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Training and employment status across Italian regions

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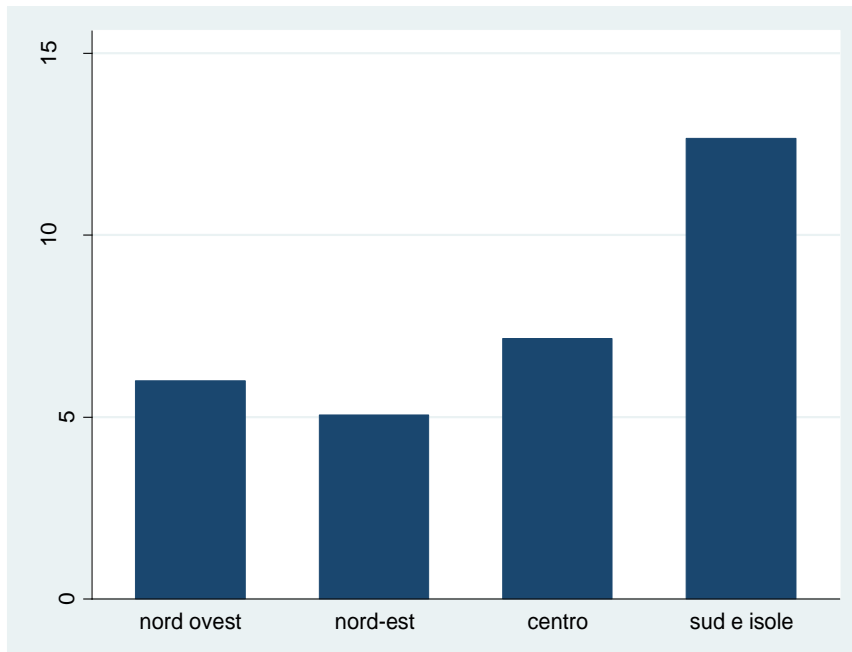
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In a nutshell

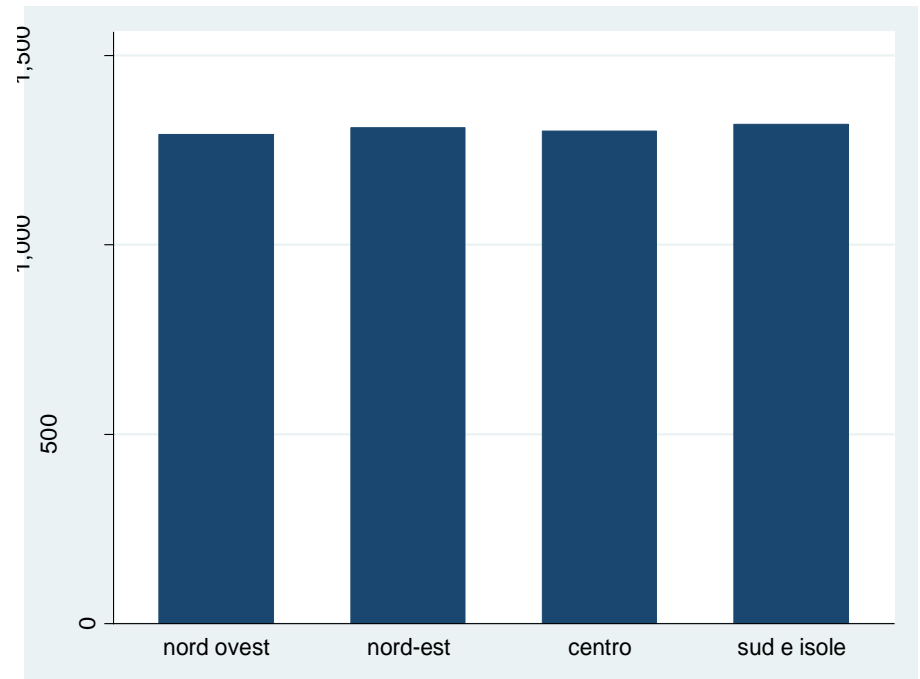
- The problem of skill in the knowledge economy
- Variation in the effectiveness of training programmes in Italy
 - *across regions*
 - across educational groups
 - across industries
- Data: PLUS survey, from ISFOL (Italian Ministry of Labour and Social Policy)
- Very preliminary empirical analysis: endogeneity issue not addressed

