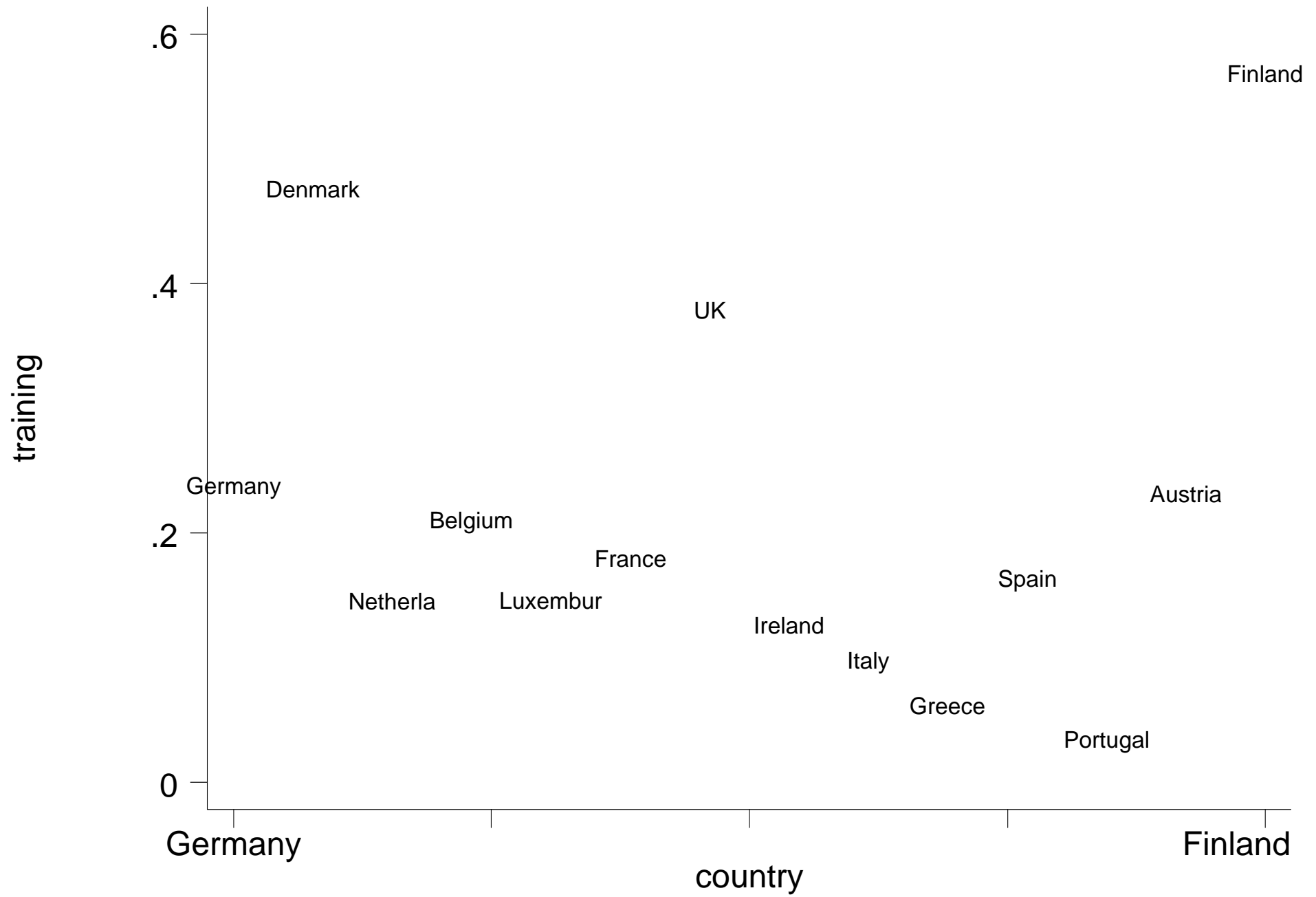


Market failures and the under- provision of training

G.Brunello and M.De Paola

Facts about employer - provided training

- Substantial variation in training intensity
 - Across countries
 - Across socio-economic groups



