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Institutions and Costs as Drivers for Enterprise Training?

Conference „New Insights in Training and Public Support for Lifelong
Learning in Enterprises“

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Structure of presentation

1. Background and research question
2. The data
3. Models and estimation results
4. Summary of results and research outlook

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Background

- CVT plays important role in European Employment strategy (**productivity, quality of work, lifelong learning, demographic change**)
- Large **differences** between European countries in CVT, but also between industries, firms of different size, employee participation rates
- **Two to three quarters** of the investments in training (CVT) in most European countries are borne by the employers (IALS, BIBB)
- Comparative **research** on firm-financed training on the basis of employer surveys and micro data is relatively scarce

Research questions

- How can the differences in training activities between countries be explained?
- Which are the **determinants** for the training participation rate?
- Are there **differences** between the compared countries?
- Where is the **scope for** (political) **action** for promoting training of the employed?

Approach

- **Institutional and Human capital approaches:** Crouch, Finegold, Sako (1999), Transitional Labour Markets and Social Risk Management (Schmid 2002, 2006), Becker 1964, Acemoglu/Pischke 1998
- Assumption: **Institutional and financial factors** influence training decisions → distinction between **institutional** factors, **financial** aspects and indicators for **innovation**
- Expectation (1): The higher the **cost** for training, the lower the training activity
- Expectation (2): **Collective training agreements** and **Training funds** have a **positive influence** on training participation in companies

Selection of countries

- **Sweden:** school based vocational education, strong state intervention in initial and vocational education, limited influence of unions on educational system, strong influence of companies on CVT system.
- **United Kingdom:** school based vocational education, weak influence of unions on educational system and limited state intervention. CVT system is dominated by the companies and the market.
- **Denmark:** dual vocational education, strong state intervention and corporatistic steering, strong union influence.
- **Germany:** dual vocational education, dominated by corporatist actors. CVT dominated by companies and the market, weak state intervention in CVT except active labour market policy.

Structure of presentation

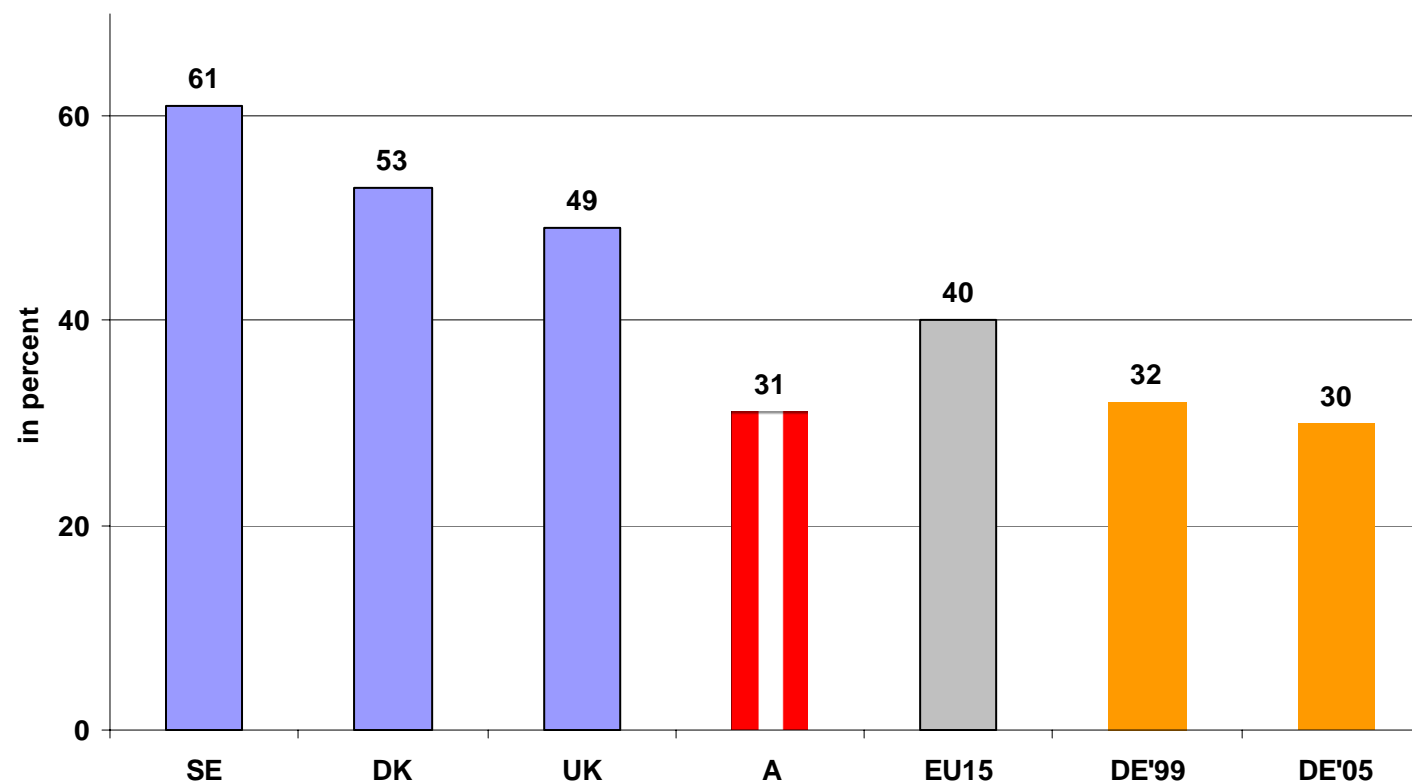
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Data base: 2nd Continuing Vocational Training Survey (CVTS2)