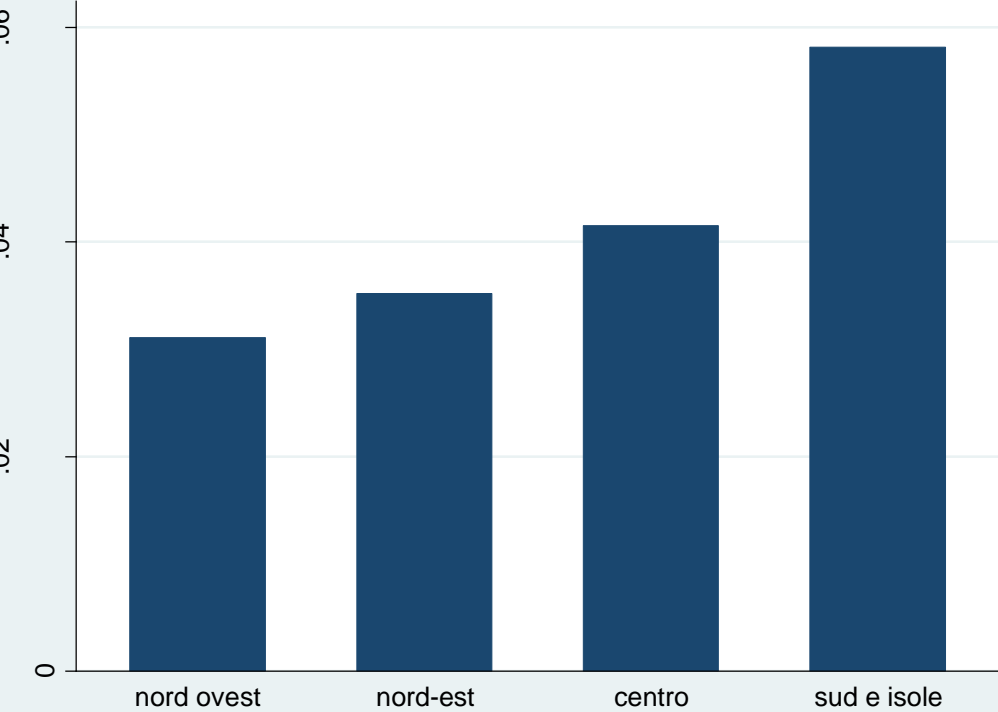
Regional background: unemployment and wages

Rate of unemployment (2008)



average monthly wage (2008)

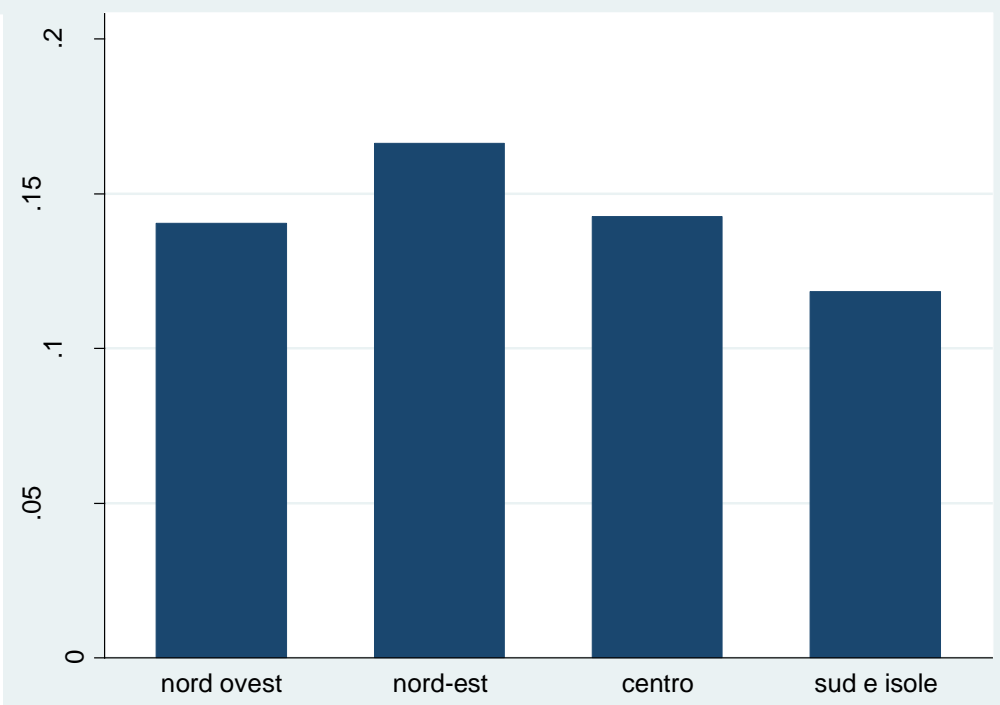




Off-the-job training



On-the-job training



The job competition model?

