Education Quality in the OIC Member Countries (Part 1)

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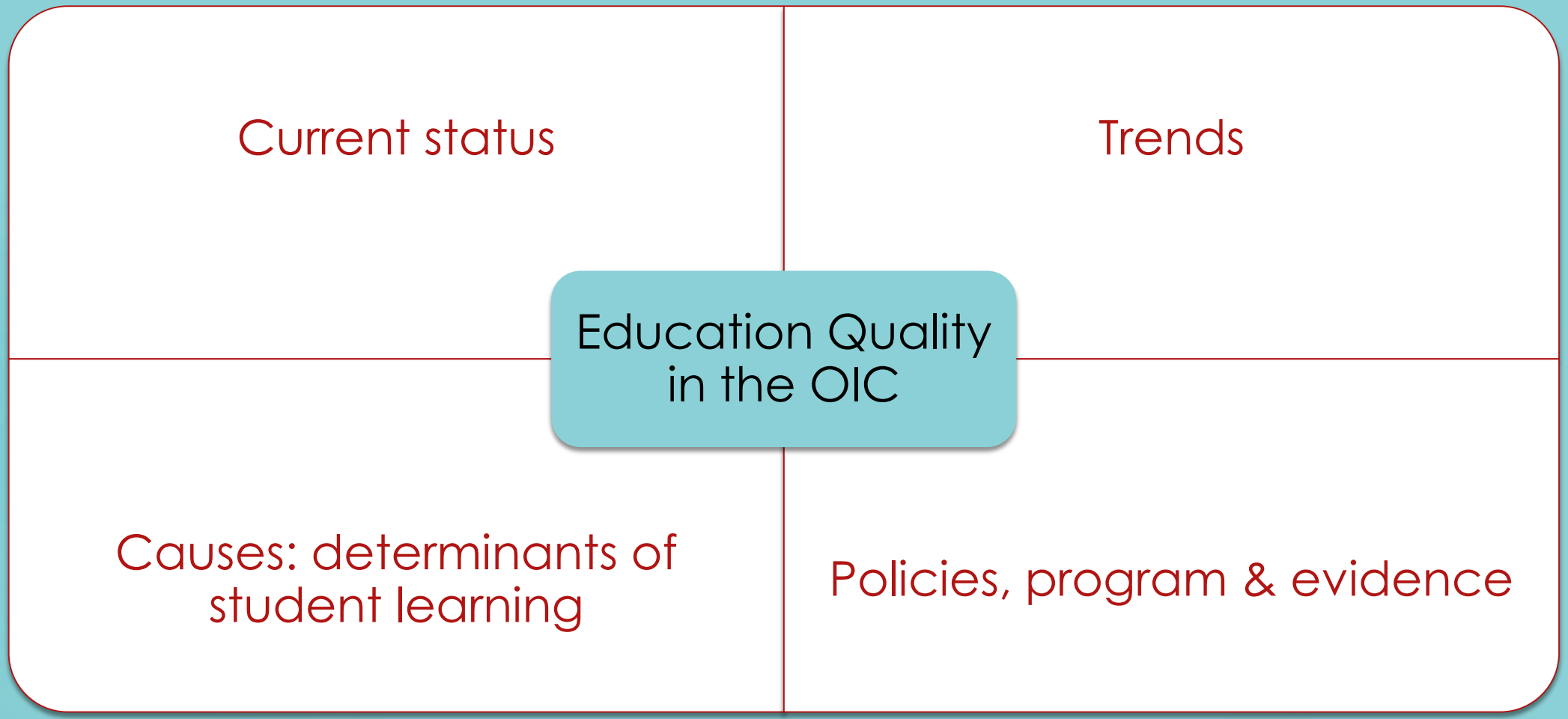
COMCEC

**Standing Committee
for Economic and Commercial Cooperation
of the Organization of Islamic Cooperation (COMCEC)**

Why Education?

- **Education is a fundamental human right**
  - Critical for building trust, resolving conflict & combating social stereotypes and inequality
- **Knowledge and skills necessary for adopting, attaining, and spreading new technologies to drive long-run growth performance**
- **Key to attaining the demographic dividend**
- **US$1 invested in an extra year of schooling in low-income countries generates**
  - …earnings and health benefits of US$10
    - *The International Commission on Financing Global Education Opportunity (Global Commission 2016)*

Scope


Current status
Trends
Education Quality in the OIC
Causes: determinants of student learning
Policies, program & evidence

Four strands of enquiry

- Conceptual discussions : “schooling” vs “learning for all”
- Analysis of region & country-level data on learning outcomes, inputs and indicators of economic development
- Analysis of the determinants of student-level learning outcomes
- In-depth case studies: Jordan, Malaysia, Pakistan and Nigeria

Organisation of Islamic Cooperation

Outline

1. Conceptual framework

- Historical review
- "Schooling for all" vs "Learning crisis"

2. Indicators and methodology

3. Education quality in the World and OIC countries

- Current situation
- Trends in learning outcomes at region & country levels
- Determinants of student achievement

4. Review of the evidence and policies

- Best practices
- Regional policies

1. Conceptual Framework

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Global Targets: EFA vs. MDGs

- Dakar EFA agenda
  - EFA goal 3 (learning needs of all .. through equitable access to appropriate learning and life skills)
  - EFA goal 6 (Improving all aspects of the quality of education and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all)
- MDG 2: narrow focus on universal education
  - # of children enrolled in primary education, # completing the primary cycle & literacy
  - Between 1990 & 2015, enrolment boom -- GER in developing countries reached 90%+
- Mostly focused on access ; not learning outcome
  - UPE possible with a worsening of PTR.
  - the importance of secondary education was ignored

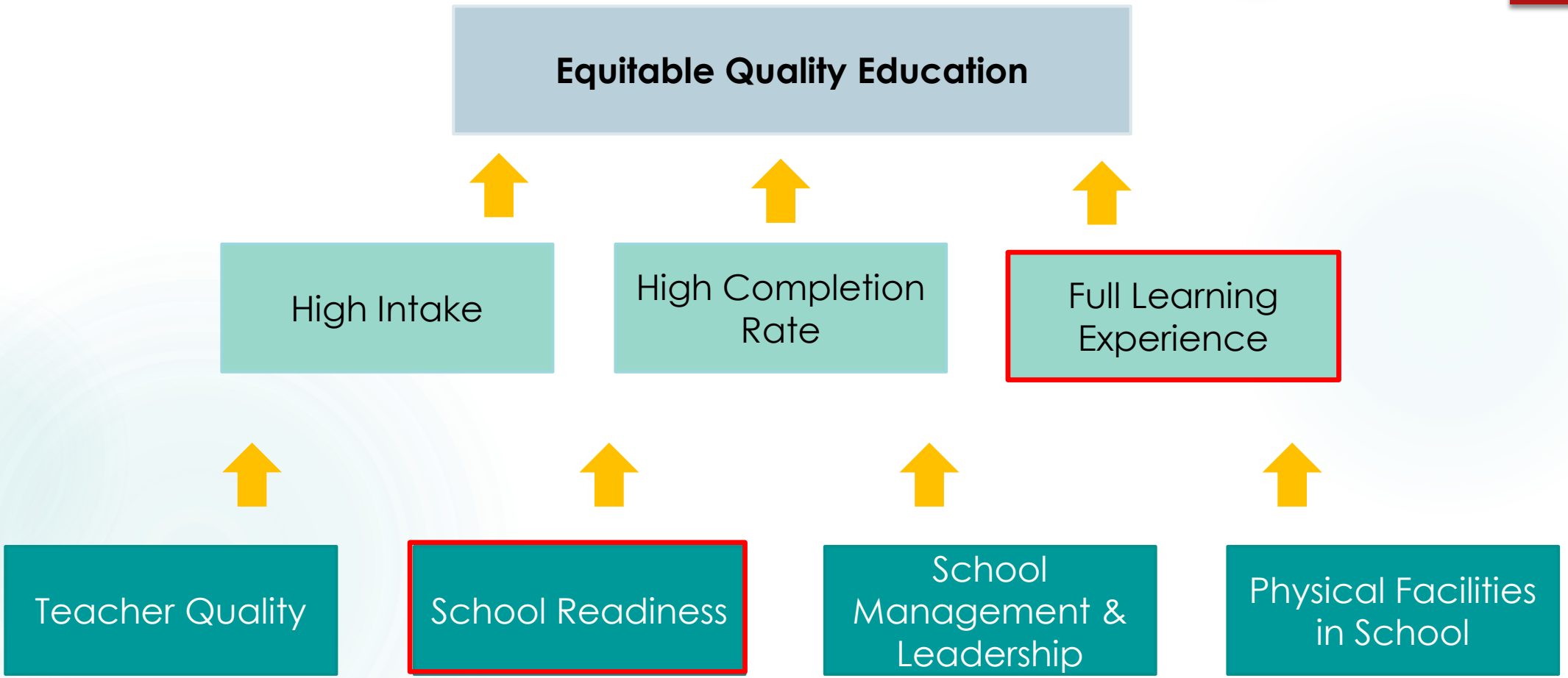
Schooling vs Learning (Numeracy & Literacy)

