

How Useful is the concept of Skills Mismatch?

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The interaction between skills mismatch and policy I

- Skills mismatch is an issue that is frequently referred to in policy debates and documentation.
- 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.
- Policy recommendations on skills mismatch are often vague and the term is often used without any mention as to the specific type of mismatch in question nor how the policy priority is expected to address it.

The interaction between skill mismatch and policy II

- Recent examples of this can be seen in the 2016 country specific recommendations (CSR) issued by the Council of the European Union and the 2016 National Reform Programme (NRP) publications.
- The term 'skills mismatch' was specifically mentioned in the CSRs of Belgium, Bulgaria, Ireland, Spain, Finland and the UK. However, the policy documents typically made no distinction as to the type of mismatch in question.
- The CSR for Finland simply suggests that measures should be taken to reduce regional and skills mismatch. The recommendations state that skills mismatches should be addressed by strengthening the quality of apprenticeships.

Objectives of the study

- Clarify the various forms that skill mismatches can take.
- Assess the weight of evidence on the various forms of skill mismatch within the academic and policy literature.
- Examine the extent to which individuals are likely to simultaneously experience different forms of mismatch.
- Assess how policy in the area might be enhanced going forward.

Forms of Skill Mismatch

- Vertical mismatch: Overeducation / undereducation and overskilling /underskilling which are typically measured using data from labour force or employee surveys.
- Skill gaps and skill shortages: Also forms of vertical mismatch typically measured using employer surveys.
- Horizontal mismatch: Worker is matched in level of education or skill but mismatched in field of study.
- Skill obsolescence: Can be typically either technical or economic.

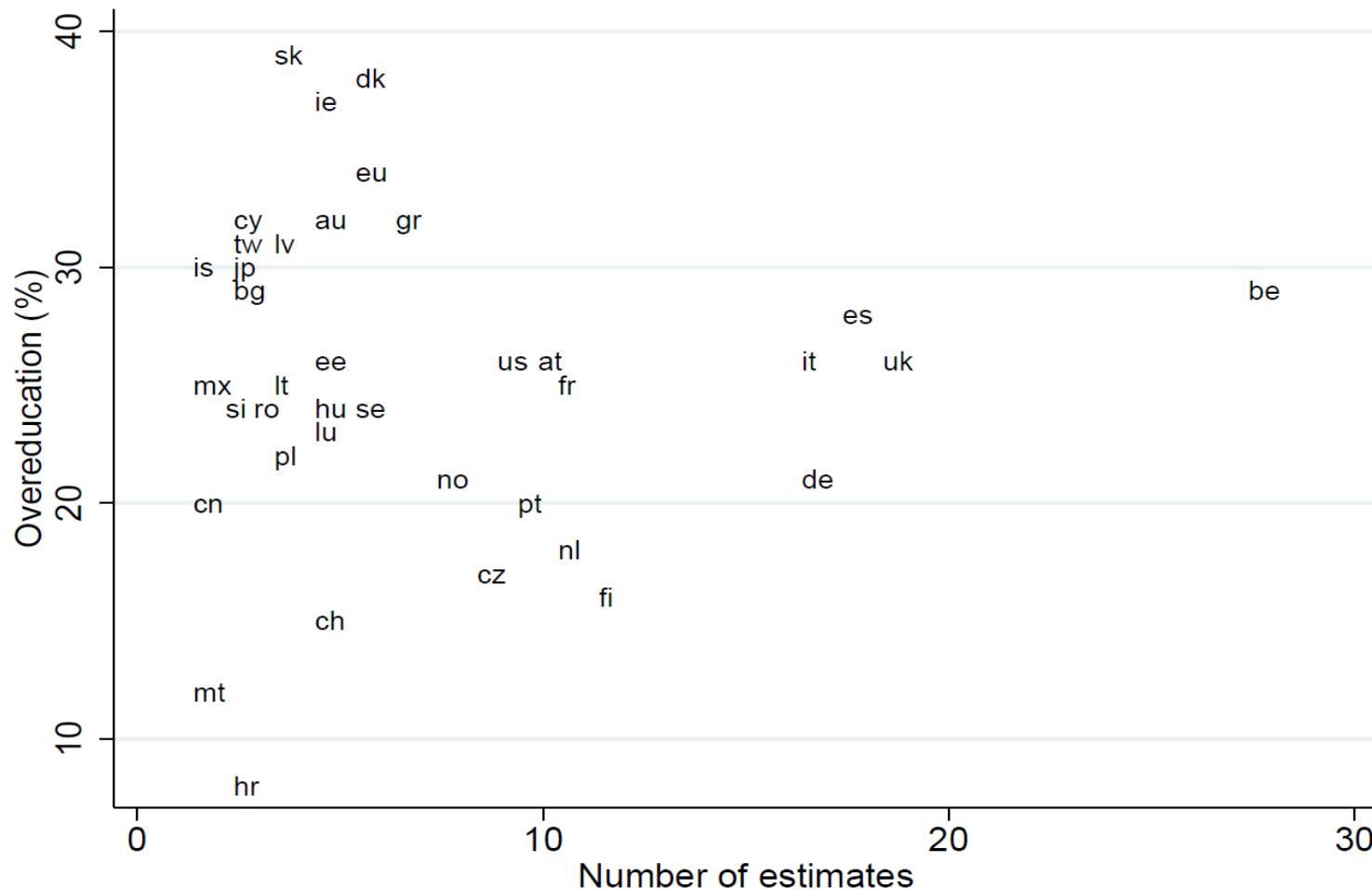
Where is the evidence concentrated?