- Wages are exogenous
- Individuals compete for jobs
- Individuals *queue* in front of vacancies and firms hire those whose training costs are lower

Regional effects in the impact of training

- Firms' decisions about training (incentives with externalities)
- Firms' decisions about laying off trained vs. non-trained workers
- Employability of trained vs. non-trained individuals

Research questions

1. Does off-the-job training affect employability?
2. Does on-the-job training reduce the probability of losing the job (over a recession)?
3. Does the effect of training (if any) vary across regions?

Data

- We use PLUS survey
- 3 periods panel (2008, 2010, 2011)
- 12,593 of observations

Super thanks to Emiliano and Debora from Isfol for data assistance

Findings 1

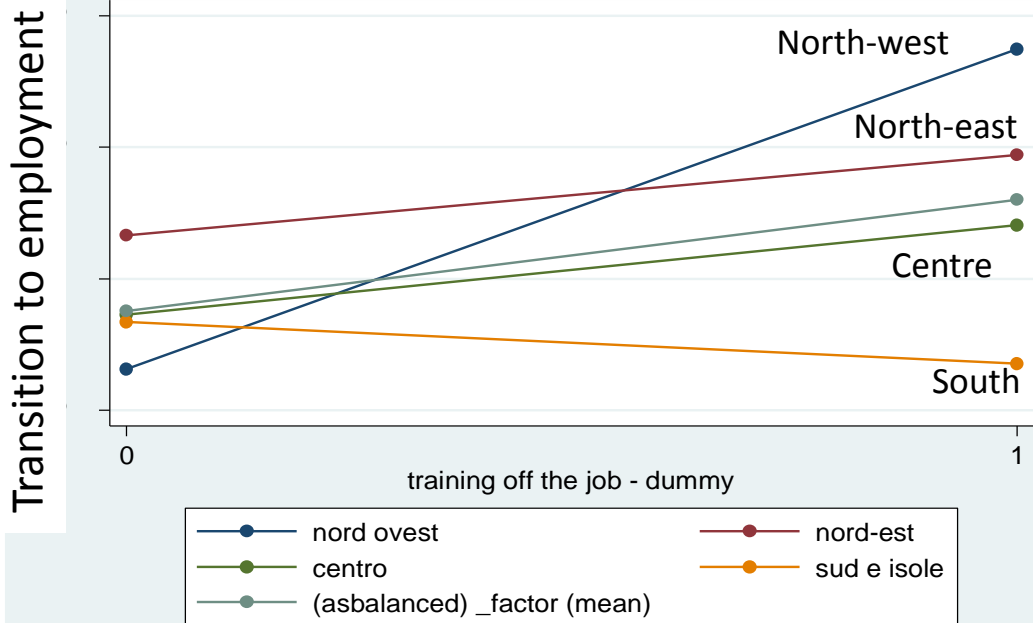
OFF THE JOB* TRAINING AND TRANSITION TO *EMPLOYMENT

The model

- Sample: starting employed in 2008
- Dependent variable: dummy variable equal to 1 if *unemployed* in year 2008 and *employed* in year 2010 and/or in year 2011
- Explanatory variable:
 - off the job training participation (1/0)
 - # hours of off the job training
- Individual level controls:
 - education, sex, age
 - Individual skills (English, ICT)
- Region level controls:
 - Regional unemployment
 - Macro-regions (north-east, north-west, centre, south) dummies

	(1)	(2)
	employ	employ
# hours training off the job		0.439*** (0.165)
training off the job - dummy	0.659*** (0.188)	
North-east*training	-0.497* (0.272)	-0.475** (0.200)
centre*training	-0.473* (0.253)	-0.387** (0.178)
south*training	-0.749*** (0.211)	-0.445*** (0.169)
Controls	yes	yes
Observations	1474	1474
R-squared		