- 2018 World Development Report of the World Bank
  - a global learning crisis
    - schooling is not translating into learning
- Crisis is costing $129 billion a year (UNESCO 2014)
- "Low learning trap" across generations
- "Schooling without learning" particularly serious in low & lower-middle income countries
  - Flat "learning profile"
  - System-wide
  - Linked to poor returns to public investment in education

SDGs and Education Quality

- World Education Forum 2015
- The Incheon Declaration for Education 2030
  - a road map and a new vision for educational development worldwide for the next fifteen years – "Towards 2030".
- Coincided with the United Nations' SDGs 4: "Ensure inclusive and quality education for all and promote lifelong learning"
  - More indicators than in MDGs
  - Equity and inclusion in quality education

Conceptual Framework



Source: Author, based on OECD-UNICEF (2016) and WDR 2018

2. Methodology and indicators

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Methodological framework

- **Descriptive trends analysis (region/country level)**
- **Educational production function (child level) - Multivariate regression model of learning outcomes**
  - **Model specification varies by data source and sample**
  - Demand-side factors
  - individual specific
    - gender, pre-school education
  - family specific
    - parental schooling, poverty, citizenship, location, parental pressure on school
  - Supply-side factors
  - school-specific
    - teacher availability, certified teachers; adequate classrooms, disciplinary climate in school, physical resources (e.g. computers availability)
  - system-wide
    - accountability & autonomy (content, hiring, budget)

Main data sources

- **GLOBAL analysis – level and trends (region/country)**
  - PISA & TIMSS (various years)
  - PIRLS, EGRA, SACMEQ
  - WIDE *(2016)* & WDI (World Development Indicators) [World Bank]
- **OIC-wide analysis – determinants of student learning**
  - PISA 2012
- **Country case studies**
  - PISA 2012 (OECD)
  - EGRA (Nigeria/RTI-USAID), ASER (Pakistan/ITA)

Challenges

- To capture learning at all stages (pre-primary, primary and secondary) and levels (basic literacy & numeracy ; advanced reading, math, science skills)

1. Some OIC countries/variables are not covered by the WIDE & WDI datasets
2. Limited participation in "Program for International Student Assessment" (PISA), "Trends in International Mathematics and Science Study" (TIMSS), "Progress in International Reading Literacy Study" (PIRLS) & "Teaching and Learning International Survey" (TALIS)
   - Household survey datasets (MICS, DHS) has no data on children's learning outcomes (only literacy data for some countries)
3. Some forms of learning are not well measured
   - Unrecognized Islamic schools
   - Out-of-school children
   - No global data base on learning outcomes in early childhood
   - Irregular participation over time

Education Quality Indicators

- **Inputs**
  - Student-teacher ratio (STR); trained teachers; public expenditure on education
- **Outcomes**
  - Enrolment & completion
  - Official literacy rate
  - Pass rates in national school completion examinations
  - Literacy and numeracy assessments – national
    - Primary grades (early and later) e.g. EGRA (Nigeria), ASER (Pakistan)
  - Mathematics, reading and science achievements – international
    - Secondary grades
      - Basic and advanced (e.g. PISA, TIMSS)

3. Education Quality in the World and OIC countries

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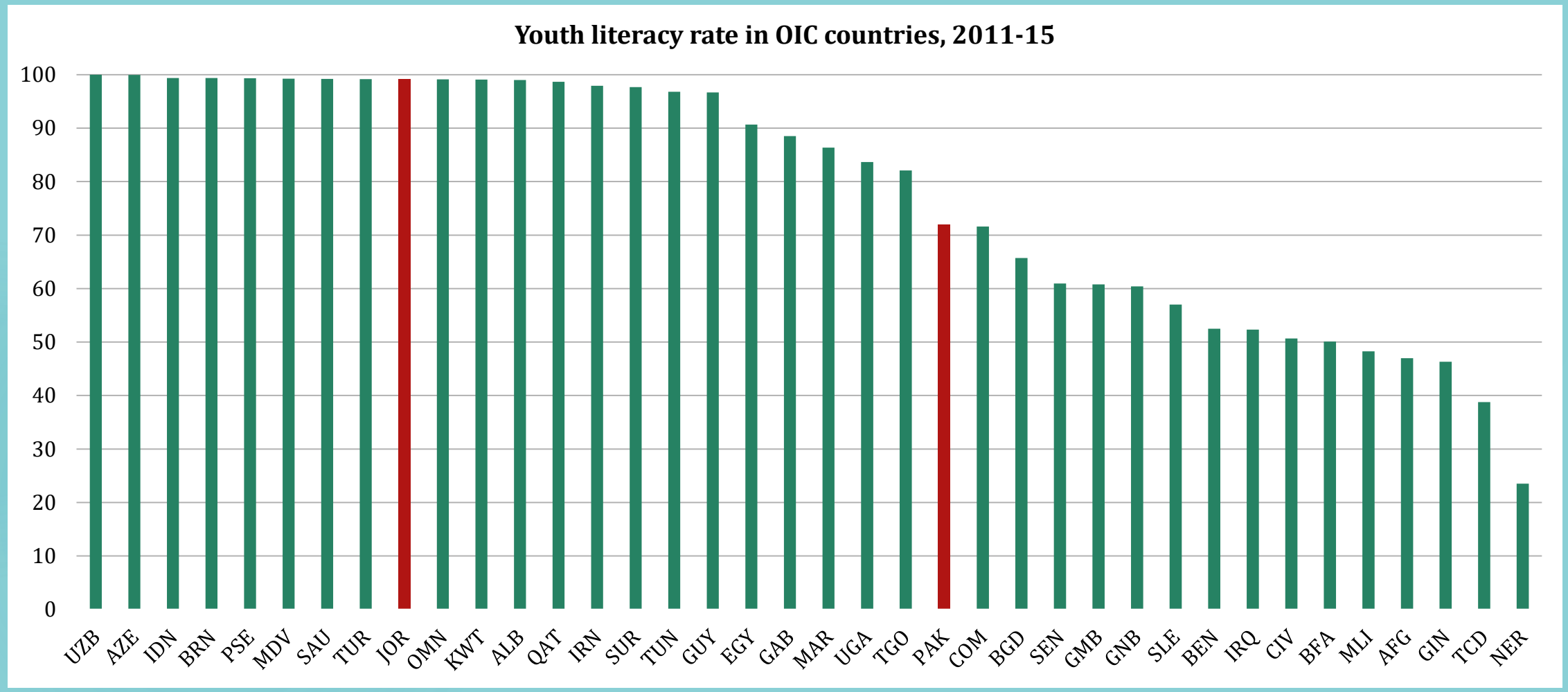
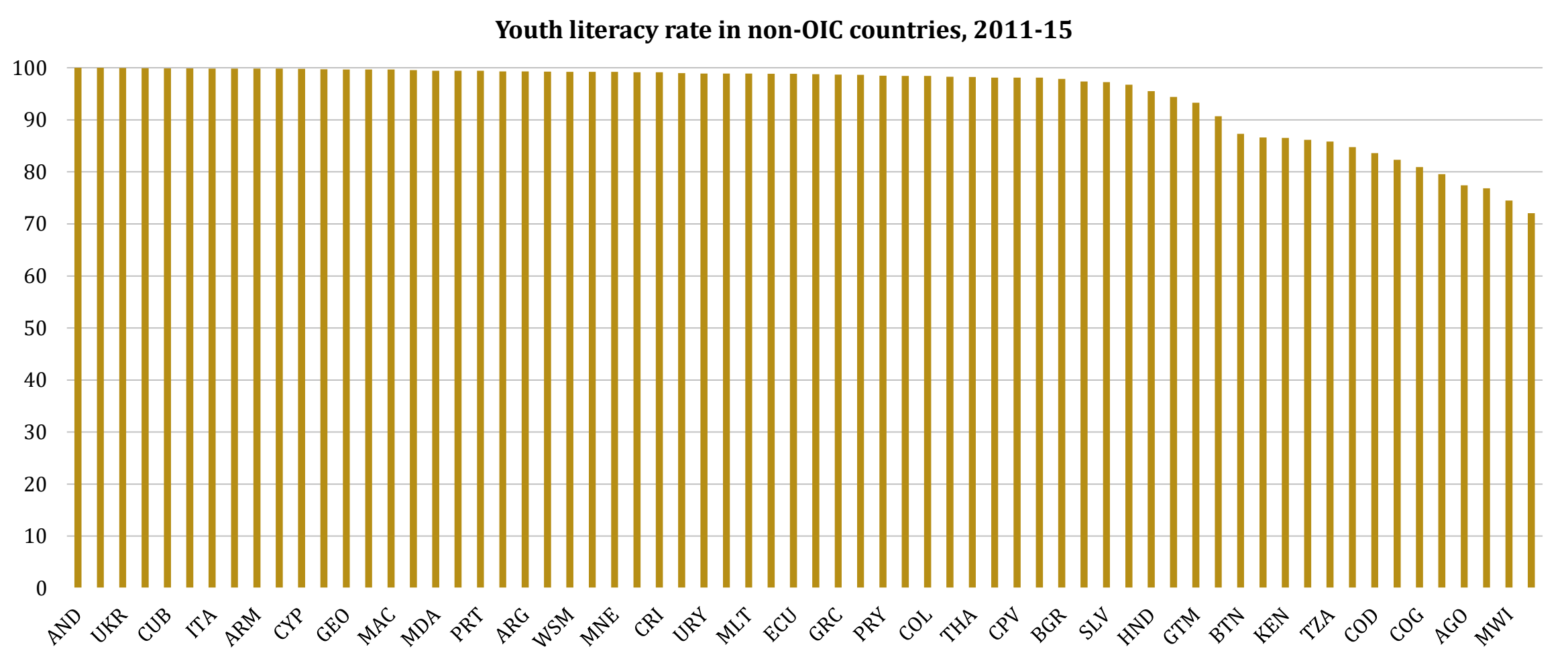
Literacy level is high in many OIC countries

