

The Skills Gap: Is it a myth?

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THE SKILLS GAP

- Skills gap: 'growing gulf between the skills workers possess today and the skills businesses say they need' (EUI 2014)
 - Field-of-study mismatch (OECD 2015):
Shortages in science, technology, engineering and maths (STEM)
 - Increasing focus on 'soft skills' (EUI 2015):
Problem solving, team working and communication
- Skills mismatch: no absolute shortage of skills, misallocation of human capital
 - Lowers productivity: over/underqualification, horizontal mismatch
Effects potentially very large (Montt 2015, Guvenen et al. 2015, Hsieh and Klenow 2009)
 - Increases unemployment: firms unable to find suitably qualified workers
May account for a third of unemployment (Şahin et al. 2014)
- 60% of employers believe there is a skills gap in Britain (YouGov 2013)

THE SKILLS GAP: IS IT A MYTH?

“aim to raise the status of STEM subjects, and increase the number of students studying maths and physics at A level by 50% within 3 years”

Nicky Morgan, launch of Your Life campaign, 10 November 2014

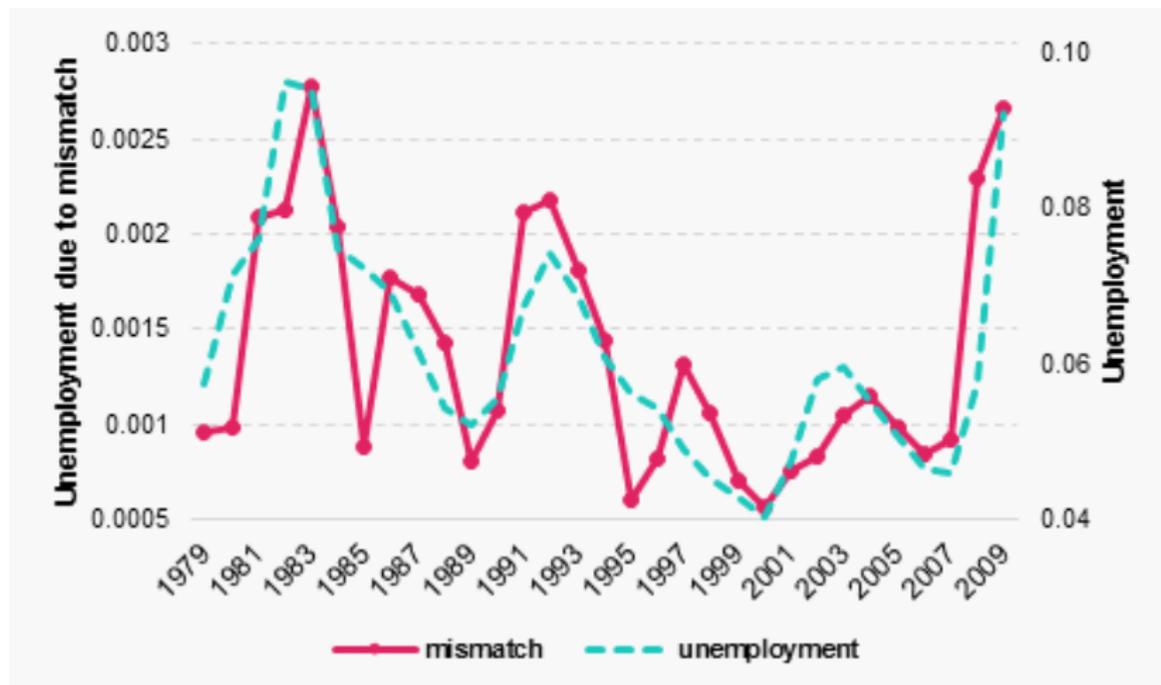
- It is often taken for granted that the skills gap is a supply problem
 - Employers (claim they) cannot find suitably qualified workers
 - Therefore, we must educate/train workers better
- I argue this view is incorrect
 - There is a huge amount of skills mismatch, which causes unemployment
 - But educating workers better/differently is not the solution

- Measuring skills mismatch
 - How large is the skills gap?
 - Is this a new problem?
- Why does skills mismatch arise?
 - Three potential sources
 - Main source: Wages do not reflect skills shortages
- Implications for policy