Predictive Margins

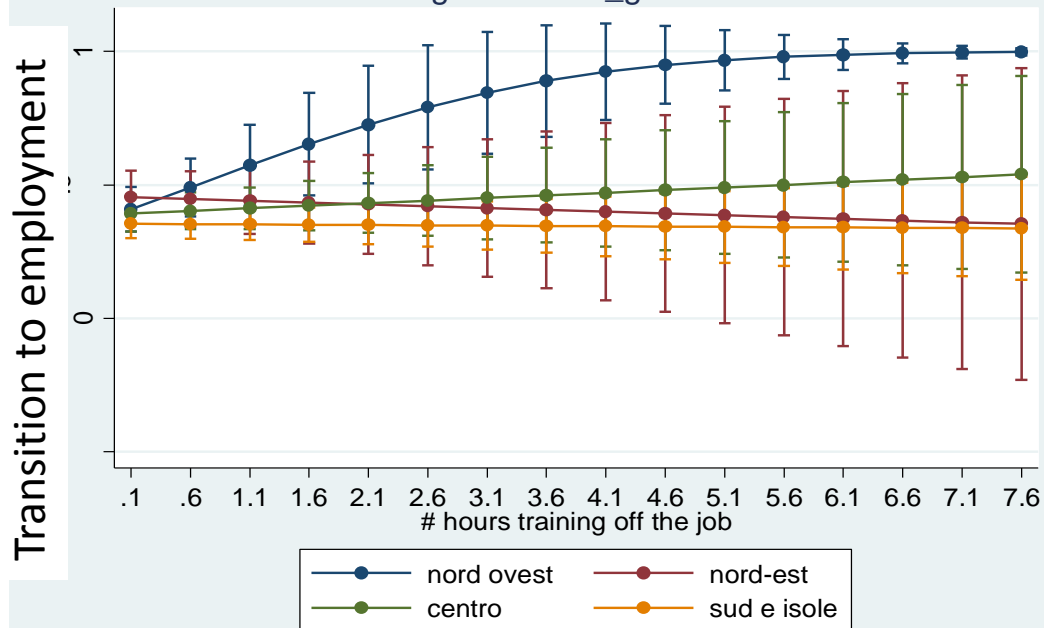


Dummy variable



Predictive Margins of area_g4 with 95% CIs

Continuous variable



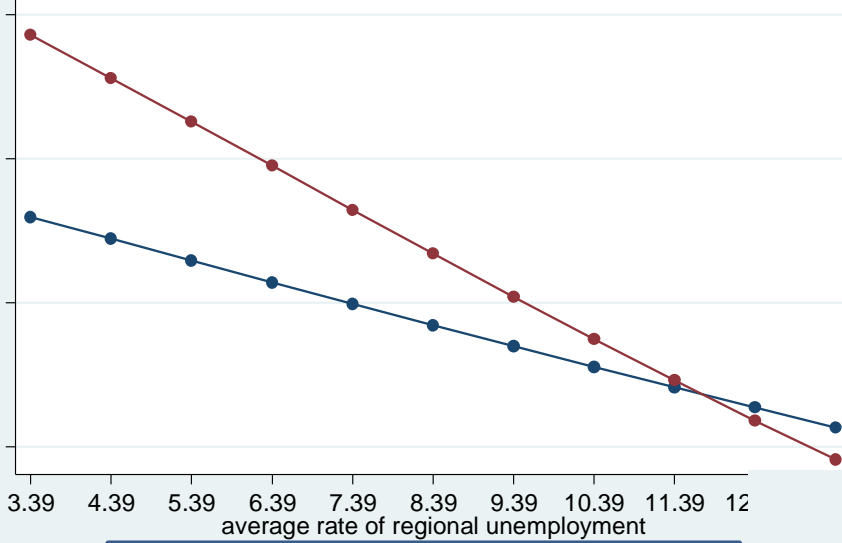
Additional findings

- There are no relevant differences over:
 - Age
 - Sex
 - Education
- But, *is training endogenous?* Heckman estimate does not detect the presence of a selection bias (selection into trained)

