Industrial policy challenges for the wood industries in the age of digitization and aging societies
Wood and furniture Industry

- Data – what do we talk about
- Development of the population in Europe
- State of digitization in Europe
- Summary and Conclusion

*) Source: Eurostat
What do we talk about

The Wood – Industry:

1. Forestry and logging

2. Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials

3. Manufacture of furniture

More than 2.5 Million employees in this sectors

*) Source: Eurostat
Data - Wood Industry

<table>
<thead>
<tr>
<th></th>
<th>Manufactur of Wood</th>
<th></th>
<th>Manufactor of furniture</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2011</td>
<td>2016</td>
<td>rate of change</td>
<td>2011</td>
</tr>
<tr>
<td>companies</td>
<td>185,000</td>
<td>170,849</td>
<td>-7,65%</td>
<td>126,000</td>
</tr>
<tr>
<td>employees</td>
<td>1,040,000</td>
<td>988,817</td>
<td>-4,92%</td>
<td>1,036,717</td>
</tr>
<tr>
<td>turnover in Millions</td>
<td>124,000</td>
<td>128,450</td>
<td>3,59%</td>
<td>94,000</td>
</tr>
</tbody>
</table>

*) Source: Eurostat
Wood and furniture Industry

Data – what do we talk about

Development of the population in Europe

State of digitization in Europe

Summary and Conclusion

*) Source: Eurostat
Population in Europe (1)

Population in Europe (2)

Graph I.6.8: Population age structure by major age groups, EU-27, 1990-2060 (%)

EU-27 excludes France’s overseas departments.

Source: Eurostat (online data codes: demo_pjan and proj_08c2150p)

*) Source: Eurostat
Wood and furniture Industry

- Data – what do we talk about
- Development of the population in Europe
- State of digitization in Europe
- Investment in research and development

*) Source: Eurostat
1. Die Vision Industrie 4.0 – Reifegradmodelle

„Industrie 4.0 ist eine Teilmenge der Digitalisierung“ (Anderl 2018)
2. Wandel von Industriearbeit: Widersprüchliche Prognosen

„Optimistische Sicht“

- Entstehung neuer Arbeitsplätze
- Aufwertung von Arbeit und steigende Qualifikationen
- Höhere Autonomie und Selbstorganisation
- Verbesserte Work-Life-Balance und lebensphasen-orientierte Arbeitsmodelle

„Pessimistische“ Sicht

- Weitreichende Jobverluste
- Entwertung von Facharbeit
- Erweiterte Kontrollpotentiale
- Digitale Fließbandarbeit, entgrenzte und prekäre Arbeit (Crowdwork)
2. Entwicklungsszenarien digitalisierter Arbeit

Substitution von Arbeit: Automated Factory

- Qualifiziertes und spezialisiertes Personal
- Ingenieure, Facharbeiter mit Zusatzqualifikation

Polarisierung von Arbeit

- Hochqualifizierte Experten, Ingenieure, Facharbeiter mit Zusatzqualifikation
- Dispositive Ebene
- Erosion mittlerer Fachqualifikation
- Angelemtete, abgewertete Fachkräfte
- Mittlere operative Ebene
- Untere ausführende Ebene

Upgrading von Arbeit

- Digital ermöglichte Kooperation unterschiedlich spezialisierter Beschäftigter
- Förderung interdisziplinärer kollektiver Intelligenz

Quelle: Eigene Darstellung
2. Wandel von Industrierearbeit: Beschäftigungsprognosen

Was uns vor Arbeitsplatzverlusten durch die Digitalisierung schützt

- zukunftsgerichtete Umstrukturierung
- visionäre Arbeitsmodelle
- mangelhafter Breitbandausbau

Wood Industry - Digitization

Next Generation Access

*Source: Eurostat*
 demands to be made to politicians

 necessity to improve the possibility for a life long learning

to improve the possibility for training for all people

*) Source: Eurostat
Wood and furniture Industry

- Data – what do we talk about
- Development of the population in Europe
- State of digitization in Europe
- Summary and Conclusion

*) Source: Eurostat
Wood Industry – summary and conclusion (1)

- Important industries in the countries because the most companies are in economically underdeveloped region
- Use one of the naturaly resources in Europe
- But also only a few big companies. The majority is of the companies is below 50 employees
- And with an older workforce as the majority of the branches in the manufacturing industry

*) Source: Eurostat
Wood Industry – summary and conclusion

- A lot of the companies are more handycraft
- A big investment backlog in a lot of companies
- Most of the employer don‘t know all the possibilities
- A lot of companies underestimate the online market‘s
- The companies are not prepared for the aging workforce
Thank you for your attention!

Questions
Wood Industry in the year 2016*)

- 170,849 Companies (-7,6% since 2008)
- 988,817 employees (-1,9% since 2008)
- 128,6 billions Euro turnover (-1,9 since 2008)
- but 5,5 % plus of productiveness since 2011
  (no former comparable datas available)

