What determines academic/vocational secondary school choice in Russia?

Social class or academic performance?

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- A key to understanding social mobility in Russia are the factors that affect whether students choose to attend academic secondary school after 9th grade or end up in vocational secondary education.

- Russian students usually attend the same academic institution for grades 1-9. In urban areas, they can continue on until 11th grade.

- Academic secondary school in Russia is only two years (10th & 11th grades). When students complete, they generally go on to university and a professional career.

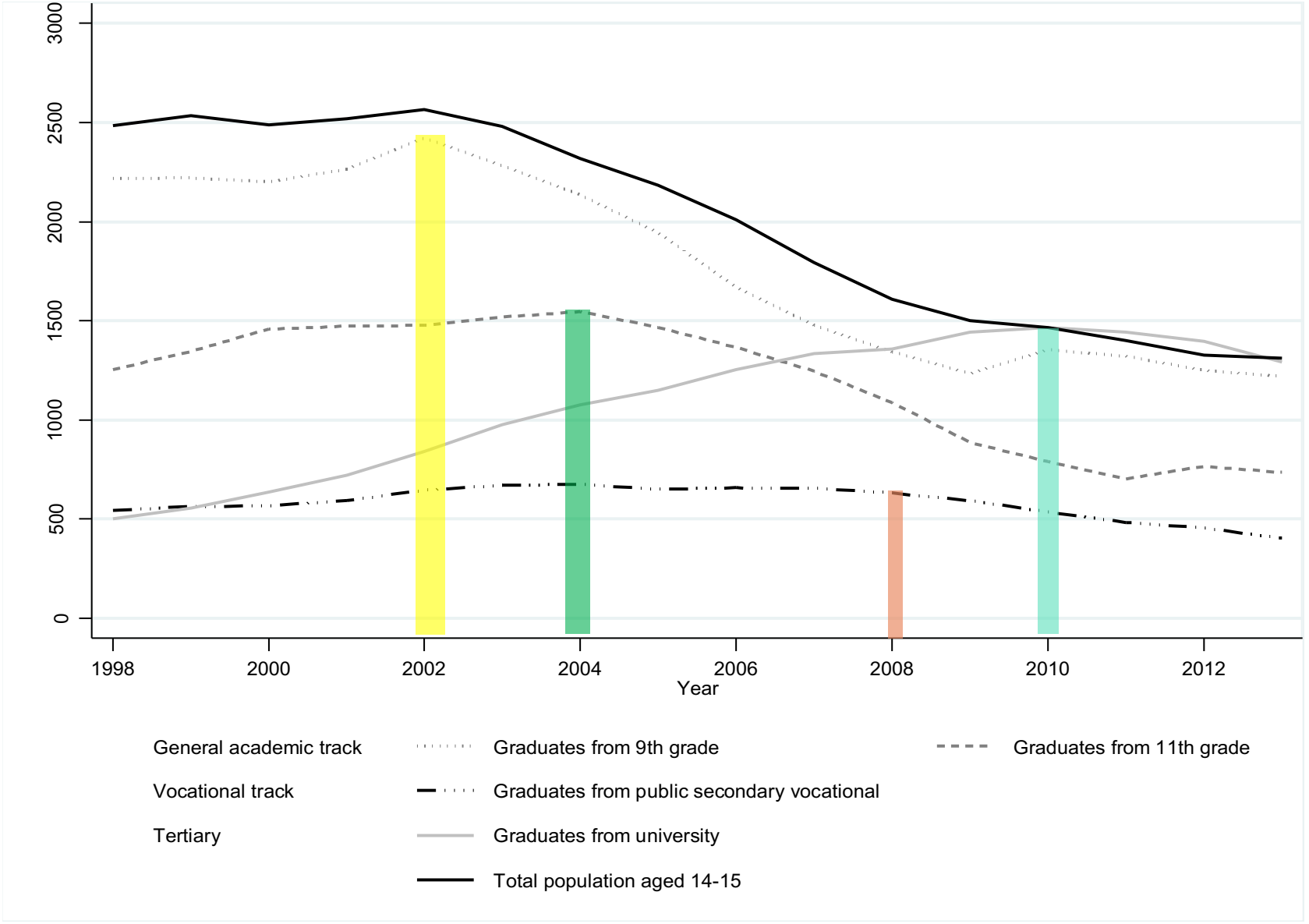
- Vocational education was an important feature of the Soviet education system, and continues to absorb many students after 9th grade (~40% in 2013).