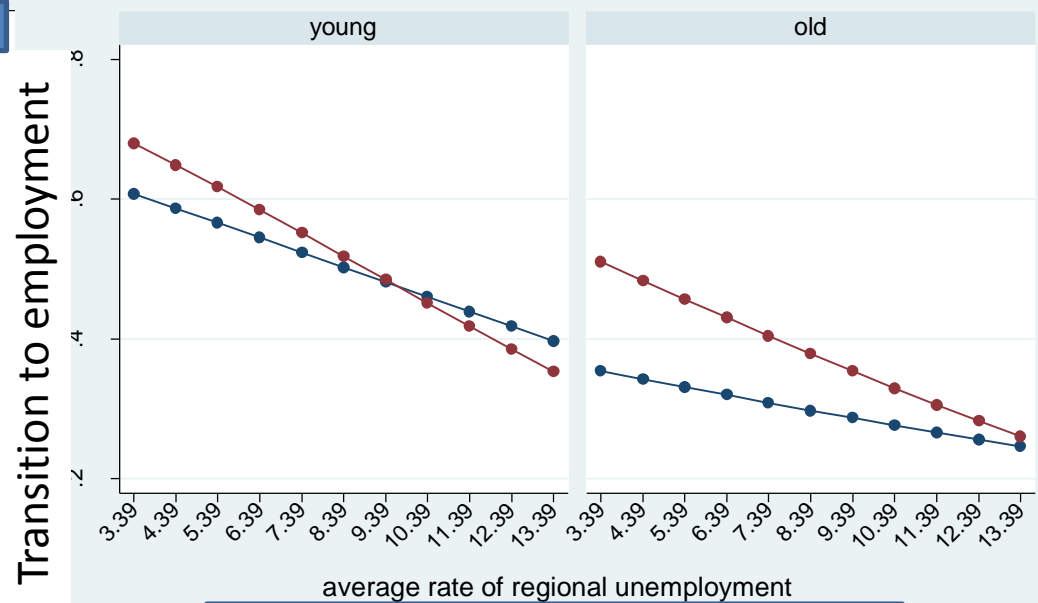
Training, employability, and regional labour markets

Transition to employment

Predictive Margins of train_offthejob



Predictive Margins of train_offthejob



Findings 2

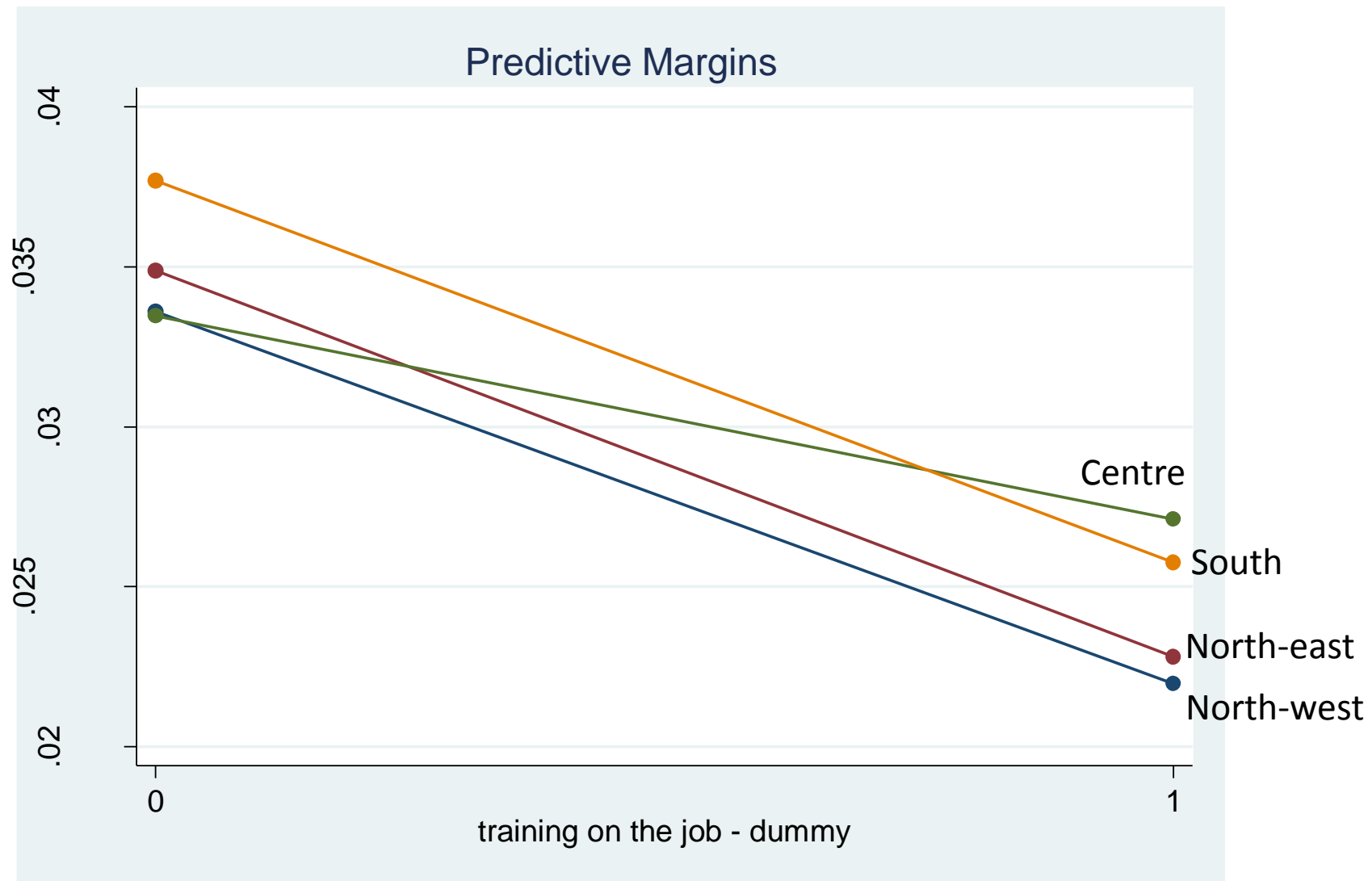
***ON THE JOB* TRAINING AND
TRANSITION TO *UNEMPLOYMENT***

