
Student Mobility and School Outcomes

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Policy Context

- High rate of mobility
 - One-sixth of families change houses each year
 - Mobility higher among low income families
- Mobility related school outcomes and other things
 - Disruption
 - “Tiebout” moves
- Disentangling effects difficult
 - Poor measures of school quality
 - Poor measures of family choices and behaviors
 - Limited observations about causes of mobility

Goals of the Paper

- Investigate the impact of school mobility on student performance
 - Do parents search for better schools when they move?
- Investigate the impact of student mobility on school quality?
 - Do movers hurt others?

Statistical Difficulties

- Heterogeneity of families
 - Unmeasured circumstances (economic condition, marital issues, etc.)
 - Unmeasured attitudes and behaviors toward education of children
- Varying motivations for moving
 - Economic
 - Social
 - Schooling

Identification Approach

- Basic model:

$$\Delta A_{it} = A_{it} - A_{i,t-1} = SQ_{it} + \gamma_i + \delta_{it} + \varepsilon_{it}$$

- School quality

$$SQ_{it} = \omega(\omega_s, \bar{m}_{st}) + \theta(\bar{m}_{st}, m_{it})$$

Estimation Approach

$$\partial(\Delta A) / \partial m_{it} = \textit{Tiebout} + \textit{assimilation} + \textit{disruption}$$

■ Assumptions:

- No losses in year prior to move
- Students return to prior achievement growth after one year (except for ΔSQ)
- Disruptions confined to year of move

$$\Delta A_{it} = m_{it} \lambda + m_{it}^* \lambda^* + x_{it} \beta + v_{it}$$

TSP Data

- All students in grades 4-7
- Three cohorts ($\approx 200,000$ /cohort)
- Normalized math performance
- Six week attendance data

Individual Effects – All Moves

	Highest grade (cross section)
λ	-0.17 (24.5)

Individual Effects – All Moves

	Highest grade (cross section)	Gain w/student fixed effects
λ	-0.17 (24.5)	-0.014 (3.1)
λ^*		0.006 (1.0)

Individual Effects – Specific Moves

	Highest grade (cross section)	Gain w/student fixed effects
λ (same region, new district)	-0.09 (10.0)	0.009 (1.4)
λ^*		0.025 (3.1)

Individual Effects – Specific Moves

	Highest grade (cross section)	Gain w/student fixed effects
λ (same region, new district)	-0.09 (10.0)	0.009 (1.4)
λ^*		0.025 (3.1)
λ (same region, same district)	-0.09 (7.6)	-0.024 (3.9)
λ^*		-0.003 (0.3)

Individual Effects – Specific Moves

	Highest grade (cross section)	Gain w/student fixed effects
λ (same region, new district)	-0.09 (10.0)	0.009 (1.4)
λ^*		0.025 (3.1)
λ (same region, same district)	-0.09 (7.6)	-0.024 (3.9)
λ^*		-0.003 (0.3)
λ (during year)	-0.25 (21.4)	-0.005 (0.75)
λ^*		0.004 (0.5)
λ (multiple during year)	-0.422 (34.3)	-0.028 (3.2)
λ^*		0.024 (1.9)

Externalities of Moving

- Student turnover may affect SQ
- Identification difficult because:
 - Sorting across students
 - Changes induced in peers
- Estimation:
 - Student fixed effects
 - School-by-grade fixed effects
 - School-by-year fixed effects

Mobility Externalities

	Score in highest grade	Student fixed effects	plus school-by-grade	Plus school-by-year
Proportion entering at start of year	0.05 (0.8)	-0.22 (8.7)	-0.01 (0.1)	-0.06 (0.7)

Mobility Externalities

	Score in highest grade	Student fixed effects	plus school-by-grade	Plus school-by-year
Proportion entering at start of year	0.05 (0.8)	-0.22 (8.7)	-0.01 (0.1)	-0.06 (0.7)
Proportion entering during year	-1.40 (16.2)	0.00 (0.1)	-0.24 (4.2)	-0.23 (3.2)

Conclusions

- Understanding impact of mobility is hard
- Movers are not random sample
- Movers are heterogeneous
- Externalities are significant