

The logo features two interlocking puzzle pieces, one white and one dark blue, forming a stylized '2'. This is set against a background of many thin, curved lines that create a sense of depth and movement, resembling a funnel or a wide, shallow bowl. Below the puzzle pieces, the text 'Skills2Capabilities' is written in a bold, dark blue, sans-serif font.

Skills2Capabilities

European workforce – untapped potential? Comparing distribution and effects of *skills mismatch* and *educational mismatch*

Liisa Martma (liisa.martma@tlu.ee)

Ellu Saar (ellu.saar@tlu.ee)

Triin Roosalu (triin.roosalu@tlu.ee)

December 2023

Introduction

This preliminary analysis is part of the new [Skills2Capabilities](#) project, which aims to understand how skill systems across Europe can reduce the level of skills mismatch in their labour markets and respond better to meeting skill demands in a more fluid labour market environment. While researchers and politicians have addressed issues related to achieving *right mix of skills* and avoiding *skills mismatches* from an economic perspective, focusing on jobs, careers and labour market demands, the effects of skills mismatches may extend beyond the realms of the economy and labour market. Recent literature highlights that skills are also a primary source of well-being and societal flourishing. This perspective aligns with the capability approach, allowing the Skills2Capabilities project to go beyond the economic and instrumental viewpoints in understanding skills formation and considering other roles of skills as well.

The current analysis presents the initial findings within Work Package 5, “*Drivers and effects of skills mismatch*,” focusing on the distribution and effects of educational and skills mismatch. It is based on pooled data from the 2014 European Skills and Jobs Survey across 28 countries. The results unveil patterns that shed light on workforce mismatch status and distribution, as well as changes in job roles and job satisfaction among both matched and mismatched workers.

1. Definitions

Although educational attainment may provide an indication of individuals’ skills, it is crucial to make a clear distinction between these two concepts. Skills, especially in a specific field, may not be directly related to individuals’ level of education, as they can be acquired not only through formal education but also through work experience or alternative pathways. Furthermore, individuals with educational degrees in the same field, may pursue distinct career paths or occupations. Consequently, individuals with the same level of educational attainment may significantly differ in terms of their actual skills and the requirements of their jobs.

There are **different approaches** (self-assessment, normative and statistical) for measuring mismatches. In the following analyses, we are using the self-assessment approach where mismatch is derived from workers’ responses to a question on the self-perceived match between their level of education or skills and the level required by their job.

In this analysis **educational mismatch** is calculated using two variables. The first variable inquires about the ISCED qualification level needed to obtain the job¹, while the second variable indicates the individual's highest level of education. Employees whose educational level exceeds the level needed to obtain the job are considered overeducated. Individuals with an educational level that aligns with the required level are defined as having matched education, and those with an educational level lower than required are defined as undereducated.

Two different measures of **skills mismatch** are employed in the subsequent analyses. For analysis showing different distributions of skills (mis)matches or changes in job roles, we used the variable that asks individuals about their skills (mis)match status when they started their job with the current employer². Additionally, for measuring job satisfaction, we used the variable that assessed skills (mis)match status at the time of the survey³.

2. Distribution of educational mismatch

Figure 1 shows that across Europe, in terms of educational mismatch, 15% of employees are overeducated, 25% are undereducated, and 60% possess an educational level aligned with the requirements needed to obtain the job.

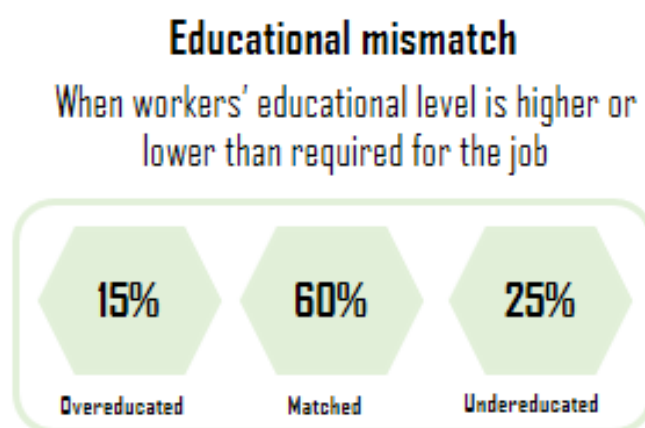


Figure 1. Distribution of educational mismatch.