The model

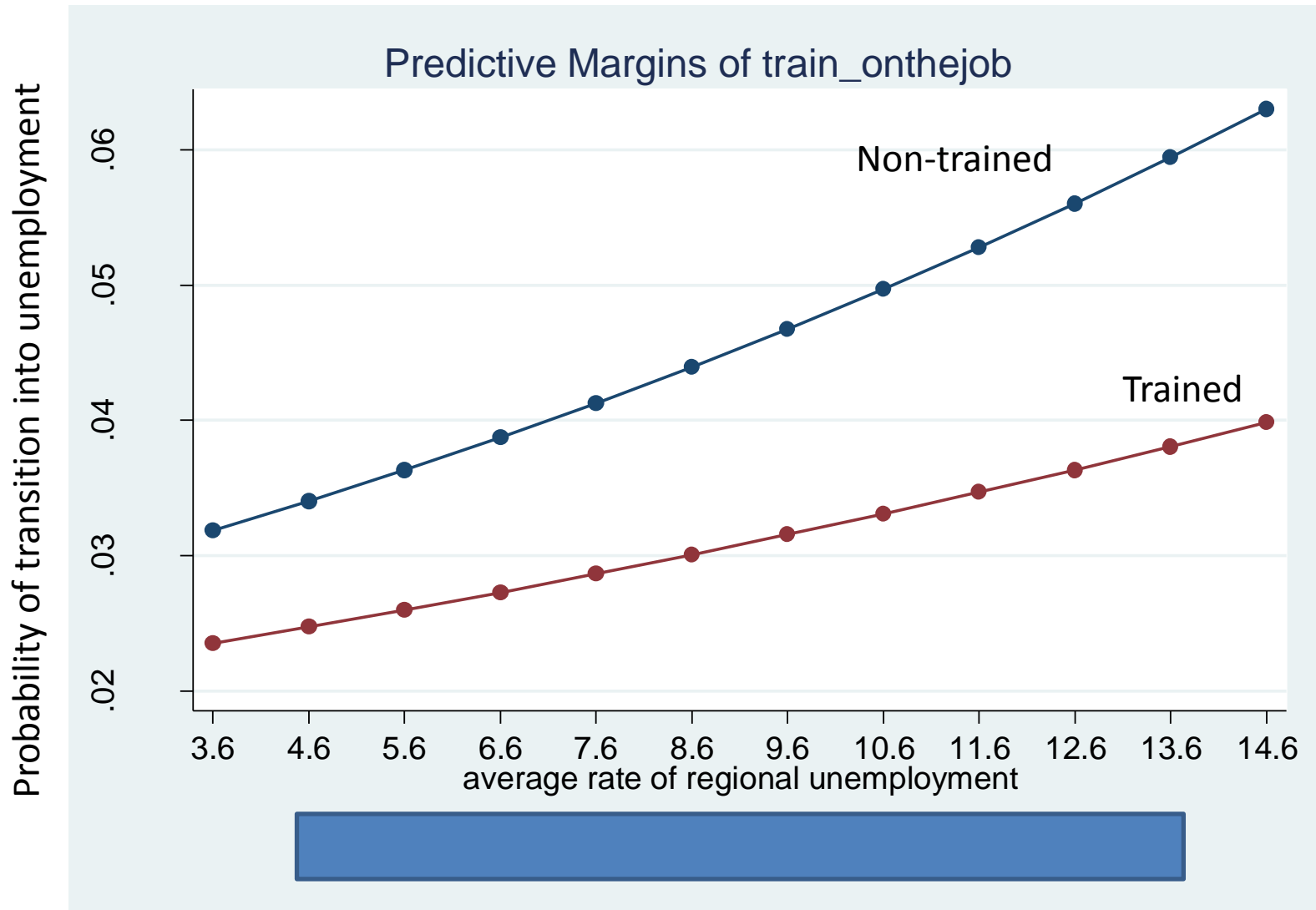
- Sample: starting employed in 2008
- Dependent variable:
 - Dummy equal to 1 if unemployed in 2011; 0 otherwise
- Explanatory individual variables:
 - education, age, sex
 - Public servant
 - Type of contract (permanent vs. fixed term)
 - Job change in year 2 and year 3
 - Firm size
- Explanatory regional variables:
 - Geographic dummies
 - Urban dummy
 - Regional change in unemployment in 2008-2011
- No instruments for training

