Efficiency and Equity of Education Tracking
A Quantitative Analysis

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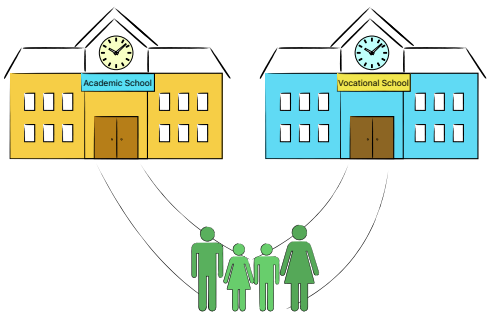

Motivation

- School tracking controversial and frequently debated policy:
  - 👍 Tracking can increase learning efficiency (Duflo et al., 2011)
  - 👎 If development uncertain, tracking (too) early may lead to "mis-allocation" + consolidate inequality; hinder social mobility

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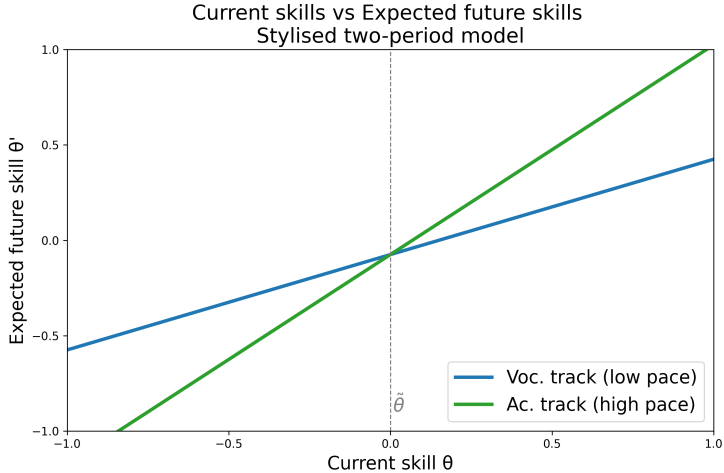
What are the long-term distributional and aggregate effects of school tracking in Germany?

[NEW] Instruction pace and peers affect child skills.



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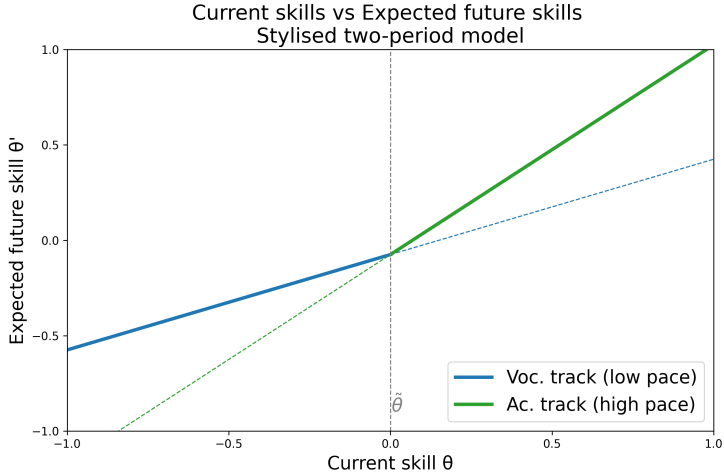

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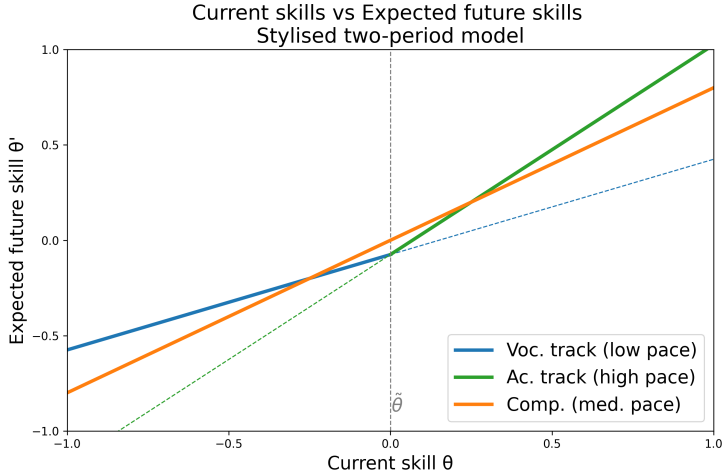