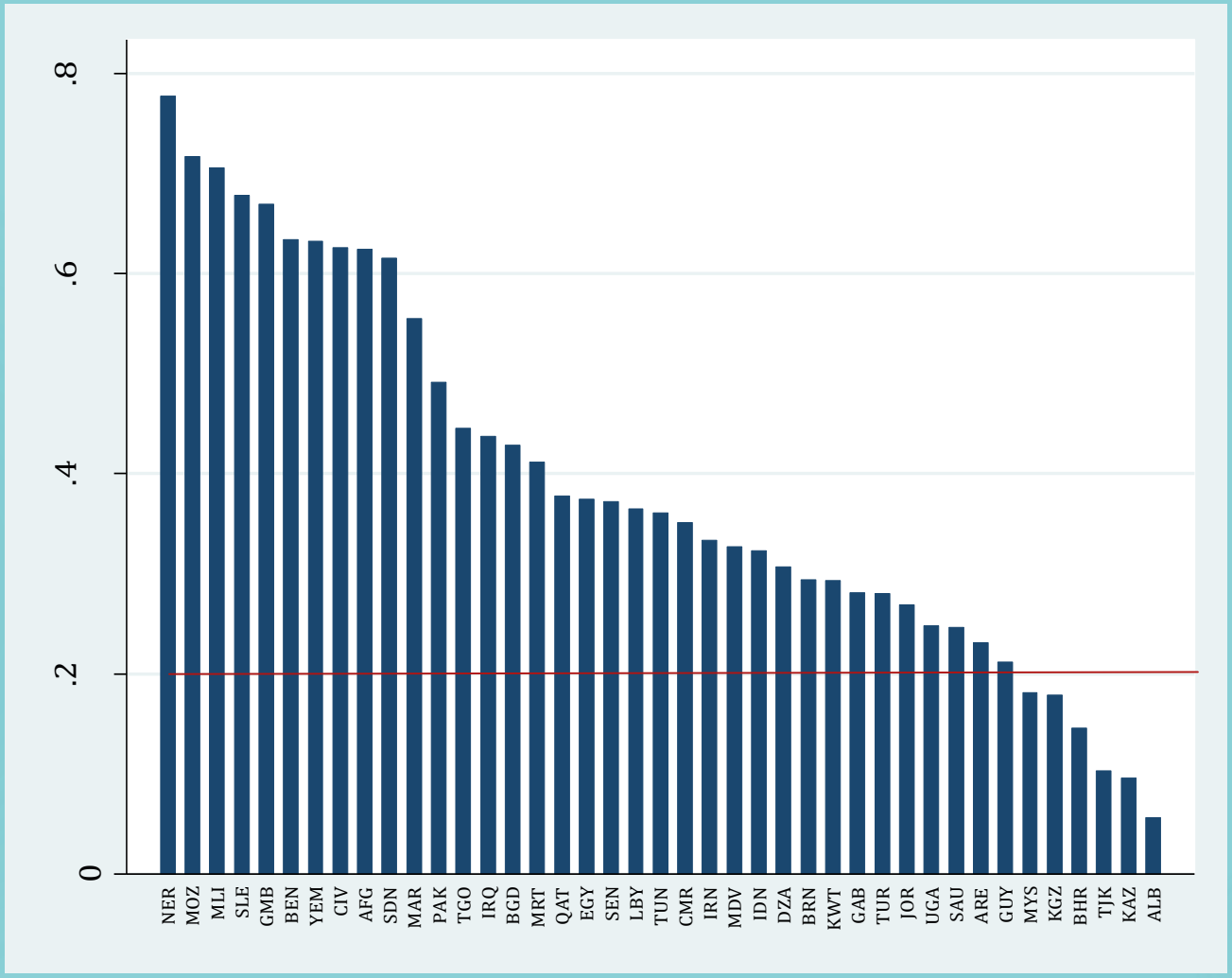


..though also high in many non-OIC countries

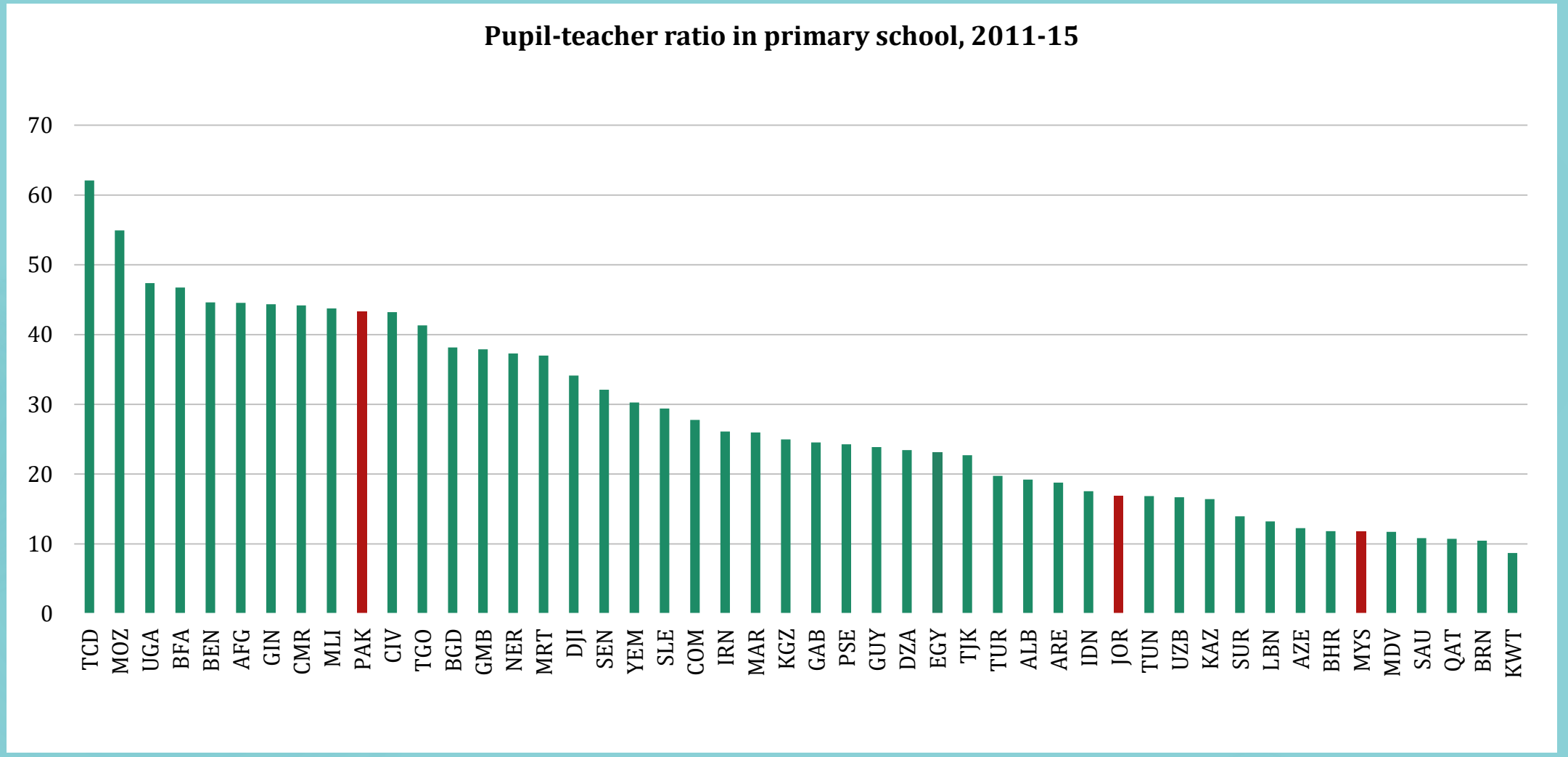


Inequality in Schooling (Educational Gini Coefficient) in many OIC Countries is low

