

# Educational inequality in Russia: The role of socio-economic status and academic achievements.

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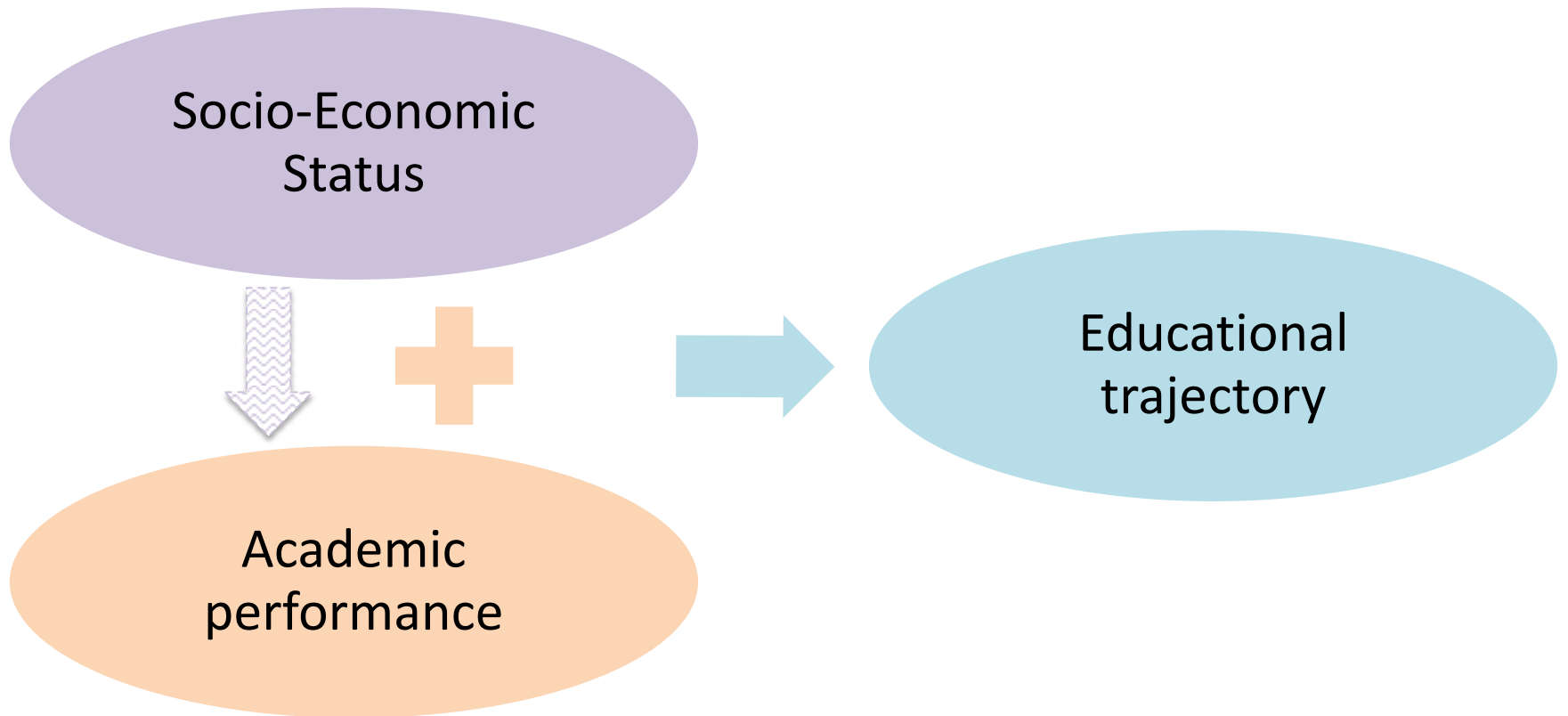
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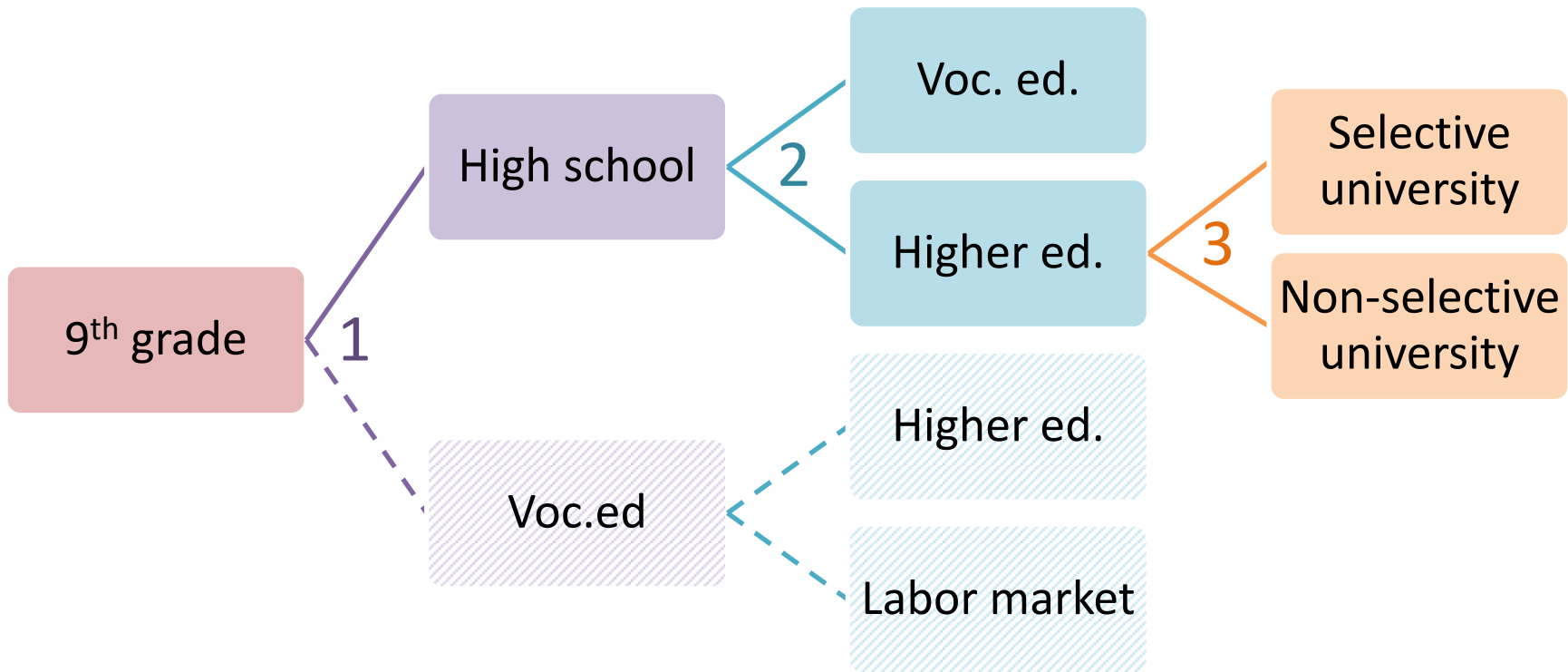
Education and equity issues in life-course transitions in Russia  
CIES 2017, Eurasia SIG