*) Source: Eurostat
Wood Industry

Development in the Wood-Industry in Europe

Source: Eurostat
## Wood Industry

### Turnover in Millions of Euro

<table>
<thead>
<tr>
<th>Country</th>
<th>Turnover in Millions of Euro 2008</th>
<th>Turnover in Millions of Euro 2016</th>
<th>Differenz since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>22.090</td>
<td>25.134</td>
<td>13,8</td>
</tr>
<tr>
<td>Italy</td>
<td>17.387</td>
<td>13.362</td>
<td>-23,2</td>
</tr>
<tr>
<td>France</td>
<td>13.148</td>
<td>11.735</td>
<td>-10,7</td>
</tr>
<tr>
<td>UK</td>
<td>10.184</td>
<td>10.959</td>
<td>7,6</td>
</tr>
<tr>
<td>Schweden</td>
<td>9.408</td>
<td>9.318</td>
<td>-1,0</td>
</tr>
<tr>
<td>Austria</td>
<td>7.374</td>
<td>8.388</td>
<td>13,7</td>
</tr>
<tr>
<td>Poland</td>
<td>7.411</td>
<td>8.323</td>
<td>12,3</td>
</tr>
<tr>
<td>Finnland</td>
<td>6.649</td>
<td>6.449</td>
<td>-3,0</td>
</tr>
<tr>
<td>Spain</td>
<td>10.074</td>
<td>6.172</td>
<td>-38,7</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>3.846</td>
<td>3.502</td>
<td>-9,0</td>
</tr>
</tbody>
</table>

*) Source: Eurostat
Wood Industry

<table>
<thead>
<tr>
<th>Employees</th>
<th>Differenz 2016 since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>134.980 - 140.679 4,2</td>
</tr>
<tr>
<td>Italy</td>
<td>155.252 - 107.819 -30,6</td>
</tr>
<tr>
<td>France*)</td>
<td>76.152 - 62.165 -18,4</td>
</tr>
<tr>
<td>UK</td>
<td>79.175 - 69.346 -12,4</td>
</tr>
<tr>
<td>Schweden</td>
<td>41.291 - 32.849 -20,4</td>
</tr>
<tr>
<td>Austria</td>
<td>36.284 - 32.752 -9,7</td>
</tr>
<tr>
<td>Poland</td>
<td>138.037 - 127.821 -7,4</td>
</tr>
<tr>
<td>Finnland</td>
<td>28.815 - 19.785 -31,3</td>
</tr>
<tr>
<td>Spain</td>
<td>90.580 - 49.528 -45,3</td>
</tr>
<tr>
<td>Czech Republic</td>
<td>66.139 - 54.801 -17,1</td>
</tr>
</tbody>
</table>

*) no data in 2008 and 2016

Source: Eurostat
Wood and furniture Industry

Furniture Industry in the year 2016*)

- 120.00 Companies  (-6,4% since 2008)
- 1.000.000 employees  (-17,1% since 2008)
- 1.000 billions Euro turnover  (-13,2 since 2008)
- but 9 % plus of productiveness since 2011
  (no former comparable datas available)

*) Source: Eurostat
Furniture Industry

Development in the furniture industry

Source: Eurostat
Furniture Industry

Turnover in Millions of Euro

<table>
<thead>
<tr>
<th>Country</th>
<th>2008 Turnover</th>
<th>2016 Turnover</th>
<th>Difference since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>22,982</td>
<td>22,666</td>
<td>-1,4</td>
</tr>
<tr>
<td>Italy</td>
<td>25,811</td>
<td>21,625</td>
<td>-16,2</td>
</tr>
<tr>
<td>UK</td>
<td>11,547</td>
<td>10,540</td>
<td>-8,7</td>
</tr>
<tr>
<td>Poland</td>
<td>7,853</td>
<td>10,091</td>
<td>28,5</td>
</tr>
<tr>
<td>France</td>
<td>8,866</td>
<td>7,338</td>
<td>-17,2</td>
</tr>
<tr>
<td>Spain</td>
<td>9,756</td>
<td>5,094</td>
<td>-47,8</td>
</tr>
<tr>
<td>Netherlands</td>
<td>3,401</td>
<td>3,647</td>
<td>7,2</td>
</tr>
<tr>
<td>Austria</td>
<td>3,395</td>
<td>3,273</td>
<td>-3,6</td>
</tr>
<tr>
<td>Sweden</td>
<td>2,949</td>
<td>2,905</td>
<td>-1,5</td>
</tr>
<tr>
<td>Belgium</td>
<td>2,523</td>
<td>2,309</td>
<td>-8,5</td>
</tr>
</tbody>
</table>

*) Source: Eurostat
Furniture Industry

Employees

<table>
<thead>
<tr>
<th>Country</th>
<th>Employees 2008</th>
<th>Employees 2016</th>
<th>Differenz since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td>152,275</td>
<td>141,910</td>
<td>-6,8 €</td>
</tr>
<tr>
<td>Italy</td>
<td>189,707</td>
<td>134,367</td>
<td>-29,2 €</td>
</tr>
<tr>
<td>UK</td>
<td>95,847</td>
<td>88,414</td>
<td>-7,8 €</td>
</tr>
<tr>
<td>Poland</td>
<td>158,893</td>
<td>182,091</td>
<td>+14,6 €</td>
</tr>
<tr>
<td>France</td>
<td>62,240</td>
<td>47,063</td>
<td>-14,4 €</td>
</tr>
<tr>
<td>Spain</td>
<td>115,808</td>
<td>57,840</td>
<td>-58,0 €</td>
</tr>
<tr>
<td>Netherlands</td>
<td>27,425</td>
<td>23,998</td>
<td>-3,4 €</td>
</tr>
<tr>
<td>Austria</td>
<td>31,767</td>
<td>27,329</td>
<td>-4,4 €</td>
</tr>
<tr>
<td>Sweden</td>
<td>18,480</td>
<td>15,368</td>
<td>-3,1 €</td>
</tr>
<tr>
<td>Belgium</td>
<td>14,994</td>
<td>12,586</td>
<td>-2,4 €</td>
</tr>
</tbody>
</table>

*) no data in 2008 and 2016

Source: Eurostat
Wood and Furniture Industry

- Not one of the european country‘s are on the level before the crisis 2009

- The highest lost was with the workingplaces

- The turnover is almost as high as before the crisis

  but

- There was a shift within Europe