MEASURING THE SKILLS GAP

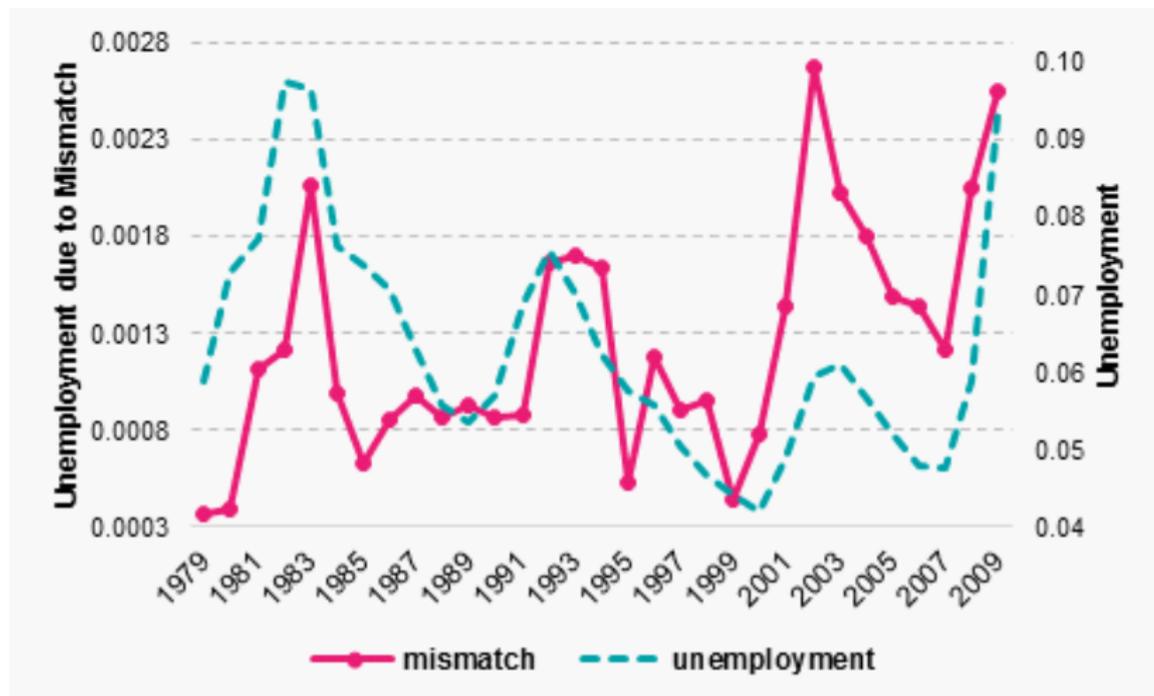
- It is very difficult, if not impossible, to directly measure mismatch between the demand and supply of skills
 - Skills are multi-dimensional and at least partly unobservable
 - Little data are available
- Dispersion in labour market conditions (across occupations, industries or geographic areas) is a measure of mismatch
 - Jobs in some occupations, vacancies in others \Rightarrow dispersion v/u ratio
 - Allows to quantify the effect of mismatch on unemployment
- Results so far are based on US data (but analysis for UK is in progress)

