New Forms of Work Organisation - German Experiences

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Agenda

1. Work Organisation in Germany – Recent Changes
2. Changes in German production model (DQP)?
3. Impact on work environment – preliminary conclusions
1. Background

• “Anti-Taylorist discourse” (humanisation of work) focusing on Group Work => underestimating company structures and market changes

• lean production- business process reengineering => “systemic” rationalisation approaches /production or value added processes

What has changed in Germany?
1. survey data 1997 / 1999: decentralisation on company level and workplace level
2. recent changes on workplace level (data 2003)
1.1 Organisational Change on Workplace Level  
(Source: Latniak, Kinkel & Lay 2002)

<table>
<thead>
<tr>
<th></th>
<th>wide definition</th>
<th>medium definition</th>
<th>narrow definition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of companies</td>
<td>% of companies</td>
<td>% of companies</td>
</tr>
<tr>
<td>Group work</td>
<td>1287 1442</td>
<td>57,1 64,1</td>
<td>37,3 46,8</td>
</tr>
<tr>
<td>Decentralisation of planning and control</td>
<td>1233 1393</td>
<td>34,2 39,3</td>
<td>11,8 14,4</td>
</tr>
<tr>
<td>Task integration at the workplace level</td>
<td>1242 1402</td>
<td>49,0 59,6</td>
<td>9,9 14,6</td>
</tr>
</tbody>
</table>

=> Slow diffusion of advanced forms of group work and task integration
### 1.2 Organisational Change on Company Level
(Source: Latniak, Kinkel & Lay 2002)

<table>
<thead>
<tr>
<th>Category</th>
<th>wide definition</th>
<th>medium definition</th>
<th>narrow definition</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% of companies</td>
<td>% of companies</td>
<td>% of companies</td>
</tr>
<tr>
<td>Reduction of hierarchy levels</td>
<td>1280</td>
<td>1409</td>
<td>1261</td>
</tr>
<tr>
<td></td>
<td>63,8</td>
<td>74,6</td>
<td>42,8</td>
</tr>
<tr>
<td></td>
<td>37,9 65,6</td>
<td>34,8 39,4</td>
<td>24,9 43,0</td>
</tr>
<tr>
<td>Use of production segments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central departments re-organised</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

=> Focus on structural changes on company level – market directed!
### 1.3 Tasks performed at the workplace – trends 1997-2003

*(source: Lay/Maloca 2005)*

<table>
<thead>
<tr>
<th>(%) of companies</th>
<th>in 2003</th>
<th>Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine leading</td>
<td>66%</td>
<td>reduction</td>
</tr>
<tr>
<td>CNC optimising</td>
<td>40%</td>
<td>stagnation</td>
</tr>
<tr>
<td>Quality</td>
<td>~33%</td>
<td>stagnation</td>
</tr>
<tr>
<td>Maintenance</td>
<td>35%</td>
<td>reduction</td>
</tr>
<tr>
<td>Detailed planning</td>
<td>7%</td>
<td>-</td>
</tr>
</tbody>
</table>
1.4 Task integration (in 2003, source: Lay/Maloca 2005)

Tasks performed at the individual workplace (% of companies, N = 866):
- Machine leading: 66%
- Leading + CNC optimising: 25%
- ... + Quality: 11%
- ... + Maintenance: 5%
- ... + detailed planning: 1%

=> Stagnating changes on workplace level since 2000
2. Diversified Quality Production (DQP) in Germany (e.g. Jürgens/Naschold 1994)

- Emphasis on technology (most advanced production technology, technical problem solution \(\rightarrow\) CIM/ “menschenleere Fabrik”, “over engineering”)
- Functional flexibility of staff – occupation based qualified work
- Integrated production – high degree of internal production of value added (car manufacturing 25%- machine tool industry 75%)
- Hierarchy, bureaucracy, functional structure of companies
### Changes in German “Production Model 2005”?