- Continuing Vocational Training Survey 2 (**CVTS2**) took place in 2000 in 25 European countries.
- For countries of interest (**Denmark, Sweden, UK, Germany**) micro data is available for econometric analyses.
- Statistical unit is the **company** (10 or more employees), contains field of economic activity (NACE 4digit), size and other structural indicators.
- Contains information about training policy, hours and costs of CVT courses, number of participants, average wage, male-female participation rates.

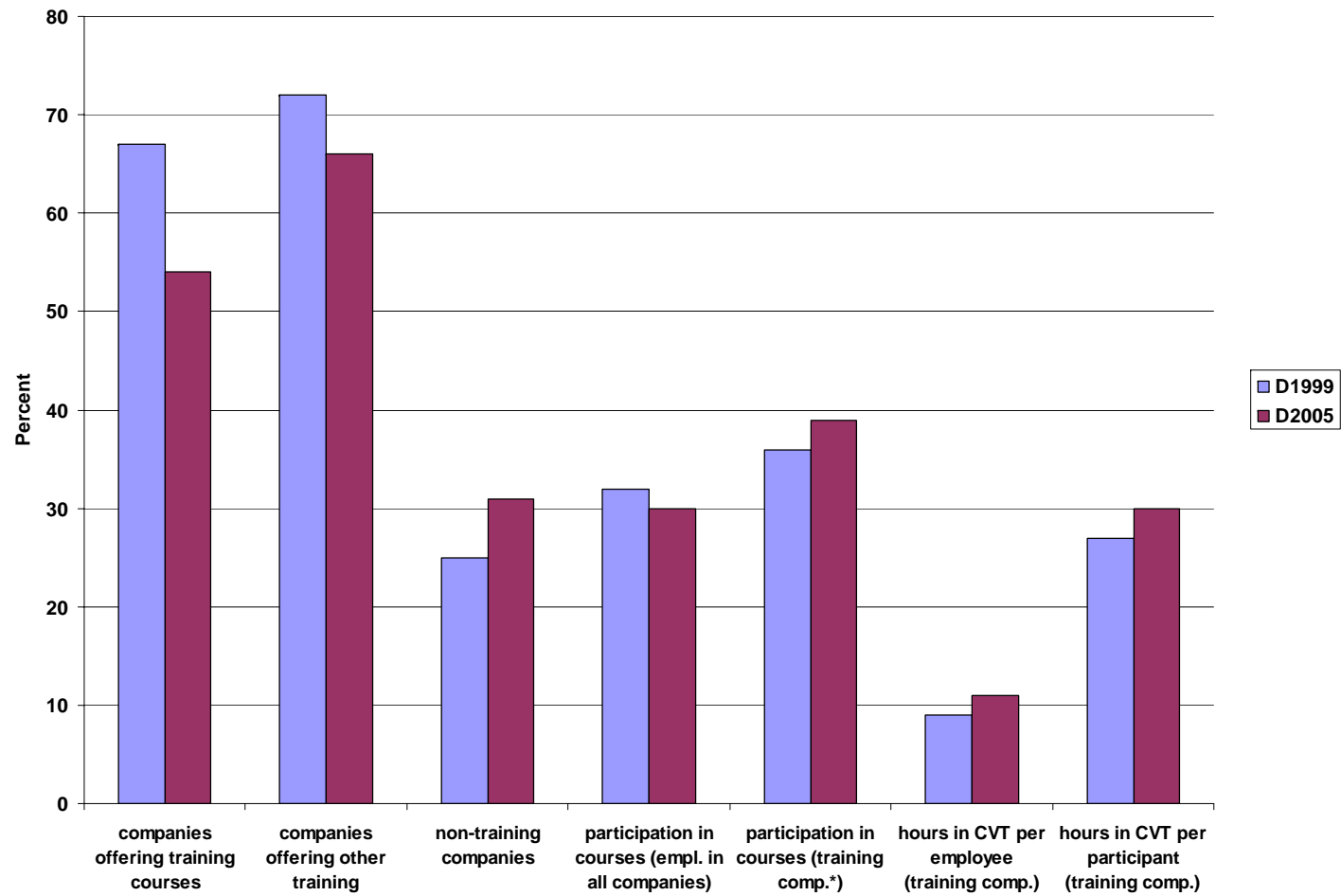
Participation rate in firm financed CVT 1999

