

Policy Brief



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Peer Effects and Youth Smoking among Secondary School Students in the Czech Republic

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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.

The current literature suggests that the efficiency of such policies could be increased by the existence of social interactions among youth. Youth smoking and social interactions could be closely interconnected. It is well known that student smoking can be affected by the smoking of one's friends through various mechanisms: through affecting the costs of obtaining cigarettes, through providing important information about smoking or through imposing any type of pressure on each other. Such mechanisms are called peer effects and can be especially powerful at a young age.

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. Young people interact with each other, which influences their behavior among themselves. 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. The case of the Czech Republic is an interesting and important one to study. The 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%. This is among the highest rates in Europe (*Figure 1*). The high proportion of young smokers suggests that anti-smoking policies will have to play an important role in public health policies, and it is hoped that this research will be useful in designing them.

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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.

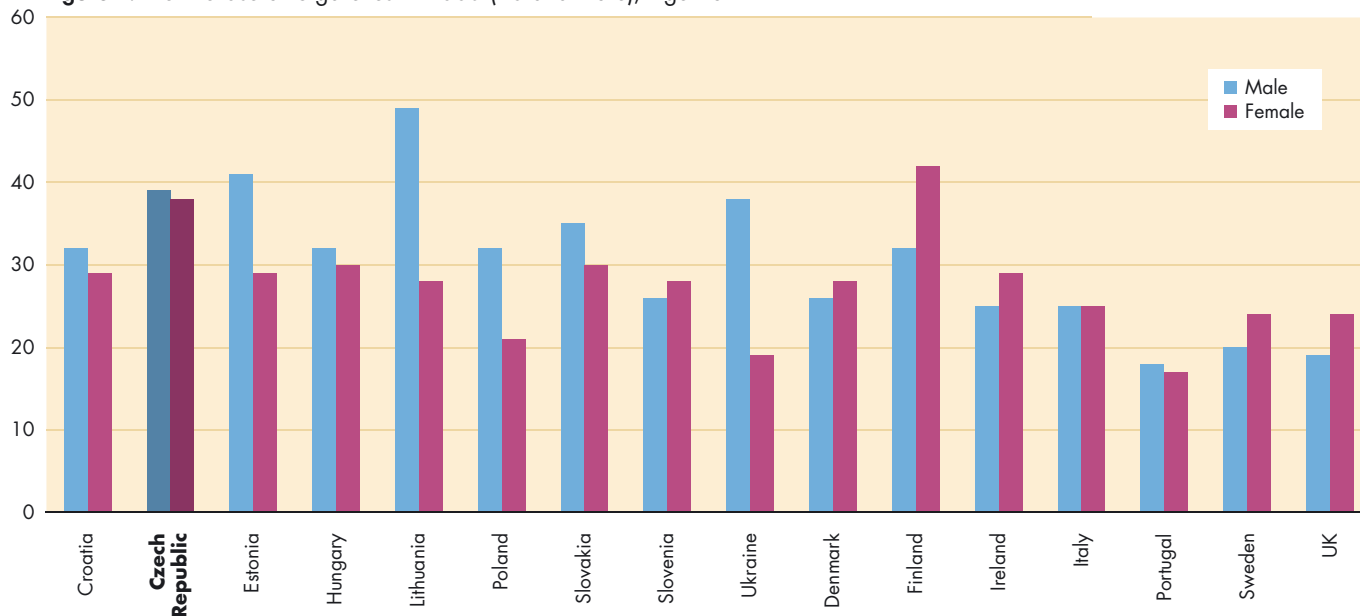
My findings have several important implications. First, the enrollment into secondary schools has not just human

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. There may be many other confounding, unobserved factors that can result in observed similar behavior. 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 bias 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 lev-

Figure 1: Lifetime Use of Cigarettes in 2003 (40 and more), Age 16



Source: European School Survey of Alcohol and Other Drugs, 2003

els 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.

Although I provide a new methodology for estimating peer effects among secondary schools students, it has certain natural limitation. The peer group is, for example, arbitrarily defined as a class, which may be too narrow: Female students might spend time with mates not enrolled in the school. Social interaction among females thus might exist, but not necessarily within

a class. Although information about the true peer group would improve the analysis, the anti-smoking campaign is often run directly in classes. Thus identifying the peer effects among classmates within schools is definitely helpful for designing them. ■

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