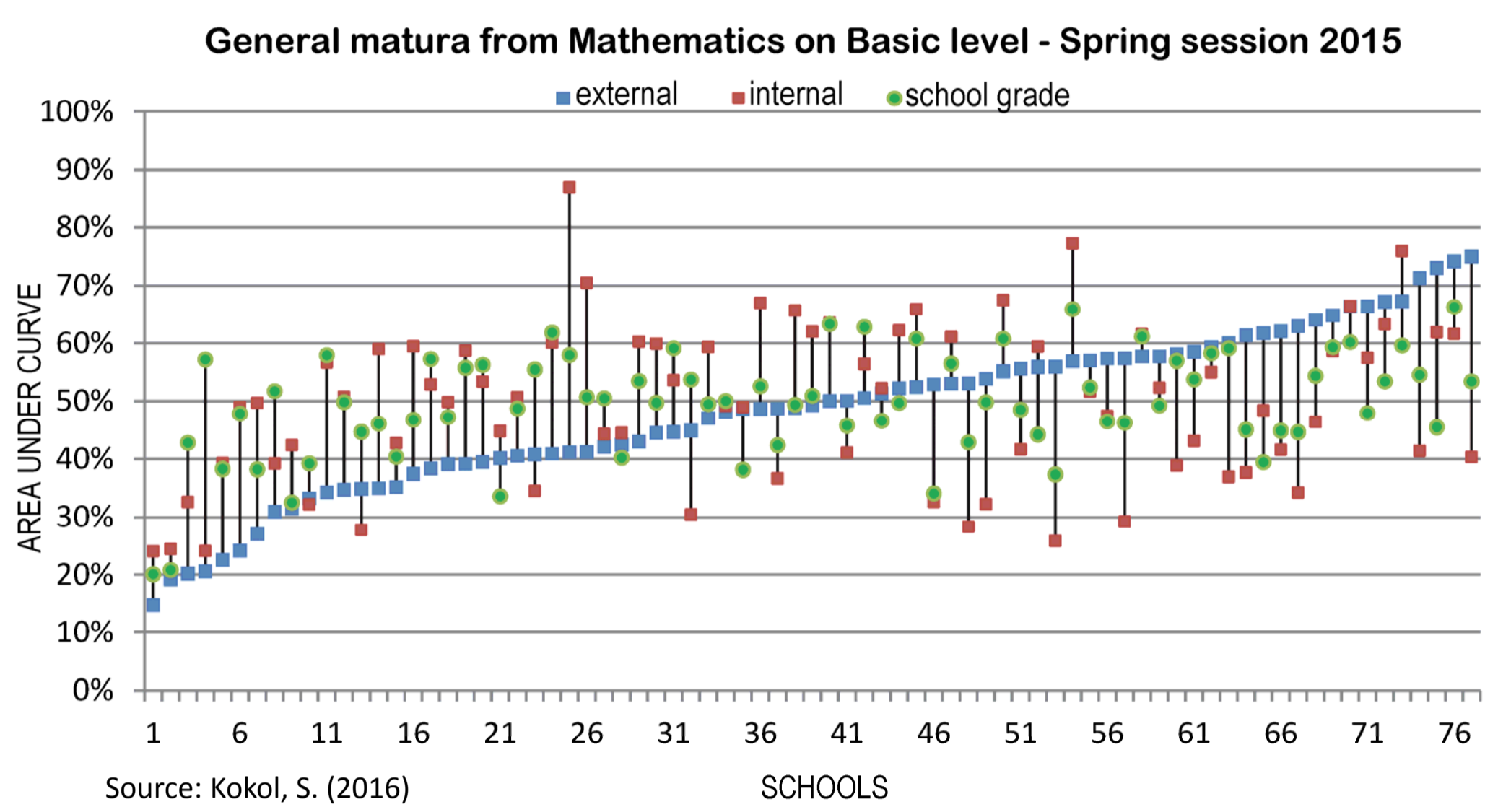




# Admission to HE should reward quality and promote high academic standards in pre-tertiary education – II. (Slovenian case)

## Inflation of internal grades

Internal grades in Slovenia are inflated (Zupanc, Bren, 2010), meaning that higher grades do not derive from a corresponding increase in student achievement. Sweden is also the case; it has a big problem with inflation of internal grades. **The average school-leaving grade rises almost continuously year per year, while the opposite applies to the PISA scores** (Henrekson, & Järvvall, 2016)

