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Institute for Employment
Research

The Research Institute of the
Federal Employment Agency



Apprenticeship Training and Further Training during the Great Recession

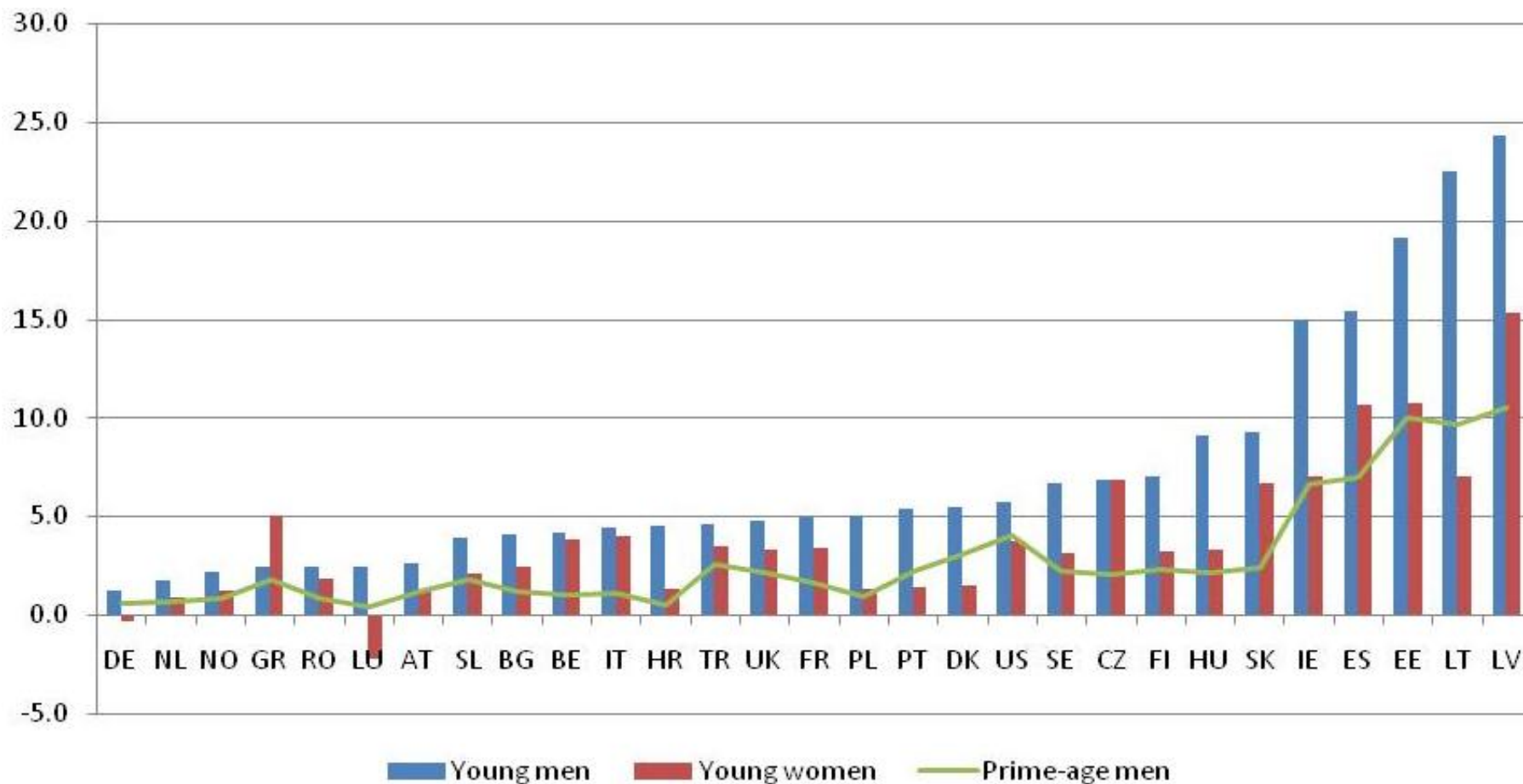
**11th Comparative Analysis of
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Impact of the global economic crisis on the development of unemployment 2008/2009



Source: Verick 2010

- Arguments for and against more apprenticeship training/ further training in the great recession
- The IAB Establishment Survey
- Empirical results
- Summary and conclusions

- lower opportunity costs of training
- lower exit risk of trained employees
- safeguard against unfilled vacancies for skilled personnel
- public subsidies for further training