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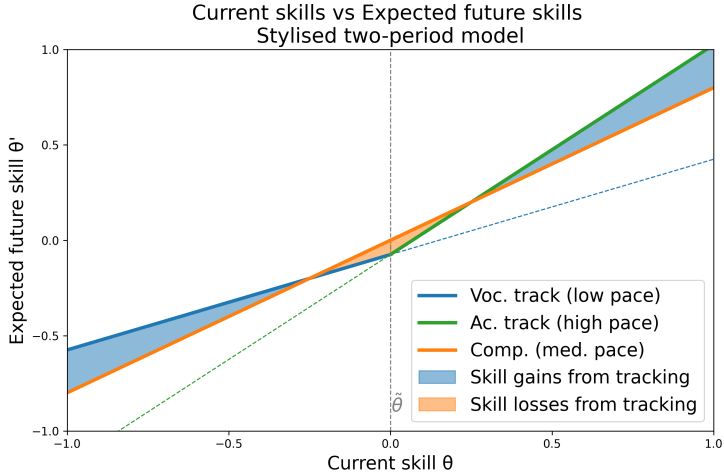
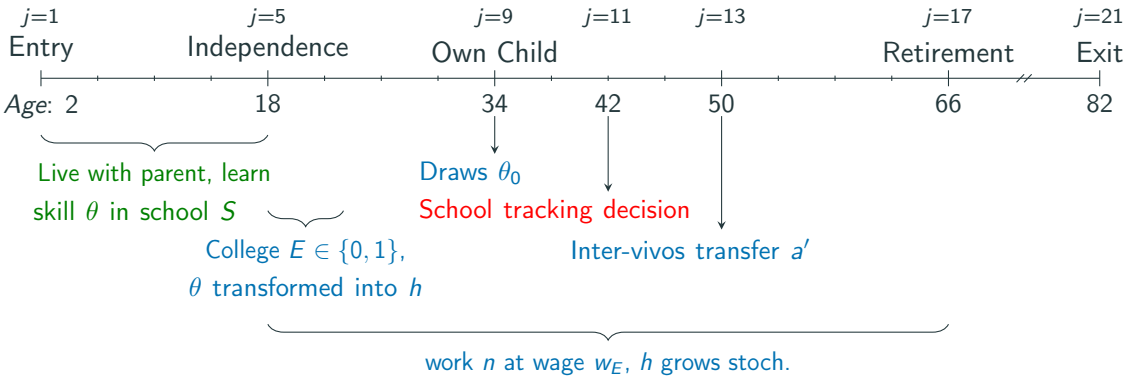


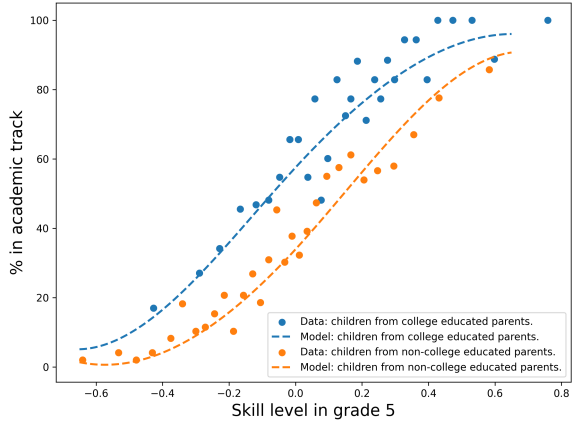
→ Technology captures main trade-offs: efficiency gains but misallocation risk.

We build OLG model of human capital formation, in GE.



→ The full-model includes main other forces at play.

Once calibrated, model rationalizes observed data patterns.

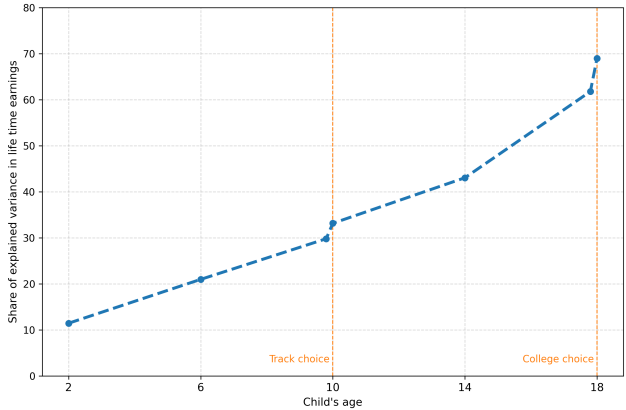


→ And other key (untargeted) moments: inequality and interg. mobility
+ Dustmann, Puhani, and Schönberg (2017) experiment.

Some results: contribution to inequality in lifetime earnings.

- Variance decomposition conditional on states at different life stages

(Huggett, Ventura, and Yaron, 2011; Lee and Seshadri, 2019)



→ Skill formation during sec. schooling years crucial for lifetime inequality.

Some results: postponing tracking from age 10 to age 14.

Outcome	PE
Output	+0.1%
Inequality: gini earnings	-1.4%
Mobility: (-) income rank-rank	+2.7%
A-Track Share	+9
College Share	+1.3

- In PE (short-term), mobility gains and small efficiency gains.

Some results: postponing tracking from age 10 to age 14.

Outcome	PE	GE
Output	+0.1%	-0.3%
Inequality: gini earnings	-1.4%	-1.8%
Mobility: (-) income rank-rank	+2.7%	+3.6%
A-Track Share	+9	+8.5
College Share	+1.3	+0.2

- In PE (short-term), mobility gains and small efficiency gains.
- In GE (long-run), efficiency gains vanish due to *wage premium adjustment*, but mobility gains amplified.

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→ *Modest* efficiency-mobility trade-off in GE, inexistent in PE.

More analyses in the paper.

- Mechanisms.
- Parental influence.
- Continuous tracking.
- No tracking.
- Skill threshold.

Thank you!