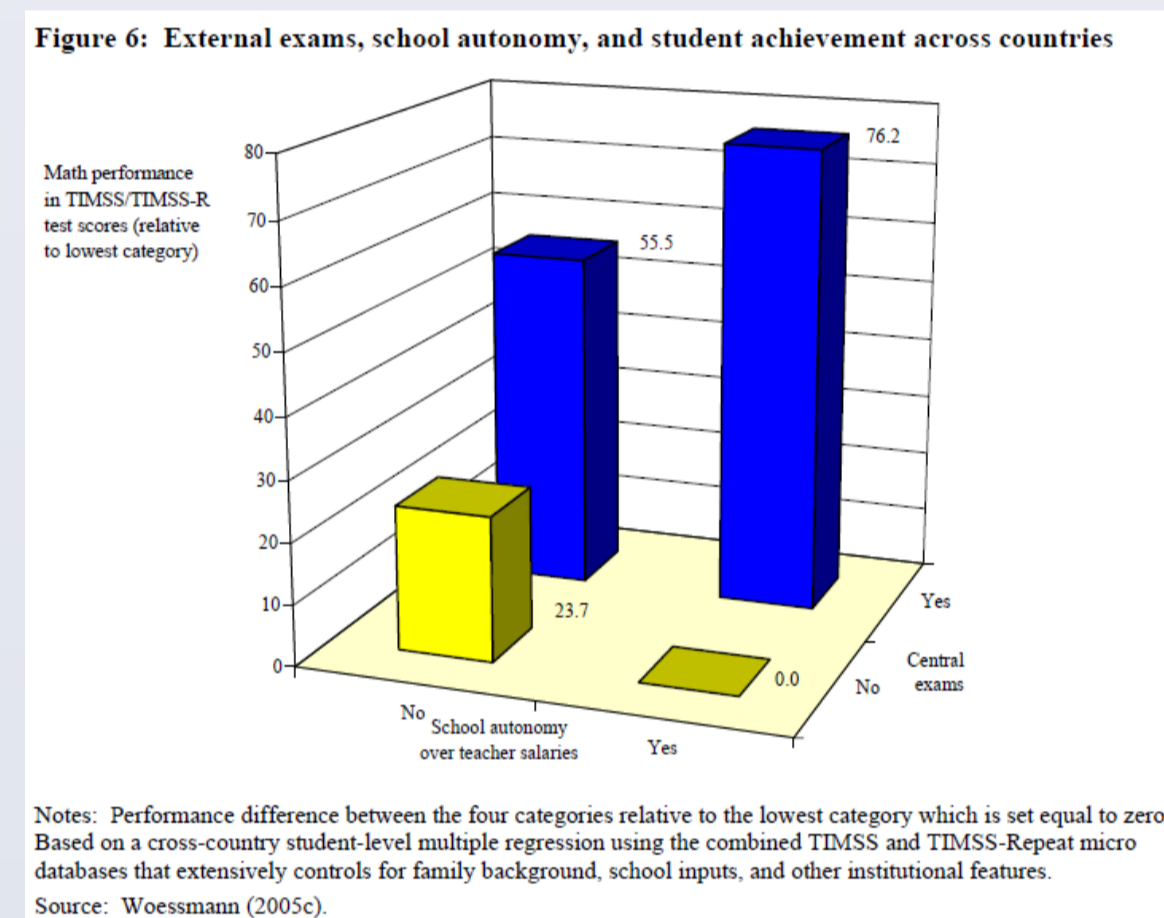
