

**Aim**

The economic crisis of the decade has put at risk the systems of the welfare state of some countries. One of the measures that has been to extend the working life of employees, for this reason it is essential to ensure sustainable working conditions that do not harm health. This paper analyses which labour conditions are most related to the perception of work stress, and compare them over the decade 2005-2015.

**Job stress models**

**Demand-Control-Support model (Karasek, 1979)**
- High stress jobs: Active jobs
- Low stress jobs: Passive jobs
- Job decision latitude

**Effort-Reward Imbalance Model (Siegrist, 1996)**
- High workload
- Time pressure
- Responsibilities
- Over-time
- Interactions
- Disturbances

**Jobs Demand-Resources Model (Demerouti et al., 2000)**
- Job demands
- Diminished energy/health
- Outcomes

**Material and Methods**

1) **Data:** European Working Conditions Surveys (ECWS) 2005, 2010 and 2015. These collect information on individual characteristics of workers, the workplace, psychosocial factors and working hours. Sample: Non self-employed of 15-64 years old in EU28.

2) **Descriptive analysis:**
- Age - sex groups.
- Work stress = 1 if the worker declares that he/she experiences stress in his/her job always or most of the time.
- Five job quality indices synthesize information of sixty-five questions:
  - Work intensity (0+, 100-);
  - Physical environment (0-, 100+);
  - Working time quality (0-, 100+);
  - Skills and discretion (0-, 100+);
  - Prospects (0-, 100+)

**Mean (standard deviation) of indices by wave**

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
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<tbody>
<tr>
<td>Work intensity (9 questions)</td>
<td>44.0 (25.5)</td>
<td>42.9 (25.0)</td>
<td>43.4 (25.1)</td>
</tr>
<tr>
<td>Physical Environmental (13 questions)</td>
<td>82.2 (15.6)</td>
<td>83.2 (14.8)</td>
<td>83.5 (14.6)</td>
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<tr>
<td>Working time quality (19 questions)</td>
<td>85.9 (21.1)</td>
<td>87.0 (20.0)</td>
<td>86.3 (20.0)</td>
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<tr>
<td>Skills and discretion (11 questions)</td>
<td>60.7 (28.0)</td>
<td>61.9 (28.4)</td>
<td>65.2 (27.6)</td>
</tr>
<tr>
<td>Prospects (9 questions)</td>
<td>67.4 (19.9)</td>
<td>67.4 (19.5)</td>
<td>70.3 (20.5)</td>
</tr>
</tbody>
</table>

**3) Micro econometric models:** In order to capture the within-country variance and between-country variance, we have estimated a multilevel logit random intercept model.

\[
Prob\ (Stress) = \beta_0 + \beta_1 \cdot X_{ij} + \beta_2 \cdot Z_{ij} + \epsilon_{ij}
\]

- \(i\) - Level 1 - Employees.
- \(j\) - Level 2 - Countries EU28.
- \(X_{ij}\) - Explanatory variables at the employee level.
- \(Z_{ij}\) - Explanatory variables at the country level.

**Conclusions**

- Women are more likely to suffer stress. The probability has increased in the service sector from 2005 to 2010. High educational level and income correlate with a higher probability of stress.
- In 2005, the job quality index with the greatest influence on stress was the physical environment. Since 2010, the most relevant index is the intensity at work.
- Work stress increases and is negative for workers’ welfare because it affects health; it is costly for companies to decrease productivity and increase absenteeism; and for society it means an increase in healthcare costs and social benefits.