US unemployment due to mismatch across states



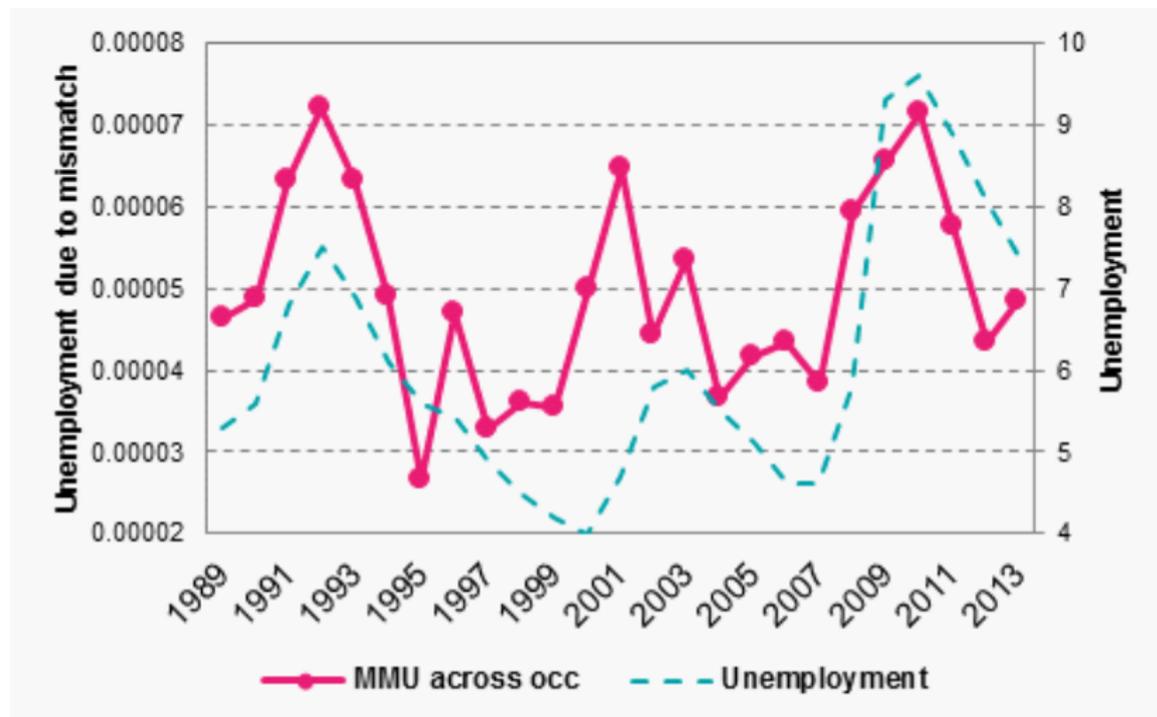
Source: Herz and van Rens (2015)

US unemployment due to mismatch across industries



Source: Herz and van Rens (2015)

US unemployment due to mismatch across occupations

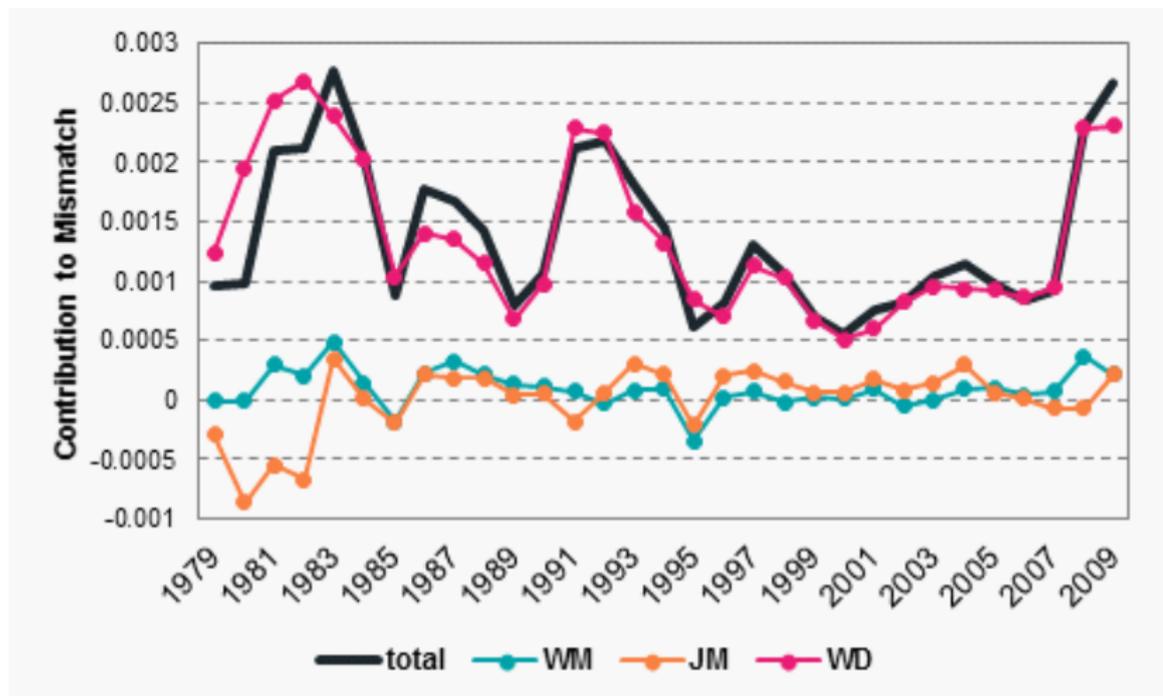


Source: Eriş Dereli and van Rens (2015)

WHY DOES SKILLS MISMATCH ARISE?