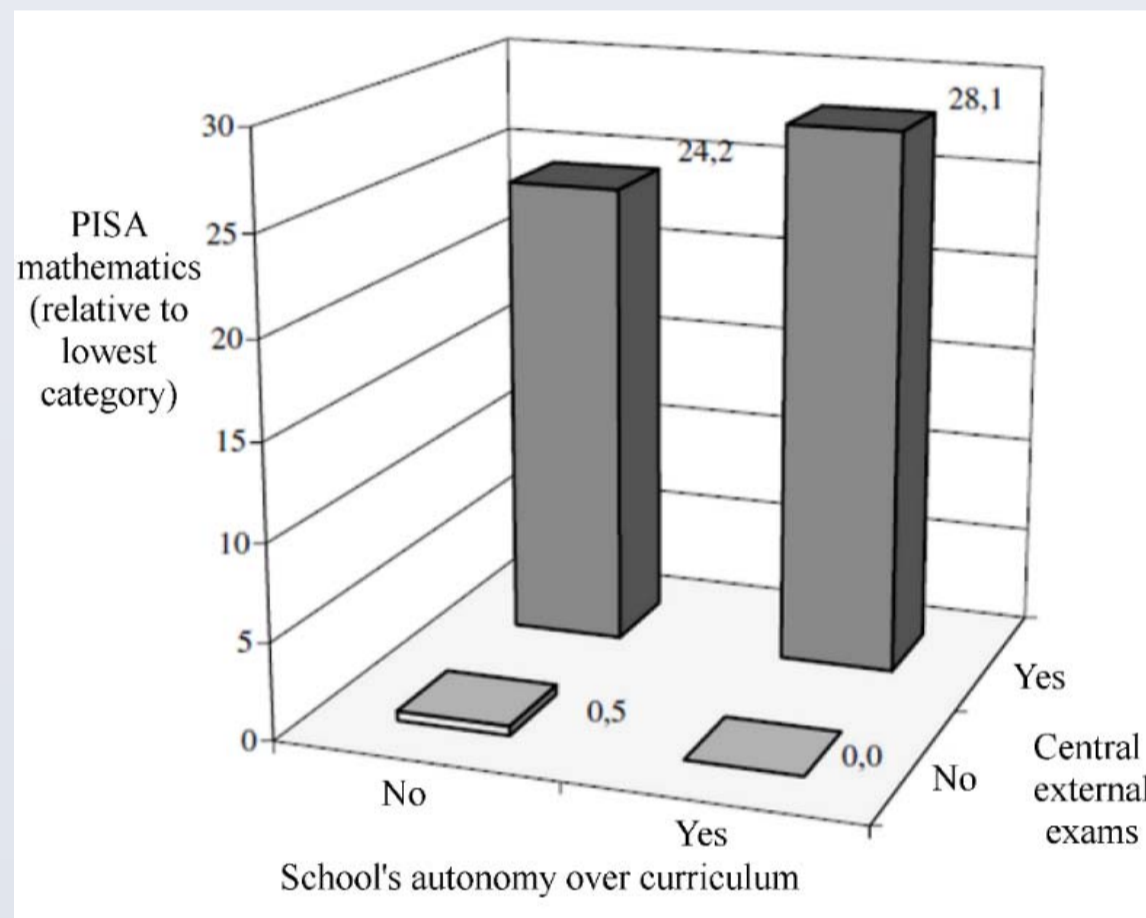