Notes: Own calculations based on the 2014 Skills and Jobs Survey data.

¹ Q19 “ISCED_Qualification needed to get job.”

² Q30 “When you started your job with your current employer, overall, how would you best describe your skills in relation to what was required to do your job at that time?”

³ Q24 “Overall, how would you best describe your skills in relation to what is required to do your job?”

3. Changes in job roles among employees experiencing educational mismatch

The analysis of changes in job roles, exploring developments in the job role since the beginning of employment, indicates that employees who are **undereducated**, as well as those with a **matched educational level** for their job, demonstrate higher rates of promotion. Conversely, **overeducated individuals**, are more likely to have their roles remain unchanged.

4. Distribution of skills mismatch

Figure 2 shows the distribution of skills mismatch: 27% of employees consider themselves overskilled, while 22% are underskilled, leaving a majority (51%) with matched skills.

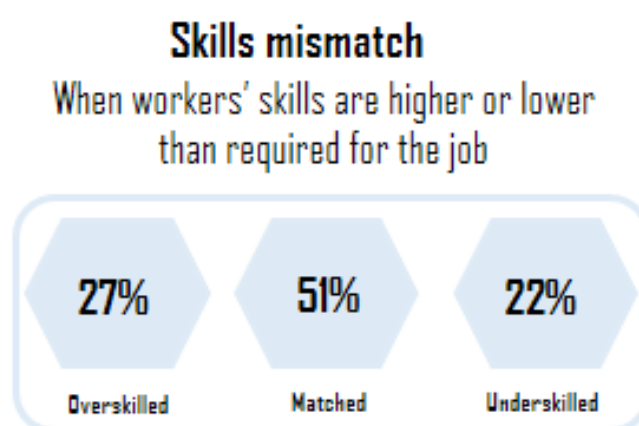


Figure 2. Distribution of skills mismatch.

Notes: Own calculations based on the 2014 Skills and Jobs Survey data.

5. Changes in job roles among employees experiencing skills mismatch

The results of the analysis of the data on changes in job roles further reveal that **underskilled** employees experience higher rates of promotion and departmental shifts compared to those with **matched skills** or who are **overskilled**. Meanwhile, individuals with **matched or overskilled skills** exhibit greater role stability.

6. Distribution of skills and educational mismatch combinations

Since educational and skills mismatch are not mutually exclusive, it is also important to examine the **combination of skills and educational mismatch**. The results in Figure 3 show that, notably, 32% fall into the category of having both matched education and skills. The other

most frequent combinations involve a mix of matched skills or educational levels with some form of mismatch.

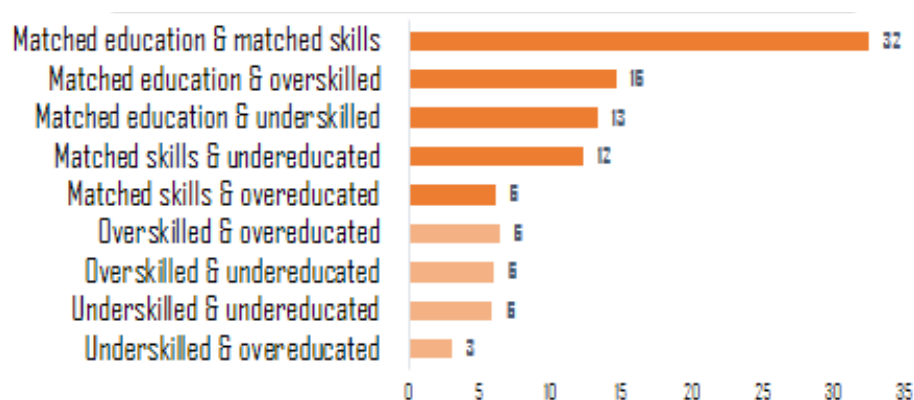


Figure 3. Combination of skills and educational mismatch (%).

Notes: Own calculations based on the 2014 Skills and Jobs Survey data.