ECHP 1996

Occupation	Percentage trained
Managers	0.32
Professionals	0.34
Technicians	0.30
Clerks	0.21
Service workers	0.17
Craft and related	0.11
Plant operators	0.12
Elementary occupations	0.07

- Training incidence higher for the better educated, the young, males
- Percentage of employer provided training high (79% of total training incidence in ECHP 1996), higher for firm specific but high as well for general training

- Are these differences due to inefficiencies?
- Do enterprises and workers invest enough in training?
- Efficiency and equity issues
- Policy intervention based on market failures or equity issues

Efficient training

- The level of training which maximizes total output net of training costs
- Reasons for failure:
 - Liquidity constraints
 - Poaching
 - Turnover
 - Externalities
 - Labor market institutions

Liquidity constraints

- If workers who invest in training have to bear the costs of the investment – training is general – lack of resources, or the fact that the wage cannot be negative, can reduce the investment below its optimal level

Poaching and turnover

- Firms could invest less than the optimal amount if they need to bear the training cost and there is a positive risk of turnover
- With turnover, training at a firm benefits future employers, who do not bear training costs. There is a poaching externality and too little training.

- If training reduces turnover then the degree of under-provision can be attenuated and the private outcome can get closer to the efficient outcome.

ECHP data

- I use ECHP data to look at the correlation between training between year t and separations between year $t+1$ and year $t+s$

Table 1. Percentage of individuals who received employer provided training in 1995 and separated in years 1996 to 2001

	(1)	(2)	(3)	(4)
Denmark	30.11	10.98	17.38	5.06
Belgium	20.33	4.97	12.51	2.10
France	15.64	3.79	8.72	1.95
UK	34.04	13.88	19.57	7.36
Ireland	17.66	7.40	10.47	4.55
Italy	10.53	2.97	4.97	0.45
Greece	16.32	6.28	6.72	1.10
Spain	12.45	3.76	6.66	0.39
Portugal	18.89	11.75	9.64	3.54
Austria	21.27	7.68	10.99	2.52

Column 1: all separations between 1996 and 2001; Column 2: all separations in 1996; Column (3): separations to a better paying job between 1996 and 2001; Column (4): separations to a better paying job in 1996. Finland missing because ECHP starts for this country in 1996.

Table 2. Conditional logit estimates

	(1)	(2)
Age	-0.281***	-0.427***
Age squared	0.000	0.001***
Job satisfaction	-0.217***	-0.142***
Wage	-0.015***	-0.004*
Training	-0.088*	-0.099**