# Motivation



# Research question

What is the relative effect of family's SES and student's achievements in every transition?

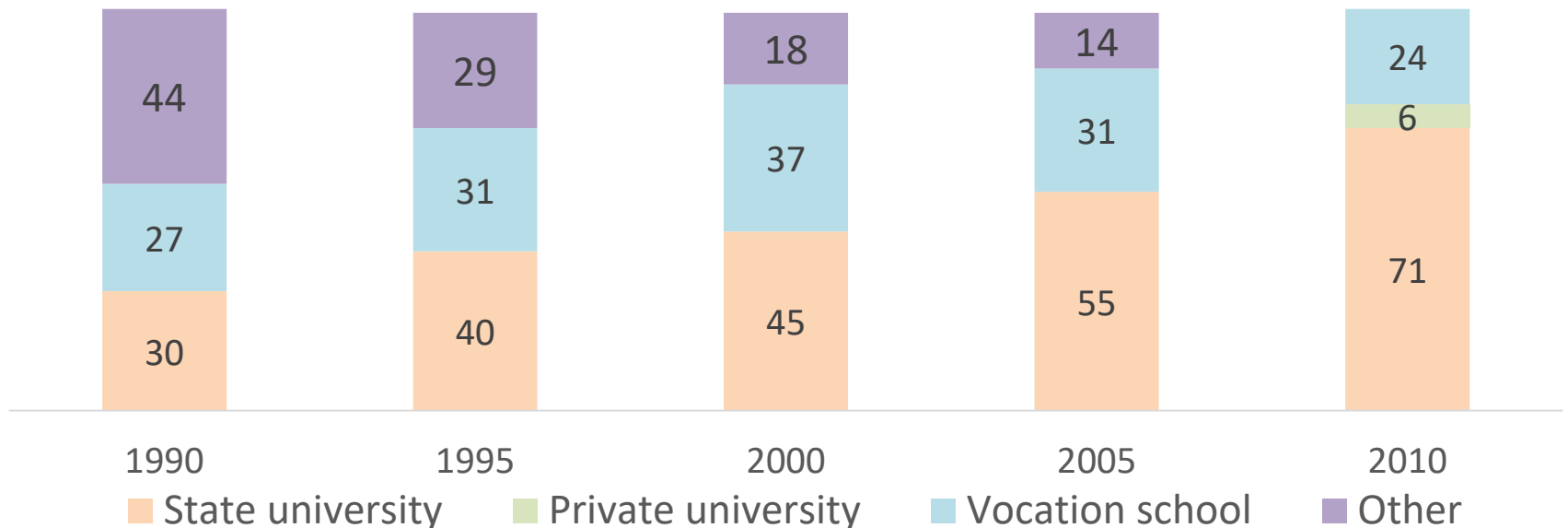


Transition points in Russian education

# Russian context

- The role of SES depends on supply of places at the given level of education.
- School level is almost universal.
- Higher education is also not a deficit.

