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- Typically, show that moments of  $Y$  variables match
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- Other moments may be of interest, like dynamic choice transitions

## Wandering astray: Teenagers' choices of schooling and crime

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We build and estimate a dynamic model of teenagers' choices of schooling and crime, incorporating four factors that may contribute to the different paths taken by different teenagers: heterogeneous endowments, unequal opportunities, uncertainties about one's own ability, and contemporaneous shocks. We estimate the model using administrative panel data from Chile that link school records with juvenile criminal records. Counterfactual policy experiments suggest that, for teenagers with disadvantaged backgrounds, interventions that combine mild improvement in their schooling opportunities with free tuition (by adding 157 USD per teenager-year to the existing high school voucher) would lead to an 11% decrease in the fraction of those ever arrested by age 18 and a 13% increase in the fraction of those consistently enrolled throughout primary and secondary education.

**KEYWORDS.** Teenage crime, education, information friction, institutional friction, dynamic model, structural estimation.

**JEL CLASSIFICATION.** I2, K42.

### 1. INTRODUCTION

Teenage years are a critical period in life, featuring major physical, psychological, and attitudinal transitions. Faced with all these complications, some teenagers may experience a particularly difficult transition to adulthood and wander astray, dropping out of school and/or engaging in criminal activities. Juvenile delinquency is a serious problem worldwide. For example, in the U.S., over 725,000 teenagers were in detention centers

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Model fit results for youth with parents who are not well educated:

Variable	Data	Model
Ever arrested %	5.6	5.2
Always enrolled, 0 arrest %	72.2	72.0
GPA (standardized)	-0.39	-0.43
Retention %	7.3	7.8
Grade Completed by T	11.1	11.3



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Model fit for other groups is similar

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- Use data and estimates to compute  $\hat{Y}$  and compare with  $Y$

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- Repeat process multiple times and take average to limit simulation error

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- In such cases, must use simulation route