- About one-half of these students end up in universities after completing three or four years of vocational education.Thus, vocational education is not dead-end education, however it greatly lessens chances of attending a “better university”

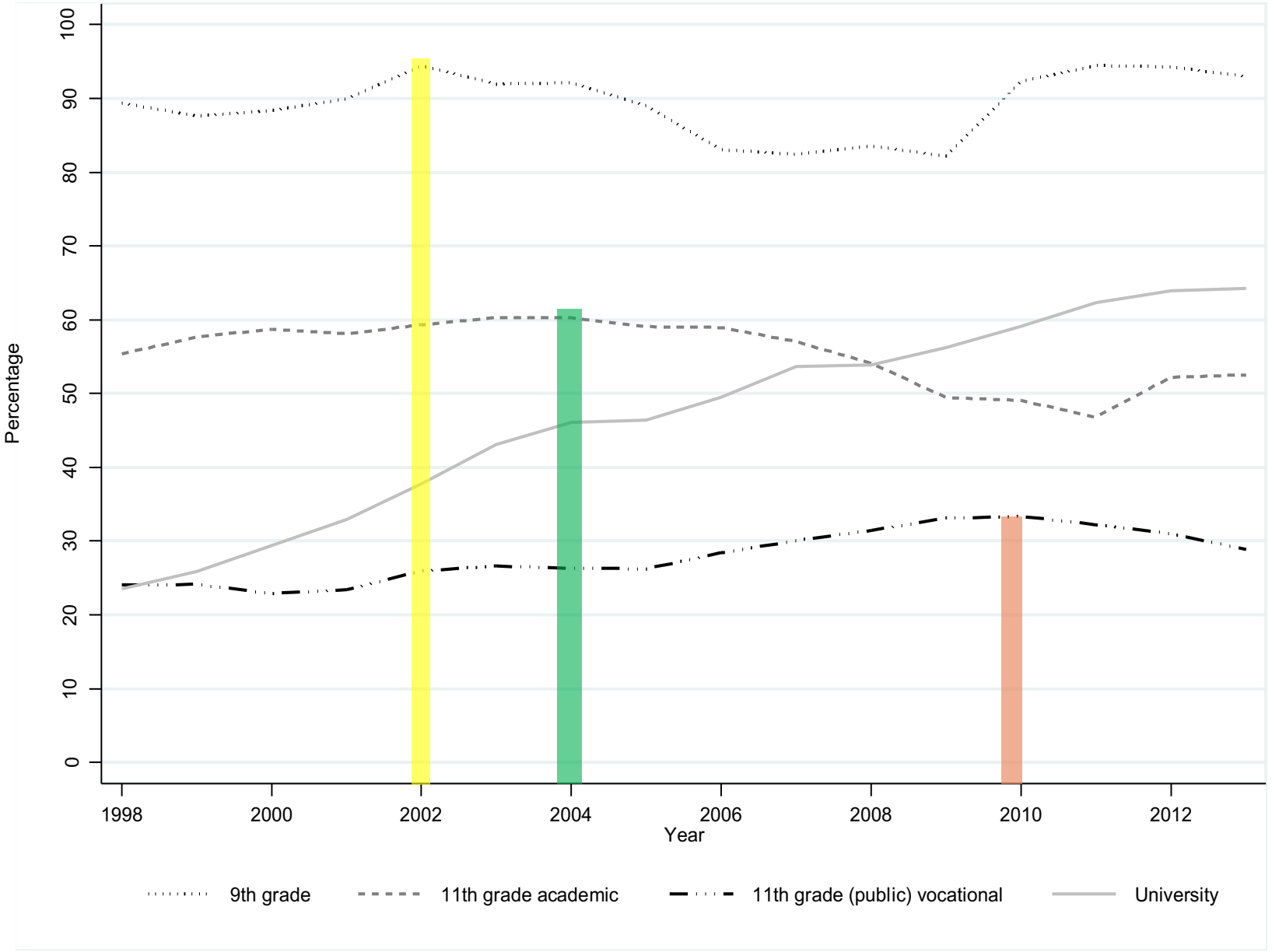
Background

- Demographic change in Russia is marked by a fairly rapid decline in school and university age population.
- This allows for a increasing percentage of school age youth to enter academic secondary school and university.
- Yet, about the same fraction of youth continue to opt for vocational education.
- At the same time, about 15 percent of youth attend select schools called *gymnasiums* and *lyceums*.
- Tracking is usually not a feature of primary and middle school but students in academic secondary schools are mainely tracked, particularly in math.