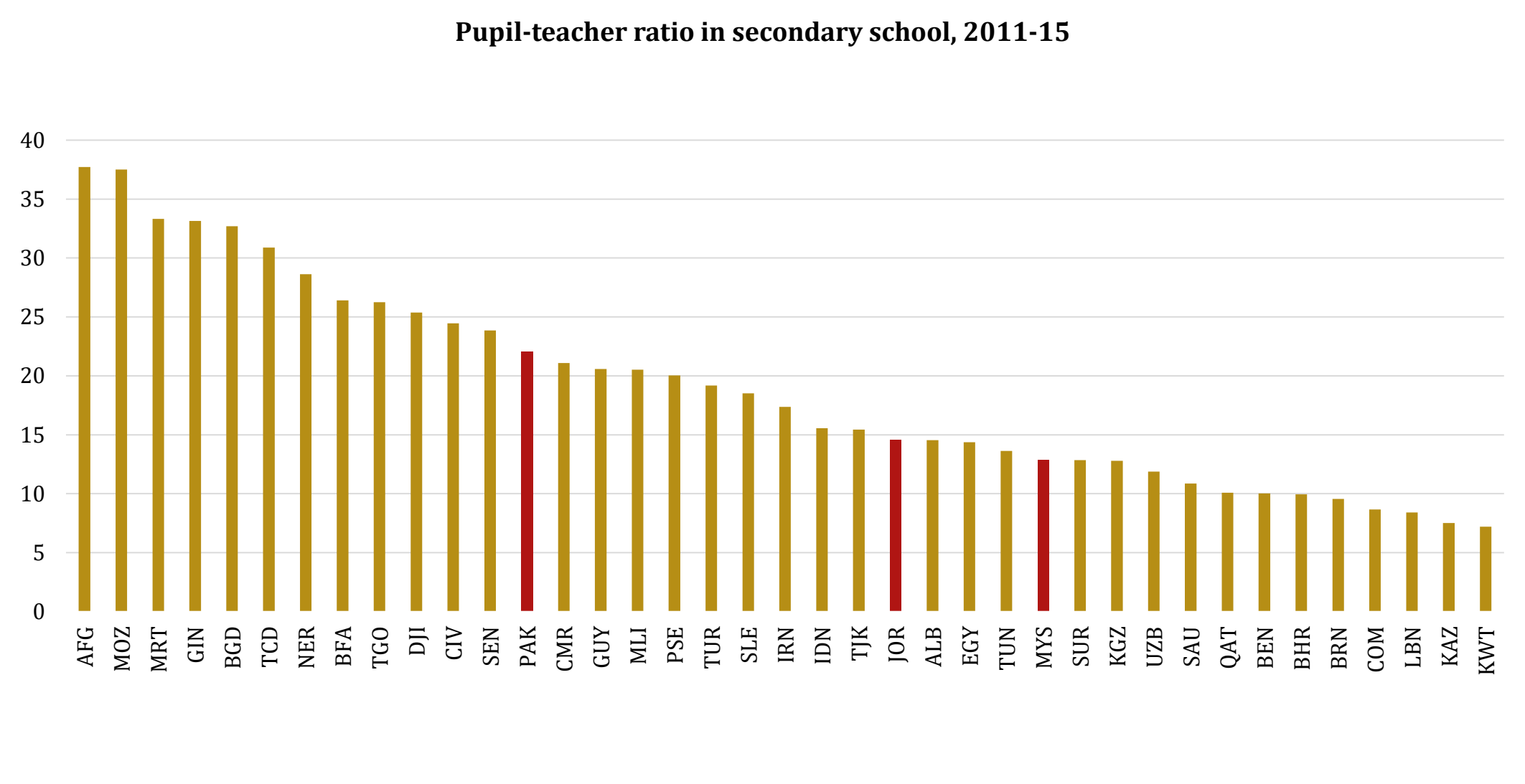
- Low (Malaysia); moderately low (S Arabia, Jordan); high (Pakistan); very high (Niger, Afghanistan)



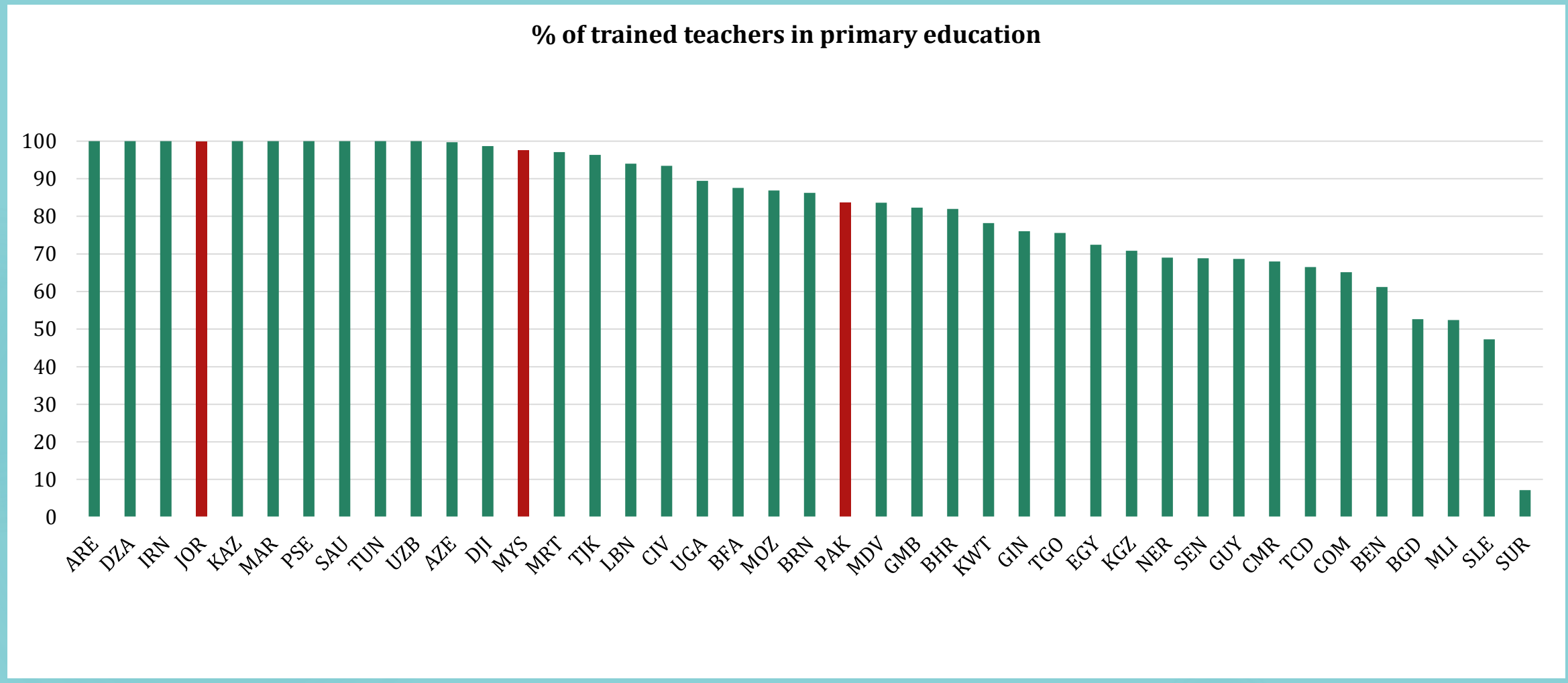
Input Quality and Expenditure on Education (1)



