

Sorting into Secondary Education and Peer Effects in Youth Smoking

Non-technical summary

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It is well known that youth smoking has long-term health consequences for individuals and imposes a burden on publicly financed health care systems. Therefore, public policy interventions that attempt to decrease the prevalence of youth smoking attract a lot of attention in social sciences.

Existence peer effects can potentially increase the efficiency of, for example, an anti-smoking campaign because if group members affect each other, such a campaign has two effects: A direct effect decreases smoking by shifting the norms of smokers, and an indirect effect decreases smoking even further. Peer effects thus amplify public policy interventions through, what is known as a social multiplier.

I explore the peer effects in smoking behavior of freshmen at Czech secondary schools, where proportion of 16-year-old high school students reporting daily smoking is 26%, and those reporting having smoked more than 40 cigarettes in their life is 40%.

Thus far, main result suggests that peers do affect individual smoking at Czech secondary schools with a significant difference between males' and females' smoking behavior with male students more affected by their peers' smoking. These findings are in line with the current literature, which finds male students to be more involved in fraternities providing them the opportunity to interact with each other.

My findings have several important implications. First, the enrollment into secondary schools has not just human capital consequences, but also important health implications. Second, public policies that attempt to influence youth smoking in Czech secondary schools can rely on peer effects that would enforce the efficiency of policy interventions against smoking, especially in the case of male students.

The further value added of my research is it offers a new estimation strategy that supports this empirical exercise. The estimation and the proper identification of peer effects are generally difficult because observed similar behavior in a group does not prove an existence of social interactions within the group. For example, students may self-select into a secondary school based on their unobserved preferences towards smoking and reveal them later during studies, or their smoking may be affected by an unobserved, school-specific, anti-smoking policy. Furthermore, the estimation of peer effects suffers from reflection problem: The researcher does not observe who affects whom in a peer group, and it causes biased results.

My new estimation strategy, however, overcomes these problems by using the typical institutional setting of a secondary schooling system combined with some information about the start of daily smoking. Specifically, my strategy relies on the re-sorting of peers (classmate groups) between the elementary and secondary levels education in the Czech Republic: I am able to identify who was a smoker before the enrollment into a secondary school, and it helps me deal with the reflection problem. Moreover, controlling for the various background characteristics of freshmen and older students at the particular school helps me to minimize the selection problem.