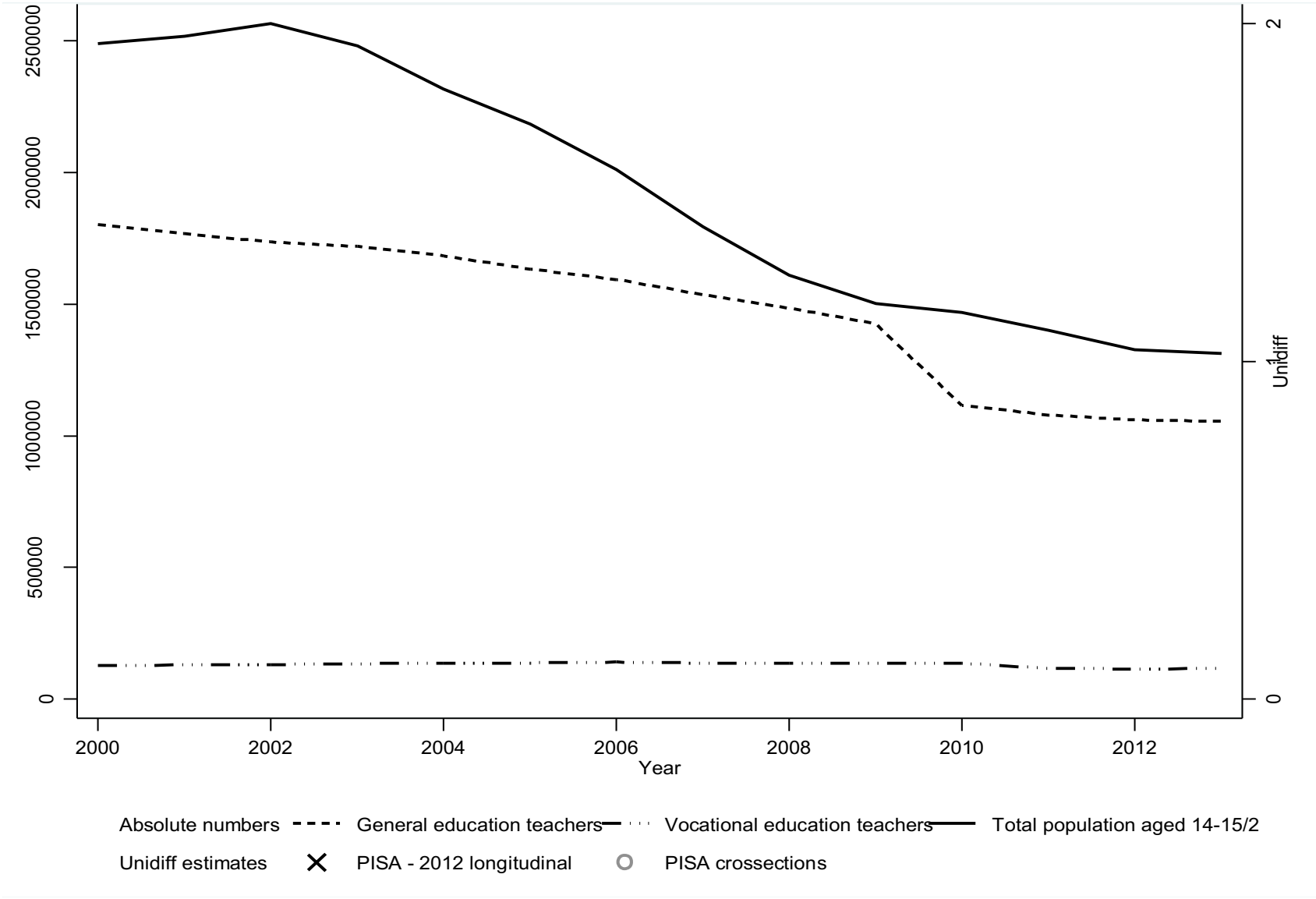
Background (cont.)



Number of graduates, 1993-2013



Proportion of cohort graduates, 1993-2013



Numbers of teachers in general and vocational education , 2000-2012

- Why do students “choose” to attend vocational school?

- Are the students who choose the vocational school option academically “weak”? Or does social class “condition” their choice, such that students of disadvantaged class origins are more likely to choose vocational school than students of advantaged origins, regardless of their academic performance?

- In the literature, social class inequalities in educational attainment have been decomposed into primary and secondary effects (Jackson, 2013).

