

Poaching and Firm-Sponsored Training: First Clean Evidence

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Motivation

- Poaching: skilled employees are lured away by rival firms after employer invested in them
- This may hamper company-sponsored training
- Tales that poaching is less wide-spread in Germany and that this leads to high-training equilibrium (especially on apprenticeship level)
- But: No empirical studies on occurrence of poaching

Outlook

- Motivation
- Institutions
- Data
- Identification of poaching
- Firm characteristics
- Poaching and training intensity
- Conclusions

Theoretical Background

- Companies frequently invest in transferable and visible skills
- Coexistence of poaching and training is possibly or likely
- Poaching might hamper training intensity because returns to investments partly accrue to future employers

Institutional Framework

The apprenticeship training system is ideal to measure poaching:

- Unambiguous definition of training and skills (Vocational Training Act, central exams, monitored by chambers)
- Transferable and visible skills
- human capital investment
- Ex-ante non-contractible employment after training
- Exogenous timing and duration of training
- Homogenous group of training participants

Data

- LIAB Longitudinal Version 2, 1999-2003
- Cancel non-profit and agriculture firms
- regular apprenticeships:
 - Begins in September/ October
 - Duration between 2.5 and 3.5 years
 - max. 30 days interruption between apprenticeship training and first skilled job
 - terminates in the exam week
- Full-time employment in first job
- 2-digit occupational codes

Identifying Poaching

Mobility distribution of apprenticeship graduates

Stayer	72.53
Mover within 10 days, same occupation	10.97
Occupational Mover within 10 days	4.88
Mover, more than 10 days, same occupation	4.80
Occupational Mover, more than 10 days	5.54
Mover, no further employment spell	1.28

Identifying Poaching

Two conditions:

- The training firm wants to retain but cannot attract the best apprenticeship graduate (the best apprenticeship graduate leaves)
- The switching apprenticeship graduate receives a higher wage in the poaching firm than in the training firm (wage mark-up)

Consequence: sample only consists of firms that have at least one staying and one leaving apprentice per occupation and year

Identification of apprentice quality by apprenticeship wage

- Collective agreements set one wage for all apprentices in a firm
- But only 4.4 percent of the training firms pay all apprentices the same wage
- SD within one establishment/ occupation/ year cell around 10 percent of the total gross wage at the end of training spell
- Hypothesis: wage mark-ups are indicators of apprenticeship quality

Apprentices' wage structure

Test the explanatory power of the last apprenticeship wage for the first employment wage of stayers within a firm/ occupation cell

- Spearman Rank Correlation Test
- OLS regression of wage ranks

Second identification of poaching by skilled entry wages

- The highest wage of staying apprenticeship graduates in the same occupation reveals willingness to pay of the training firm
- Switcher has to earn more than stayer

Identifying Poaching

Combine the leaving best apprenticeship graduate and the wage mark-up conditions

Occupation	Proportion
Blue-collar occupations in manufacturing	0.110
White-collar occupations	0.057
Total	0.071

Firm characteristics of poaching victims

	Poaching victims (N= 186)	Non- poaching victims (N=5954)	T-Value of Mean Differences
Number of Employees	1608	662	3.55
Share of Apprentices	0.102	0.085	2.99
Share of Skilled Workers	0.652	0.662	0.74
Share of Part-Time Workers	0.113	0.098	1.43
Share of Employees who are older than 55	0.089	0.097	2.27
Collective Agreement	0.941	0.848	4.21
Works Council	0.892	0.831	2.63
Log(Investments per Capita)	14.53	13.56	4.54
Export Share	0.241	0.178	2.77
Tenure in days	3793	3516	2.38
Difference Experience and Tenure (days)	2169	2028	1.40

New apprentices in (t+1) on all employees

OLS estimates

	level		First difference
Firm is Poaching Victim	0.007 (3.50)		0.042 (2.03)
Poaching Victim in Blue-Collar Manufacturing Occupations			0.096 (2.06)
Controls	Yes		Yes
Number of Observations	4493		4493
R square	0.29		0.30

Standard errors clustered on establishment, t-values in parenthesis, further control variables: Firm size, Firm Size squared, Collective Bargaining Agreement, Works Council, Proportion of unskilled workers, skilled workers, high-skilled workers and workers which are older than 55 years on all employees, log of investments per capital; proportion of leaving and newly hired workers with an apprenticeship degree and work experience on all employees, 12 industry and 4 yeas dummies. Source: LIAB longitudinal version 2 1999-2003.

Apprentice wages in (t+1) on all employees

OLS estimates

	level		First difference
Firm is Poaching Victim	0.044 (0.19)		-0.342 (1.28)
Poaching Victim in Blue-Collar Manufacturing Occupations			1.208 (2.45)
Controls	Yes		Yes
Number of Observations	4493		4493
R square	0.19		0.20

Standard errors clustered on establishment, t-values in parenthesis, further control variables: Firm size, Firm Size squared, Collective Bargaining Agreement, Works Council, Proportion of unskilled workers, skilled workers, high-skilled workers and workers which are older than 55 years on all employees, log of investments per capital; proportion of leaving and newly hired workers with an apprenticeship degree and work experience on all employees, 12 industry and 4 yeas dummies. Source: LIAB longitudinal version 2 1999-2003.

Robustness Checks

- IV estimation of the training intensity
- Relax the poaching definitions
- Vary occupational codes

Conclusions

- Poaching and firm-sponsored training simultaneously exist
- Poaching is more likely a transitory event
- Poaching victims do not adjust new apprentices and apprentices wages
- Lower bound – analysis is restricted to large firms that are potential poaching victims

Vielen Dank für die Aufmerksamkeit
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Identifying Poaching

The best apprenticeship graduate leave

Apprenticeship graduates who earn more than all staying apprenticeship graduates within an occupation/ establishment cell at the end of the apprenticeship as a proportion of all immediate movers.

Occupation	Proportion
Blue-collar occupations in manufacturing	0.268
White-collar occupations	0.198
Total	0.246

Identifying Poaching

Wage mark-up

Apprenticeship graduates who earn more than all staying apprenticeship graduates within an occupation/establishment cell at the first full-time employment as a proportion of all immediate movers

Occupation	Proportion
Blue-collar occupations in manufacturing	0.397
White-collar occupations	0.167
Total	0.239



