Education and Teen Driving Accidents: Evidence from No Pass No Drive Laws

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Abstract

Much attention has been paid recently to the use of positive incentives or “carrots” as a way to improve academic outcomes. However, not many studies have evaluated the impact of negative incentives or “sticks”. In this paper, we evaluate the impact of a relatively low cost negative incentive policy, No Pass No Drive (NPND) Laws, on education and teen traffic accidents. Since the 1990s many US states have set restrictions for teenagers to have access to a driver’s license. These laws, commonly known as the No Pass No Drive laws, require that students must continually earn their driving privileges by staying in school and passing their classes. We exploit cross state variation in scope and timing of the law to identify effects not only on education, but also on an important education externality, namely, teenage traffic accidents.

Using data from the CPS and US Census, we show that NPND laws have a positive and significant effect on educational attainment among teenagers and

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the effect is particularly large for boys (an increase of 0.06 years of education). This is a crucial result for policy purposes since previous studies have shown that *positive incentives* do not have an impact on academic performance for boys. On the other hand, our results are in line with recent studies (Lindo, Sanders, and Oreopoulus, 2009; Vidal-Fernandez, 2010) that have shown that *negative incentives* have a larger effect on outcomes among boys.

Furthermore, we study the effect of NPND laws on teen accident rates. Theoretically NPND laws may affect accident rates through at least two channels: (i) Through its effect on education: Risk aversion, patience, alcohol use etc and, (ii) Allocation of time (between school work, leisure and market work). Preliminary results using state level data from the Fatality Analysis Reporting System (FARS) suggests that NPND laws have no effect on teen traffic related deaths. We also employ data from the Monitoring the Future (MTF) to study individual level effects.

This paper is of obvious social policy interest for at least two reasons. First, traffic fatalities are the leading cause of death among young adults in developed countries. In the U.S. drivers between 16 to 19 years old are four times more likely to have accidents than older drivers. Hence, it is relevant to analyze whether setting academic requirements to access driving privileges has any impact on accident rates. Second, our results show that unlike “carrots”, negative incentives seem an effective way to improve academic performance among boys.