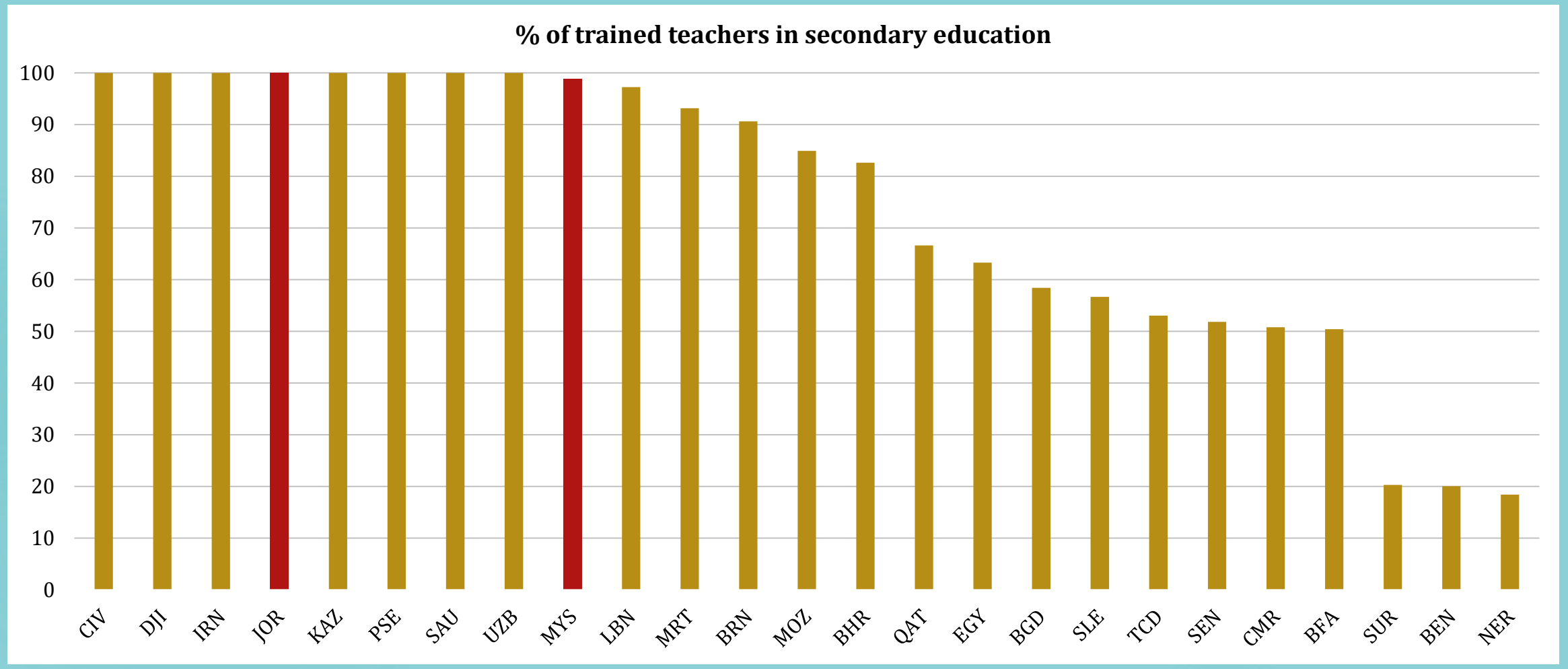
Input Quality and Expenditure on Education (2)



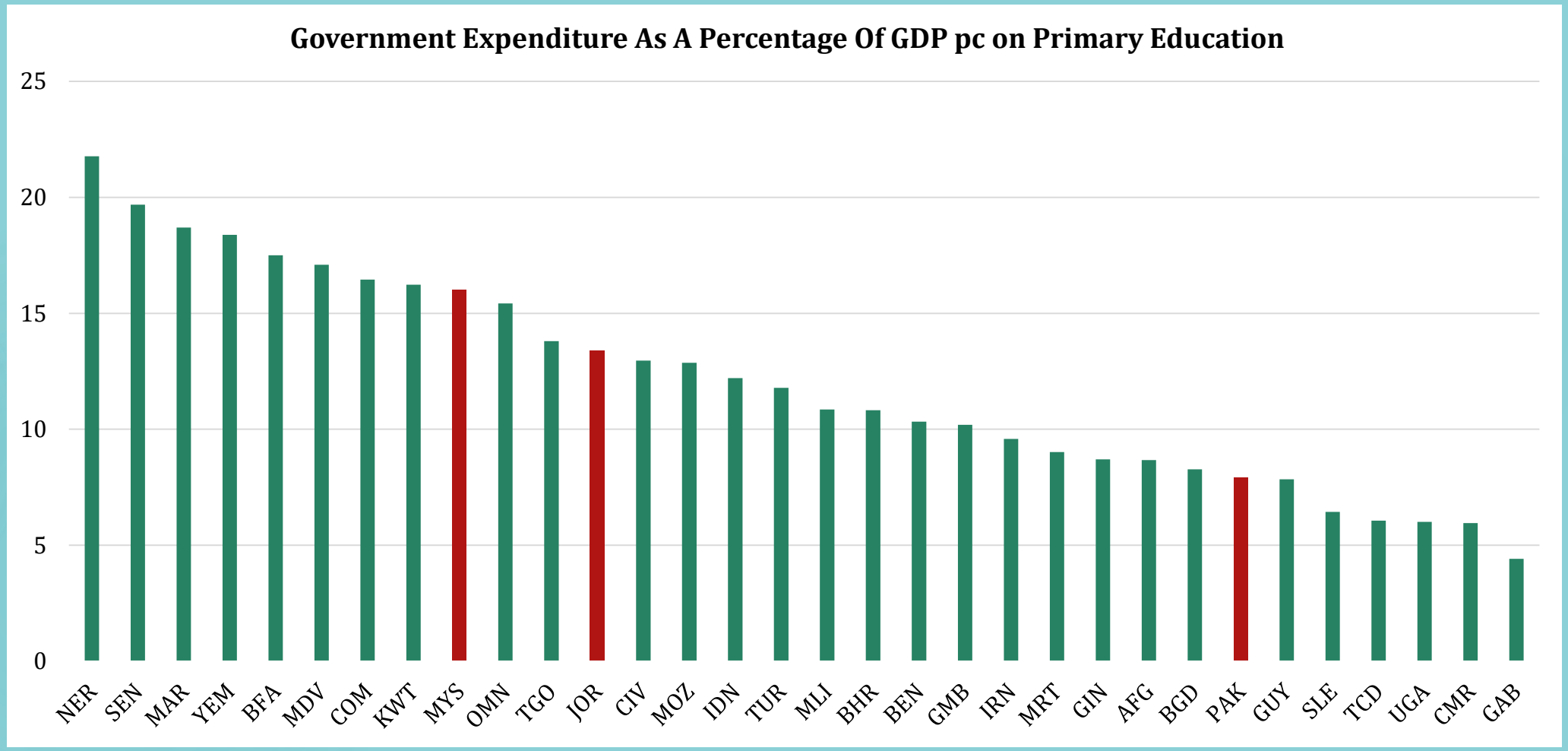
Input Quality and Expenditure on Education (3)