Teachers in Slovenia give the spectrum of lower and higher grades regardless of measured achievements relative to absolute (criterion) reference.

As a rule, **high achievements for the external parts is followed by low achievements for the internal parts and vice-versa; low achievements for the external parts is increased by high achievements for the internal parts.** The criterion is higher for „better“ schools and lower for schools with „lower“ achievement students.

## School autonomy and accountability

The relationship between autonomy, accountability and performance is complex. It is a combination of several autonomy and accountability policies, not just a single, isolated policy relating to better student outcomes (OECD, 2011). **PISA results suggest that, when autonomy and accountability are combined in an intelligent manner, they tend to be associated with better student performance** (OECD, 2011).



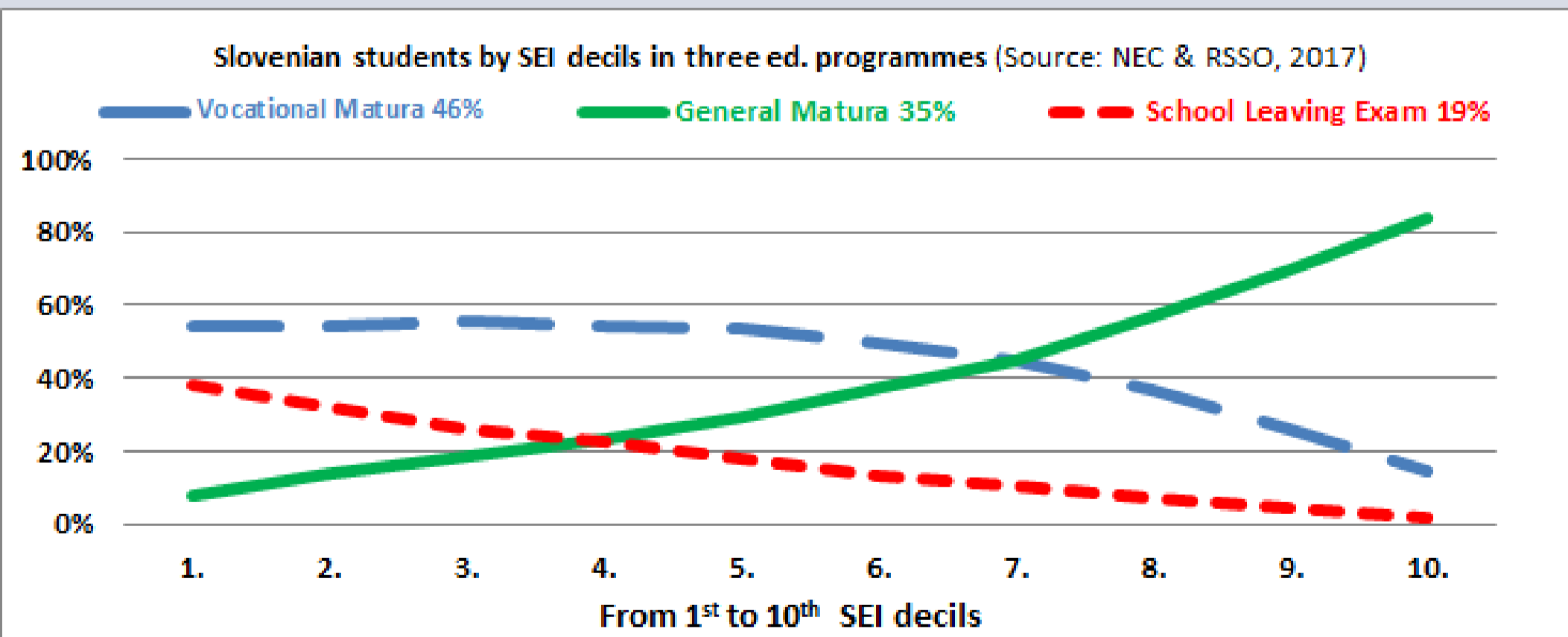
Across OECD countries, those that use Curriculum-Based External Examination Systems (CBEEs) tend to perform higher, even when accounting for national income: students in school systems that use CBEEs perform, on average across OECD countries, 16 points higher than students in school systems that do not use these examinations (OECD 2010). Greater autonomy in decisions relating to curricula, assessments and resource allocation tends to be associated with better student performance, particularly when schools operate within a culture of accountability. **There is an indication that local decision-making (autonomy) works better when there is also external accountability that limits any opportunistic behaviour of schools.**

Research results (Jürges, Shneider, Büchel 2003) suggest that **centralized examinations increase student achievement by about one third school year equivalent**. Positive effects of external exit examinations on test-score outcomes have been shown for Canadian provinces, for US states and for German states. International cross-country evidence suggests that **the effect of external exit examinations on student achievement may well exceed a whole grade-level equivalent** (Piopiunik, Schwerdt, Wößmann 2012).

## Equity in education

All countries should try to meet **two goals** to ensure the best outcome for their schools: **getting high levels of student achievement (quality) while minimizing systematic gaps in performance - equity** (Wößmann, 2016). Poor children have a much higher risk of low school achievement (OECD, 2012).

**In countries with earlier tracking, the achievement difference between children with different socio-economic backgrounds is considerably larger** (Hanushek, Wößmann, 2011). Early tracking has especially negative effects on the achievement levels of disadvantaged children (COM; 2016).



Entering different tracks of upper secondary education in Slovenia is highly associated with students and their families' socio-economic status (SES or Social Economic Index - SEI).

The probability for students in **short upper secondary vocational (2 years) and upper secondary vocational education programmes (3 years)**, where they need to pass a **programme-ending exam**, is reducing inversely proportional to the score of his/her family's SEI.

The probability for students in **technical education programmes (upper secondary technical & vocational technical education programmes)**, where students need to pass the **Vocational Matura**, is constant up to 5<sup>th</sup> SEI decile; afterwards the probability is reducing when the family SEI goes from 6<sup>th</sup> to maximum 10<sup>th</sup> decile.

