



Labour Market Matters

Special points of interest:

- Significant negative effects found on student achievement in reading and mathematics in year with teacher strikes lasting longer than 10 instructional days.
- Labour market outcomes of Economics graduates found to be much higher than other social science disciplines, and are comparable to those of physical science graduates.

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Michael Baker
(University of Toronto)

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Teacher strikes found to have significant negative effects on student achievement in Reading and Mathematics

Teacher strikes can have many effects, including creating major inconveniences for parents, but the most contentious issue is undoubtedly the impact on student learning. The argument against teachers' right to strike is based on the assumption that teacher strikes negatively affect student achievement. However, there is surprisingly little research on the impact of teacher strikes on student development. The few existing studies typically make point in time comparisons of the achievement of students who do or do not experience a strike—an empirical strategy that is unlikely to reveal whether teacher strikes affect students. These studies tend to conclude that strikes do not have a significant impact.

A study by CLSRN affiliate Michael Baker (University of Toronto) entitled **“Industrial Actions in Schools: Strikes and Student Achievement”** ([CLSRN Working Paper no. 111](#)) employs a different empirical strategy which compares the achievement of student cohorts before and after a strike. He finds that the effect of longer strikes is negative and significant for critical subjects such as reading and mathematics.

Teachers in Ontario have had the legal right to strike since 1975, and between 1975 and 2005 there was at least 101 teacher strikes that lasted almost 19 instructional days on average. Some strikes lasted in excess of 50 instructional days. Using data

on students' scores on curriculum-based standardized tests conducted in grades 3 and 6, from the Education Quality and Accountability Office (EQAO), Baker examines the impact of teacher strikes on student achievement in the province of Ontario. The empirical strategy is to compare the grade 3 through grade 6 change in test scores for school cohorts that experience a strike to the corresponding changes for cohorts that do not.

The study finds that “long” strikes, which last 10 instructional days or more, have significant negative effects on student performance in reading and math in the year that they occur. In mathematics, the impact is a reduction in pass rate of just over 4.5 percentage points. This is almost 7.5 percent of the average pass rate on the grade 6 math test among cohorts that did not experience a strike. There is also a negative impact on the pass rate in the reading test of just over 2.5 percentage points, or almost 4 percent of the average pass rate for no strike cohorts.

Interestingly, the study finds few longer-term impacts of strikes on test scores. For example, a strike experienced in grade 5 does not appear to affect the results on tests conducted grade 6. This might be true if teachers worked to cover any missed material that was relevant for the test in the intervening period.

Overall, the results suggest that longer strikes do have impacts on



Strikes lasting 10 instructional days or more have significant negative effects on student performance in reading and math in the year that they occur.
Image: Stockimages/Freedigitalphotos.net

student achievement as measured by standardized test scores. Since standardized tests capture only certain dimensions of students' development, it is also possible that strikes have broader impacts on other dimensions. This is a potentially important qualification to the finding that strikes have no longer-term effects. There appear to be no long-term effects on test scores, perhaps because any missed test material can be remediated. However an impact on a developmental factor like student self esteem may be harder to remediate. Furthermore, the lower test scores recorded by students who experience a strike in their testing year (i.e., in grade 6) may affect their future schooling decisions. These potential, multi-dimensional impacts of strikes are important topics for future research.

Labour Market Outcomes of Economics graduates found to be comparable to those of Physical Science Graduates

The discipline of Economics is generally classified as a “social science” and thus the perception exists that the post-graduation earnings of an Economics degree graduate would be closer to that of other social science graduates, rather than wages of traditionally higher-paying disciplines in business, engineering, law or the natural sciences. While enrolment in Economic disciplines has been on an increasing trend in most Western countries since the Great Recession of 2007, this same trend has not been observed in Canada. A potential reason for this outcome may be the continued perception of Economics as a social science with the associated less lucrative wage outcomes compared to disciplines such as business, engineering and the natural sciences – which are traditionally perceived as high-paying disciplines. A study entitled **“Economic Benefits of Studying Economics in Canada: a Comparison of Wages of Economics Majors with those in Other Disciplines Circa 2005”** ([CLSRN Working Paper no. 109](#)) by CLSRN affiliates Ather H. Akbari and Yigit Aydede (both of St. Mary’s University) examines the wages earned by university degree holders in 50 disciplines in relation to economics, and finds that graduates in Economics actually earn higher wages than most other disciplines – significantly more than graduates of other social science disciplines such as Political science.

Using data on 50 disciplines based on the 2006 census, the researchers find that at the undergraduate level, finance, law, and engineering majors were among the top three paying professions, while economics majors earned the 9th highest average wage in 2005, after controlling for demographic differences. The researchers found that workers whose wages were below those of economics majors earned on average about 16 percent lower while those who earned above economics majors earned about 10 percent higher.



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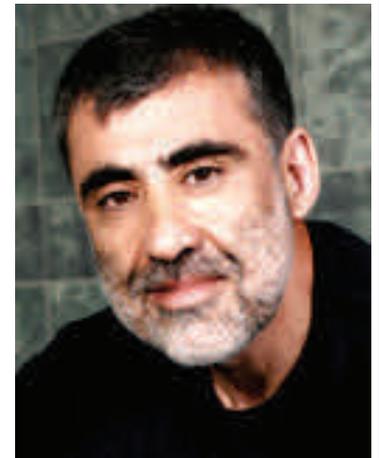
Even though engineering majors are found to earn higher wages than economics majors, one striking finding in the study is the similarity of the unemployment rates of economics majors with those of majors in engineering and the biological sciences, physical sciences and mathematics. While Economics degrees and Political Science degrees are often perceived as close complements, the after

graduation earnings of holders of these two degrees are quite different. Indeed, the study finds that Economic degree holders approximately 21 percent higher wages than political science majors.

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The comparative benefits of graduate-level education are increasingly recognized in policy circles in Canada. As opposed to business, economics and engineering bachelor degree, social sciences and humanities degree holders tend to lean towards the acquisition of a graduate-level degree due to less favourable labour market conditions in these subject areas. In 24 out of the 28 disciplines considered, the wage gap is negative for graduate degree holders in economics, indicating that graduate economics degree holders may earn more than those in other disciplines. The negative wage gaps at graduate level are wider than at

undergraduate level indicating a clear advantage of studying economics at graduate level. With a few exceptions in certain majors, the researchers found, that gender differences in unemployment rates and wages are significant: male workers were found to have lower unemployment rates with higher average hourly wages than female workers do.



Yigit Aydede
(St. Mary’s University)

While many students lean towards bachelor degrees in business, engineering and physical sciences on the perception that their future wage outcomes will be far greater than if they pursue a degree in Economics, this study provides evidence that while business and engineering graduates do earn more than those with an economics degree, degree holders in economics are not far behind, and certainly fare better than other social science disciplines such as political science with which they are frequently co-categorized.

Endnotes

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