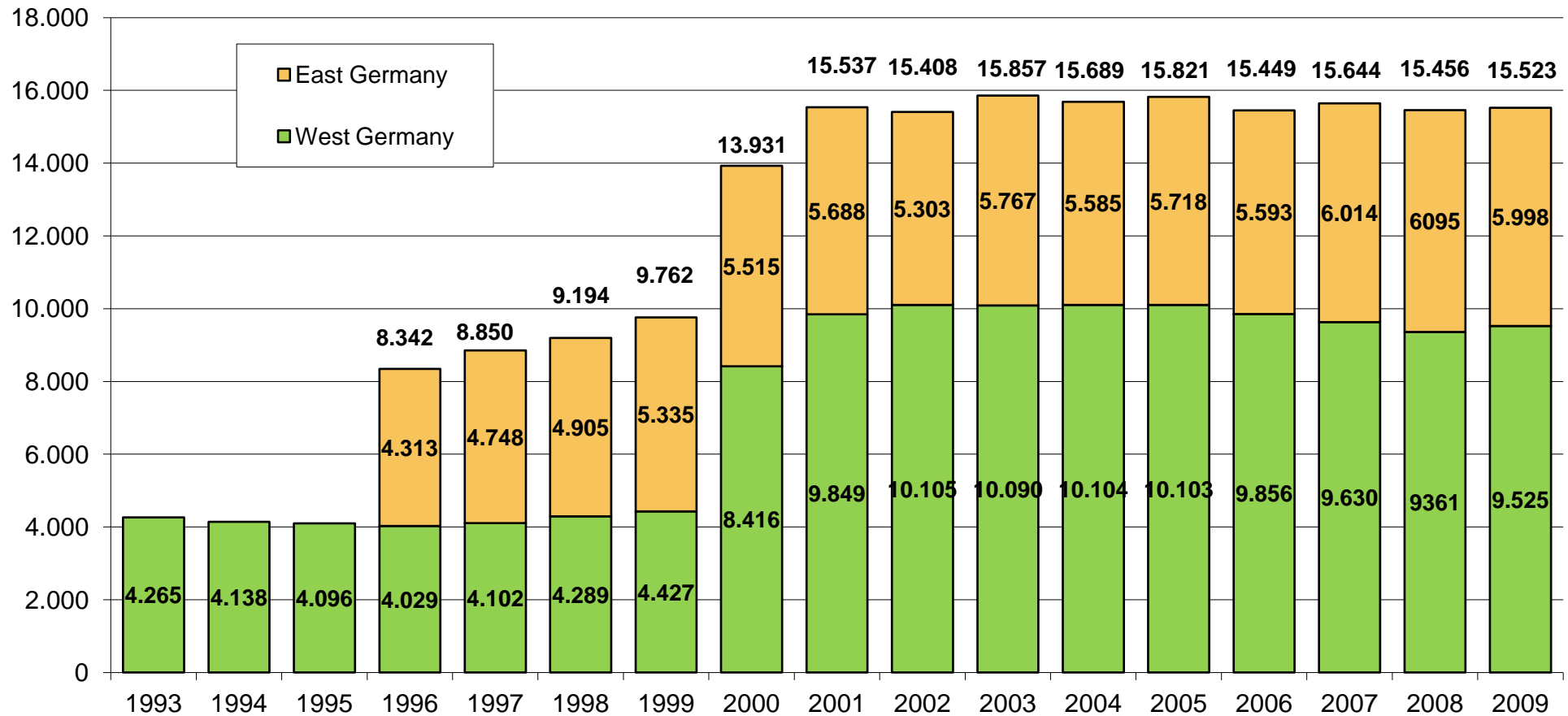
- direct costs of training cannot be financed
- uncertainty about returns of training
- less hirings

Bassanini/Brunello (2008)	15 European countries	negative correlation between further training and the GDP
Bassanini et al. (2007)	15 European countries	positive correlation between further training and unemployment rate
Majmudar (2007)	USA	negative correlation between further training and unemployment rate
Sepulveda (2004)	USA	negative correlation between further training and the GDP

Bilginsoy (2003)	USA	negative correlation between further training and unemployment rate
Askilden/Nielsen (2005)	Norway	negative correlation between further training and unemployment rate
Schweri/Mueller (2008) Muehlemann et al. (2009)	Switzerland	negative correlation between further training and unemployment rate

- annual survey among all German establishments
- stratified sample
- f2f interviews conducted with high-ranked managers by TNS Infratest Social Research Munich
- modular concept of the questionnaire: annual questions vs. focal topics