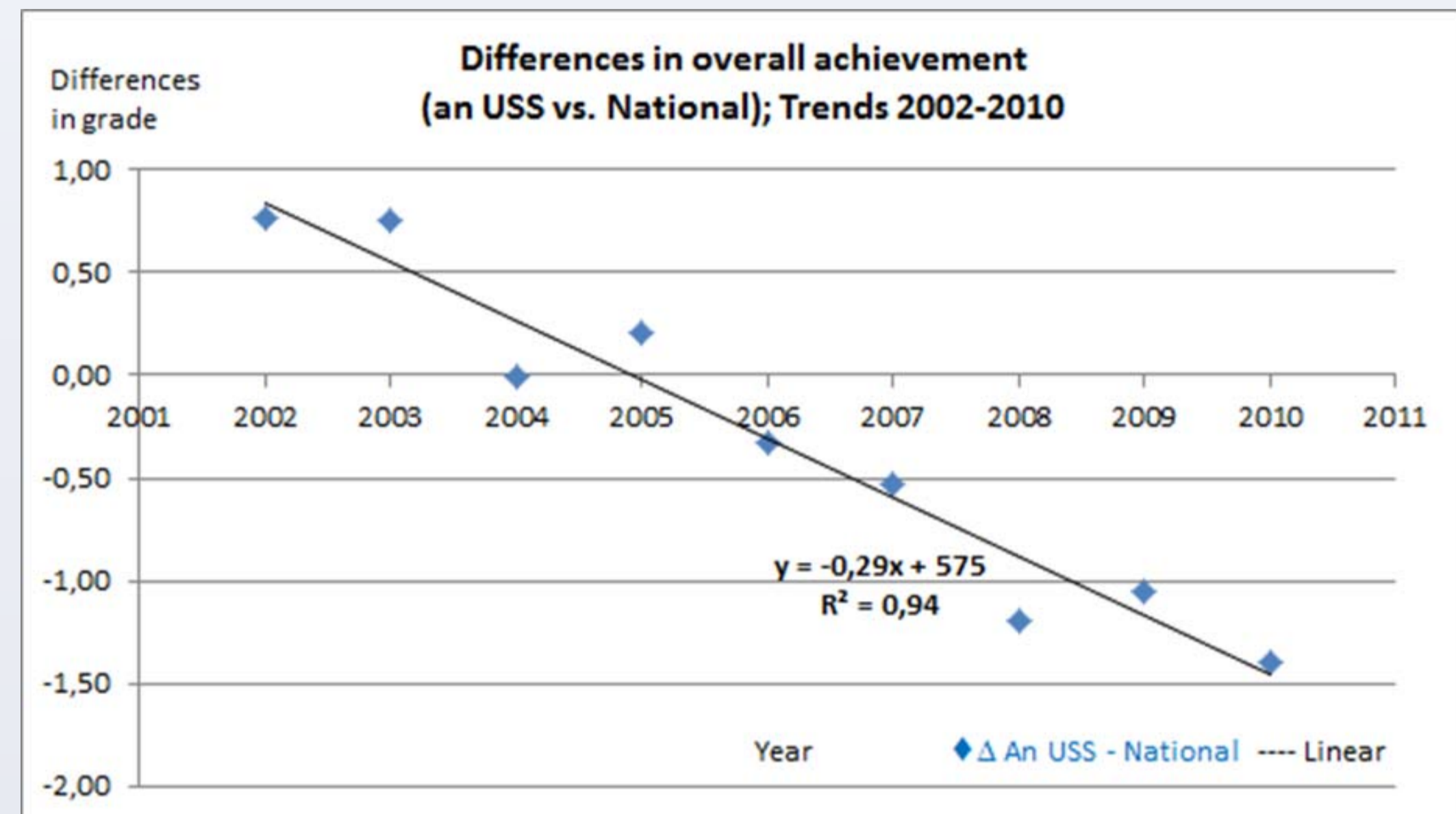
The higher is the SEI decile of the student's family, the higher the probability of the student finishing upper secondary education in the most demanding and prestige **Gimnazija programmes with General Matura Exam**, and the higher the probability of the student enrolling in tertiary education university programs (Cankar, Bren, Zupanc, 2017).