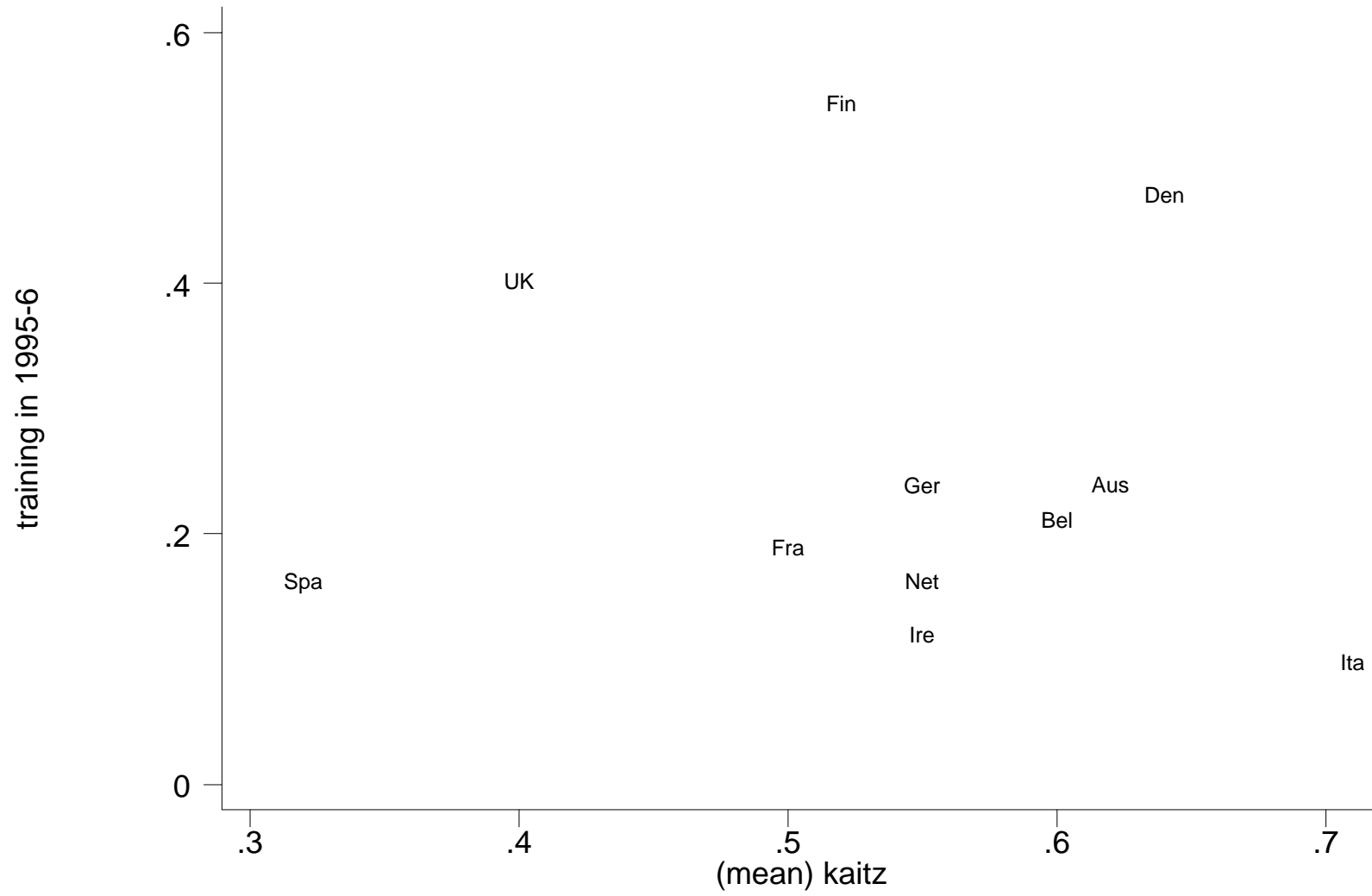
Column (1): separations to a better paying job between t+1 and t+s; Column (2): separations to a better paying job in t+1.

Labor market institutions

- Empirical evidence that employer provided training is higher when the training wage premium is lower
- Labor market institutions can affect the training wage premium and training