Number of establishments surveyed in the IAB Establishment Panel Survey



Variables used in our analysis

- incidence of further training (share of establishments providing further training to their employees in the first half of the respective year)
- intensity of further training (share of employees participating in firm-provided further training schemes)
- incidence of apprenticeship training (share of establishments employing at least one trainee)
- intensity of apprenticeship training (share of trainees)
- affection by the great recession (direct assessment of the respondent: „Was your establishment hit by the great recession in a negative way?“)

Method: Difference-in-Differences Estimator

Y – Endogenous variable

C – 1 if firm is subject to
the crisis in 2009; 0 else

T – time dummy

i – establishment

x – vector of control variables

γ – vector of regression coefficients

ε – error term

$$y_{it} = \beta_0 + \beta_1 C_i + T_t' \theta + (CT)'_{it} \theta + x'_{it} \gamma + \varepsilon_{it}$$

Descriptive Statistics: Selected Indicators of Crisis and Non-Crisis Establishments

	crisis establishments	non-crisis establishments
number of employees	151.966	87.134
proportion of qualified	0.697	0.662
proportion of part-timers	0.146	0.230
sectoral level bargaining	0.386	0.363
firm level bargaining	0.070	0.064
works council	0.304	0.221

Proportion of establishments affected by the global crisis (examples)

Manufacturing Industry	0.45
...Automotive	0.52
...Chemistry	0.45
...Food Industry	0.19
...Mechanical Engineering	0.61
Construction	0.24
Hotels and Restaurants	0.22
Banking and Insurance	0.12
Wholesale and Retail	0.24
Service Activities	0.20
...Advertising and Market Research	0.37
...Legal and Tax Consulting	0.14
...Management Consulting	0.22
...R&D	0.35
...Temporary Employment Agencies	0.66
Total	0.27

Source: IAB Establishment Panel 2009

Further training/Apprenticeship Training in Crisis and Non-Crisis Establishments

<i>Further training</i>	Crisis Establishments	Non-Crisis Establishments
incidence 1 st half of 2008	0.718	0.644
incidence 1 st half of 2009	0.635	0.590
intensity 1 st half of 2008	0.252	0.276
intensity 1 st half of 2009	0.224	0.253
<i>Apprenticeship training</i>		
incidence June 2008	0.526	0.416
incidence June 2009	0.504	0.406
intensity June 2008	0.051	0.049
intensity June 2009	0.049	0.047

Incidence of apprenticeship training (yes/no)

	Crisis	Non-Crisis	Difference
2008 vs. 2007	0.0107* (0.079)	0.0004 (0.940)	0.0103 (0.213)
2009 vs. 2008	-0.0155*** (0.006)	-0.0104** (0.045)	-0.0051 (0.506)
2010 vs. 2009	0.0094* (0.064)	-0.0019 (0.696)	0.0113 (0.0113)

Incidence of further further training (yes/no)

	Crisis	Non-Crisis	Difference
2008 vs. 2007	0.038*** (0.000)	0.0426*** (0.000)	-0.0046 (0.676)
2009 vs. 2008	-0.0761*** (0.000)	-0.0546*** (0.000)	-0.0215** (0.043)
2010 vs. 2009	0.0218*** (0.000)	-0.0079 (0.242)	0.0297*** (0.003)

	Crisis	Non-Crisis	Difference
2008 vs. 2007	0.0005 (0.692)	-0.0006 (0.621)	0.0010 (0.527)
2009 vs. 2008	-0.0032*** (0.003)	-0.028*** (0.007)	-0.0004 (0.811)
2010 vs. 2009	0.0007 (0.483)	0.0006 (0.559)	0.0001 (0.934)

	Crisis	Non-Crisis	Difference
2008 vs. 2007	0.0507*** (0.000)	0.0484*** (0.000)	0.0023 (0.791)
2009 vs. 2008	-0.0409*** (0.000)	-0.0325*** (0.000)	-0.0084 (0.332)
2010 vs. 2009	0.0264*** (0.000)	0.0089 (0.122)	0.0176** (0.039)

Summary

- No clear results from theoretical considerations and existing empirical research
- We find two effects of the crisis:
 - Indirect effect/trickle down effect: The establishments reduced their training activities from 2008 to 2009 irrespectively of whether they were directly hit by the recession or not.
 - Direct effect: Firms which were directly affected by the recession show a stronger decline in their training activities than firms which were not hit by the crisis.
 - There are stronger variations in the development of firms' further training activities than in the development of their apprenticeship training.

Conclusions

- Differences between our results and related studies because of the severity of the 2008/2009 crisis?
- Additional research on other indicators of further training and apprenticeship training (e.g., skill level of training participants, hiring of former apprentices etc.)

Thank you for your attention!