

WEAK ECONOMY, STRONG TEACHERS: Evidence that the quality of new teachers rises after a recession

Teachers recruited during a recession get better results for their pupils than ones recruited in better economic times. That is the central finding of research by **Markus Nagler, Marc Piopiunik and Martin West**, to be presented at the annual congress of the European Economic Association in Mannheim in August 2015. The authors conclude:

‘Our results provide the strongest evidence to date that making teaching wages more attractive would improve teacher quality.’

‘What’s more, while no one would hope for an economic downturn, recessions do seem to provide a window of opportunity for the government to hire teachers who would otherwise have not chosen this career path.’

The study analyses data on 33,000 schools in Florida that are part of the state’s public education system. It finds that teachers who start during recessions – when their alternative job prospects are worse – are much better at raising student test scores. Looking at how these affect a student’s lifetime income, an average recession-time teacher creates \$13,000 higher earnings for their classroom.

Higher wages have often been suggested as a way to recruit better teachers, but there are a lot of problems in studying this. First, teachers are often drawn to their career by other factors, such as how much society values education. Second, even test scores are a very limited way of working out the ‘quality’ of a teacher. Still, the finding that teachers hired during a recession tend to be better suggests that when the pay becomes comparatively better, higher quality applicants are attracted to the profession.

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Would improving teacher pay improve teacher quality? The question is critical for policy, as teachers play a critical role in developing the human capital of the next generation.

This study sheds new light on this question by examining the importance of outside labour market options for the quality of the teaching workforce. Using administrative data on 33,000 public school teachers in one large US state, the researchers find that teachers entering the profession during recessions, that is, during periods when outside labour market options are worse, are substantially more effective in raising student test scores. Translated to earnings, an average recession teacher in the sample produces \$13,000 higher discounted student lifetime earnings in his classroom each year.

Although many advocates have repeatedly suggested higher wages as one way to attract more capable individuals into teaching, just how important relative pay and outside labour market opportunities are for teacher quality has been difficult to discern for two main reasons:

- First, teacher pay and teacher quality are often influenced by other factors, such as how much a given community values education.
- Second, teacher quality is notoriously difficult to measure.

Using administrative data from Florida's public schools on 5,200 teachers who started teaching in a recession and 27,800 teachers who started in normal periods, the new study assesses teacher quality by how much teachers improve their students' math and reading skills in a school year. This measure, which accounts for other determinants of student learning, such as students' family background, is called teacher value-added. Research confirms that children who have been assigned to teachers with higher value-added measures are more likely to complete college and earn more as adults.

Recessions are periods when outside labour market options for potential teachers are bad. In contrast, teaching is a relatively stable occupation over the business cycle. Therefore, recessions make teaching more attractive in comparison to other jobs. And because recessions do not influence teaching skills otherwise, it is possible to be confident that the effect the study measures really only reflects the importance of outside career opportunities.

The researchers find that teachers who started their careers during recessions, or when the unemployment rate for college graduates is higher, are better teachers in reading and especially in maths. This difference cannot be explained by other factors such as experience, age at career start, school characteristics or teacher dropout rates. It appears to be driven primarily by an increase in the supply of very effective teachers, as opposed to schools hiring fewer teachers due to the slowing economy.

Although no one would hope for an economic downturn, these results nonetheless have important implications for policy-makers:

- First, they provide the strongest evidence to date that making teaching more attractive economically would improve teacher quality.
- Second, recessions seem to provide a window of opportunity for the government to hire teachers that would otherwise have not chosen this career path. Slowing the pace of hiring during recessions may therefore be more costly than is commonly thought.

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