(based on a review of published research 2006-2016).

Type of mismatch	Number of papers
Overeducation	86
Undereducation	24
Overskilling	21
Underskilling	3
Horizontal mismatch	10
Skill shortages	11
Skill gaps	6
Skill obsolescence	5

Source: McGuinness, Pouliakas & Redmond (2017)

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.
- Very little on firm level impacts for any of the above, however, emerging work suggests that firms capture a productivity rent from hiring overeducated workers (Mahy et al., 2015; Kampelmann and Rycx, 2012).

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 Shortages:** Difficult to get a single figure due to differing measurement approaches (difficult to fill, hard to fill, unfilled) and a thin evidence base (11 studies). 47% of firms recruiting higher education graduates reported recruitment difficulties in a 2010 Eurobarometer survey. However, Cedefop highlights that about 40-60% of those responses reflect an 'apparent skill shortage', since employers simultaneously reported difficulties offering a competitive starting salary or some HRM inefficiency. Only 12% could not find right skills independently of other employer practices. Only a small number of studies provide evidence that skill shortages negatively impact firm-level productivity.

What stylised facts emerge from the review? III

- **Skill gaps:** Little consistent international evidence in terms of either incidence or impacts on firm-level performance.
- **Skill obsolescence:** Little consistent international evidence in terms of either incidence or impacts on earnings or productivity.

What is the state of evidence for low and middle income countries?

- Most of the evidence base relates to high income countries. The lack of evidence for low and middle income countries is likely to be primarily driven by a lack of available data.
- Some evidence is beginning to emerge.
- Handel et al. (2016), using the STEP data, report an average overeducation rate of 36 percent across 12 countries. The factors driving overeducation include family composition and field of study (also found for high income countries).
- We know relatively little w.r.t. the impact on earnings.

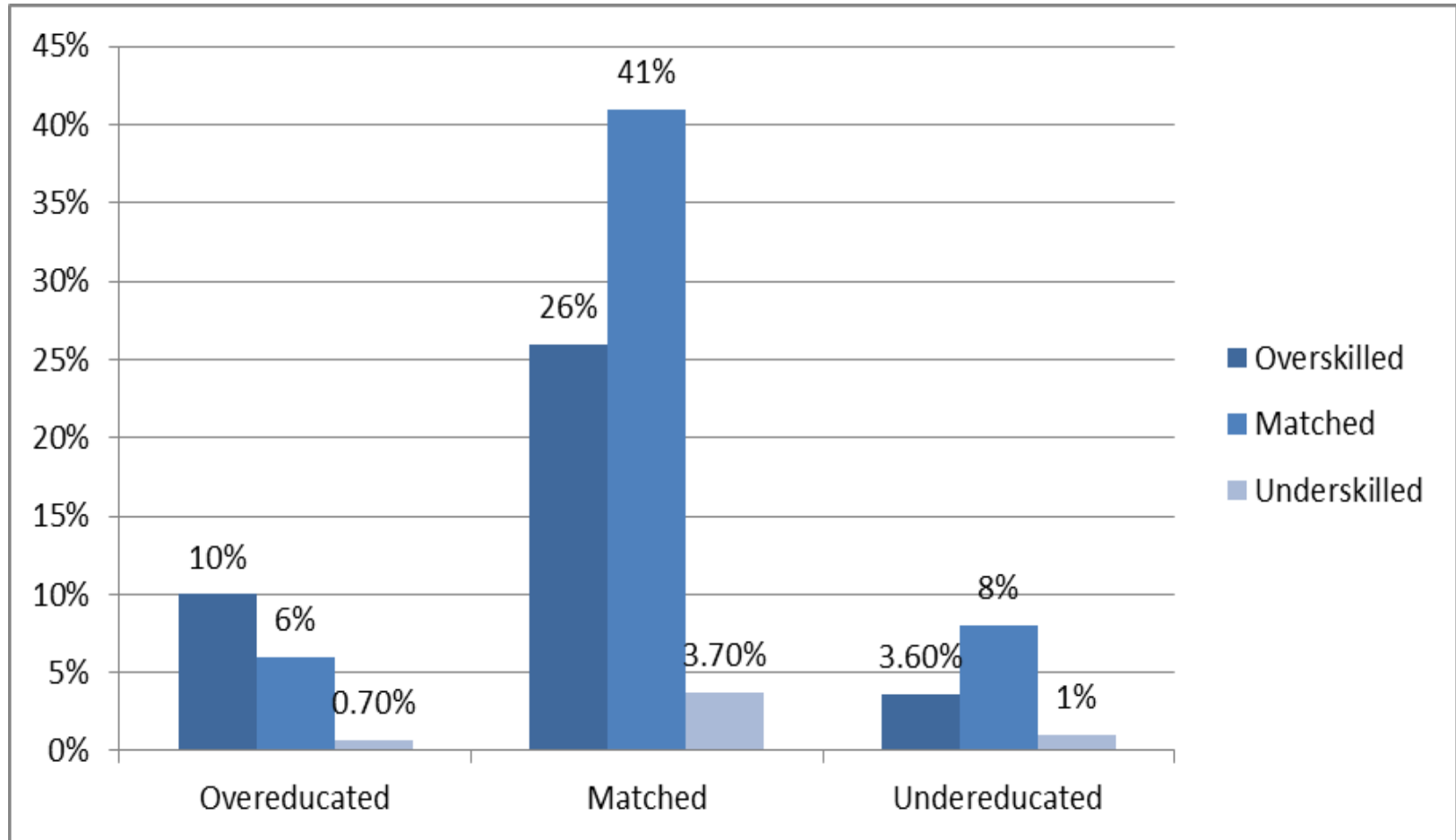
How are different forms of skill mismatch related to each other? I