- Not surprising that mismatch arises, but ...
- Why does skills mismatch persist?
 - Workforce does not respond to changes in the demand for skills
 - Firms do not respond to changes in the supply of skills
 - Wages do not reflect skills shortages

Sources of mismatch across US states

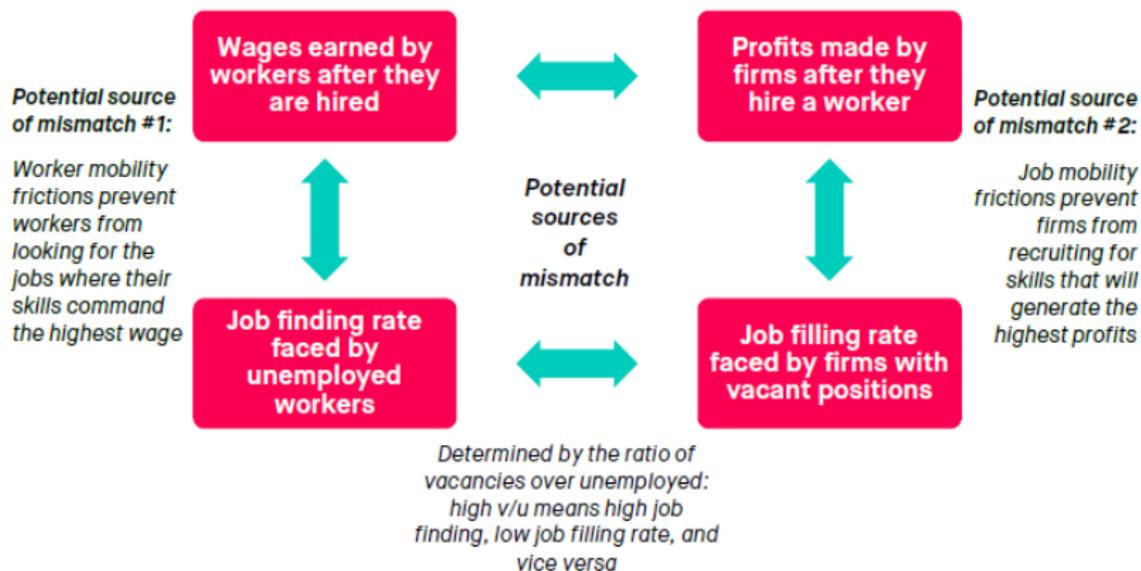


Source: Herz and van Rens (2015)

WHY DOES SKILLS MISMATCH PERSIST?

Potential source of mismatch #3:

Wage setting frictions prevent wages going up (and therefore profits going down) for skills that are scarce, or going down (profits up) for skills that are abundant