Distribution of high school graduates by post-secondary educational options, Russia, %



# Theoretical framework

- Maximally maintained inequality (MMI): inequality moves on the next level of education when previous one is available for every person of a given age cohort. (Raftery and Hout, 1993)
- Effectively maintained inequality (EMI): even in case of full availability of a given education level inequality can still exist within it. (Lucas, 2001)
- Primary (indirect) and secondary (direct) effects of family SES on educational choice.(Boudon, 1974)

# Methodology. Models

- Logistic regressions for every transition points and decomposition analysis (KHB). This technique decomposes the odds ratios describing inequalities between social origin groups into primary (indirect) and secondary (direct) effects. (Karlson, Holm, & Breen, 2012)
- In its sense it is close to “product of coefficients” in SEM models. However it captures the features of logit model and produces unbiased coefficient estimates.

# Methodology. Data

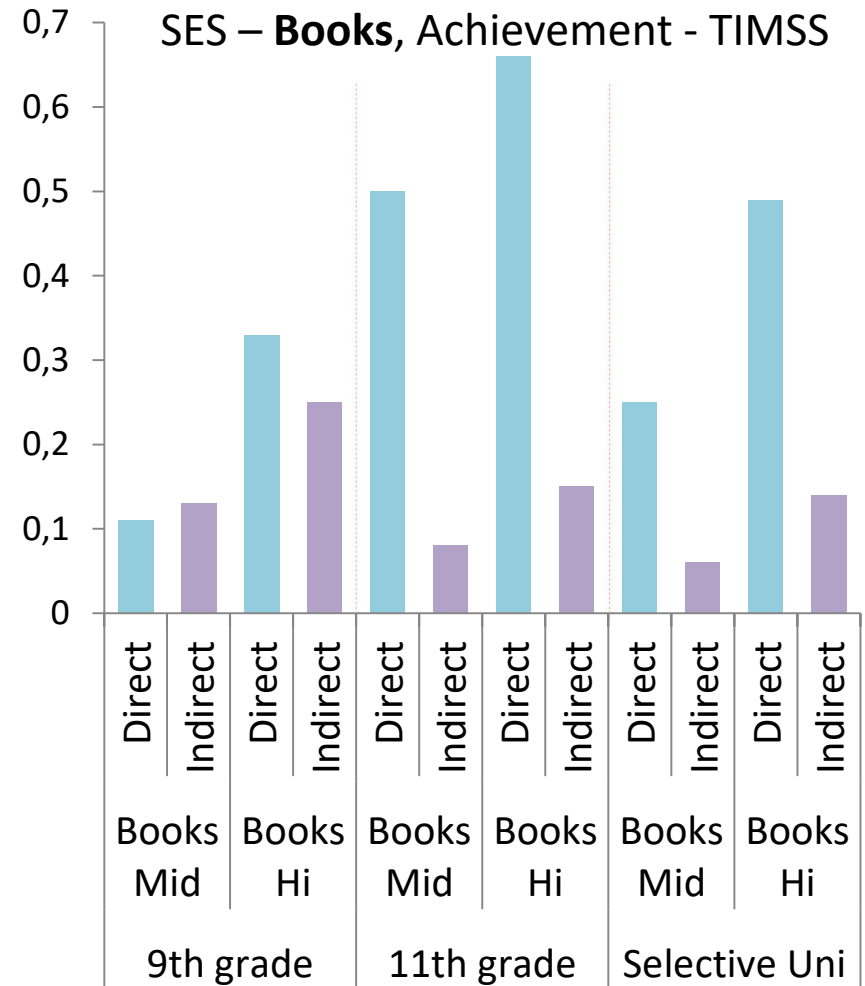
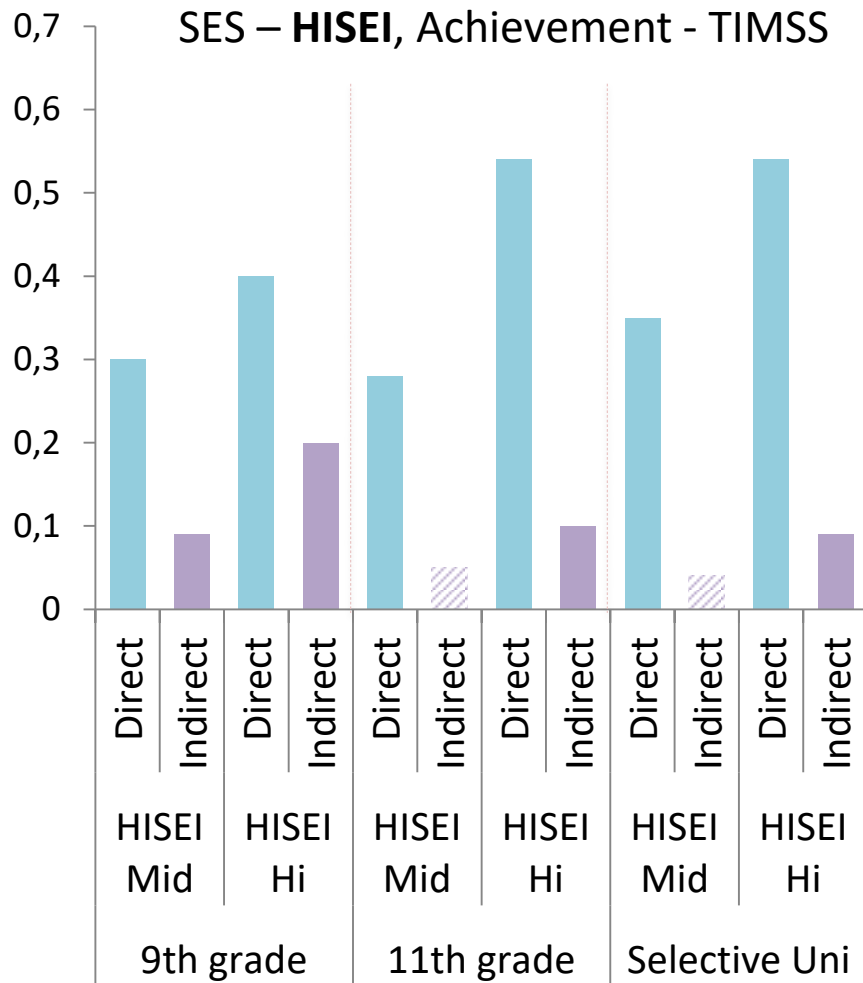
- Russian longitudinal panel study “[Trajectories in Education and Careers](#)”. Waves:
  - Before first transition:
    - 2011 – start of the panel, TIMSS 8th grade (4893 students, 227 classes);
    - 2012 – PISA 2012 (4399 students);
  - After first, before second transition:
    - 2013-2014 Fall and spring 11<sup>th</sup> grade or 2<sup>nd</sup> year of vocational schools (4138 and 4244 students, respectively);
  - After second transition:
    - 2015 age of university second year (3618 students).
- Final sample size: 2774, 1652, 1503 students for 1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup> points respectively.

