How Useful is the concept of Skills Mismatch?

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WHAT IS 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.

WHY IS SKILLS MISMATCH A CONCERN FOR POLICY?

In theory, all of the various forms of skills mismatch can have very serious implications for firms, individuals and the economy more generally.

Skills gaps and skills shortages are thought to increase labour costs, lower firm-level productivity and slow economic growth.

Vertical mismatch are thought to lower the earnings of individuals and result in an economy that is operating well below its potential.

There is much less debate about the impact of horizontal mismatch but, again, this is shown to have negative implications for earnings, productivity and job satisfaction as well as increasing turnover.

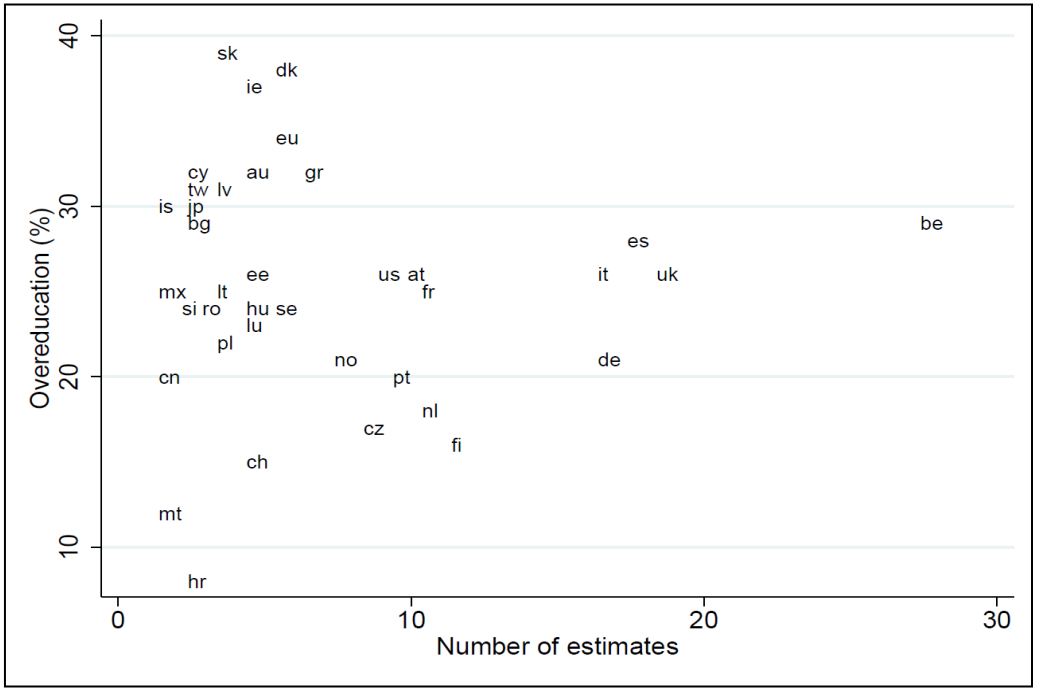
WHAT IS THE EVIDENCE?

(BASED ON A REVIEW OF PUBLISHED RESEARCH 2006-2016)

TYPE OF MISMATCH	NUMBER OF STUDIES
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?

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 with respect to 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?

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 HE 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?

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.

ARE SKILLS MISMATCHES JUST A PROBLEM FOR DEVELOPED ECONOMIES?

It is true that the vast majority of the evidence to date is restricted to advanced labour markets.

The absence of evidence for low and middle income economies is largely driven by a lack of reliable data.

Some very credible evidence is now beginning to emerge in terms of both the scale and impact of skills mismatched in developing labour markets.

Three major studies have been commission as part of an ILO sponsored research programme.

WHAT IS THE STATE OF EVIDENCE FOR LOW AND MIDDLE INCOME COUNTRIES?

The three ILO studies have analysed both the incidence and impacts of education mismatch in approximately 50 low and middle income countries.

The studies found that both overeducation and undereducation are common features of low and middle income labour markets.

Undereducation appears to be a much bigger issue in developing labour markets compared to high income countries.

Overeducation is found to consistently lower earnings in low and middle income countries with penalties generally higher than what is observed in developed economies.

WHAT IS THE STATE OF EVIDENCE FOR LOW AND MIDDLE INCOME COUNTRIES?

All of the studies point to the relatively high level of informality as a key driver of educational mismatch in low and middle income labour markets.

Poor job quality and low levels of educational attainment are also identified as a common feature of mismatch in low and middle income countries.

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, 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 (NSA) 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?

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.

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.

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).

WHY THE DISCONNECT BETWEEN POLICY AND EVIDENCE?

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?

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?

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 polices 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.

POTENTIAL POLICY LEVERS

Within *developed labour markets*, research point to a number of potential policies for addressing the problems of vertical mismatch:

- Improving the match between the composition of educational supply (field of study) with the demands of employers;
- Increasing the vocational content of all post-compulsory courses irrespective of field of study;
- Reducing information gaps between employers and workers through improved job matching;
- Enhancing equality legislation to prevent females from occupationally downgrading to have families;
- Examine ways in which firms can more flexibly harness the skills of their workforce;
- Improve job quality.

POTENTIAL POLICY LEVERS

For *developing economies*, while all of the previous polices are relevant (at least to some extent) there are some particular areas which the emerging evidence suggests are of particular importance in combatting mismatch:

- Improving rates of formal employment;
- Improving rates of educational attainment at both basic and intermediate levels;
- The continued growth of per capita GDP.