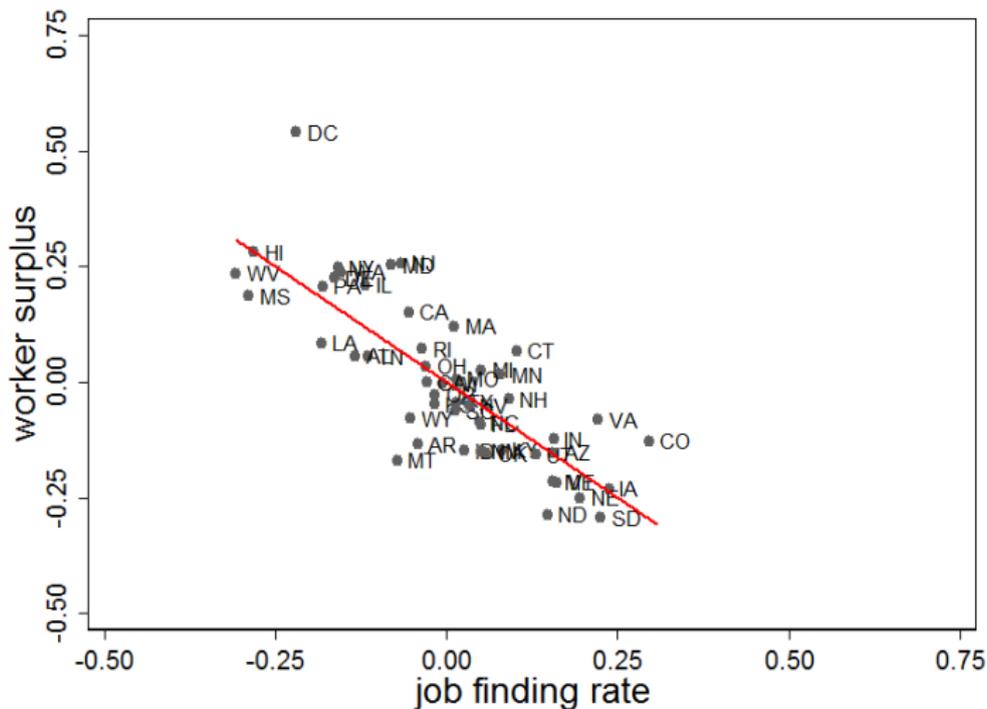


WORKERS ADJUST TO CHANGES IN SKILL DEMAND



- If you are a typist looking for work in the 1980s ...
 - Learn to work with a computer / word processor
 - Take the job of someone else who did
 - Replace a retiring typist
- If these mechanisms fail to operate, we would see
 - Some hard-to-find low-wage jobs (typists)
 - Some easy-to-find high-wage jobs (word processing)

WORKERS ADJUST TO CHANGES IN SKILL DEMAND



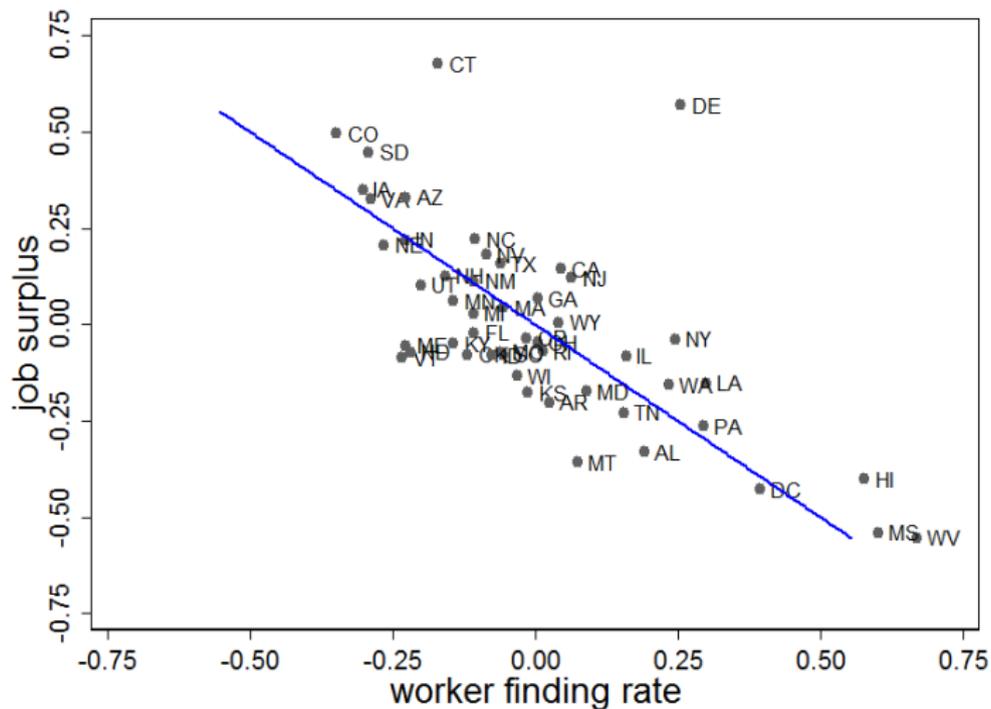
Source: Herz and van Rens (2015)

FIRMS ADJUST TO CHANGES IN SKILL SUPPLY



- A firm wanting someone doing word processing in the 1980s could
 - Hire a typist and train them in word processing
 - Get by with a typist and pay them less
- If these mechanisms fail to operate, we would see
 - Some hard-to-fill profitable vacancies (word processing)
 - Some easy-to-fill less profitable vacancies (typists)

