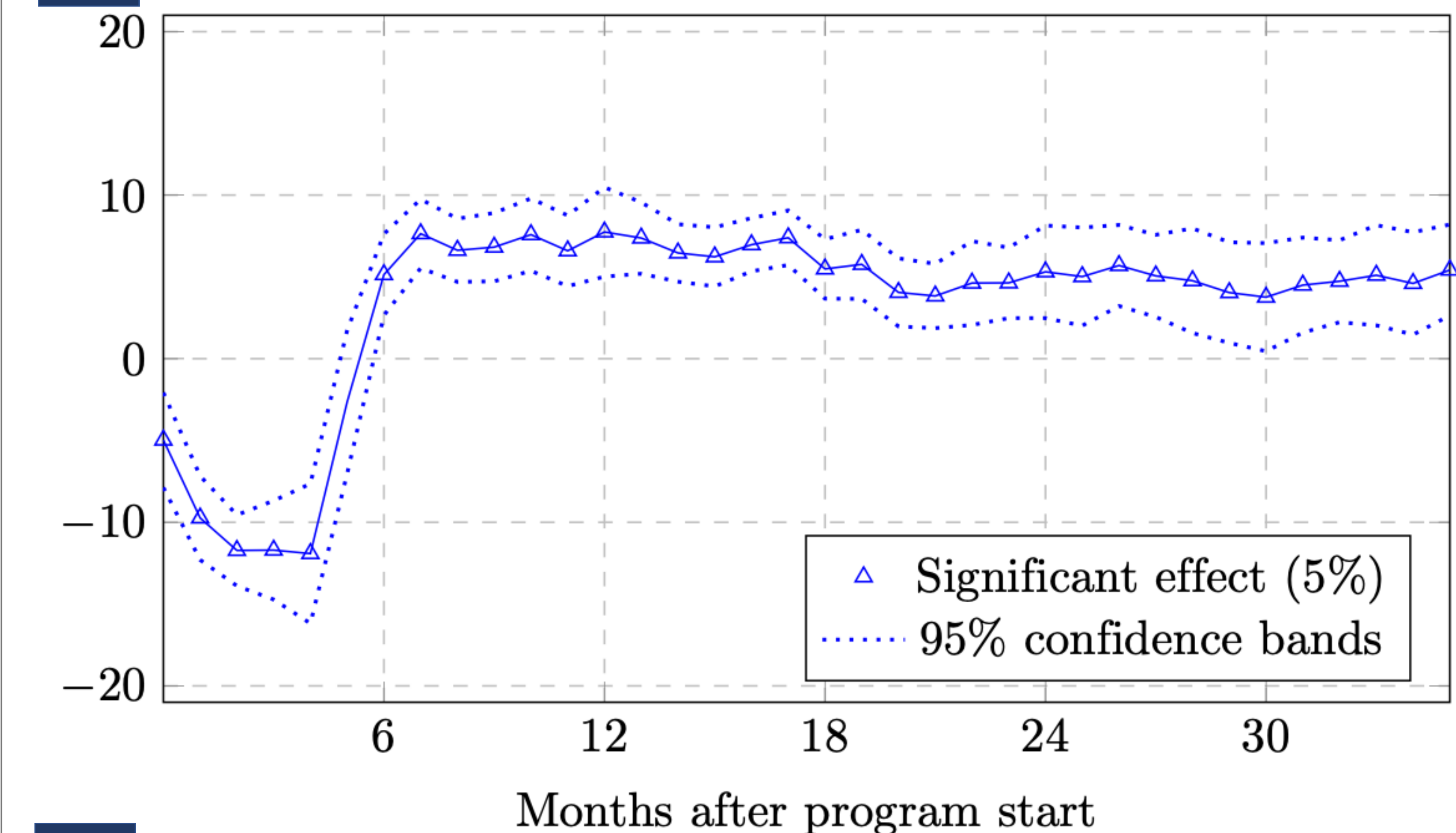
	Treated (N=242)	Control (N=242)	Bias (%)	t	p-value
ability score	58.39	58.24	3.0	0.30	0.77
problem analysis	64.57	64.48	0.5	0.06	0.96
verbal communication	44.95	44.46	2.8	0.28	0.78
sensitivity	49.42	49.49	-0.5	-0.05	0.96
persuasiveness	50.17	49.77	2.8	0.28	0.78
team working	47.61	47.11	3.3	0.34	0.74
initiative	51.81	51.65	1.2	0.12	0.90
female	0.28	0.29	-2.4	-0.25	0.80
migrant	0.21	0.20	2.4	0.25	0.80
disabled benefit recipient	0.02	0.02	1.3	0.15	0.88
year of birth	1984.1	1984.0	1.4	0.16	0.88

	Mean bias (%)	Median bias (%)
Mahalanobis	4.7	3.7
Nearest neighbor	2.0	2.4
Gaussian kernel	4.8	5.0

ATE: Effect on earnings per month (€)



ATE: Effect on working days per month (fte)



Rate of return and conclusion

$$NPV = \sum_{t=0}^{35} \frac{ATE_{earnings,t}}{(1+IRR)^t} - \frac{300}{(1+IRR)^0} - \frac{700}{(1+IRR)^2} = 0$$

Annualized IRR: 2.52% (95% CI: 0.26-5.05%)

Main conclusion: positive effects, low returns when compared to returns to education of ~8% (Psacharopoulos and Patrinos 2018)