

Shadow Education in Switzerland

Regional Variation in the Use of Private Tutoring and the Role of Cantonal Education Systems

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Background

Shadow education refers to out-of-school learning activities that are private, supplemental, and academic. The most widespread expression of shadow education, private tutoring, has seen a rapid expansion around the world^{1,2}.

While research on the effectiveness of private tutoring remains largely inconclusive³, several studies have investigated how student characteristics relate to the uptake of private tutoring. In contrast, research on the role of institutional features of education systems remains limited^{1,2}.

Study Design

Previous comparative research on how educational structures relate to participation in private tutoring has two potential downsides: concerns regarding conceptual equivalence between countries and the disregard of within-country variation. The subnational units of Switzerland, the cantons, provide a suitable case for addressing both.

Switzerland is one of the most decentralised education systems, which has led to extensive variation in educational structures among the cantons⁴. Focusing on the subnational level provides novel insights into shadow education and decreases omitted variable bias to a greater extent than cross-country comparisons.

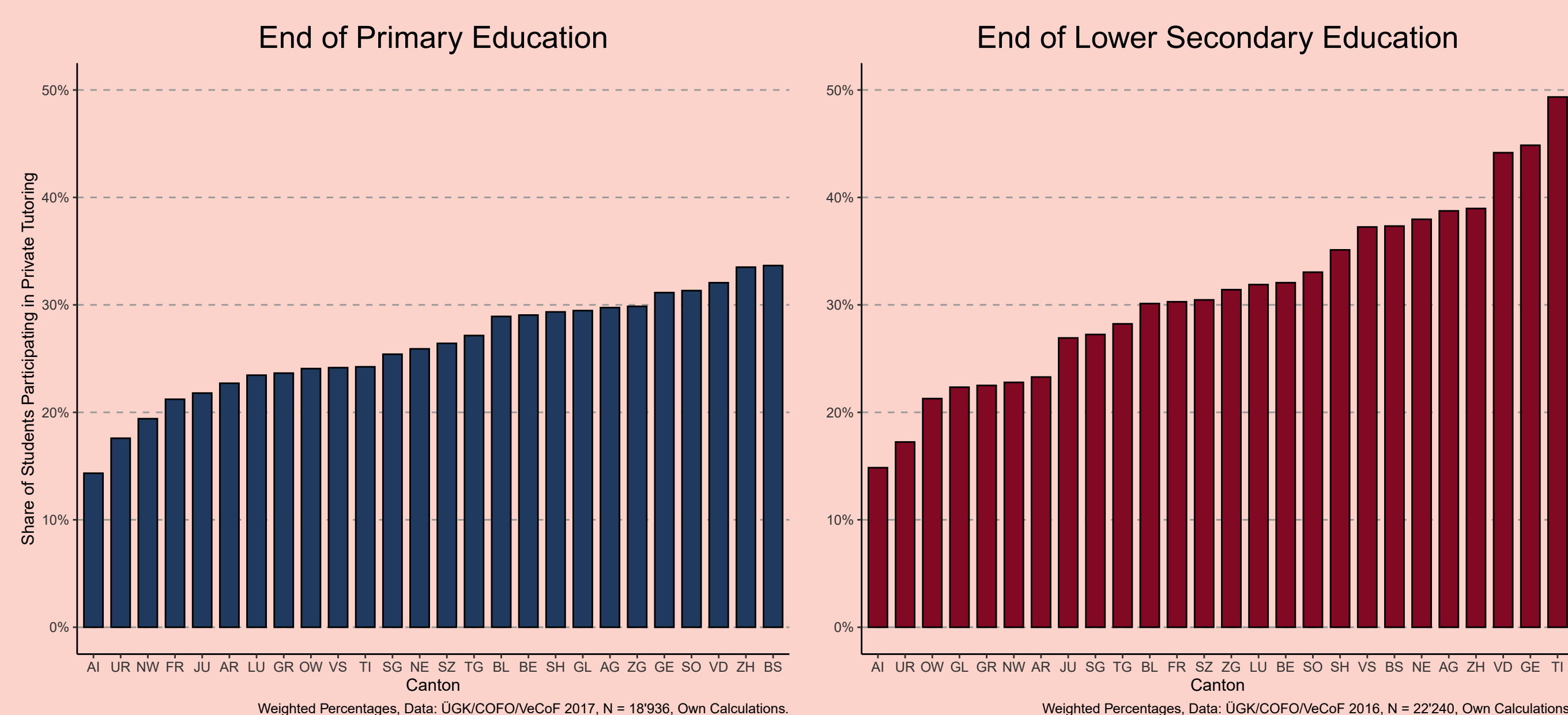
This study investigates how differing educational structures in Swiss cantons incentivise or discourage investments in private tutoring in the run-up of two critical educational transitions. The theoretical argument builds upon a subjective expected utility framework⁵, assuming that:

