

# Skill mismatch: what do we know and what do we need to know?

## DATE

Tuesday 7th November 2023

## Event

Tackling the Digital Divide in  
the EU and Beyond

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# What is a Skills Mismatch?

<b>Overeducation</b>	<b>Describes a situation where a worker has surplus educational qualifications relative to those required to either do, or get, their current job.</b>
<b>Undereducation</b>	<b>Describes a situation where a worker has insufficient educational qualification relative to those required either to do, or get, their current job</b>
<b>Overskilling</b>	<b>Describes a situation where a worker is deemed to have excess skills or competencies relative to what is required to competently do their current job.</b>
<b>Underskilling:</b>	<b>Describes a situation where a worker is deemed to have deficit skills or competencies relative to what is required to competently do their current job.</b>
<b>Horizontal mismatch</b>	<b>Describes a situation where a worker is employed in a job that is not related to the main field of study of their highest qualification.</b>
<b>Skills gap</b>	<b>Describes a situation where an employer perceived that members of their workforce do not possess the required skills or abilities to competently undertake their current jobs (related to the concepts of undereducation and underskilling only measured from the perspective of the employer</b>
<b>Skills shortages</b>	<b>Describes a situation where an employer is having difficulty filling a job vacancy as a consequence of a shortage of suitably qualified / skilled external candidates.</b>

# What is the evidence?

(based on a review of published research 2006-2017)

Type of mismatch	Number of studies
<b>Overeducation</b>	98
<b>Undereducation</b>	30
<b>Overskilling</b>	22
<b>Underskilling</b>	3
<b>Horizontal mismatch</b>	17
<b>Skill shortages</b>	11
<b>Skill gaps</b>	6
<b>Skill obsolescence</b>	5

Source: McGuinness, Pouliakas & Redmond (2017)

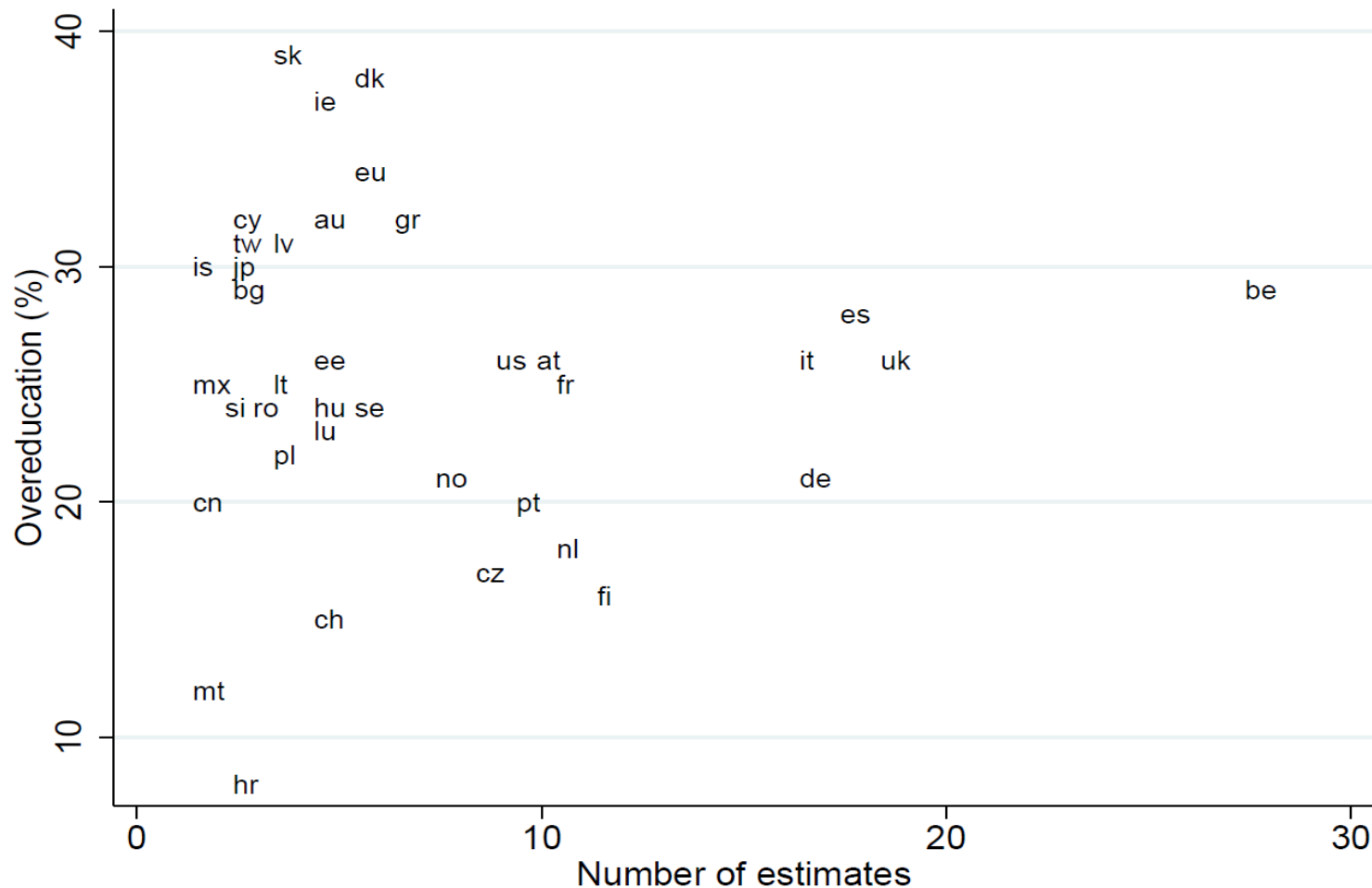
# What is the evidence?

