New research by **Eric Maurin** and **Sandra McNally** reveals that France's short-lived 'revolution' of May 1968 had long-term benefits for the angry students – and later for their children. These findings have important implications for the debate about widening access to higher education.

Children of the revolution

The student revolt of May 1968 led to chaos across France, temporarily shaking the economic and political establishment. But while the revolution was short-lived, it had significant long-term consequences – not only for the students taking important exams that year but also for the next generation. It turns out that the revolutionaries of 1968 were successful in ways that they were unlikely to have foreseen.

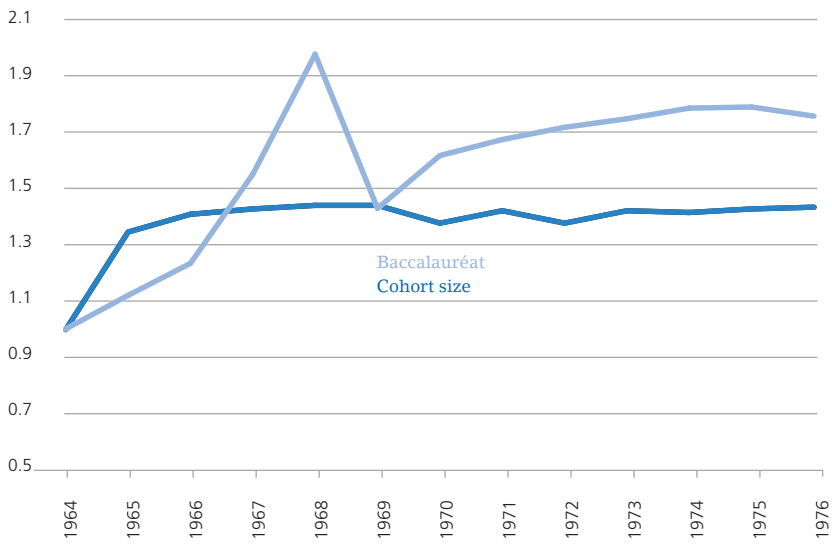
The famous '1968 events' coincided with the examination season and, in universities, exams became a central aspect of the bargaining process between students and the authorities. The rebellious students successfully bargained for 'light-touch' exams 'to avoid harming students who have spent a lot of time struggling for a better university'.

But it was not only university exams that were affected in 1968. That year, the baccalauréat exam – success at which guarantees entry to university – only involved oral tests. As a result, as Figure 1 shows, the pass rate increased enormously.

Our research finds that this lowering of thresholds at an early – and highly selective – stage of the higher education system enabled a significant proportion of students born between 1947 and 1950 (particularly those born in 1948 and 1949) to pursue more years of higher education than would otherwise have been possible.

This was followed by a significant increase in their subsequent wages and occupational attainment, particularly for students from a middle-class family background. What's more, because there is a relationship between parents'

Figure 1:
Trends in cohort size and the number of students passing the baccalauréat exam



Sources: The French Ministry of Education and the French Statistical Office.
The size of the cohort for year t corresponds to the number of people born at t minus 19 (19 is the median age of candidates). The two series are normalised to 1 in 1945.

educational achievement and that of their children, these returns were transmitted to the next generation.

These findings are of great relevance to the current debate in many countries about widening access to higher education. The 1968 events are an important example of a situation where lower thresholds at critical stages enabled those on the margin to go to university or pursue further years of higher education. The experience of 1968 suggests that enabling the 'marginal' person to enter higher education can result in high private returns in the labour market and, because this is transmitted to the next generation, may have a long-run effect on overall educational attainment.

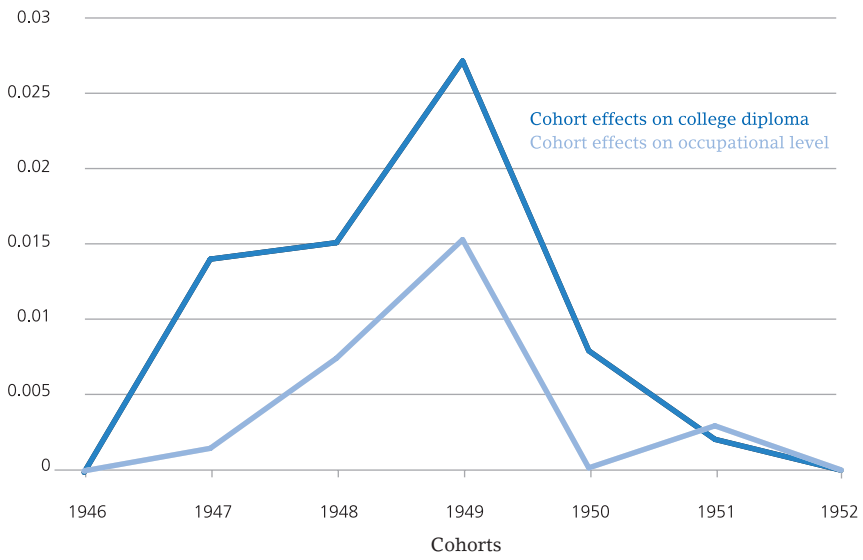
We use 1968 as a 'natural experiment' to address key questions about the effects of education: what is its true causal impact on labour market outcomes like the jobs people end up doing and the wages they earn? And what is the causal relationship between the education of parents and that of their children?