- Families invest in private tutoring when their educational motivation exceeds their investment risk ($B + P_{SD} * SD > C / P_{ES}$).
- Educational structures affect the evaluation of subjective expected utility.

Private Tutoring in Switzerland

- On average, 28.7% of students at the end of primary education (P) and 35.6% of students at the end of lower secondary education (LS) participate in private tutoring. The proportion of tutees varies considerably between cantons.
- Mathematics is the most requested subject among tutees (P: 76.3%, LS: 74.3%), followed by foreign languages (P: 46.7%, LS: 44.5%).
- While a vast majority of tutees report using private tutoring to achieve better results in their current grade (P: 74.9%, LS: 81.5%), about half mention preparation for the next educational stage, including passing entrance exams, as the aim of private tutoring (P: 45.7%, LS: 55.6%).

Proportion of Students Participating in Private Tutoring by Canton



Data and Methods

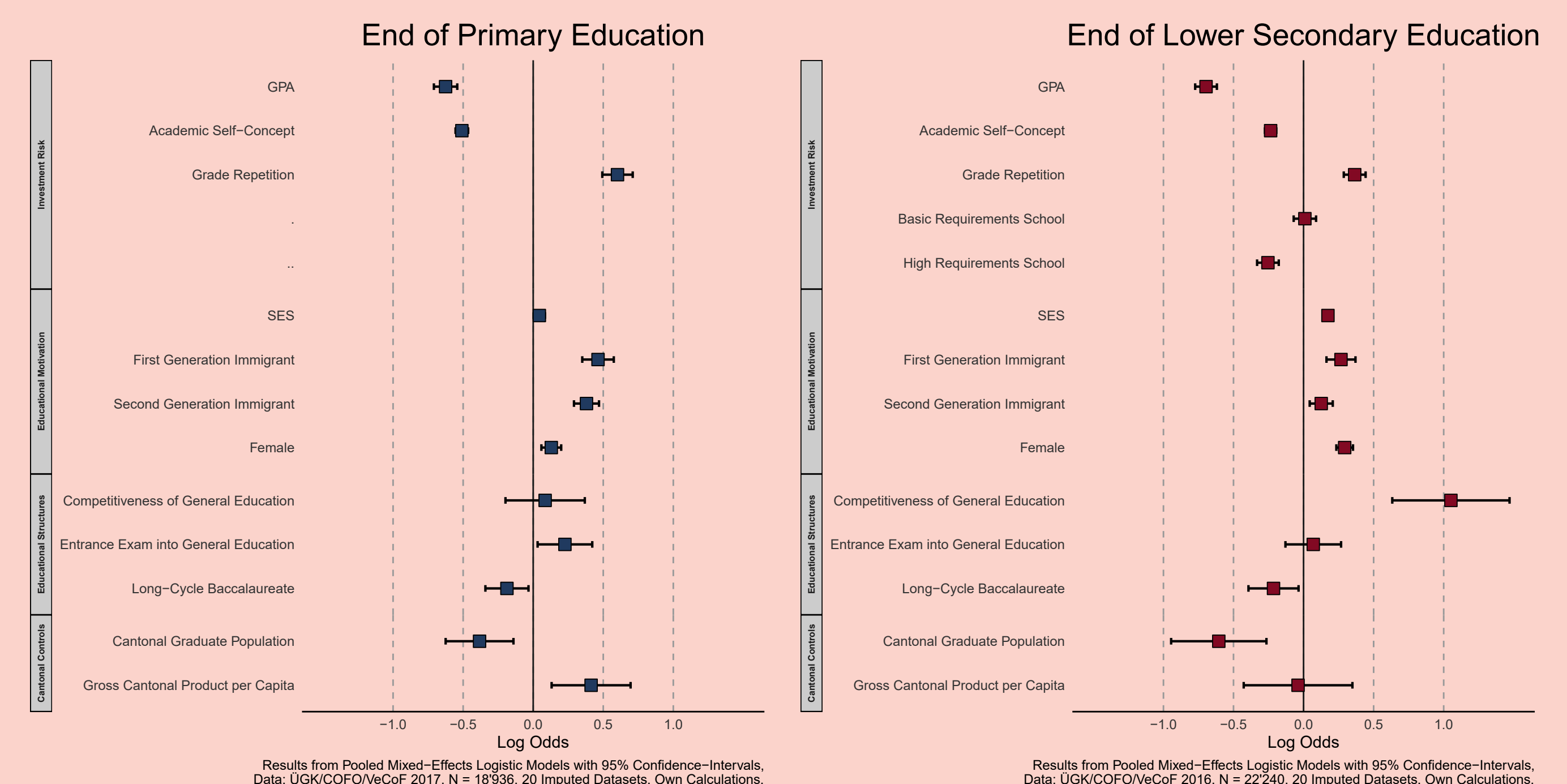
This study draws on cross-sectional data from two waves of Switzerland's large-scale assessment study *ÜGK/COFO/VeCoF*.