**The growth in the number of students did not increase equity, as it mostly favoured individuals from higher socio-economic groups or those whose parents with higher education.** Free access to higher education does not necessarily guarantee equity.

## Data-rich school environment

**Effective long-term policies must be based on solid evidence.** As data based decision-making is receiving increased attention in education, more and more school performance feedback systems (SPFS) are being developed and used worldwide. They provide schools with data on their functioning (Verhaeghe, Schildkamp, Luyten, Valcke, 2015).

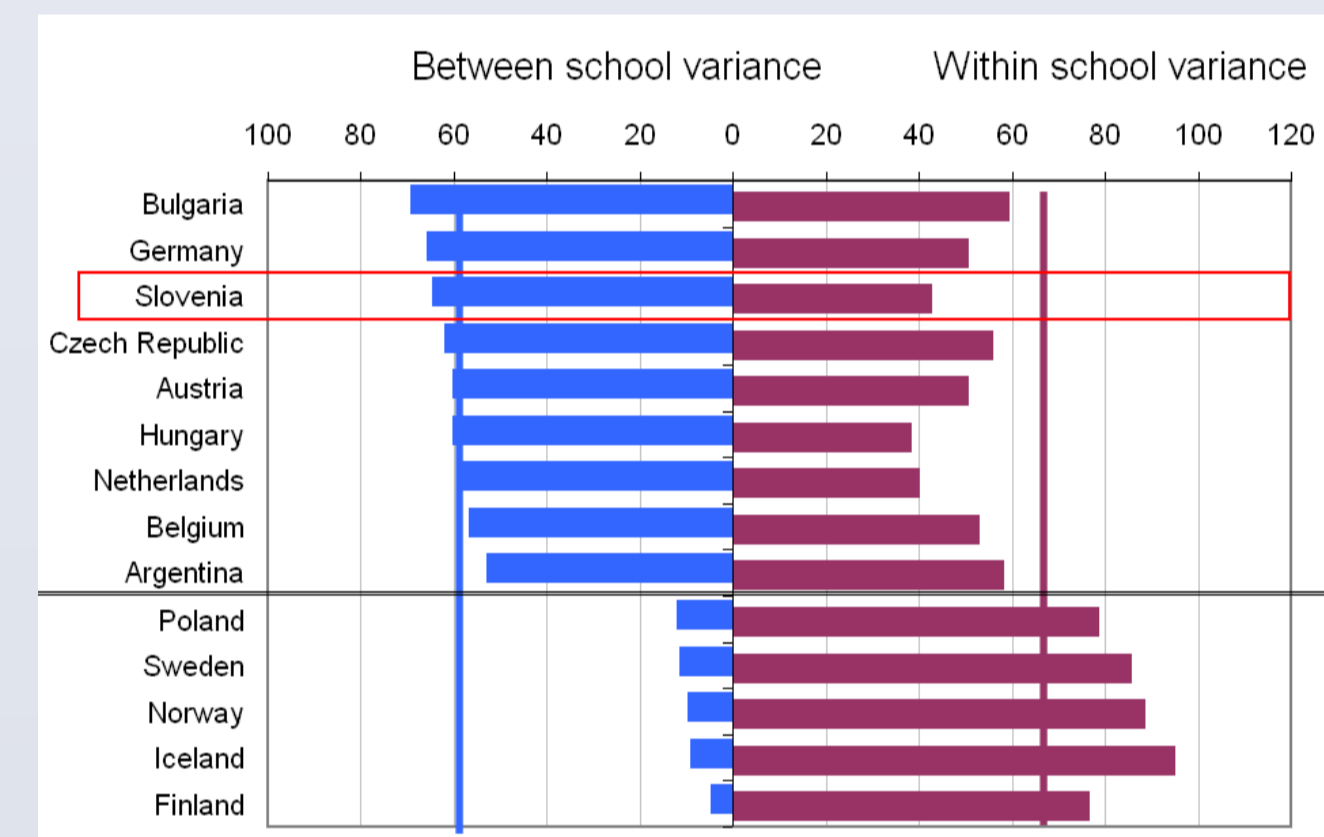
The Slovenian National Examinations Centre (NEC) also developed a version of SPFS for purposes of ensuring effectiveness and attaining improvement in classrooms and schools in upper secondary education in Slovenia: *Assessment of Learning Analytic Tool (ALAT)* (Zupanc, Urank, Bren, 2009). Software enables interactive analysis of data for each school with national benchmarks, calculated using the same selection criteria (Brejč, Sarđoč & Zupanc, 2011).



