

# Does enterprise matter? Firm-specific effects on the transition from apprenticeship training to employment in Germany

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## Characteristics of German apprenticeship training

### Dual principles:

- State and enterprise
- School and working place
- General and vocational education (not firm specific) and working experience

### Highly standardized:

- Upper secondary level
- Countywide curricula and certificates

### Low stratified:

- No vertical stratification
- 346 different vocations (horizontal stratification)

## Research questions

In how far effect characteristics of firms individuals transition from training to work beyond individual and vocational variation

## Findings from literature I

### Theoretical concepts

Human capital theory

Institutional theory

Segmentation theory

Cost-benefit theory

## Findings from literature II

### Empirical results

Two thirds of each age cohort joins the apprenticeship system; youth unemployment is still moderate low

Good match between apprenticeship training and first job: 57% in the old Länder and 40% in the new Länder become employed in the training firm (Hillmert 2001; Konietzka 1999)

Weak match by scheme based training (Winkelmann 1995; Dietrich 2004)

Regional effects (Mertens/Haas2006)

However increase in job turn over in the first years (McGinnity 2004)

## Findings from literature III

### Empirical results

Institutional factors (Kerckhoff 1995; Ryan 2001)

Cost-benefit relation varies over sectors and fields of occupation (Bardeleben 1993; Beicht/Walden 2004; Hanhart/Bossio 1998)

Sector specific strategies (Franz/Soskice 1994)

Firms training activities reflect strongly firm specific conditions (Dietrich/Gerner 2005/2006; Niederalte 2005)

## Data base I

### Data source 1: The German Integrated Employment Biographies (IEB)

Complete and integrated data from different process produced register data from German social security system covering all dependant employed and unemployed people:

- unemployment records;
- job search records
- dependant employment records
- scheme participation records

**Individual variables:** age, gender, nationality, qualification, vocational field of apprenticeship training, apprenticeship wage, biographical information on all episodes of dependant employment, registered unemployment, scheme participation and job search

## Data base II

### Data source 2: IAB-enterprise file

Covering all firms in Germany with dependant employees; enriched with regional labour market information

**Enterprise variables:** firm size of training firm; industry of training firm; average wage level in training firm

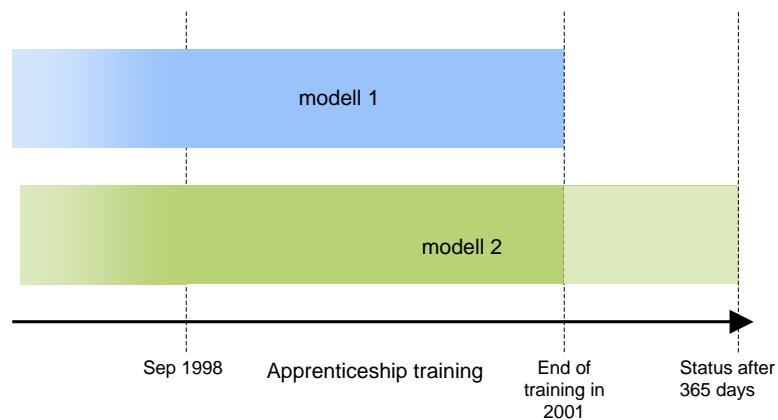
### Data base III

**Target group:** Young people aged up to 27 years, who finished a non subsidised apprenticeship training outside the public sector in year 2001 successfully

**Observation period:** time after leaving general education till 365 days after finishing apprenticeship training

**Sample size:** 6.179.992 spells; 462.538 + 418.424 events

### Observation window for analysis



## Outcome of apprenticeship training

Outcome	Time of observation	
	after training	365 days later
Employment in training firm	45,6	27,5
Employment in new firm	14,8	25,6
Scheme	0,3	3,0
Unemployed	23,7	7,7
Out of labour force	15,8	26,5
Censored	0,4	9,6
Total (N)	462.538	462.538

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## Explaining variables I: individual level

Variable	Value
Region = est	18,8%
Gender = female	44,3%
Nationality=non German	5,6%
Qualification = Abitur	13,3%
Unemployment experience before training	8%
Unemployment experience one year after training	37,2%
Apprentice wage (average daily)	25,1€

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**Explaining variables II: firm level**