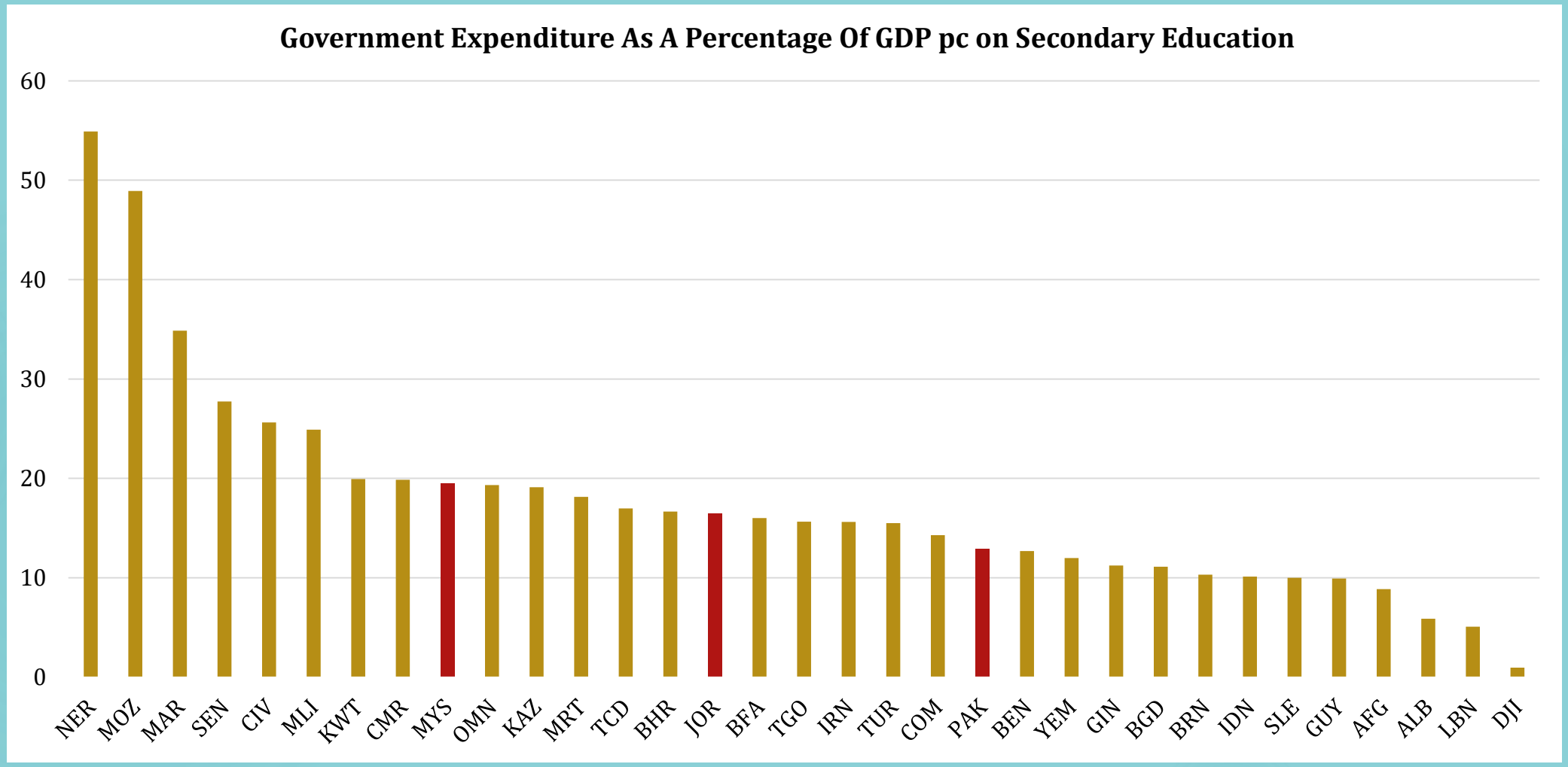
Input Quality and Expenditure on Education (4)



Input Quality and Expenditure on Education (5)



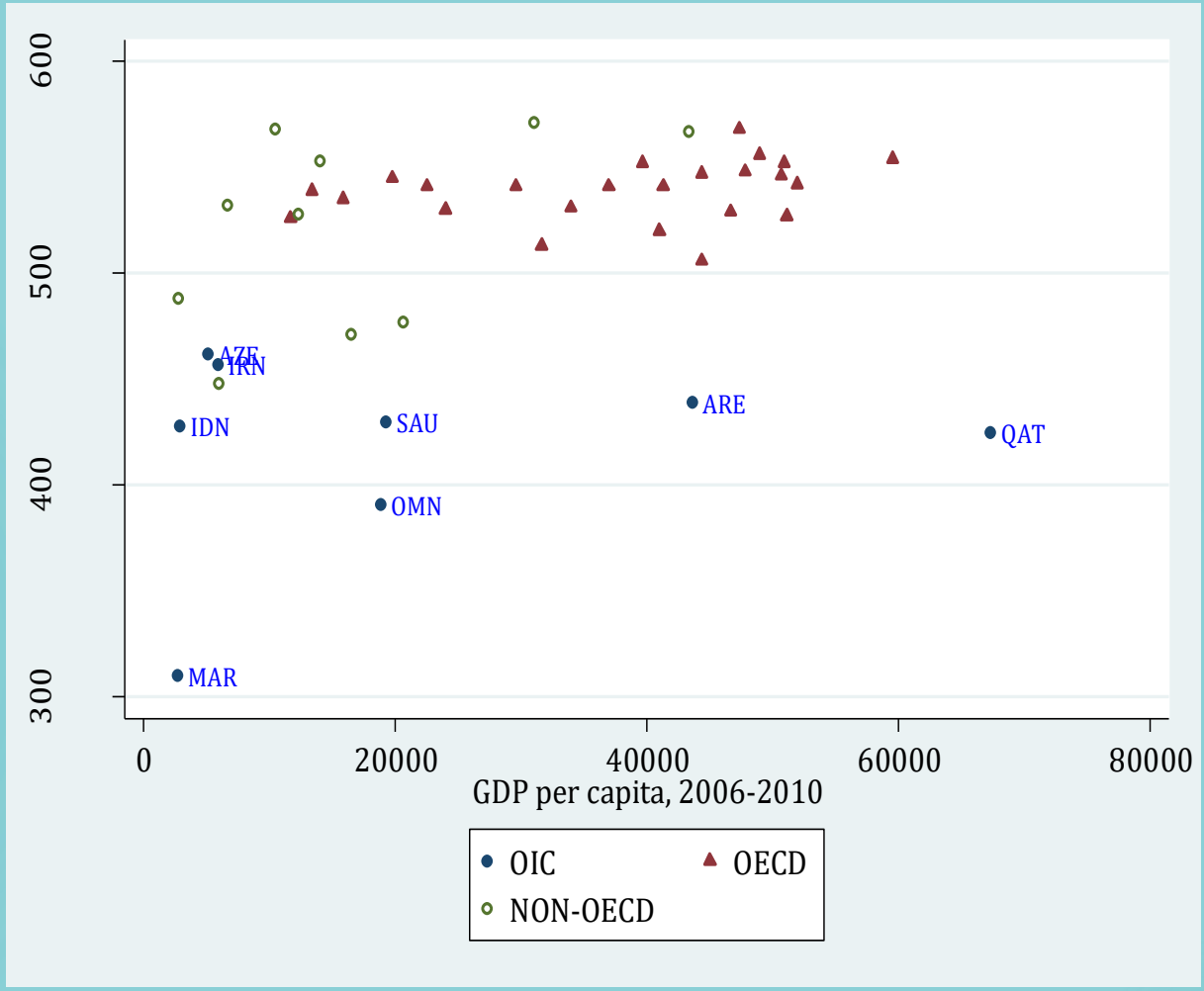
Input Quality and Expenditure on Education (6)



