TRAILS

Enabling Data Analytics for Actions Tackling Skills Shortages & Mismatch

PRESS RELEASE

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TRAILS Research Highlights the Consequences of Skills Mismatch for Workers' Wages, Wellbeing and Resilience

The TRAILS project has published a new research report examining how educational and skills mismatch affect workers across European countries, sectors and regions. Deliverable D3.3 – COMPARE III: Regional and sectoral analysis of training and inclusiveness explores the consequences of being overqualified or underqualified for a job, how different approaches to measuring mismatch can lead to different conclusions, and the role of training in addressing these challenges.

Drawing on European Skills and Jobs Survey data and the TRAILS-I survey covering 31 European countries, the report provides new evidence on the relationship between education, skills utilisation, wages, job satisfaction, job security, learning opportunities and workers' economic resilience. The findings underline the importance of looking beyond formal qualifications to understand whether people's skills are adequately recognised, used and developed in the workplace.

Measuring skills mismatch: different approaches, different conclusions

One of the report's key findings is that skills and educational mismatch are not always straightforward to identify. The research compares two approaches: a subjective measure, based on employees' perceptions of the education required to do their jobs, and a statistical measure, based on the typical level of education within their occupation.

The results show that the two approaches classify employees differently in more than half of cases (52%). While approximately 60% of employees are considered matched under the subjective measure, this falls to 38% under the statistical approach. Using a combined measure that identifies workers whose mismatch status is consistent across both approaches, 55% of employees are classified as matched.

These differences highlight the importance of how mismatch is measured when analysing labour-market inequalities and designing policies. Relying on a single measure may overlook important differences in workers' experiences and the challenges they face.

Overeducation is associated with significant wage penalties

The report also examines how educational mismatch is associated with workers' wages, job satisfaction and perceptions of job security. The findings show that overeducated employees face considerable disadvantages compared with workers with the same level of education who are employed in matched jobs.

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Using the combined mismatch measure, overeducated employees earn approximately 28% less than their matched counterparts. This wage penalty is substantially higher than the estimates obtained using the subjective or statistical measures separately, suggesting that a more consistent identification of mismatch can reveal stronger labour-market disadvantages.

The effects are particularly pronounced in sectors such as transport and storage, wholesale and retail, real estate, and arts and entertainment, where overeducated workers also tend to report greater concerns about job security.

The research further shows that overeducation is often severe, with many workers holding qualifications considerably above the level required for their jobs. In several European countries, including Czechia, Bulgaria, Slovakia and Romania, around 80–90% of overeducated employees are classified as severely overeducated.

Training can help address educational gaps and improve labour-market outcomes

Training emerges as an important factor in addressing educational mismatch and improving workers' labour-market outcomes. The report finds that employees who are undereducated for their jobs earn approximately 11% less than comparable employees with the required level of education. However, job-related training can help mitigate this wage deficit, with the estimated wage benefit of training being similar in magnitude to the penalty associated with undereducation.

The findings also indicate that training is associated with higher wages across different mismatch categories, reinforcing the importance of access to learning and skills development throughout working life.

However, the report highlights that training alone may not be sufficient to address all forms of mismatch. Some workers lack skills required by their jobs, while others possess skills and qualifications that are not fully used. These situations require different responses, ranging from targeted training and upskilling to better job design, task allocation and opportunities for career progression.

Understanding skills utilisation, learning and resilience across Europe

Using TRAILS-I data, the report extends the analysis to skills utilisation, reported skill gaps, learning participation, labour-market resilience and financial resilience across European countries, regions and sectors.

The findings show that educational mismatch, skill gaps and skills utilisation are related, but they are not interchangeable. Workers who consider themselves underqualified tend to report more skill gaps, particularly in digital, technical and customer-handling skills. At the same time, workers who feel overqualified are more likely to report that their skills are only partially used or not used at all.

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This distinction is important because unused skills and missing skills can coexist within the same labour market, and even within similar occupational groups. Understanding these differences can help identify whether workers need additional training, better opportunities to apply their existing skills, or both.

The report also identifies geographical and sectoral differences in mismatch, suggesting that labour-market challenges are not evenly distributed across Europe. Regional and local evidence can therefore play an important role in identifying specific needs and developing more targeted interventions.

Supporting more inclusive and responsive skills policies in Europe

Together, the findings of Deliverable D3.3 contribute to ongoing discussions on skills development, education and training, labour-market inclusion and economic resilience in Europe. They highlight the need for policies that recognise the diversity of workers' experiences and distinguish between qualification mismatch, skills shortages and skills underutilisation.

The research provides evidence to support regional and local authorities in identifying areas with concentrated mismatch, training providers in responding to specific skills gaps, and employers in improving skills utilisation through training, job redesign and internal mobility.

By connecting skills mismatch with wages, wellbeing, learning opportunities and resilience, TRAILS contributes to a better understanding of how European labour markets can make more effective use of people's skills while supporting more inclusive and sustainable employment outcomes.

ABOUT TRAILS

TRAILS is funded under the Horizon Europe Research and Innovation Programme, Thematic Priority "Innovative research on social and economic transformations" and will last three years (2024-2027).

TRAILS seeks to build on current data in skills mismatches and create novel tools and databases, harnessing the power of Artificial Intelligence. It will empower Vocational and Adult Education training to match employers with educational opportunities to reallocate workers efficiently.

The consortium is led by the Democritus University of Thrace (D.U.Th, Greece), in partnership with the Università degli Studi di Napoli Federico II / Centre for Studies in Economics and Finance (UNINA/ CSEF, Italy), IPSOS NV (Belgium), the Economic and Social Research Institute LBG (ESRI, Ireland), SKILLAB BV (Skillab, the Netherlands), University of Tilburg (TiU, the Netherlands), European Association of Regional & Local Authorities for Lifelong Learning (EARLALL, Belgium), and the Aristotle University of Thessaloniki (AUTH, Greece).

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For more information, please visit the TRAILS website(https://www.trails-project.eu/) and social media channels.

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