**Schools and teachers use multi-annual databases of students' achievements to analyse longitudinal trends in each Matura subject and in overall achievements.** The graph at the left shows the difference in overall achievement between a school and the national average – trends. It is an extreme case, but it is real.

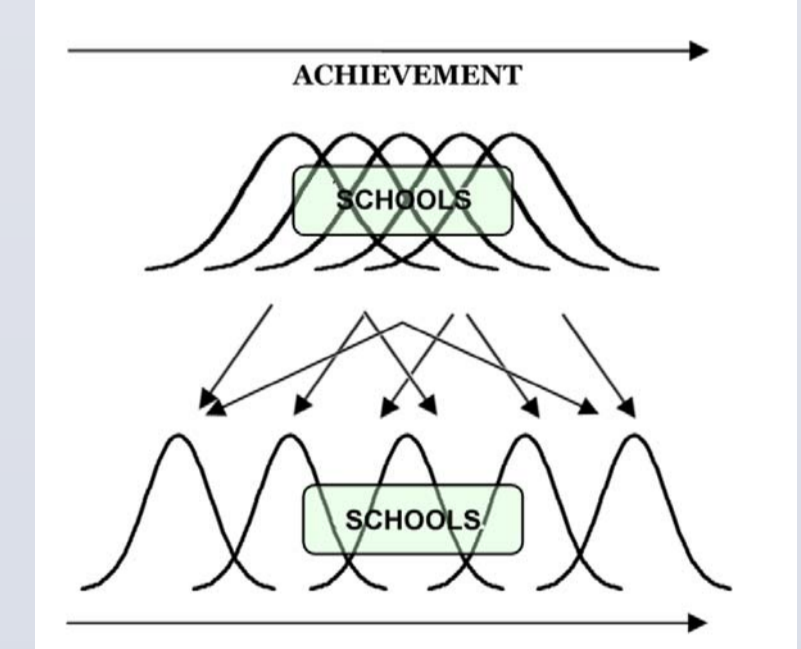
The NEC has also results of the National Assessment (NA) at the end of compulsory education – in the last year (9<sup>th</sup> grade) of basic school. There are data for achievement of Mother Tongue, Math and 1 optional subject for each student in the generation in Slovenia. **Value-added approach enables schools to analyse the progress of their students from the end of basic school to the end of upper secondary school.**

## Caution due to misuse of data



The Programme for International Student Assessment (PISA) 2006 raised many questions when Slovenia got very low results on the equity indicator. As shown in left figure, Slovenia ranked third highest on the between-school variance indicator – an indicator of great differences between schools. In other words, in Slovenia students were attending schools that (over time) created remarkable differences between students, which leads to the conclusion that **some students were in 'good' schools and some students in 'bad' ones and the educational system was promoting this.**