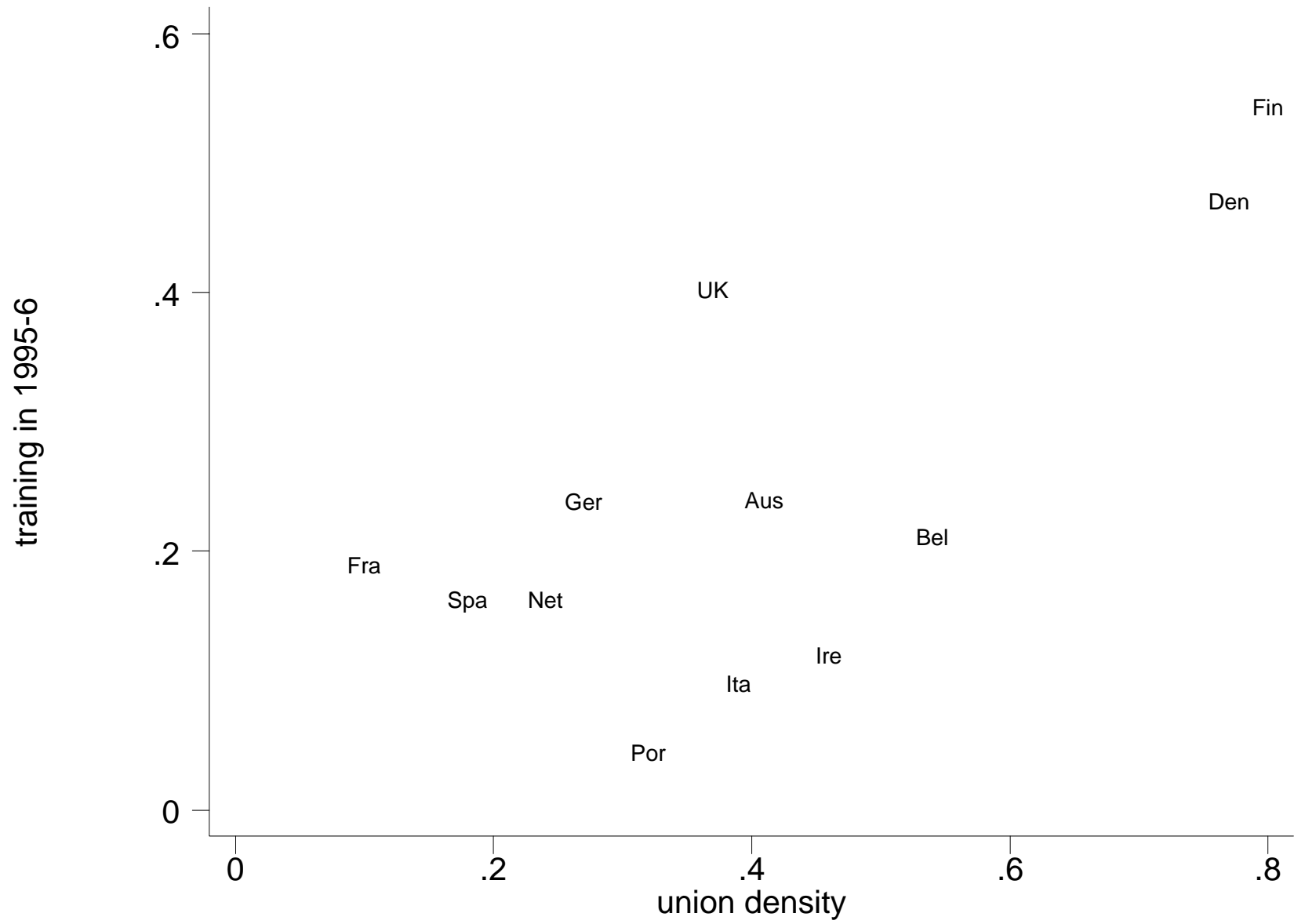
The minimum wage

- Empirical studies in the US and the UK report different findings, so that the empirical evidence is inconclusive



