

Education at any Cost?

The relation between academic track mismatch in secondary education and the temporal development of abilities and well-being



Research Question

After primary education in Germany, pupils and their **parents have to choose** between several tracks.

The **academic track** (*Gymnasium*), which is the direct way to higher education eligibility (*Abitur*), usually offers the best prospects and outcomes. However, teachers in grade four **recommend a track** based on the abilities of a child. When parents send their child to the academic track without being recommended to do so, a **track mismatch** occurs.

How do children with a track mismatch develop in secondary education with respect to their abilities and well-being? **Are they able to catch up to their peers or are they experiencing problems due to insufficient academic performance?**

Is insufficient performance mediating negative effects?

Theoretical concepts

Big-Fish-Little-Pond Effect:

Since the predominant form of **comparison is with peers in the same classroom**, students with a mismatch find themselves at the lower end of the distribution with regard to academic abilities. This can create feelings of **inadequateness** and **stress** which might affect well-being and development of abilities negatively.

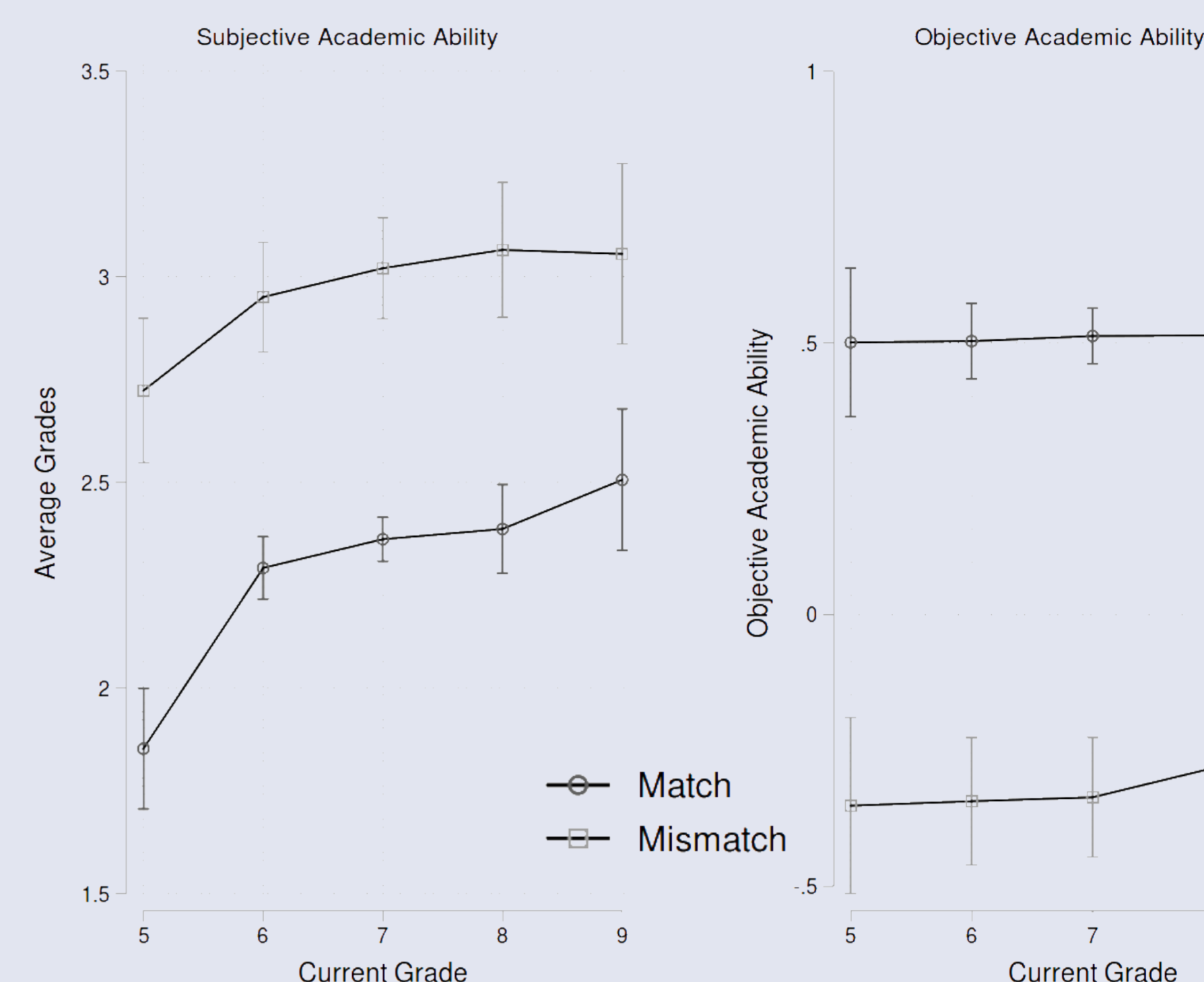
Basking-in-reflected-glory:

However, when students with a mismatch compare themselves to their peers visiting other tracks, they recognize that they are in the most **demanding and prestigious schooling** with best prospects after graduation, which might have **positive effects** on self-esteem and outcomes