Research problem

- **Primary effects:** class effects on performance that lead to inequalities in transition rates. The size that the inequality would be if only performance operated to create inequalities between classes.
- **Secondary effects:** class effects on transition rates, conditioning on performance. This shows us what the size of the inequality in the transition to academic rather than vocational school would be if there were no inequalities in performance between classes. This inequality is created because students with precisely the same level of academic performance are making different choices with respect to the transition.

"**Primary effects** are all those that are expressed in the association that exists between children's class origins and their average levels of demonstrated academic ability. Children of more advantaged backgrounds… perform better, on average, than children of less advantaged backgrounds in standard tests, examinations, and so on…

Secondary effects…are effects that are expressed in the actual choices that children, together perhaps with their parents, make in the course of their careers within the educational system – including the choice of exit"

(Breen and Goldthorpe, 1997)

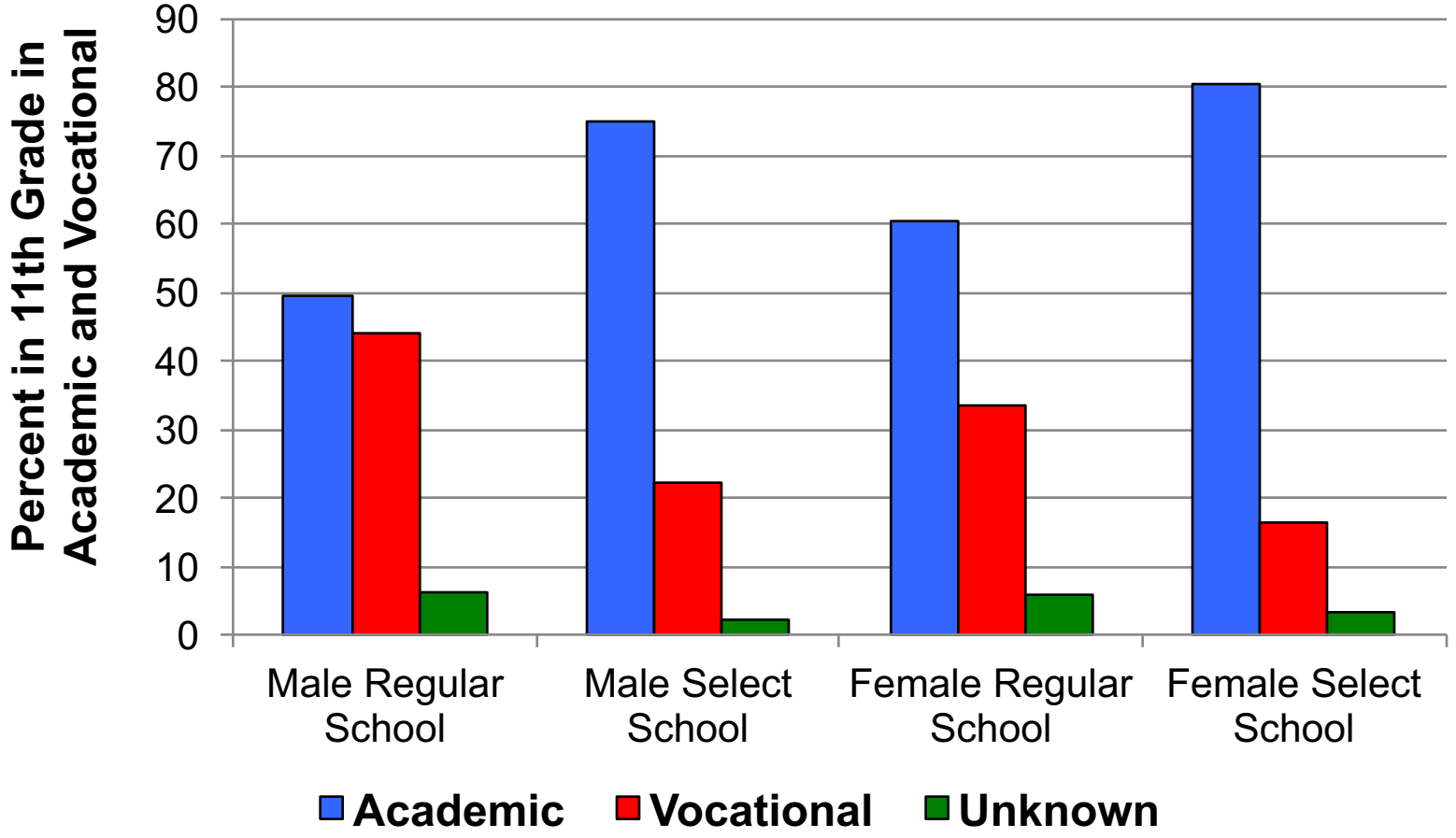
Defining Primary & Secondary Effects

Longitudinal study of Russian youth educational trajectories

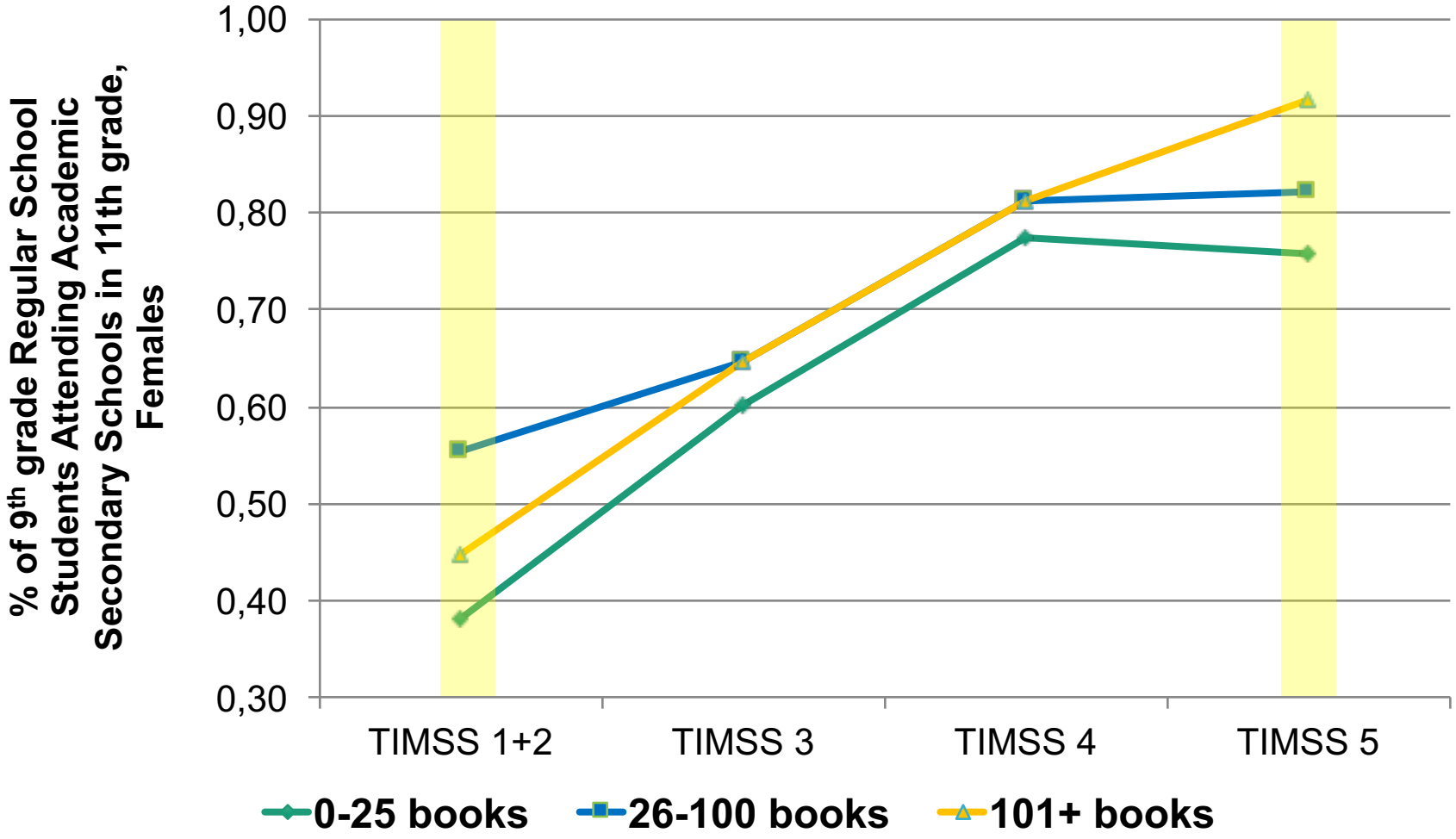
1st wave Spring 2011	2nd wave Spring 2012	3rd wave Fall 2013	4th wave Spring 2014
• **TIMSS** • 8th grade of general school • N=4893	• **PISA** • 9th grade of general school • N=4399	• 11th grade of general school, • 1 or 2nd year of vocational school • N=4129	• 11th grade of general school, • 1 or 2nd year of vocational school • N=4237