It is normally very difficult to identify the causal effects of education on subsequent outcomes. We estimate the returns to education using an approach that involves finding a variable that predicts years of higher education without otherwise influencing the outcome measure such as wages. In this context, we can use birth cohort as that variable and also the fact that within the most affected cohorts (1948 and 1949), there was a disproportionate effect on the education of middle-class students.

The essence of our results can be very simply illustrated using data from the French Labour Force Survey (l'Enquête Emploi) on men in their forties. Figure 2 shows the net effect of birth cohort on the probability of these men having at least a university diploma and of them being in an upper-level white-collar job. The pattern in the data shows a marked similarity for the two different effects and provides good prima facie evidence of the relationship between educational and labour market outcomes, with a pronounced upward shift for people born in 1949.

This 1949 cohort, the one whose education was most substantively affected by the 1968 events, comprised students taking the baccalauréat exam at the end of their secondary education. And within this group, middle-class students were much more likely to be affected. This is because people from a lower social background are more likely to leave education before taking the exam and people from a higher social background

Figure 2:
The net effects of birth cohort on the probability of having at least a university diploma and on the probability of being in an upper-level white-collar position



The returns to an extra year of higher education may be at least as large as to an extra year of compulsory schooling

are more likely to pass the exam even without the advantage of easier exams.

We use these facts to estimate the relationship between wages and years of higher education using data for the 1949 birth cohort and two control groups that were much less likely to have been affected by the relaxation of exam standards in 1968, namely the 1946 and 1952 birth cohorts. Specifically, belonging to the 1949 birth cohort is used to predict years of higher education and thus reveal the true causal relationship between education and wages.

The results indicate that each additional year spent in higher education increases wages by about 14 percentage points and the probability of holding a high-status occupation by 10 percentage points. These are high estimates and suggest that the private returns to an additional year of higher education may be at least as large as to an additional year of compulsory schooling.

We can't say whether employers were rewarding the 'human capital' gains from additional years of higher education or the signalling value of these years (and the educational credentials). But we can say that enabling the marginal university entrant to gain years of higher education led to high private gains. In fact, we estimate that the effect on wages corresponds to a gain in permanent income which exceeds private costs (that is, forgone earnings) by a factor of 7 and which exceeds the social costs of one year of education by an even larger factor. (The annual cost of higher education in France is about £4,400 per student.)

We might hypothesise that a similar group could be affected in this way by policies designed to widen access to higher education – to the extent that this involves some lowering of thresholds and hence making the system less selective.

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We use a similar approach to analyse whether the gain in education and earnings for the affected cohorts had an impact on the outcomes of their children. More generally, we use 1968 to address the important policy issue as to whether providing additional education to parents is transmitted to the next generation, thus breaking the cycle of low intergenerational mobility that occurs in many countries.

The outcome we consider corresponds to children's 'educational advancement' at the age of 15. This describes the difference between the actual grade of the adolescent concerned and the normal grade for his or her age group. France is one of several countries where grade repetition is an important phenomenon (most children repeat at least one grade at school). Grade repetition is strongly correlated with other measures of educational achievement, and international data show that children who repeat a grade are likely to obtain much lower scores in maths, reading or science at age 15.

The results show that the benefits accruing to fathers born in 1948 and 1949 were transmitted to the next generation in terms of educational advancement. The children of fathers who benefited from the relaxation of exam standards in 1968 were doing significantly better at school than the children of those born too early or too late to be affected in the same way (the 1946 or 1952 birth cohorts). We use these facts to estimate the causal relationship between fathers' education and their children's educational advancement, and the results suggest a strong positive relationship.

But it is unlikely that fathers' education was the only family resource affected by the 1968 events. Since similarly educated men and women are more likely to marry each other, the estimated impact of a father's years of higher education reflects both the direct effect of his resources and the indirect effect of his wife's resources on the educational performance of their children.

Our estimates indicate that the true causal impact of parental education on children's outcomes is considerably larger than is suggested by more descriptive analysis. Measures to improve family resources via parents' education are therefore an effective way to improve outcomes for the next generation.

Measures to improve family resources via parents' education are an effective way to improve outcomes for the next generation

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More details on the research discussed here are in 'Vive la Révolution! Long Term Returns of 1968 to the Angry Students', CEE Discussion Paper No. 49 (http://cee.lse.ac.uk/cee%20dps/ceedp49.pdf).

The study is also available in French: 'Vive la Révolution! Les Bénéfices de Long Terme de Mai 1968', La République des Idées, Paris (http://www.repid.com/IMG/pdf/doc-95.pdf).