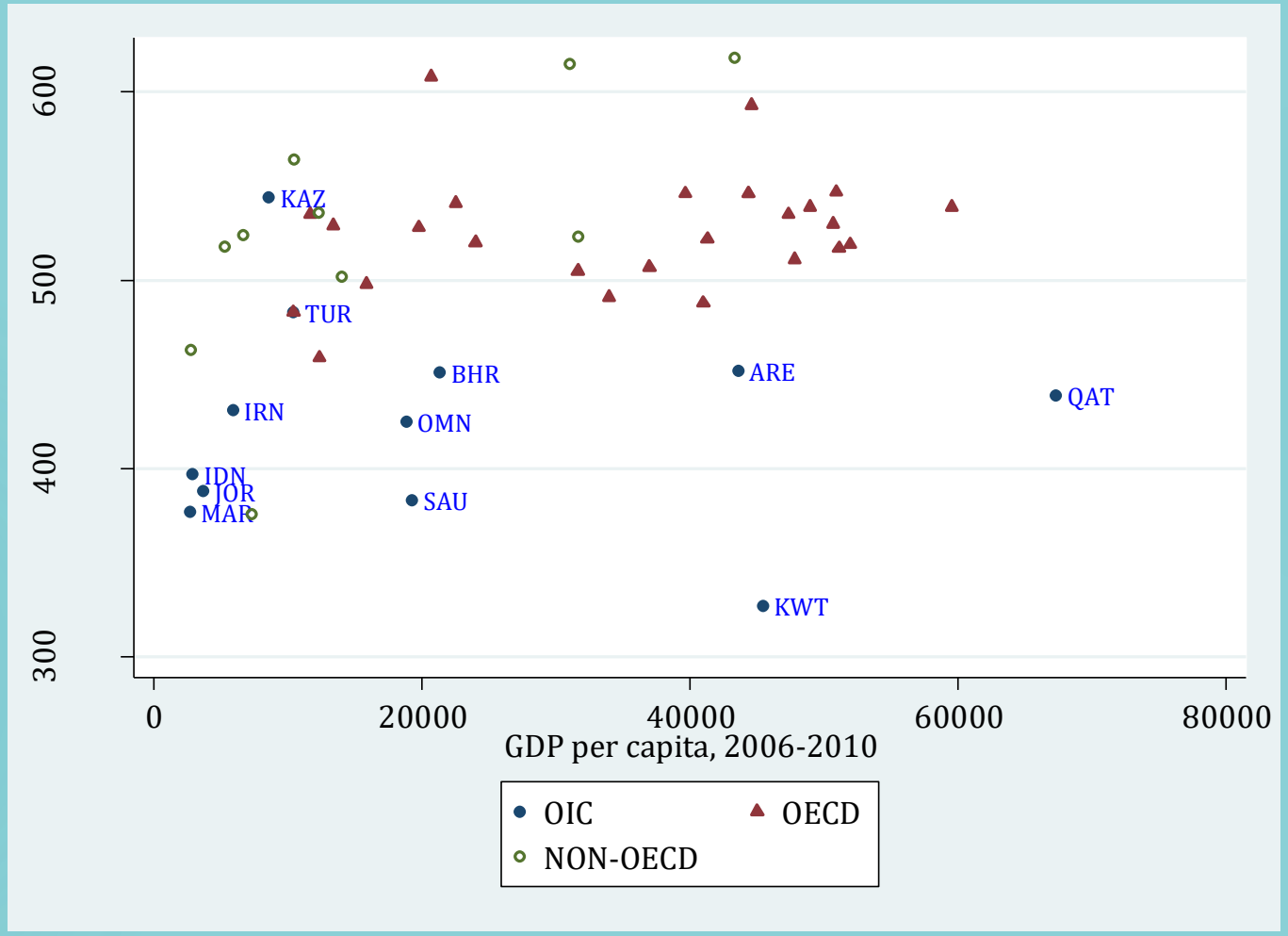
Upper middle / high income OIC countries do better in terms of literacy, inequality in access and levels of inputs & expenditure

- But how do they compare with other non-OIC countries of similar income level?

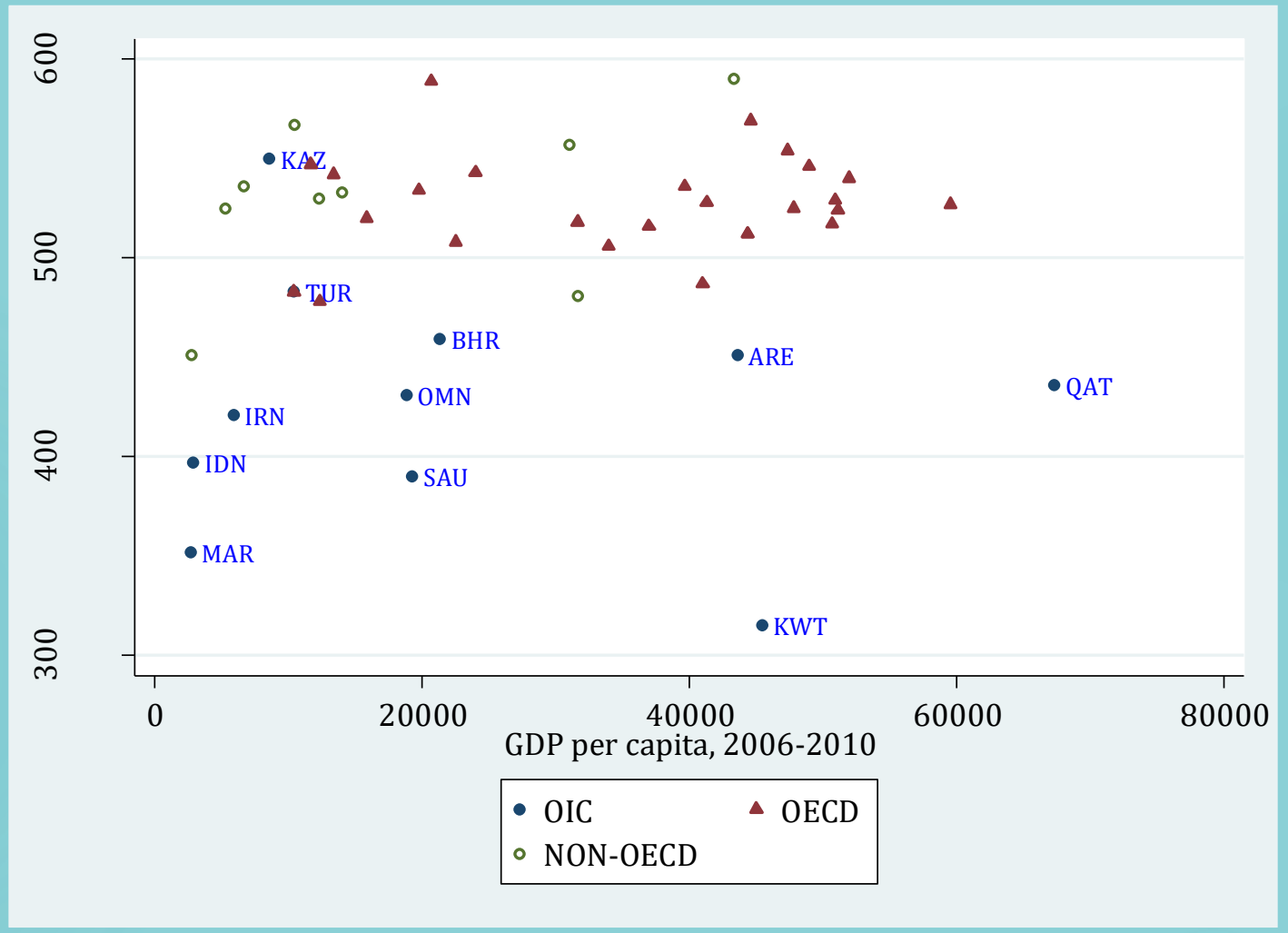
Level of early learning (Reading) is low in OIC : PIRLS assessment