# Methodology. Variables

- Outcome:
  - 1<sup>st</sup>: academic (1) vs vocational school (0),
  - 2<sup>nd</sup>: university (1) vs vocational school (0),
  - 3<sup>rd</sup>: selective (1) vs non-selective university (0). (Selective - 30% of the highest average admission scores).
- SES:
  - number of books at home (0-25, 26-100, 100+),
  - mother's education (less than VE, VE, HE),
  - parental highest ISEI (thirds: 0-45, 46-65, 66-100).
  - Reference category is the lowest one in every case.
- Achievement:
  - **TIMSS scores** (8th grade),
  - PISA scores (9th grade),
  - USE scores (Unified State Exams , 11<sup>th</sup> grade).
- Controls: gender, type of school.



# Results. Odds ratios for three transition point.



# Results

- Direct effect of SES is higher than indirect at every transition point. Hence the choice of further educational trajectory is always affected by family SES background directly irrespective to the academic performance.

## **9<sup>th</sup> grade track**

- Direct and indirect effects are closer in absolute values, especially books in home as SES proxy.
- Coefficients are somewhat higher for boys.
- Positive direct effect of high SES is bigger than negative direct effect of low SES.

## **Selective vs non-selective university**

- The negative direct effect of low SES is bigger than the positive one of high SES. Low SES pulls down with the more strength than high SES gives a push to selective universities.

# Discussion

- MMI. Increase in direct effect between 9<sup>th</sup> and 11<sup>th</sup> grades transition points showed that MMI is in operation here. Inequality is less apparent at the middle to high school transition. The supply is enough to enroll all the students; and low SES students prefer to use this possibility to achieve higher level of education. However in average they have lower academic performance and are not so competitive for the higher education places especially in prestigious universities.
- EMI (at the higher education level). Direct effect is high for the choice between selective and non-selective university.

Thank you!

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