Estimates are robust to Heckman correction model controlling for selection into initial employment

Probability of losing the job: trained versus non-trained individuals across regions:



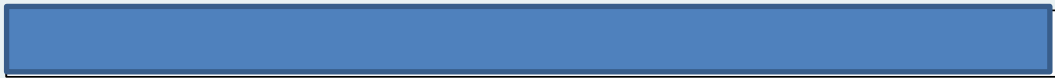
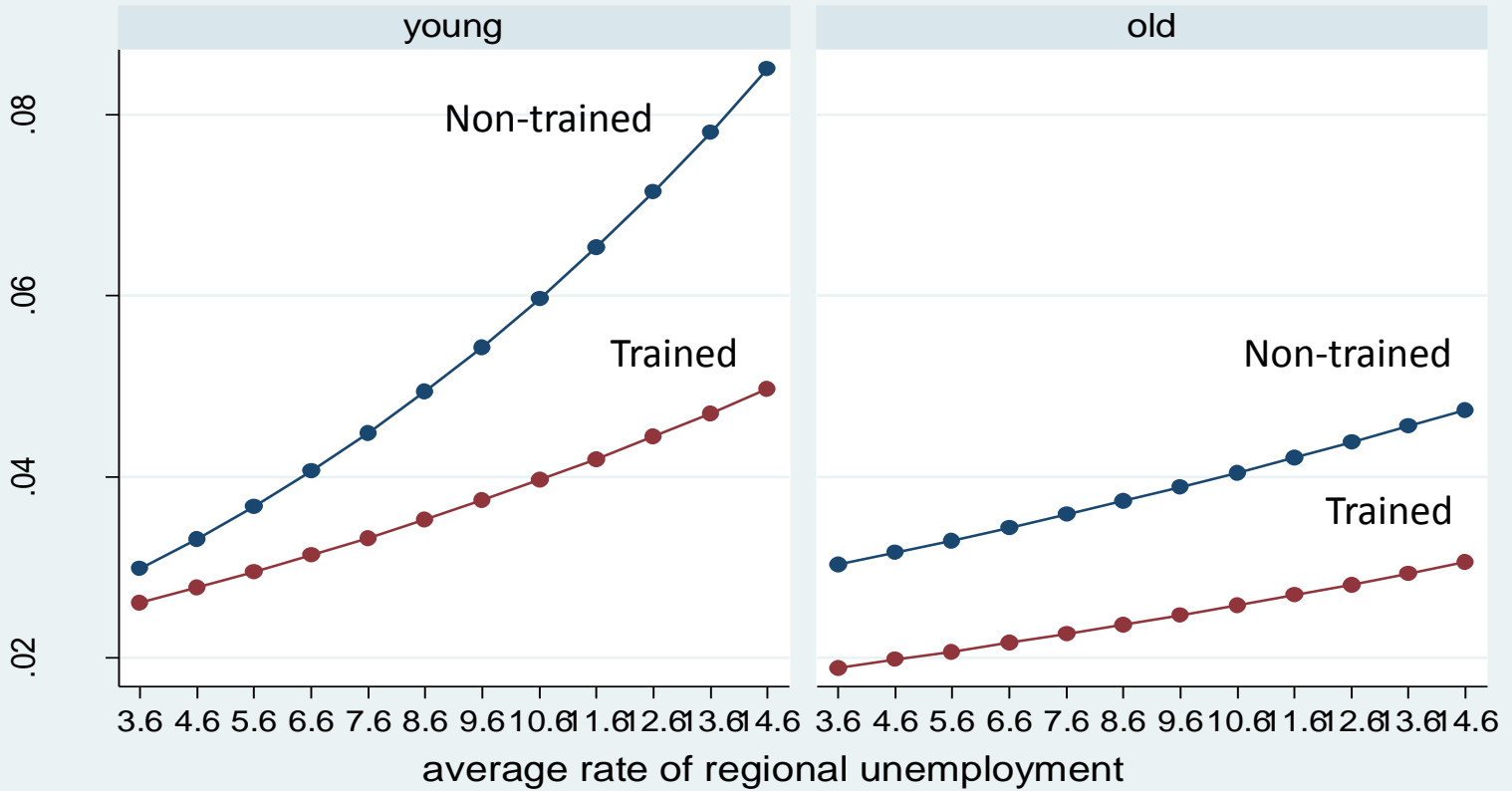
Trained versus non-trained individuals across regional unemployment rate