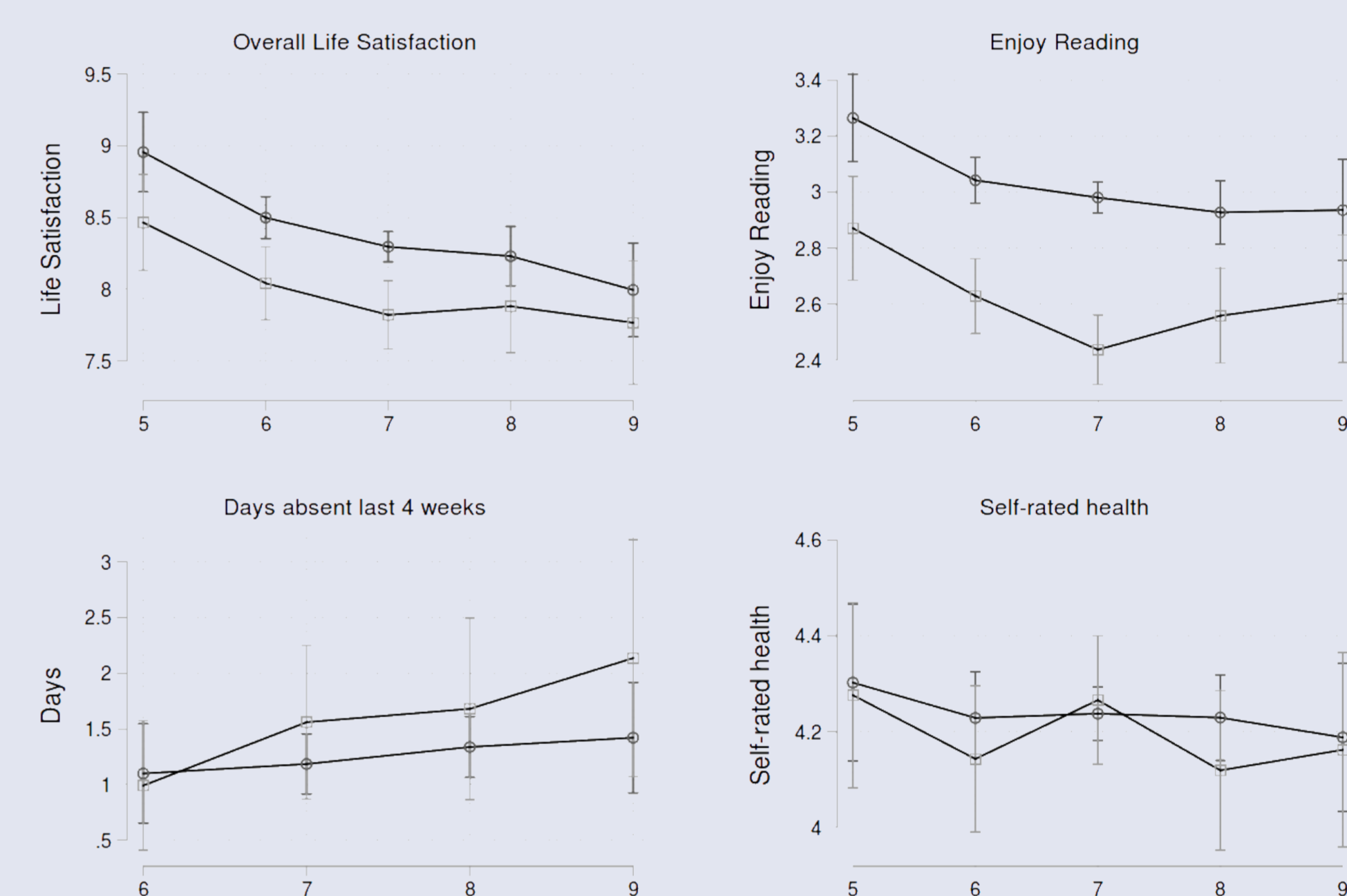
Data & Methods

- German National Educational Panel Study (**NEPS**)
- Starting Cohort 3 – Pupils from grade 5 to 9
- Multilevel Growth-Curve-Models (N=1114, grade 5)
- Longitudinal Regressions with Random Effects
- Control variables: gender, migration status, parental educational, parental ISEI, age, family status, siblings, parental friends, federal state (only states without binding recommendation included)

Results



Students with a mismatch display **consistently lower abilities** than their peers → no catch-up effects



- Significantly **lower well-being** and enjoyment of reading for pupils with a mismatch
- No effects regarding days absent from school and self-rated health.

	Well-being			Enjoyment Reading		
	M1	M2	M3	N1	N2	N3
Mismatch	-0.409*** (0.096)	-0.347*** (0.100)	-0.147 (0.103)	-0.432*** (0.056)	-0.335*** (0.056)	-0.147** (0.056)
Subjective Abilities (Grades)			-0.282*** (0.037)			-0.046* (0.018)
Objective Abilities			0.053 (0.049)			0.237*** (0.026)
Constant	8.478*** (0.037)	11.040*** (0.317)	11.142*** (0.311)	3.065*** (0.021)	4.016*** (0.171)	4.034*** (0.165)
Controls	No	Yes	Yes	No	Yes	Yes
Observations	3404	3404	3404	3354	3354	3354

Source: NEPS SC3, own calculations. Standard errors in parentheses.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

- Panel Regression with Random-Effects: Negative effects of mismatch **can be explained** by lower subjective and objective abilities
- Highly significant effects become smaller or even **disappear** after including abilities

Conclusion

- Pupils with a mismatch **cannot catch-up to their peers**
- They display **lower well-being** and enjoyment of reading
- Negative effects of mismatch are explainable by lower academic performance

