



“CARLO DELL’ARINGA” YOUNG LABOR ECONOMISTS AWARD 2019

Schools and Their Multiple Ways to Impact Students: A Structural Model of Skill Accumulation and Educational Choices

Annalisa Loviglio

The paper by Annalisa Loviglio studies how the school environment affects students' cognitive skills and educational attainment in terms of graduation probabilities and subsequent enrollment at upper academic levels. Annalisa estimates a dynamic structural model of cognitive skills accumulation and schooling decisions of students enrolled in lower secondary education, using rich administrative data for the universe of public schools in Barcelona.

The topic is certainly relevant; moreover, to answer the research question, Annalisa adopts a highly demanding and cutting-edge structural estimation approach, combining methodological rigor and clarity of exposition. The main advantage of the structural model is that it allows the author to separately identify the different channels through which schools affect student outcomes.

Estimation results show that the school environment, both in terms of peer effects and the school itself, is an important determinant of cognitive skills: she finds that one standard deviation increase in the quality/ability of peers increases cognitive skills by about one tenth of a standard deviation; while moving to the bottom to the top quartile of the school quality distribution increases cognitive skills by about one third of a standard deviation. What is more, the school environment has a sizable direct effect on educational choices, which go beyond the level of cognitive skills. Interestingly, being enrolled in a high quality school does not necessarily imply that the chances of pursuing higher education increase, this is particularly true for those that have less favorable socio-economic background. Then Annalisa uses the model to conduct three types of simulation exercises. In the first one, she evaluates the importance of school environment by simulating educational outcomes for different types of students, and she finds that the school has a crucial role especially for students with lower socio-economic background. In the second, she looks at the impact of policies that raise school effects on cognitive skills or those on subsequent educational choices: again she finds that these policies are particularly effective for the pupils at the bottom of the family background distribution. Finally, in the last exercise, she analyses the consequences of retention, and finds that next educational choices are negatively influenced by retention, even if the latter has positive effect on cognitive skills.

The AIEL executive board believes that the paper is highly deserving of the “*Carlo Dell’Aringa*” *Young Labor Economists Award* because it adopts a cutting-edge estimation strategy in order to obtain reliable and credible estimates of the effects of interest, which are also highly relevant from the policy perspective.