FIRMS ADJUST TO CHANGES IN SKILL SUPPLY

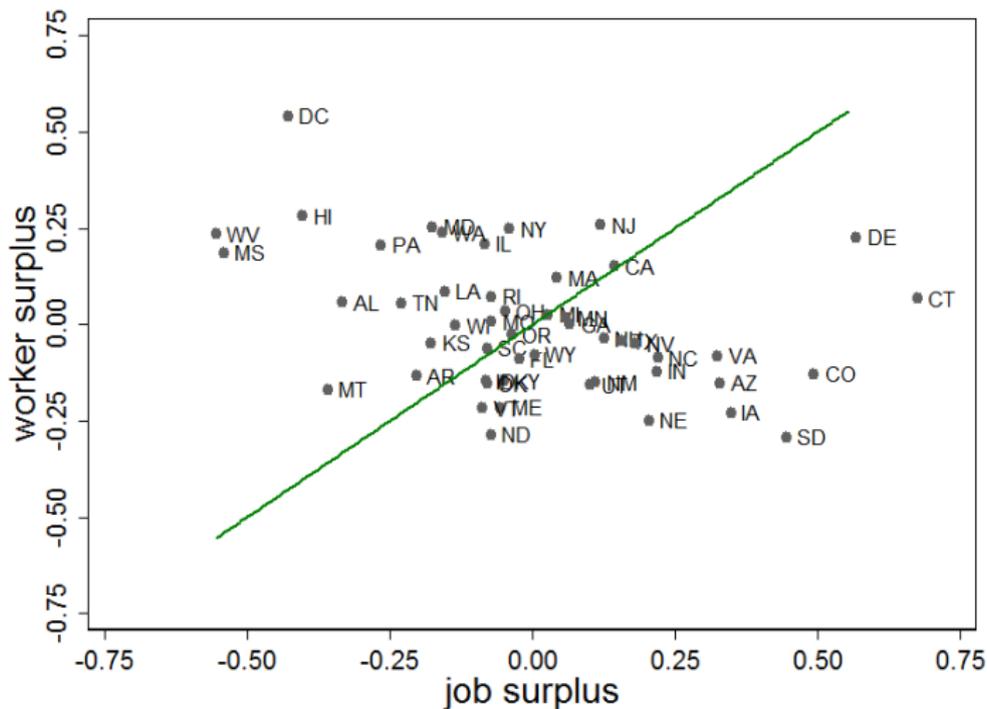


Source: Herz and van Rens (2015)

WAGES DO NOT REFLECT SKILLS SHORTAGES

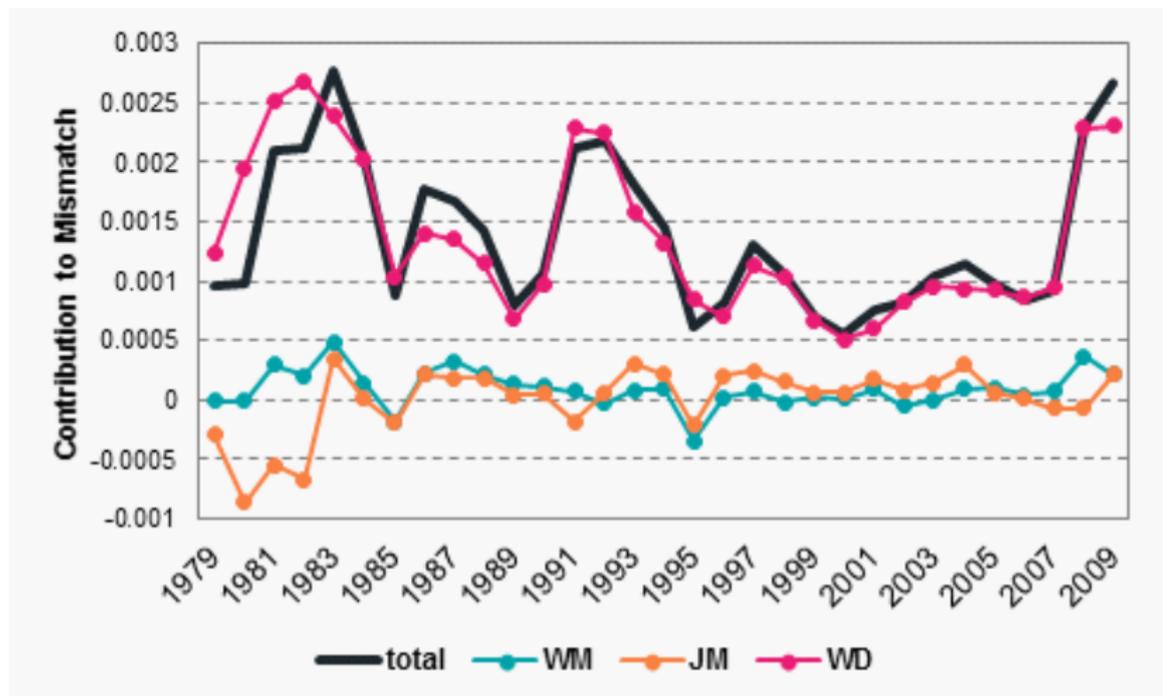
- Workers and firms adjust to changes in wages/profits
- But this eliminates skills mismatch only if wages reflect skills shortages
- If STEM skills are very productive, but their wage stays low
 - Workers have no incentive to acquire (more) STEM skills
 - Firms open lots of vacancies for workers with STEM skills (STEM skills are not only productive, they are cheap too!)
- If wages reflect skills shortages, wages should be high when profits are high