- Wave 2016: 22'240 students in the last year of lower secondary education (9th grade)
- Wave 2017: 18'396 students in the last year of primary education (6th grade)

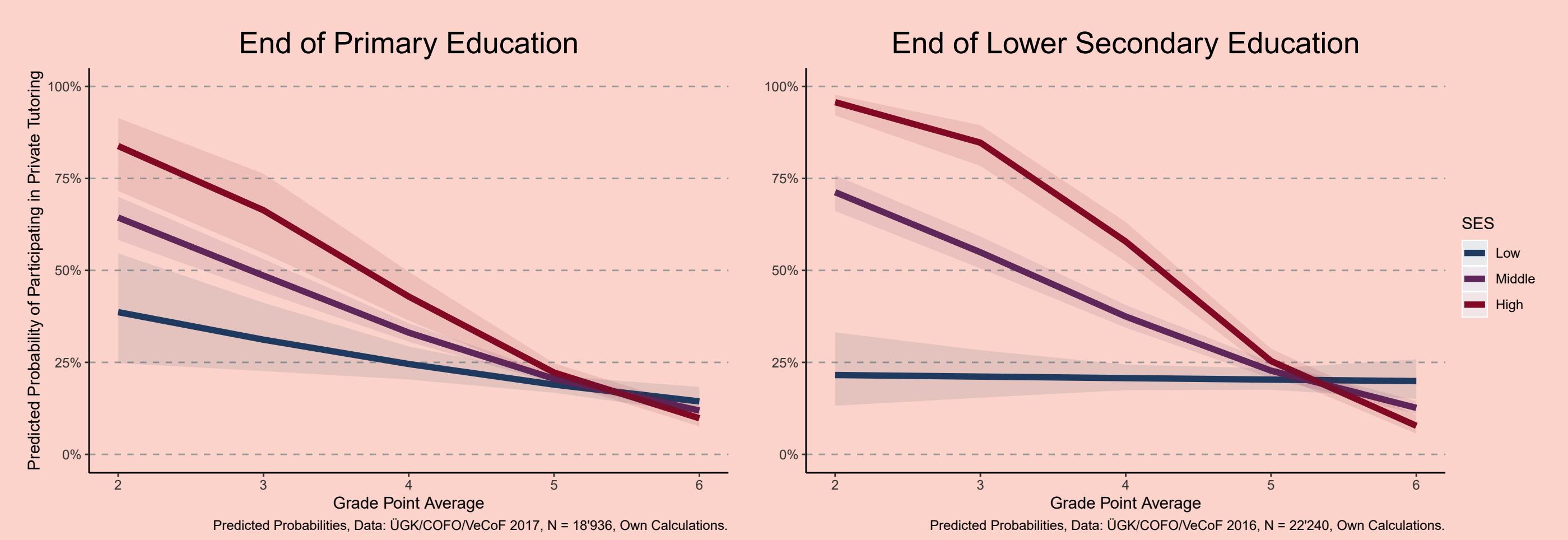
Missingness in the data is addressed using multiple imputation by chained equations (multilevel FCS, 20 imputed data sets). Pooled regression analyses on participation in private tutoring are conducted using mixed-effects logistic models with students nested in cantons.