	<i>Overeducated</i>	<i>Matched</i>	<i>Undereducated</i>
<i>When hired</i>			
Overskilled	44%	24%	20%
Skill Matched	38%	54%	53%
Underskilled	18%	22%	27%
<i>Present time</i>			
Overskilled	60%	36%	29%
Skill Matched	36%	58%	63%
Underskilled	4%	5%	8%
Skill obsolescence (physical)	21%	12%	11%

Source: European Skills and Jobs Survey

<http://www.cedefop.europa.eu/en/events-and-projects/projects/european-skills-and-jobs-esj-survey>

How are different forms of skill mismatch related to each other? II



Estimates based in EU average and taken from ESJS 2014

Where is policy focused?

- There appears to be a misalignment between the focus of the evidence base on skills mismatch and the direction of skills and labour market policy.
- To illustrate this we analysed the 2016 CSRs issued by the Council of the European Union and the 2016 National Reform Programme (NRP) publications.
- In the vast majority of cases, any country specific policy recommendations primarily relate to skill shortages. Even if referring to skill mismatches, the policy response inferred typically relates to either skill shortages or skill gaps.
- The New Skills Agenda for Europe (European Commission, 2016) raises concerns relating to skill shortages and mismatch by highlighting that “40% of European employers have difficulty finding people with the skills they need to grow and innovate”

Where is policy focused? II

- The NSA factsheet entitled “skill mismatches at sectoral level” is focused solely on potential skill shortages in 2025. Furthermore, in terms of the evidence base, the NSA appears to place a high degree of evidence on a single data point (Euro companies survey estimate)
- Specific reference was made to skill shortages in the CSRs for Lithuania, Germany, Belgium, Estonia and the UK and the NRPs for Ireland, Greece, Malta, Bulgaria, Cyprus and Hungary.
- Emphasis was placed on the reform and implementation of education and training strategies as a way of reducing skill shortages in Lithuania, Greece, Malta, Ireland, Belgium and the UK. In Bulgaria, Cyprus and Hungary, the policy focus relates specifically to a shortage of qualified ICT specialists, whereas in the UK specific mention is made of skill shortages in construction.

Where is policy focused? III

- Only one CSR, that of Spain, made reference to the issue of overeducation.

Summary I

- 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.
- However, policy appears to focus on precisely the areas for which the least evidence exists, namely skill shortages.

Why the disconnect between policy and evidence?

- Political challenges associated with implementing policies that question long-held assumptions around the benefits of the continued educational expansion may be a factor along with the challenges of addressing enhanced skills utilisation in enterprises.
- It may be assumed that policies targeted towards one form of mismatch will have a generic impact on all forms of mismatch. To some extent this will be true, for instance, strengthening apprenticeships will help address the issue of skill gaps and may also reduce overskilling by ensuring more workers are equipped with skills demanded by employers. However, the extent of policy spillovers will be limited in many cases (see paper).
- Moreover, it may also be the case that policy makers do not view overeducation or overskilling as being overly problematic, viewing it simply as a short-run phenomenon despite some convincing evidence for the contrary.
- Strength of employers lobby.

The way forward I ?

- A more transparent and consistent approach that takes account of the existing evidence should form the basis of future policy debate in this area.
- The situation whereby 1 in 4 employees are operating below their productive capacity should be a major concern for policy, particularly given the weight of evidence on earnings suggesting that such forms of mismatch lower worker productivity.

The way forward II?

- It is important that policy continues to focus on tackling the issue of skill shortages and skill gaps; however, a greater balance needs to be struck between policies aimed at improving welfare by reducing skill shortages and skill gaps and those that can achieve the same goal by removing constraints associated with surpluses in education and skills. **A more targeted approach is needed.**
- The continued adoption of a generic approach to skills issues under the term “skills mismatch” only serves to confuse the policy debate. Policy should focus on eradicating the specific forms of mismatch most relevant to national labour markets, supported by a robust evidence base measuring both the scale of the problem and its impacts.