

ADAPT CONFERENCE

“THE GREAT TRANSFORMATION OF WORK”

MANAGING LABOUR DURING PERIODS OF TIGHT LABOUR MARKETS AND AGEING POPULATIONS IN THE KNOWLEDGE-BASED ECONOMY

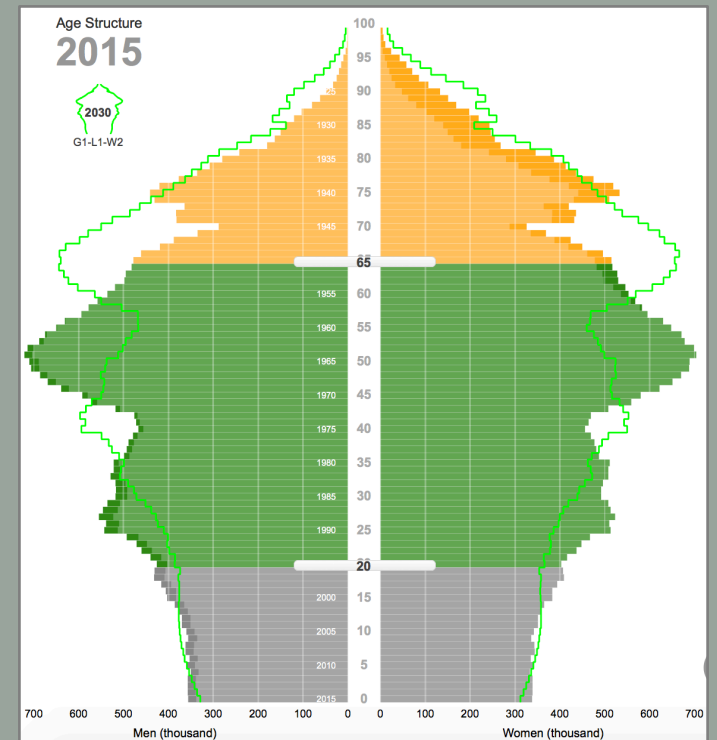
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I. TOPIC & MOTIVATION

German unemployment rate in comparison to the OECD (in %)



Main Labour Market Challenges:

- Demographic Change
- Increasing Knowledge Requirements

Kahlenberg and Spermann 2012;
Zimmermann 2013

Research Question:

- ❖ What strategies are organizations using to secure their skilled workforce in the knowledge-based economy and what role do older workers play within these strategies?

II. LITERATURE REVIEW

Older Workers in the Knowledge-Based Economy

- ❖ Knowledge intensity has not been considered by studies and organizational attitudes seem to vary (e. g. Taylor & Walker 1998; Chiu et al. 2001; Henkens 2005; Van Dalen et al. 2010):
 - Employers' perceptions correlate with positive attitudes:
 - Being reliable, flexible or less accident-prone
 - Employers' perceptions correlate with negative attitudes:
 - Being difficult to train or resentful of taking orders from younger people, or lacking enthusiasm for technological change
- ❖ Empirical research finds no statistical effect between proportions of older workers and IT-enabled productivity of firms (Bertschek & Meyer 2009)
- ❖ IT industry depends heavily on younger men (Platman & Taylor 2004)

III. METHODOLOGY

Methodological Approach builds on Henkens et al. 2008 and Taylor et al. 2013

- ❖ Identifying latent structures in organizations' labour management through factor analysis
- ❖ Using regression analysis to identify statistical association between strategies and predominant variables (resource constraints, product-market constraints and institutional constraints) that impact organizations
- ❖ Incorporation of sectoral knowledge-intensity by applying a OECD/EUROSTAT classification:
 - Manufacturing: high-technology, medium-high-technology, medium-low-technology, and low technology
 - Services: knowledge-intensive services and less knowledge-intensive services

IV. DATA

Survey

- ❖ IAB Establishment Panel (n= 15,283)
- ❖ Questions pertains to:
 - developments in employment
 - demand for personnel and labour expectations
 - status of and developments in technology and organisation
 - training and further training activities
- ❖ Included items on the demand for qualified labour in 2011 (cross-sectional analysis)
- ❖ Dependent variable:
 - Item: *“How important does your establishment/office consider the following measures to safeguard the skilled workforce within the establishment and to cover future skill needs?”*
- ❖ Sample composition (knowledge intensity):
 - 158 high tech; 840 medium-high tech; 674 medium-low-tech; 920 low-tech
 - 4,114 knowledge intense services; 4,008 less knowledge-intense services

V. RESULTS: FACTOR ANALYSIS

Organizational Strategies to Safeguard Skilled Labour:

- I. Improving workplace desirability
 - Enhance the desire of workers to stay with the organisation and increase the attractiveness for labour in the external labour market
- II. Collaboration and promotion
 - Cooperation with educational organisations, such as universities or chambers of commerce, to attract new talents or promote the public image of the employer
- III. Human capital development
 - Training activities for current and new non-skilled workers as well as development opportunities for the workforce (internal measures)
- IV. Increasing the supply of labour
 - Tapping into non-traditional sources of labour to satisfy demand for skilled labour