(as per cent of all persons employed in companies with 10 or more employees)



Participation rate in CVT (all employees)

CVTS3 – First Results for Germany



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Model development

- Dependent variable is the **participation rate** in training among employees in companies providing training courses (= training participation rate)
- Factors that influence the training participation rate shall be estimated in a regression framework
- Estimates are influenced by **selection**, i.e. whether a company is offering training courses or not
- The selection process is interpreted as “**self-selection**” (Heckman 1979), where the dependent variable is censored due to non-randomly missing values in the independent variables

Variables of interest in Heckman correction model

Variable \ Land	DE		DK		SE		UK	
	OLS	SEL	OLS	SEL	OLS	SEL	OLS	SEL
Training agreement (y/n)	0.057*** (3.27)	0.461*** (3.50)	0.034 (1.43)	0.934*** (3.80)	0.062*** (4.21)	1.160*** (6.94)	0.409 (1.53)	0.406 (2.19)**
Initial training / apprenticeships as instrument to develop skills (y/n)	0.031** (2.16)	0.687*** (7.71)	0.015 (0.78)	0.274 (2.14)	0.029 (1.62)	0.347** (2.52)	-0.002 (-0.10)	0.038 (0.31)
Contributions to collective funds or subscriptions for CVT (y/n)	0.003 (0.12)	-	0.030 (1.39)	-	-0.026 (-0.58)	-	0.034 (1.51)	-
Receipts from public sources or funds for training (per employee in Euro, log)	0.030*** (2.95)	-	0.005 (1.10)	-	0.035*** (12.34)	-	-0.005 (-0.39)	-
Wage - average hourly wage of employees (in Euro, log)	0.066*** (4.11)	-	0.092*** (3.76)	-	0.116*** (5.90)	-	-	-
Direct costs of CVT-courses per hour (in Euro, log)	-0.053*** (-8.07)	-	-0.027*** (-3.97)	-	-0.068*** (-8.85)	-	-0.035*** (-4.85)	-
Introduction of new products (y/n)	0.017 (1.11)	0.406*** (5.67)	-0.021 (-0.85)	0.359* (1.81)	0.014 (0.86)	0.247** (2.15)	-	-
Introduction of new technologies (y/n)	0.044*** (3.00)	0.335*** (4.49)	0.031 (1.20)	0.007 (0.04)	0.050*** (3.17)	0.294*** (2.69)	0.065*** (2.68)	0.473*** (3.59)
Organisational change (y/n)	0.071*** (5.15)	0.452*** (5.82)	0.003 (0.14)	0.445** (2.31)	0.035** (2.45)	0.341*** (3.05)	0.013 (0.53)	0.502*** (3.20)

Summary of results

- Coefficient of indicator „training agreement“ is positive in all countries, but only in Germany and Sweden statistically significant.
- Results for the indicator „initial training“ are mixed – only in Germany positive and significant.
- Among the indicators in the mixed category, „receipts“ and „wage“ display some significant results with clear directions.
- The pure cost indicator „direct costs“ is positive and highly significant in all countries except UK.

Results – critical remarks

- Systems of vocational training are highly diverse – „initial training“ is difficult to compare.
- „Direct costs“ not only reflect the cost levels, but also the nature and selectivity of the training itself.
- „Wage“ also incorporates qualification and productivity which should be responsible for its positive influence.
- „Training agreements“ are highly depended on the institutional settings in the resp. countries. The indicator might also be very diverse within the countries (sectors).

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Summary of results

- At first glance, **costs** are more influential than institutional indicators.
- But: average cost for training courses reflect **selectivity of the training decisions** rather than cost consciousness (cf. Käßlinger 2007).
- And: **qualification** and expected **future productivity gains** exceed the costs of foregone production.
- Plus: costs of firms for initial training can not be made accountable for the lack of further training.
- Collective training agreements are related to the incidence and the participation rate of training in companies.

Outlook

- Development of a comprehensive training performance indicator, stronger focus on heterogeneity between firms.
- Inclusion of other context variables (unemployment level, union coverage, regional training initiatives).
- Utilization of firm panel data and/or data that links employer and employee data.
- CVTS3: age-structure, but not qualification of the trainees or employees! Data quality issues seem not solved in CVTS3.

Thank you for your attention!

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