Depreciation on Organisational Capital
A Micro-Level Analysis for Germany

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Presented by Erich Oltmanns

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The framework

Intangible capital (Corrado/Hulten/Sichel, 2009)

- Computerised information
- Innovative property
- Economic competencies
  - Brands
  - Organisational capital
  - Firm-specific human capital

Value of a team as part of organisational capital
Aim of the study

Assessment of depreciation rates for organisational capital
Focus on the value of a team
Have a look on

- Public influenced industries
- Comparision of results for Germany and the United States
Structure of the paper

Introduction
Background
Data
Results
Conclusions
Background

Explaining

- Organisational capital
- Capital value of a team
- Depreciation and asset’s service life

Why service life differ

The decline in value of organisational capital

- Normal wear and tear
- Obsolescence
What is „the team“?

Composition of the team?

Related to the management employees in a production unit

Should be subject to further variations

Operationalisation

- All employees in some occupations
- Employees with higher education in other branches
Table 1: Basic Team - management staff definition in INNODRIVE

<table>
<thead>
<tr>
<th>BKd88¹</th>
<th>description²</th>
<th>Management staff</th>
</tr>
</thead>
<tbody>
<tr>
<td>31-32</td>
<td>Agricultural engineers and administrators, a.s.</td>
<td>All</td>
</tr>
<tr>
<td>601-612</td>
<td>Engineers, physicists, mathematicians, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>681</td>
<td>Wholesale, retail trade agents, purchasing agents, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>682-688</td>
<td>Sales assistents, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>691-692</td>
<td>Banker, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>703</td>
<td>Advertising specialists, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>751-763</td>
<td>Chief executives, consultants, tax adviser, a.s.</td>
<td>All</td>
</tr>
<tr>
<td>771-773</td>
<td>Financial officers, chief accountants, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>781-782</td>
<td>Office executives, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>784-794</td>
<td>Office clerks, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>862-863</td>
<td>Chief executives, consultants of social institutions, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>911</td>
<td>Directors of hotels, restaurants, a.s.</td>
<td>High</td>
</tr>
<tr>
<td>921</td>
<td>Home economy administrators, a.s.</td>
<td>High</td>
</tr>
</tbody>
</table>

¹German classification of occupations (IAB 2008; chapter 5). - ²Translated from German. - All: All employees. - High: Employees with higher education (code numbers 4 to 6 in IAB 2008). - Low: Employees without higher education (all other code numbers).

Sources: IAB 2008, INNODRIVE 2011
„Public influenced industries“

No trivial task to differ the public and the private sector

Kind of production
- Non-market production of
  - General government
  - Private Non-profits
- Market production controlled by General Government

Operationalisation
- Majority of units is either non-market production
- or unit under control of governmental institutions
<table>
<thead>
<tr>
<th>Activities</th>
<th>Nace 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;All other activities&quot;</td>
<td>(AO)</td>
</tr>
<tr>
<td>Scientific research and development</td>
<td>MB</td>
</tr>
<tr>
<td>Public administration, defence; compulsory social security</td>
<td>O</td>
</tr>
<tr>
<td>Education</td>
<td>P</td>
</tr>
<tr>
<td>Human health activities</td>
<td>QA</td>
</tr>
<tr>
<td>Residential care, social work activities</td>
<td>QB</td>
</tr>
<tr>
<td>Creative, arts, entertainment activities; libraries, archives</td>
<td>R (1)</td>
</tr>
<tr>
<td>museums, other cultural</td>
<td></td>
</tr>
<tr>
<td>Gambling, betting activities; sports, amusement, recreation</td>
<td>R (2)</td>
</tr>
</tbody>
</table>
The data

EUKLEED

- Micro data set on employment, investment and output
- for about 1.6 million German establishments
- with around 40 million employment cases per year

Calculation of quit rates
Figure 1: Employment patterns over the year

- Person A
- Person B
- Person C - Firm 1
- Person C - Firm 2
- Person C - Firm 3

Timeline:
- January 1st 1999
- January 1st 2000
- January 1st 2001
- January 1st 2002
- January 1st 2003
- December 31 2003
Table 3: Aggregated results

<table>
<thead>
<tr>
<th></th>
<th>Averages 1999-2003</th>
<th>SPINTAN related industries¹</th>
<th>All other industries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Establishments</td>
<td>million</td>
<td>0.301</td>
<td>1.473</td>
</tr>
<tr>
<td>Employees</td>
<td>million</td>
<td>5.641</td>
<td>18.492</td>
</tr>
<tr>
<td>Management staff²</td>
<td>million</td>
<td>0.462</td>
<td>2.259</td>
</tr>
<tr>
<td>Management quits</td>
<td>million</td>
<td>0.059</td>
<td>0.295</td>
</tr>
<tr>
<td>Average establishment size</td>
<td>employees</td>
<td>19</td>
<td>13</td>
</tr>
<tr>
<td>Average management share</td>
<td>per cent</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Average management quit rate</td>
<td>per cent</td>
<td>13</td>
<td>13</td>
</tr>
</tbody>
</table>

¹ Nace 2 industries MB, O, P, Q, R. ² As defined in INNODRIVE (see table 1). - Sources: Eukleed, Own calculations.
Table 5: Comparison of depreciation rates for public influenced industries

<table>
<thead>
<tr>
<th>Public influenced industries - Nace 2</th>
<th>Depreciation rates in % of the team value</th>
<th>US NAICS 2007 - NACE Rev. 2 CORRESPONDENCE TABLE AT TWO-DIGIT LEVEL - primary links only²</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Germany¹</td>
<td>US²</td>
</tr>
<tr>
<td>Scientific research and development</td>
<td>72</td>
<td>19</td>
</tr>
<tr>
<td>Public administration, defence; compulsory social security</td>
<td>84</td>
<td>11</td>
</tr>
<tr>
<td>Education</td>
<td>85</td>
<td>20</td>
</tr>
<tr>
<td>Human health activities</td>
<td>86</td>
<td>13</td>
</tr>
<tr>
<td>Creative, arts, entertainment activities; libraries, archives museums, other cultural, gambling, betting activities; sports, amusement, recreation</td>
<td>90-93</td>
<td>24</td>
</tr>
</tbody>
</table>

¹ Non-weighted averages across all production units.
² Squicciarini/Le Mouel (2012), table 5.
³ Commission of the European Communities (2010).- Own calculations.
Figure 2: Quit rates for public influenced industries (weighted and not weighted)

- Scientific research and development (Nace2: MB)
- Public administration, defence; compulsory social security (Nace2: O)
- Education (Nace2: P)
- Human health activities (Nace2: QA)
- Residential care, social work activities (Nace2: QB)
- Creative, arts, entertainment activities; libraries, archives museums, other cultural (Nace2: R-1)
- Gambling, betting activities; sports, amusement, recreation (Nace2: R-2)

Quits in % of total management staff

- Basic staff (weighted)
- Basic staff (not weighted)
Comments/questions

Is it management only that makes the team?
Stages of a team
EUKLEED, INNODRIVE, SPINTAN?
Thanks for your attention!

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