VI. RESULTS: REGRESSION ANALYSIS

Significant predictors of measures:

- ❖ Size of the Organisation: positively associated with all strategies
- ❖ Shortage of Skilled Workers: positively associated with all strategies
- ❖ Share of Skilled Workers: positively associated with strategies 1 to 3
- ❖ Share of Older Workers: negatively associated with all strategies
- ❖ Competitive Pressure: substantial pressure positively associated with all strategies
- ❖ Industrial Relations: positively associated to strategy 2 and 3

Knowledge-intensity of the sector:

- ❖ In particular medium-high technology manufacturing is positively associated with the strategies
- ❖ Knowledge-intense services are positively associated with strategies 1 to 3 and have overall higher coefficients than less knowledge-intense services

VII. LIMITATIONS & CONCLUSIONS

Limitations

- Variable “Retaining older skilled workers longer” had only moderate loading on factor 1
- Regression model needs to be extended (control for business performance, expected change in workforce size, reasons for difficulty filling skilled positions)

Conclusions

- Organisations that face difficulties to hire skilled workers rate measures to safeguard a skilled workforce as being more important
- Large organizations seem to have higher capabilities to safeguard a skilled workforce (particularly when it comes to human capital development)
- Competitive pressure seems to have a positive effect on strategies to safeguard skilled workforce
- Organizations that operate in knowledge-intensive sectors tend to safeguard skilled labour, particularly medium-high technology and knowledge intense service (findings in line with Leydesdorff/Fritsch 2006)
- The role of older workers in the knowledge-based economy seem ambiguous

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Thank you for your attention!

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BACKUP: CLASSIFICATION OF KBE (I)

Classification of the Knowledge-Based Economy	NACE-CODE (Rev. 2 codes)
High-Technology	<p>21 Manufacture of basic pharmaceutical products and pharmaceutical preparations</p> <p>26 Manufacture of computer, electronic and optical products</p>
Medium-high-technology	<p>20 Manufacture of chemicals and chemical products</p> <p>27 Manufacture of electrical equipment</p> <p>28 Manufacture of machinery and equipment n.e.c.</p> <p>29 Manufacture of motor vehicles, trailers and semi-trailers</p> <p>30 Manufacture of other transport equipment</p>
Medium-low-technology	<p>19 Manufacture of coke and refined petroleum products</p> <p>22 Manufacture of rubber and plastic products</p> <p>23 Manufacture of other non-metallic mineral products</p> <p>24 Manufacture of basic metals</p> <p>25 Manufacture of fabricated metal products, except machinery and equipment</p> <p>33 Repair and installation of machinery and equipment</p>
Low-technology	<p>10 Manufacture of food products</p> <p>11 Manufacture of beverages</p> <p>12 Manufacture of tobacco products</p> <p>13 Manufacture of textiles</p> <p>14 Manufacture of wearing apparel</p> <p>15 Manufacture of leather and related products</p> <p>16 Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials</p> <p>17 Manufacture of paper and paper products</p> <p>18 Printing and reproduction of recorded media</p> <p>31 Manufacture of furniture</p> <p>32 Other manufacturing</p>

BACKUP: CLASSIFICATION OF KBE (II)

<p>Knowledge-intense services</p>	<p>50 Water transport 51 Air transport 58 Publishing activities 59 Motion picture, video and television programme production, sound recording and music publishing activities 60 Programming and broadcasting activities 61 Telecommunications 62 Computer programming, consultancy and related activities 63 Information service activities 64 Financial service activities, except insurance and pension funding 65 Insurance, reinsurance and pension funding, except compulsory social security 66 Activities auxiliary to financial services and insurance activities 69 Legal and accounting activities 70 Activities of head offices; management consultancy activities 71 Architectural and engineering activities; technical testing and analysis 72 Scientific research and development 73 Advertising and market research 74 Other professional, scientific and technical activities 75 Veterinary activities 78 Employment activities 80 Security and investigation activities 84 Public administration and defence; compulsory social security 85 Education 86 Human health activities 87 Residential care activities 88 Social work activities without accommodation 90 Creative, arts and entertainment activities 91 Libraries, archives, museums and other cultural activities 92 Gambling and betting activities 93 Sports activities and amusement and recreation activities</p>	<p>Less Knowledge-intense services</p>	<p>45 Wholesale and retail trade and repair of motor vehicles and motorcycles 46 Wholesale trade, except of motor vehicles and motorcycles 47 Retail trade, except of motor vehicles and motorcycles 49 Land transport and transport via pipelines 52 Warehousing and support activities for transportation 53 Postal and courier activities 55 Accommodation 56 Food and beverage service activities 68 Real estate activities 77 Rental and leasing activities 79 Travel agency, tour operator and other reservation service and related activities 81 Services to buildings and landscape activities 82 Office administrative, office support and other business support activities 94 Activities of membership organisations 95 Repair of computers and personal and household goods 96 Other personal service activities 97 Activities of households as employers of domestic personnel 98 Undifferentiated goods- and services-producing activities of private households for own use 99 Activities of extraterritorial organisations and bodies</p>
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