N (vocational school) = 36%

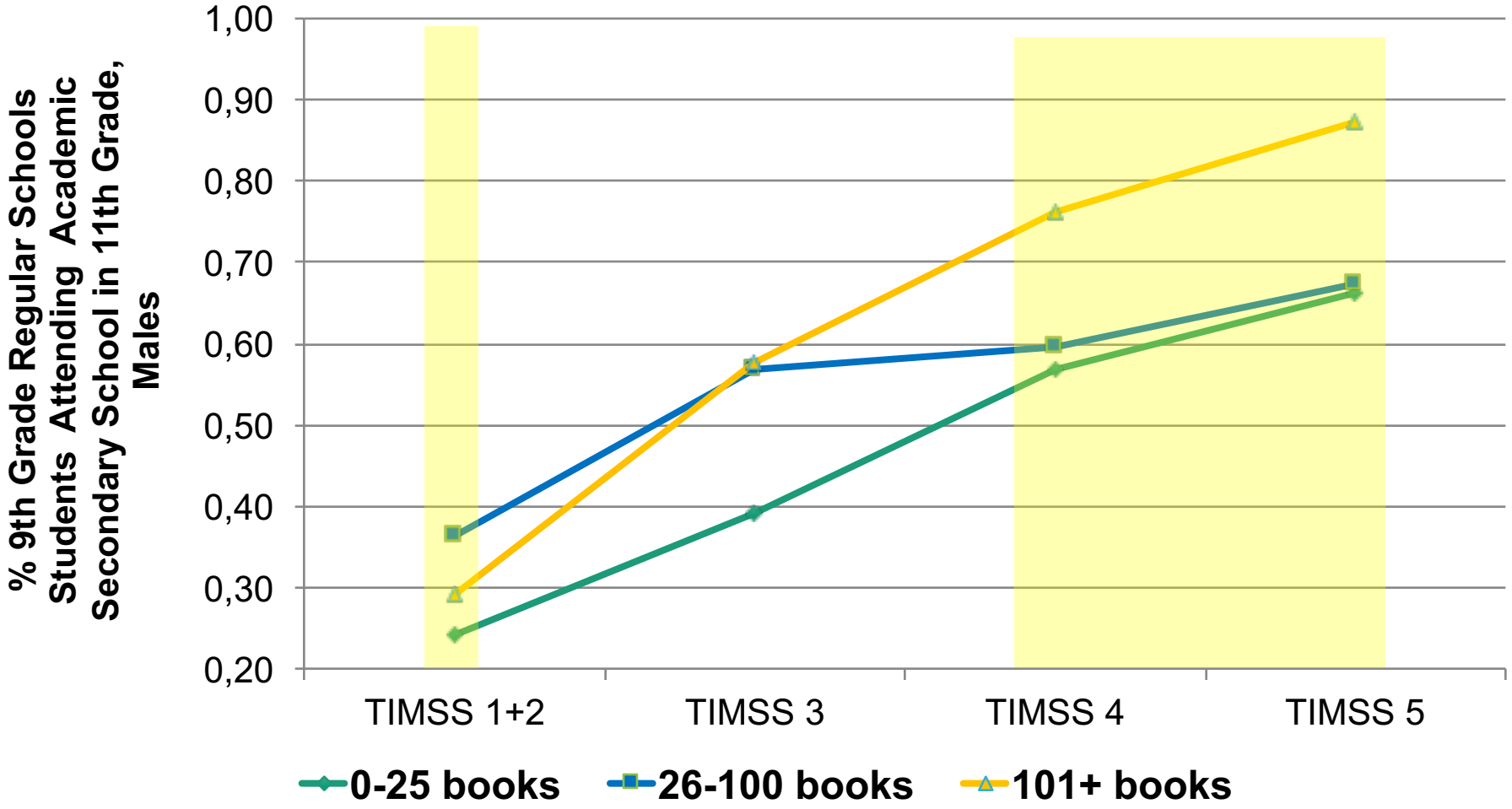
Data—Description of the Longitudinal Study, Starting with TIMSS Sample



Description of Choices, Males & Females in 11th Grade, by Type of School, 8th Grade



Probability of Attending Academic School by TIMSS Test Score and Family Academic Resources (BIH), Girls