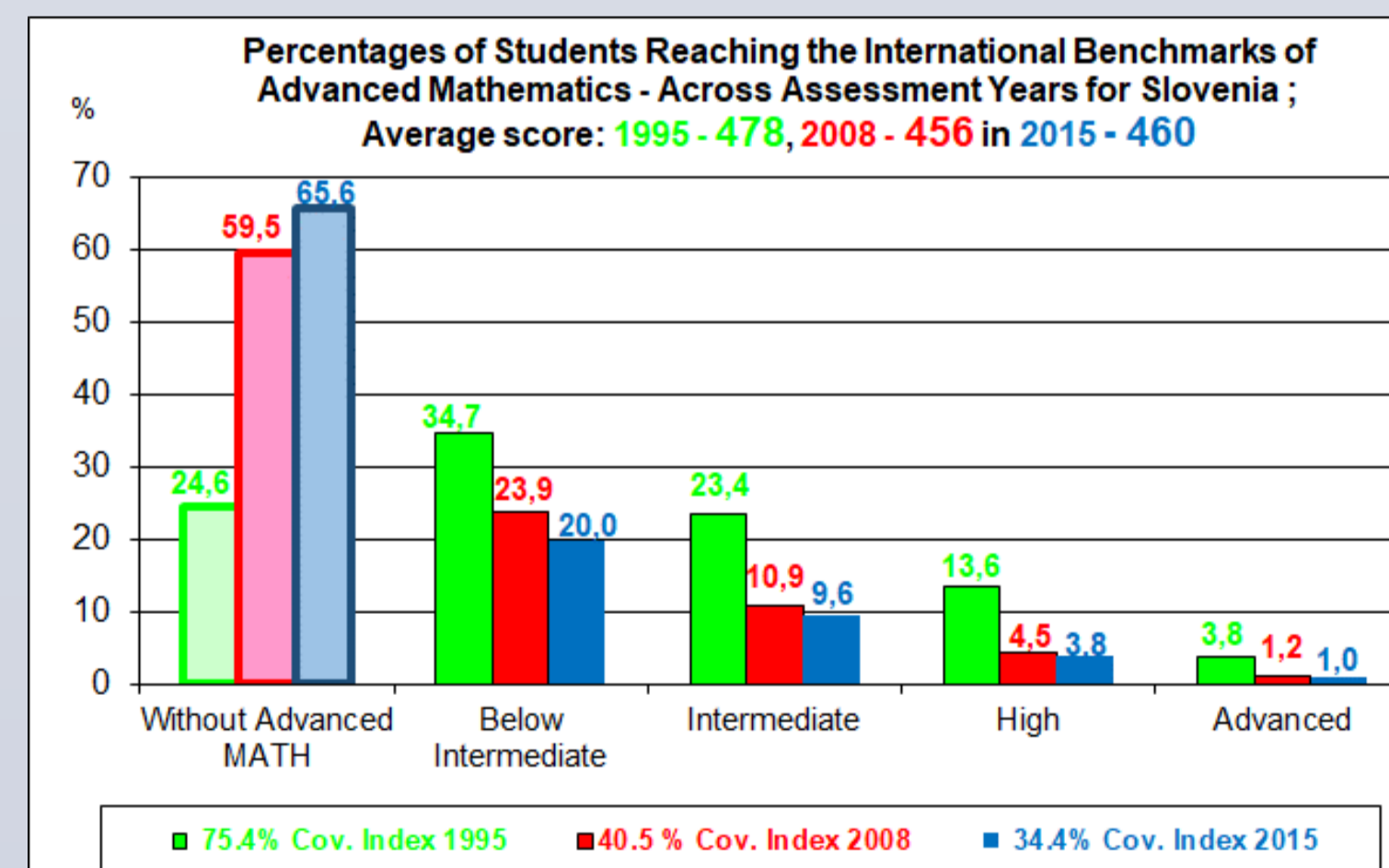
It was actually a case of mixed identity (of schools). Results were calculated according to upper secondary schools (which students attended at the time of PISA testing), **but findings were interpreted as results of previous nine years of schooling!**



## Pre-university TIMSS Advanced study

TIMSS Advanced is the only international assessment that provides essential information about students' achievement in advanced mathematics and physics. It assesses students in their final year of secondary school (often 12<sup>th</sup> grade) that prepare them to enter STEM tertiary programs in higher education.

**Good results at the end of pre-university education in Slovenia in Advanced Mathematics and Physics** (compared to other 9 countries) **can most likely be attributed to positive feedback of the Rules on admission to HE as well.**



However, considering the results of our students 7 or 20 years ago, **we can see that students at that time achieved equal (Physics) or even higher results (Mathematics) in a much larger proportion of population!** The proportion of population in Mathematics was twice as large (75.4% compared to 34.4%); with Physics the proportion was 5 times larger (38.6% in 1995 compared to 7.6% in 2015).

What has happened since? **In Slovenia, education was infused with early choice, as this was seen as friendlier and more modern.** In Slovenia, but perhaps in other countries even more so, **this resulted in the avoidance of hard work and demanding content.**

20 years of history on TIMSS Advanced results in Slovenia is **the argument that we should have** (Andreas Schleicher, PISA, OECD):

- **high universal educational standards for all;**
- **incentives for students to take tough courses and study hard;**
- **have clear ambitious goals aligned with high stakes gateways at each stage of their education; and**
- **use achievement data over time to make decisions.**

The case message for Slovenia should be, to paraphrase Obama's speech: *"Yes we did. Yes we can - what we have to!"*