Variable	Value
Firm size (N employees): 1-4	9,8%
5-9	14,0%
10-19	14,5%
20-49	15,9%
50-199	19,1%
200-499	10,7%
500-999	6,7%
1000+	9,2%
Daily wage average	67,5€

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**Explaining variables III: control variables**

Field of training	N = 10
Industries	N = 11

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## Findings I

**Regional:** Better employment perspectives, more firm mobility, lower unemployment risk and scheme participation, fewer drop out of labour market in the old Länder in dependence on the regional labour market conditions

**Individual:** weak gender effects, strong effects on nationality, effects of general qualification; early unemployment experience (unemployment before training) matters

Strong **firm size** effects: increasing firm size reduces inter firm mobility, reduces risk of unemployment experience and scheme participation

Firm specific wage level increases mobility, whilst apprenticeship wages reduce inter firm mobility

## Findings II

**Human capital** orientated hypothesis are not supported, as a majority of small enterprises is not able to use their investments in apprentices after the training period

**Segmented labour market** hypothesis are supported partially; trainees in small firm show a much higher inter firm mobility after the end of training; but these trainees have also a much higher risk of becoming unemployed, scheme participants or dropping out of labour market

**Cost-benefit assumptions:**

Long term cost-benefit orientation in larger firms (screening/transaction costs) vs. short term strategies in smaller firms

High apprenticeship wages reduces firm mobility (first order sorting process)

High average wages increase interfirm mobility (second order sorting process)

## Conclusion

Firms strongly effect the transition from training to employment;

Place of training has strong consequences

Firms work in multiple ways as a sorting machine

## Thank you for attention



## Findings I after training

Multinomial logit: Reference outcome: employment in training firm

Variable (Reference)	Items	employment new firm	scheme	unemployed	out of LM
Region (new Länder)	old Länder	1.487	.185	.497	.862
Gender (female)	male	.884	(n.s.)	(n.s.)	1.120
Nationality (foreign)	German	(n.s.)	.039	.588	.659
Qualification (Abi)	Below upper secondary	.923	1763	1.235	1.116
Unemployment (>90 days)	Never	.909	.064	.579	(n.s.)
	1-90 days	(n.s.)	.422	1.015	.897

Model parameter N 452.071; Chi<sup>2</sup> 71642 McFadden R<sup>2</sup> 0.062

## Findings I after training

Reference employment in training firm

Variable (Reference)	Items	employment new firm	scheme	unemployed	out of LM
Individ. Apprent wage		.998	.993	.963	.957
Average Firm wage		1.006	.993	1.003	1.009
Firm size (1000+)	1-4	1.880	3.547	3.465	2.534
	5-9	1.346	2.561	2.470	1.817
	10-19	1.278	2.672	2.348	1.701
	20-49	1.269	2.326	2.284	1.648
	50-199	1.151	2.642	1.964	1.389
	200-499	1.242	1.943	1.446	1.256
	500-999	1.318	1.200	1.313	1.110

Model parameter: N 452.071; Chi<sup>2</sup> 71642; McFadden R<sup>2</sup> 0.062

## Findings II one year later

Reference employment in training firm

Variable (Reference)	Items	employment new firm	scheme	unemployed	out of LM
Region (new Länder)	old Länder	1.555	.218	.681	.830
Gender (female)	male	.826	.813	.826	1.538
Nationality (foreign)	German	1.068	.362	.756	1.620
Qualification (Abi)	Below upper sec	.954	1.513	1.798	1.098
Unemploy (>90 days)	Never	.186	.006	.045	.182
	1-90 days	1.534	.514	.763	1.093

Model parameter Chi<sup>2</sup> 193375; N 418.424 McFadden R<sup>2</sup> .130

## Findings II one year later

Reference employment in training firm

Variable (Reference)	Items	employment new firm	scheme	unemployed	out of LM
Individ. Apprent. Wage		.991	.970	.976	.967
Average Firm wage		1.003	.998	1.005	1.010
Firm size (1000+)	1-4	2.246	3.353	2.859	2.447
	5-9	1.791	2.616	2.197	1.959
	10-19	1.737	2.499	2.065	1.824
	20-49	1.675	2.420	2.019	1.674
	50-199	1.461	2.071	1.850	1.459
	200-499	1.373	1.626	1.601	1.311
	500-999	1.331	1.497	1.445	1.213

Model parameter Chi<sup>2</sup> 193375; N 418.424; McFadden R<sup>2</sup> .130