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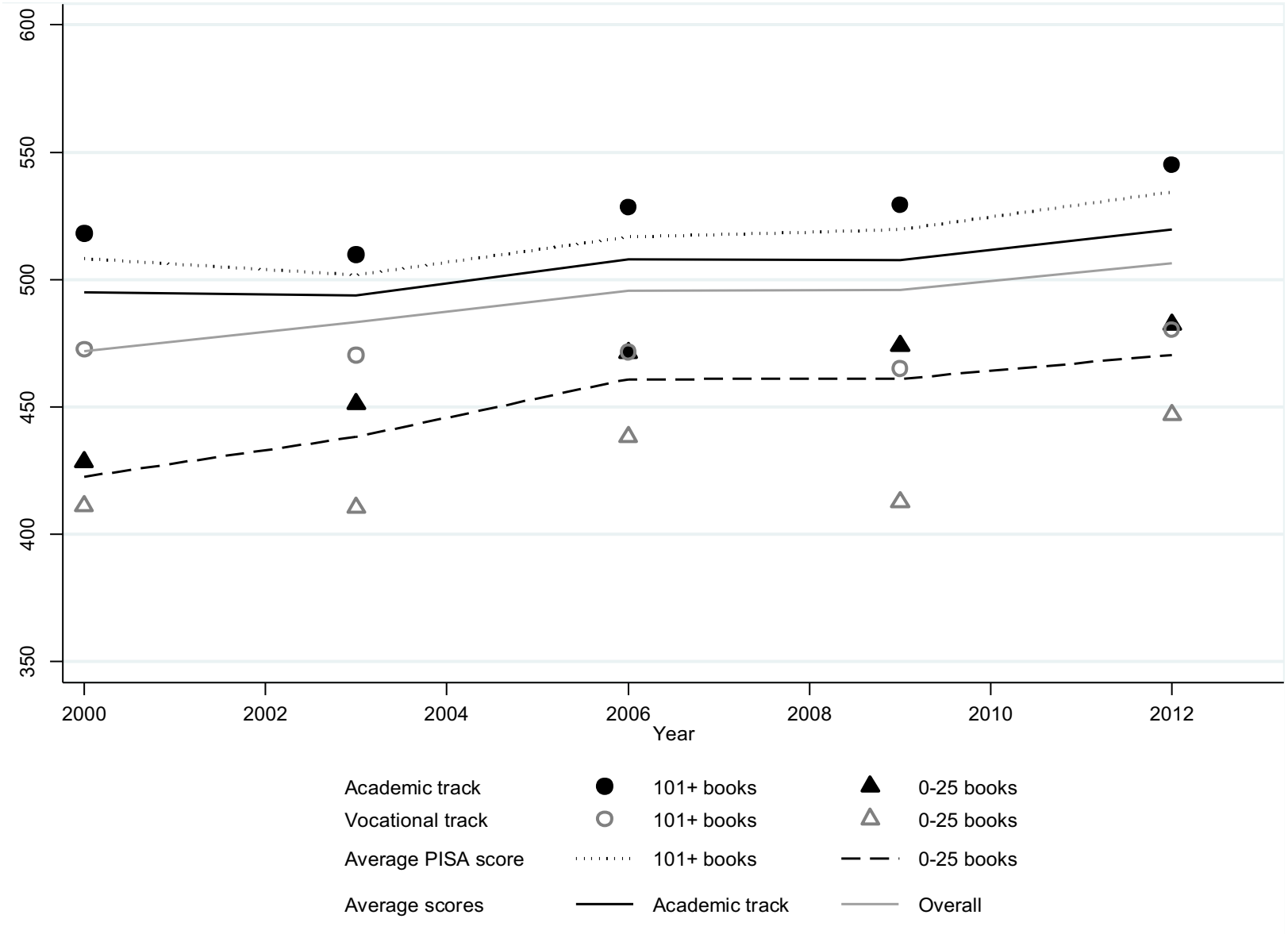
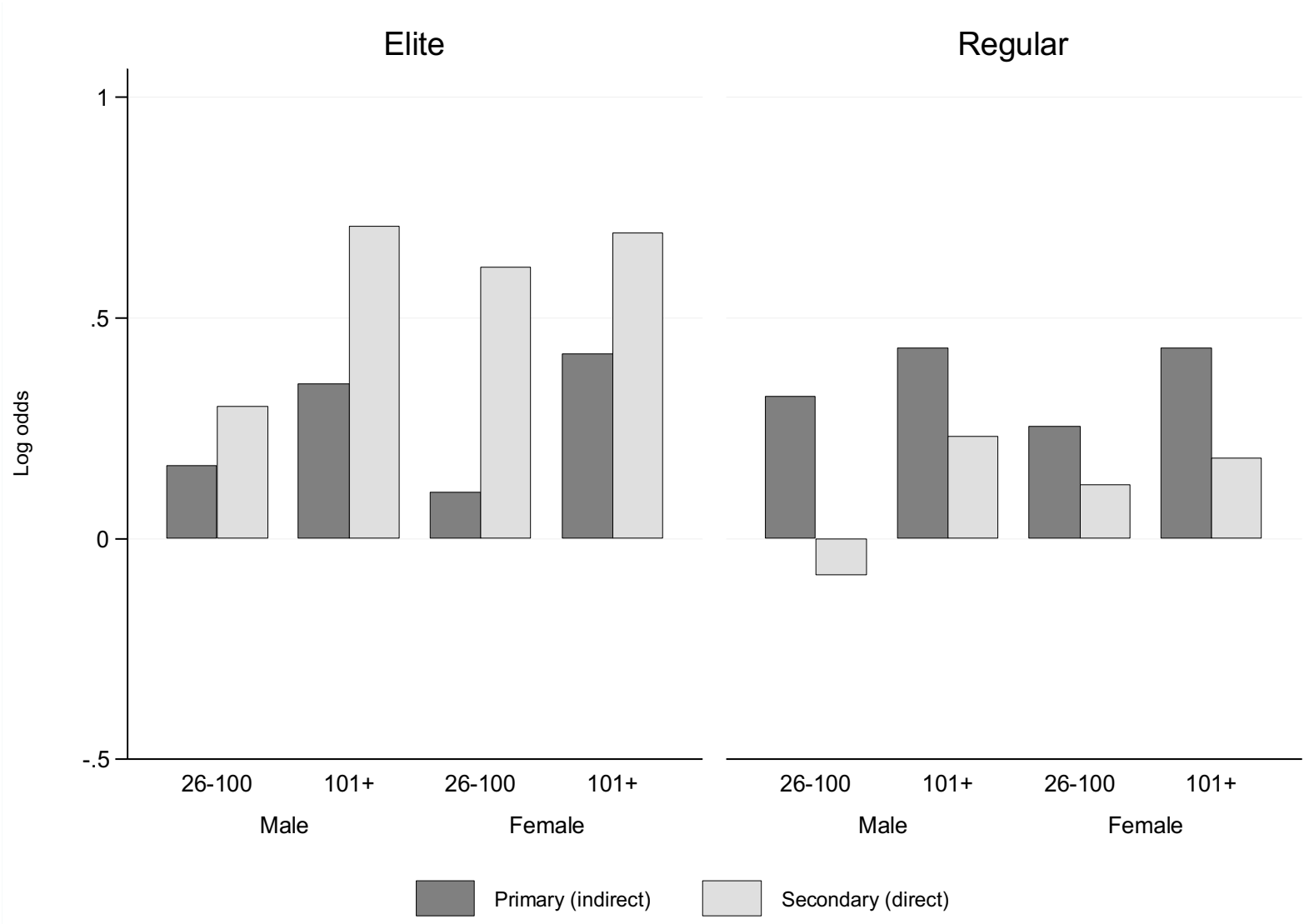


Average PISA scores

- To assess the relative importance of performance/choice conditional on performance, we use the KHB method, which allows for the decomposition of a non-linear probability model into primary and secondary effects (Karlson, Holm and Breen, 2010)

- This method decomposes the total (log) odds ratio describing an inequality between classes into a part attributable to the indirect effects of class that operate through performance, and a part attributable to the direct effects of class that operate net of performance

Statistical decomposition of school choice



Decomposition of choice function

- **Total social origin inequalities** in upper secondary track placement are larger in elite schools
  - For students **in regular schools**, social origin inequalities in upper secondary track placement are largely due to inequalities in PISA test performance. For both males and females in regular schools, around 70% of the inequality between origin categories is accounted for by inequalities in academic ability.
  - For students in **elite schools** no more than 35% of the inequalities between the low and higher origin groups are determined by PISA test score inequalities. This is most likely because the test scores in elite schools are markedly higher than the scores in regular schools. Elite school students are therefore unlikely to be squeezed out of the academic track on the basis of their test scores, and instead, social background inequalities are largely determined by factors unrelated to test scores
- This is high relative to European countries and the U.S. (cf. Jackson and Jonsson, 2013)
- Differences in academic performance among classes are not the main driving force behind inequality at this transition

Conclusions