(based on a review of published research 2017-2022)

Type of mismatch	Number of studies
<b>Overeducation</b>	46
<b>Undereducation</b>	3
<b>Overskilling</b>	6
<b>Underskilling</b>	2
<b>Horizontal mismatch</b>	4
<b>Skill shortages</b>	2
<b>Skill gaps</b>	1
<b>Skill obsolescence</b>	3

Source: McGuinness et al (forthcoming)

# Relationship between the evidence base and the scale of the problem?



# What stylised facts emerge from the review? - I

- **Overeducation:** Average incidence of 25% (based on 241 estimates from 37 countries) with an average wage penalty of 13.5% (based on 61 estimates)
- **Undereducation:** Average incidence of 16% (based on 47 estimates from 18 countries). Evidence w.r.t. earnings is mixed ranging from zero impact to a small premium
- **Overskilling:** Average incidence of 21% (based on 21 studies, 9 of which relate to Australia). Average wage penalty of 7.5%
- **Underskilling:** Average incidence of 25.5% (based on 3 studies covering multiple countries) with no consistent evidence of an impact on earnings

# What stylised facts emerge from the review? - II

- **Horizontal mismatch:** Average incidence of 37.3% (based on 27 estimates). No consistent evidence of a wage impact
- **Skill gaps:** Little consistent international evidence in terms of either incidence or impacts on firm-level performance
- **Skill Shortages:** Difficult to get a single figure due to differing measurement approaches (difficult to fill, hard to fill, unfilled) and a thin evidence base (13 studies)
  - 47% of firms recruiting HE graduates reported recruitment difficulties in a 2010 Eurobarometer survey
  - Only a small number of studies provide evidence that skill shortages negatively impact firm-level productivity