Across age

Probability of transition into unemployment

Predictive Margins of train_onthejob



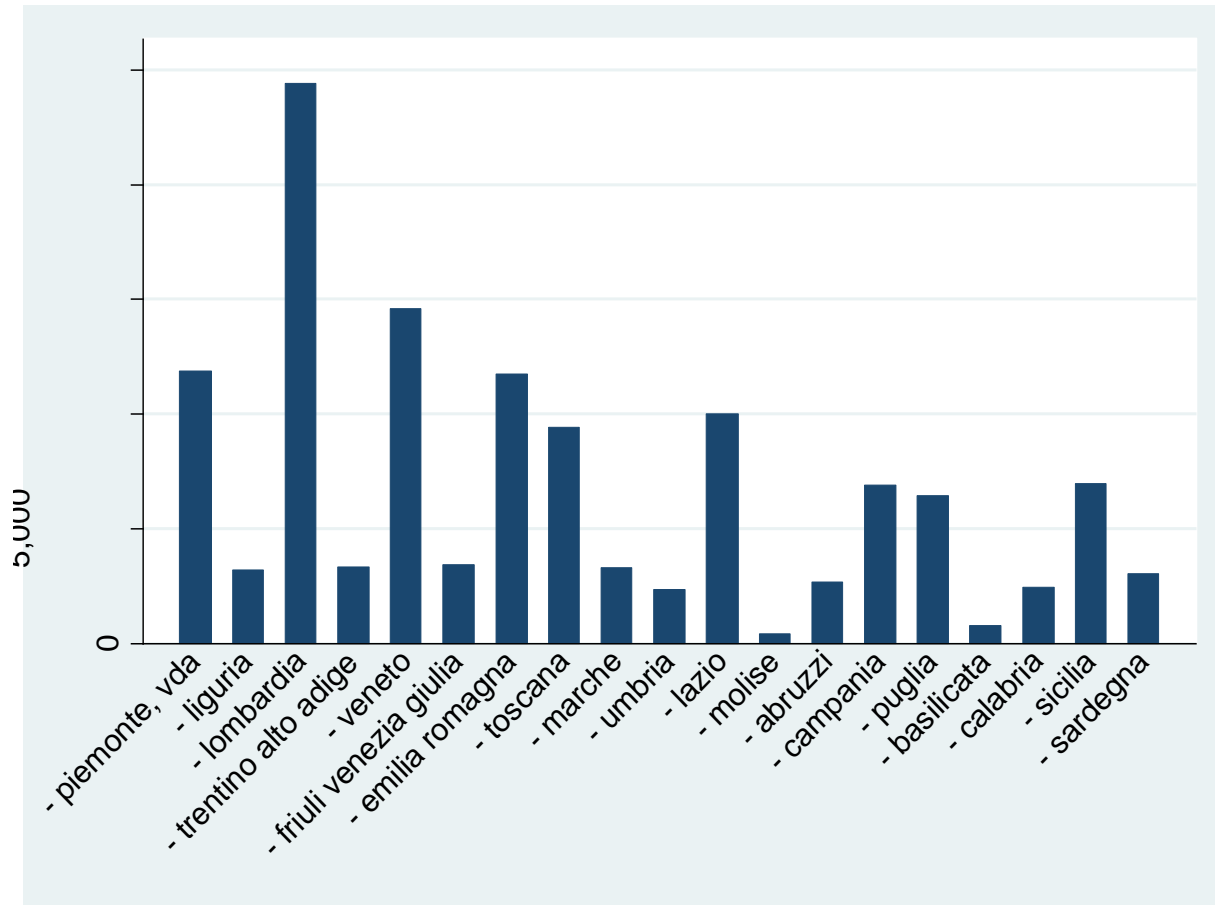
Summary of preliminary findings

- ***Returns to training differ across regional labour markets***
 - Training off-the-job helps employability only in the Northern regions
 - Training on-the-job decreases the probability of losing the job (stronger effect in low-unemployment regions)

Very much in progress, suggestions are welcome:

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of SME firms that did training within the firm per region



Probability of transition into unemployment