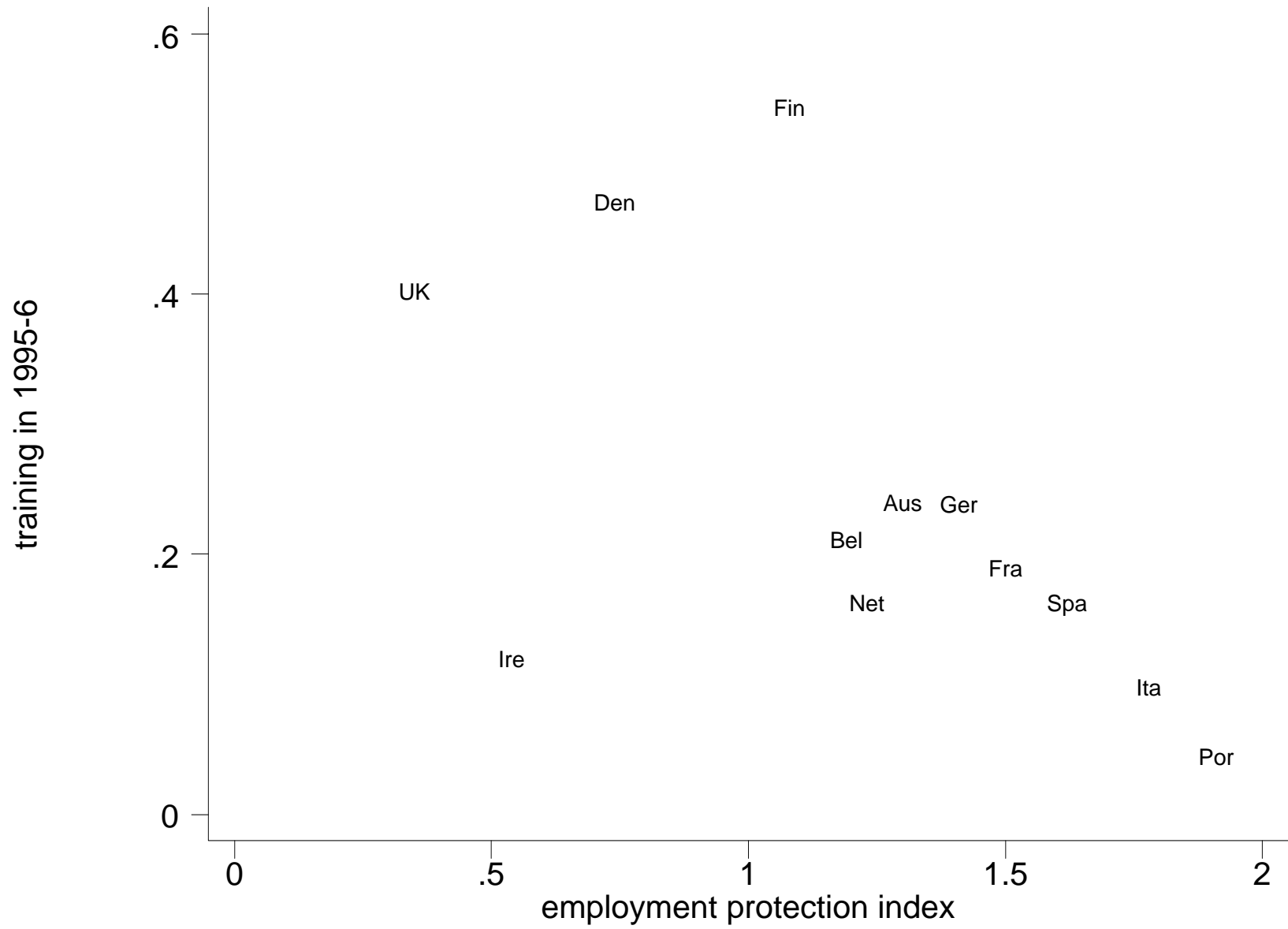
Unions

- Unions can bargain over training
- Unions can affect turnover by encouraging voice over exit
- Unions monitor contracts
- Unions raise wage compression and reduce the training wage premium
- Some evidence of a positive union effect



Employment protection

- No evidence that training is higher when employment protection is higher
- High employment protection raises wages and reduces profits – therefore training falls.
- High employment protection countries have two-tier systems with flexible sector, where training is lower.



High private returns

- Since the private returns to training are high – relative to other investments – there is some market failure which prevents individuals to invest more.
- The evidence that private returns to training are high is very controversial, however.

Policies

- Policies can be based on evidence that there is under – provision (efficiency considerations) or on the fact that the distribution of training is unequal (equity considerations)
- Some evidence on under-provision associated to the presence of turnover.
- No much evidence that liquidity constraints matter

Supply side policies

- Policies should affect the marginal benefits of training to the employers – by affecting for instance turnover and/or the training wage premium
- Labor market flexibility could be detrimental to training, because of the shorter span of the contract
- Policies that enhance cooperation among firms and voluntary restraints to poaching may help.

- Localization policies which lead to more agglomeration do not necessarily help
- Policies which favor educational attainment and innovation can encourage training because of complementarities
- Useful to distinguish between policies targeted at marginal benefits and policies targeted at marginal costs

Policies targeted at marginal benefits

- Payback clauses
- Apprenticeship contracts
- Both affect benefits by reducing labor turnover

- Apprenticeships specify contract length, and the qualification is awarded only at the end – by specifying an appropriate length the firm can recoup training costs
- Payback clauses impose penalties on workers who quit within a certain period.

Policies targeted at marginal costs

- Tax deductions
- Levy/grant schemes are rather widespread, and consist of a payroll tax and a training grant to successful firms – the idea is to spread the training costs over different firms
- Train or pay schemes

Efficiency and equity

- Human capital is an important source of income and job satisfaction – an equitable allocation would require some redistribution
- By modifying outcomes – differences in training – or by modifying initial conditions – educational attainment

Conclusions

- Little evidence of under-provision because of liquidity constraints
- Evidence that employers pay for general training, and that turnover increases with training. This suggests under-provision
- Policy should also consider equity issues.