7. Job satisfaction by combination of skills and educational mismatch

In the concluding figure of the infographics, **job satisfaction**, measured on a 0-10 scale (where 10 signifies very satisfied and 0 represents very dissatisfied), is presented along with its variations linked to the combination of skills and educational mismatch. The results reveal four distinct groups:

The **first group**, consisting of individuals facing both overeducation and overskilling, exhibits the lowest job satisfaction compared to the other groups. In the **second group**, individuals experience opposing mismatches — some are undereducated yet overskilled, while others are overeducated but underskilled. Moving to the **third group**, it includes individuals experiencing a mix of matching and mismatching. This includes those with matched education but who are overskilled and individuals with matched skills but who are undereducated. Job satisfaction in groups 2 and 3 is moderately higher than in the first group, with the second and third groups exhibiting a similar level of job satisfaction with each other. The **fourth group** encompasses individuals with various combinations: matched skills and undereducated, undereducated and underskilled, matched education but underskilled, and those with both matched education and skills. Remarkably, this group displays the highest job satisfaction compared to the other three groups.

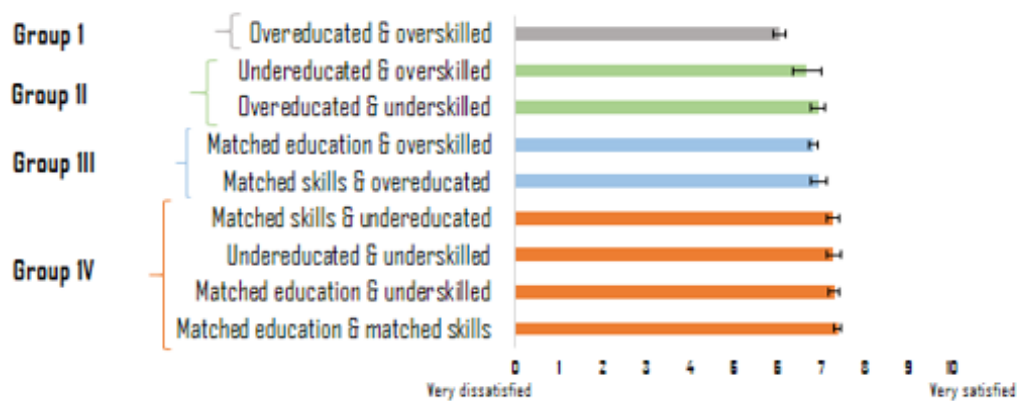


Figure 4. Job satisfaction by combination of skills and educational mismatch

Notes: Own calculations based on the 2014 Skills and Jobs Survey data.

Summary

The preliminary results show that both educational mismatch and skills mismatch are widespread among the workforce, rather than being limited to small minorities. The findings reveal that employees with an educational level lower than needed for the job, as well as those whose educational level matches the requirements, experience higher rates of promotion. Similarly, the results indicate that underskilled employees undergo more promotions and departmental shifts compared to those who are overskilled or who possess matched skills. Individuals with matched skills or who are overskilled, as well as overeducated individuals, are more likely to have their roles remain unchanged. These findings suggest that, in terms of career progression, those employees who are undereducated or underskilled, have an increased chance of reaching higher job positions. While overskilled and overeducated employees are more likely to exhibit greater stability in their job roles.

Overall, the results also indicate that individuals who possess both a matched educational level and skills for their job are more satisfied with their job. Furthermore, the combination of matching skills or education, even when coupled with underskilling or undereducation, and surprisingly, also the combination of being undereducated and underskilled, proves to result in higher job satisfaction from the employees' perspective. This implies that employees are more satisfied in their job when they feel that they have not met all the requirements and when they believe there are more things they need to learn for doing the job.

In the next steps of the analysis, we explore the reasons why people find themselves in mismatched job positions, along with the importance of factors influencing job acceptance. We also analyse various types of skills mismatch (e.g. ICT, numeracy, communication skills etc.)

and their significance in their job roles, examining how they vary across occupational positions and fields. Additionally, we delve into skill development and learning possibilities in the workplace, exploring how they differ based on individuals' skills and educational (mis)match status and other characteristics.