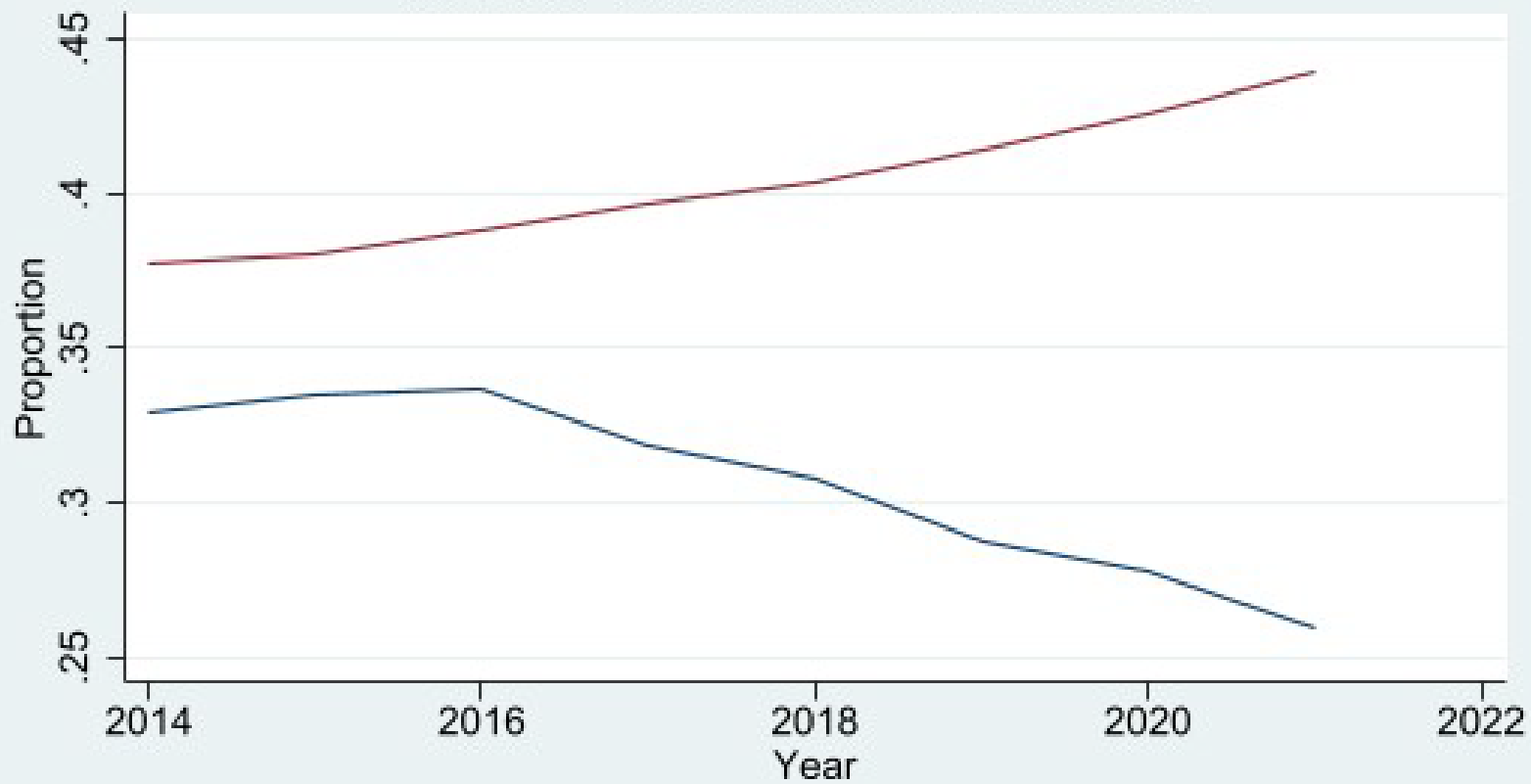
# The Paradox

- The term skills mismatch is very broad, and can refer to a variety of concepts including vertical mismatch, horizontal mismatch, skill gaps, skill shortages and skill obsolescence
- Whilst an abundance of evidence exists on the costs associated with surplus human capital, as measured by overeducation and overskilling, much less is known on the effects of skill gaps, skill obsolescence and skill shortages
- The phenomenon of overeducation and the observed negative impact on earnings and job satisfaction is observed consistently in both developed and developing labour markets
- However, policy appears to focus on precisely the areas for which the least evidence exists, namely skill shortages



## EU-27

### ISCED 5+ and overeducation at ISCED5+



— overed ISCED 5+ — ISCED 5+

Full-time Employees Aged 25-29

# What works: Supply-side policies

- Universities have a key role to play. The provision of higher education job placement or where the university helped the student directly to find employment have very substantial impacts in reducing the incidence of graduate overeducation
- On the other hand some other routes into the labour market substantially increase the risk of mismatch such as through **private recruitment agencies** or **through family and friends** substantially increase the risk of mismatch. Formal training in job search methods?
- It is also found that the higher the practical content of degrees (**research projects, work placements, emphasis on facts and knowledge, problem based learning**) the lower the probability of mismatch across all fields of study.

# What is missing?

- Research is entirely lacking on the impact of demand side factors in determining various forms of mismatch
  - The organisation of labour within firms
  - How has job quality been evolving?
  - Contractual arrangements and job stability
  - Recruitment policies and HR practices
  - Flexible working arrangements and childcare entitlements
  - Managerial skills and competencies
  - Training intensity
  - What are the implications for various forms of mismatch for firm-level productivity?
- To a large extent this is due to data constraints and we really need linked employer-employee datasets to get a firmer grasp on this questions

# We need much better data!!!!

- We need to develop a better understanding regarding the link between various forms of mismatch and demand side factors, supply-side factors and demand\*supply interactions.
- This can only really be achieved through proper investment in a longitudinal linked employer-employee survey with a sufficient evidence on mismatch.
- The existing European Skills and Jobs Survey provides a good base infrastructure on which to develop this.