Factors Related to Participation in Private Tutoring

Multilevel Regression Estimates on Participation in Private Tutoring



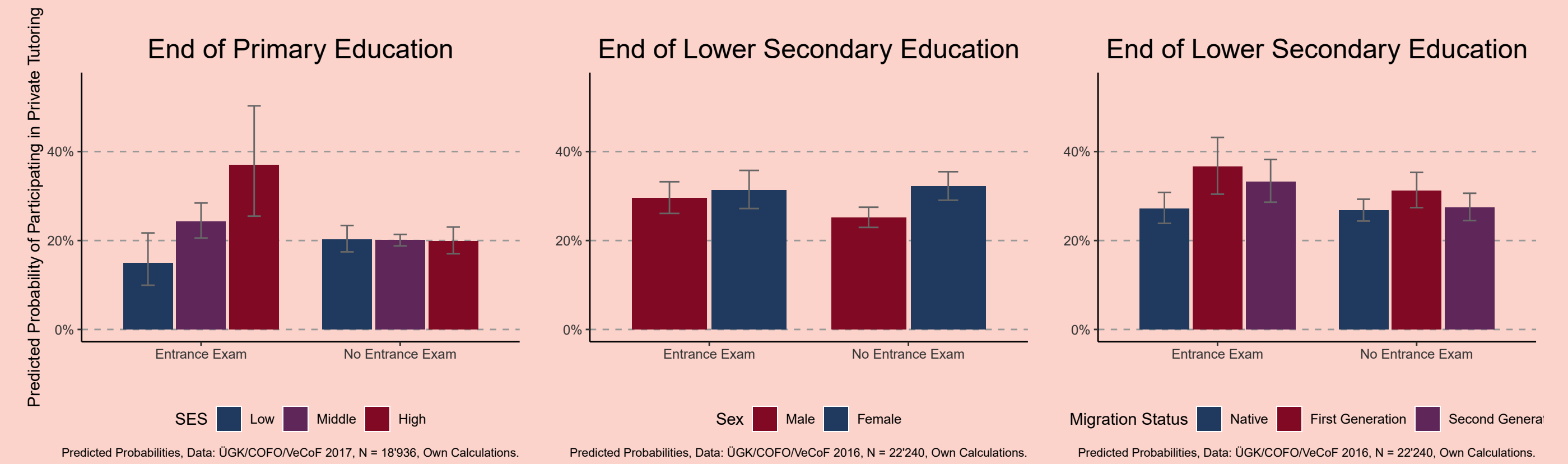
Interaction of Educational Motivation and Investment Risk



The Role of Cantonal Education Systems

- The existence of mandatory entrance exams into general education increases demand for private tutoring at the end of primary education.
- Using cantonal baccalaureate quotas as a proxy, higher competitiveness of general education relates to higher participation in private tutoring.
- The social selectivity of long-cycle baccalaureate schools lowers the demand for private tutoring in the run-up of both transitions.
- Depending on educational structures, participation in private tutoring is more socially selective in some cantons than in others.

Cross-Level Interactions with Entrance Exams



Conclusion

This study provides evidence that investments in shadow education - and the social selectivity thereof - are incentivised by institutional features of education systems. Moreover, the Swiss case underlines the necessity of considering within-country variation when analysing participation in private tutoring.

Shadow education is a vibrant yet complex phenomenon. Future research should continue uncovering the broader implications of shadow education.

References

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Further Information

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