WAGES DO NOT REFLECT SKILLS SHORTAGES



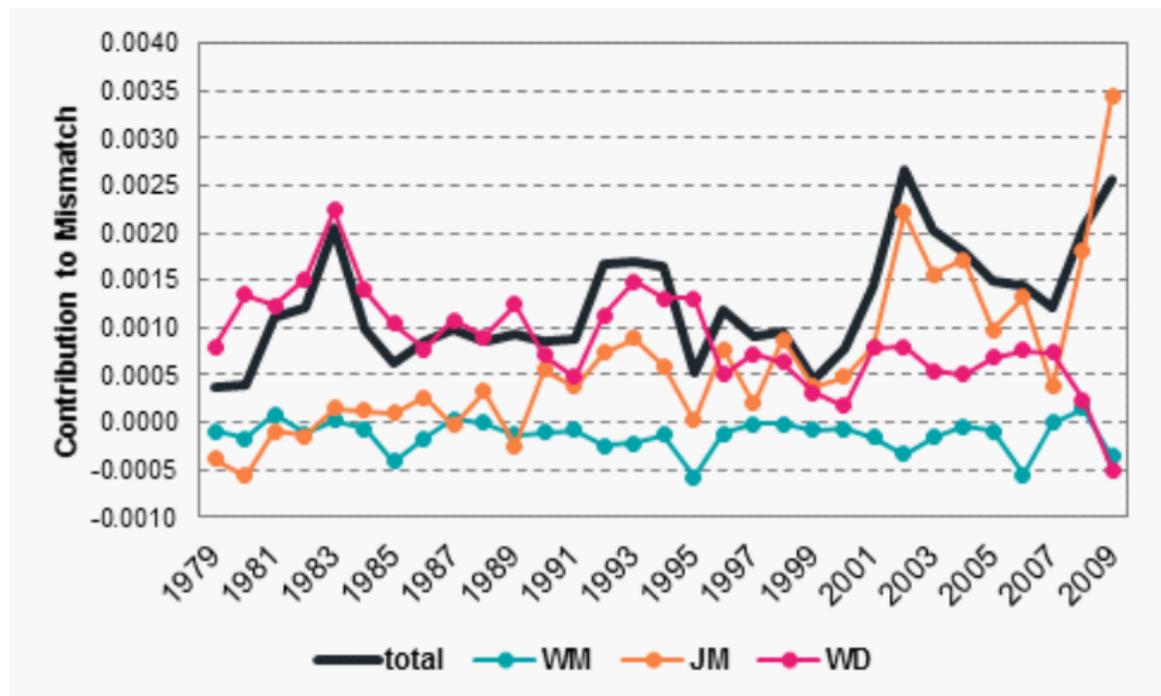
Source: Herz and van Rens (2015)

Sources of mismatch across US states



Source: Herz and van Rens (2015)

Sources of mismatch across US industries



Source: Herz and van Rens (2015)

THE SKILLS GAP: IS IT A MYTH?

- The skills gap is a real problem, but the reasons for it are misunderstood
 - Most important reason is that wages do not reflect skills shortages
 - Workers *are* adjusting to changes in skill demand if these are reflected in wages
- Are employers lobbying to keep wage costs down?

IMPLICATIONS FOR POLICY

- Increased emphasis on scarce skills in schools, colleges and universities will not help
 - Students have a choice about what skills they acquire, and whether they use these skills on the labour market
 - As long as wages do not reward certain skills, they will either not acquire these skills, or find employment in other occupations.
- This does not mean we should do nothing
 - Skills gap is a huge problem, solving it would substantially reduce unemployment and raise productivity
 - However, policy interventions are costly and should be effective



Source: David Groves, www.thestand.org, 18 June 2013, inspired by Cappelli (2012).