<table>
<thead>
<tr>
<th>“Traditional structure” of work organisation in Germany</th>
<th>“German Lean Model of Production”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stable market situation</td>
<td>Increasing price &amp; time &amp; quality based competition</td>
</tr>
<tr>
<td>Functional structure</td>
<td>Modular structure along “make or buy” decisions</td>
</tr>
<tr>
<td>High degree of internal production of value added</td>
<td>Process oriented structure</td>
</tr>
<tr>
<td>Stable sourcing relations – large internal buffers</td>
<td>Selective and strategic sourcing decisions</td>
</tr>
<tr>
<td>Management style based on directive and control in hierarchies</td>
<td>Introduction of integrated management systems</td>
</tr>
<tr>
<td>Quality guaranteed by intensive control measures ex post</td>
<td>Quality “is being produced” – introduction of integrated quality management systems covering the whole value chain/process chain</td>
</tr>
<tr>
<td>Low differentiation between core staff and peripheral staff – long job tenure</td>
<td>Increasing differentiation between core staff and periphery into differently tied sub-groups of employees – reduced staff (varying along sectors)</td>
</tr>
</tbody>
</table>

#### New Features

- **Management style**: Based on directive and control in hierarchies.
- **Selective and strategic sourcing decisions**.
- **Stable sourcing relations** and large internal buffers.
- **Modular structure along “make or buy” decisions**.
- **Process oriented structure**.
- **Introduction of integrated management systems**.
- **Quality “is being produced”** – introduction of integrated quality management systems covering the whole value chain/process chain.
- **Increasing differentiation between core staff and periphery into differently tied sub-groups of employees – reduced staff (varying along sectors)**.
- **Occupation-based qualified work as prerequisite to Diversified Quality Production (DQP)** for the core of the staff – low internal mobility, technical specialisation as option.
- **Working time patterns with a specific regulation of overtime, low degree of external flexibility**.
- **Occupation-based qualified work ("qualifizierte Facharbeit") as prerequisite to Diversified Quality Production (DQP) for the core of the staff** – low differentiation between core staff and peripheral staff – long job tenure.

#### New Flexibilities

- **Broad use of flexitime accounts (numerical flexibility)** by applying organisation of working times.
- **Modular structure along “make or buy” decisions**.
- **Process oriented structure**.
- **Increasing price & time & quality based competition**.
- **Changing structure of work organisation in Germany**.
- **Broad use of flexitime accounts (numerical flexibility)**.
2.1 Changes in Quality management

From quality control to quality production...

- Quality audits by the customer  ~60%

Active measures:
- Quality circles, CI teams  ~50%
- EFQM  18%
- CI processes initiated  ~65%


=> Integrated quality approaches widely applied
2.2 Changes in working time

• increasing application of working time accounts – cutting overtime costs; in 2003 (source: ISO 2004)
  - 41% of all companies
  - 68% of companies >500 employees

• Regular average working time is higher than contractual working time (comparatively low)

=> Internal numerical flexibility is widely reached through flexible working time arrangements - contractual working time is comparatively short but flexibly applied
2.3 Changes in Employment
(e.g. machine tool industry, source: IGM 2003)

productivity, turnover, production (net), employees

[Graph showing productivity, turnover, production (net), and employees from 1995 to 2002]
2.3 Changes in Employment
(e.g. machine tool industry, source: Franzki 2005, own translation)

*) statistical changes in 2002

Data source: Statistisches Bundesamt, Bundesanstalt für Arbeit, VDMA

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2.4 Impact on work situation

- 57% of employees who have a flexitime account and who can actively influence their working time work longer than contracted (ISO 2004, 102)

- Why?
  - “Otherwise the amount of work could not be managed.”
  - “Problems needed to be solved.”
  - “Work output would be inconvenient otherwise.”

=> “personnel policy of the bottom line” (Haipeter/Lehndorff 2004): Business units are operating with a minimum of personnel, buffering market fluctuations by increasing the intensity of work or the working time of the employees.
3. Preliminary conclusions (1)

- Process oriented structures widely applied, hierarchies and functionally defined borders were abolished => increasing market/customer orientation, importance of short delivery times and quality aspects by adopting elements of Lean Production (“hybrid”)

- Strong emphasis on individual functional flexibility based on skilled work, but organisational measures for ‘smarter use’ of HR are hardly applied => Instead, while people formerly tended to work in one unit, they now work all over the company

- Numerical flexibility is supported by widely used flexitime accounts reducing costs for overtime
3. Preliminary Conclusions (2)

- Production lines staffed with a minimum of workers who have work with high degrees of time flexibility
- Widely applied performance measurement in production; application of MbO (68% of the companies in 2001 + 12% intending to apply)
- Even ‘core’ employees can’t be sure whether their production unit will last (sourcing strategies, market development – varying according to sector)

⇒ Towards increasing insecurity of jobs and “intensity” of work instead of “sustainable work systems” (Docherty et al. 2002)
⇒ First indications for increasing degrees of strain and stress
That’s it...

Thank you very much for your attention!