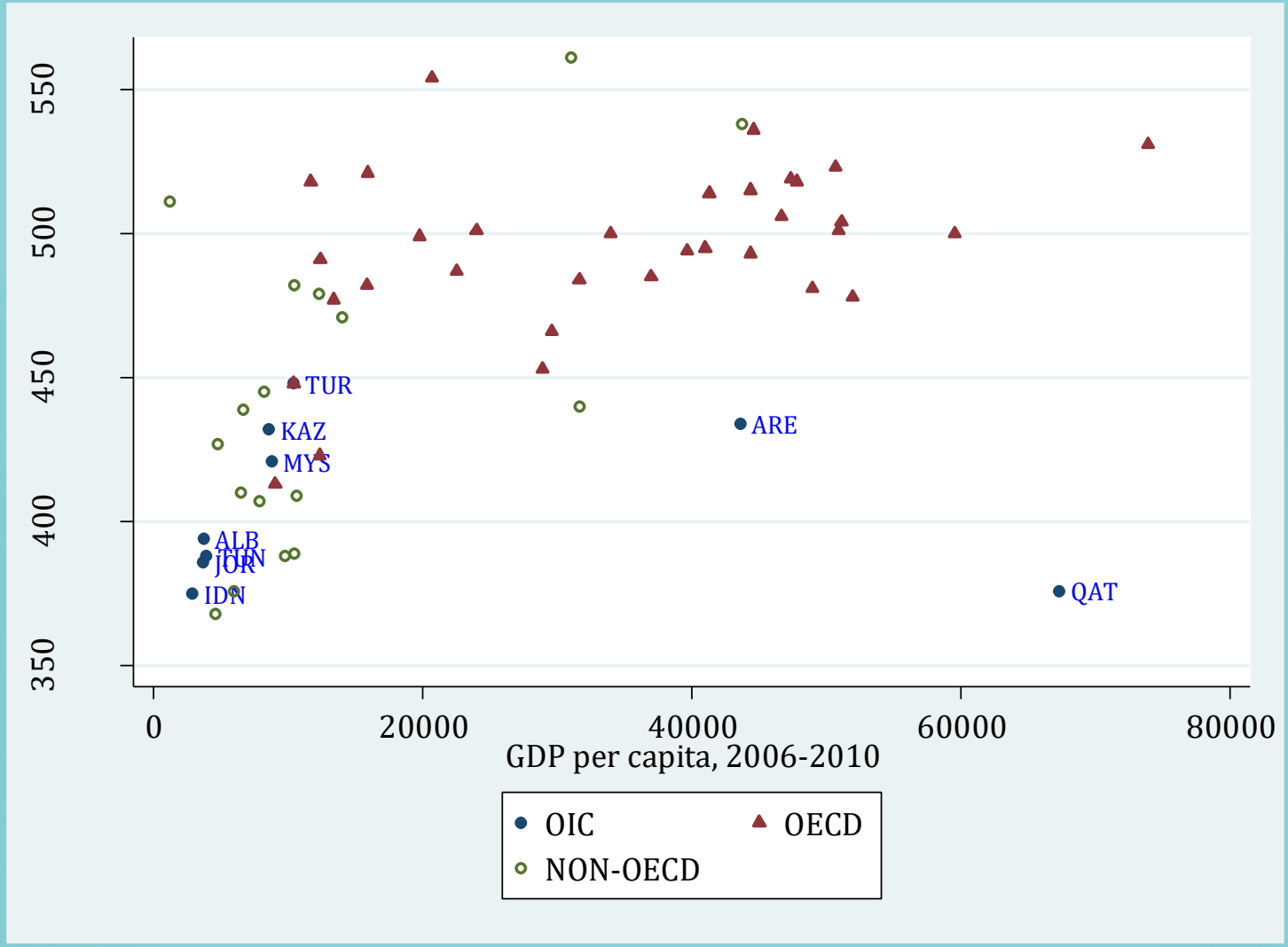
…also low in math (TIMSS, Grade 8)



…also low in science (TIMSS, Grade 8)



…also low in math among 15 years old (PISA)



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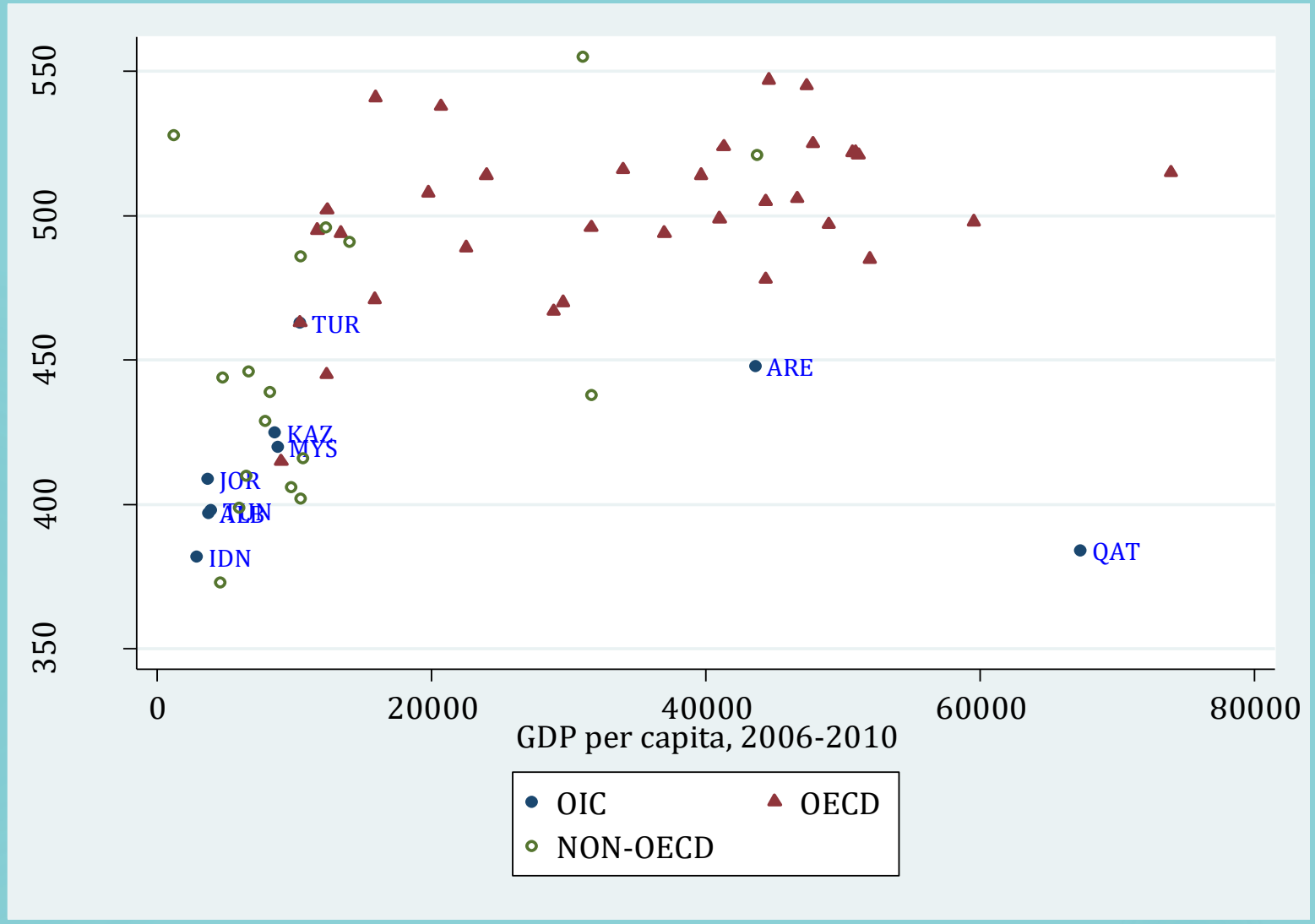
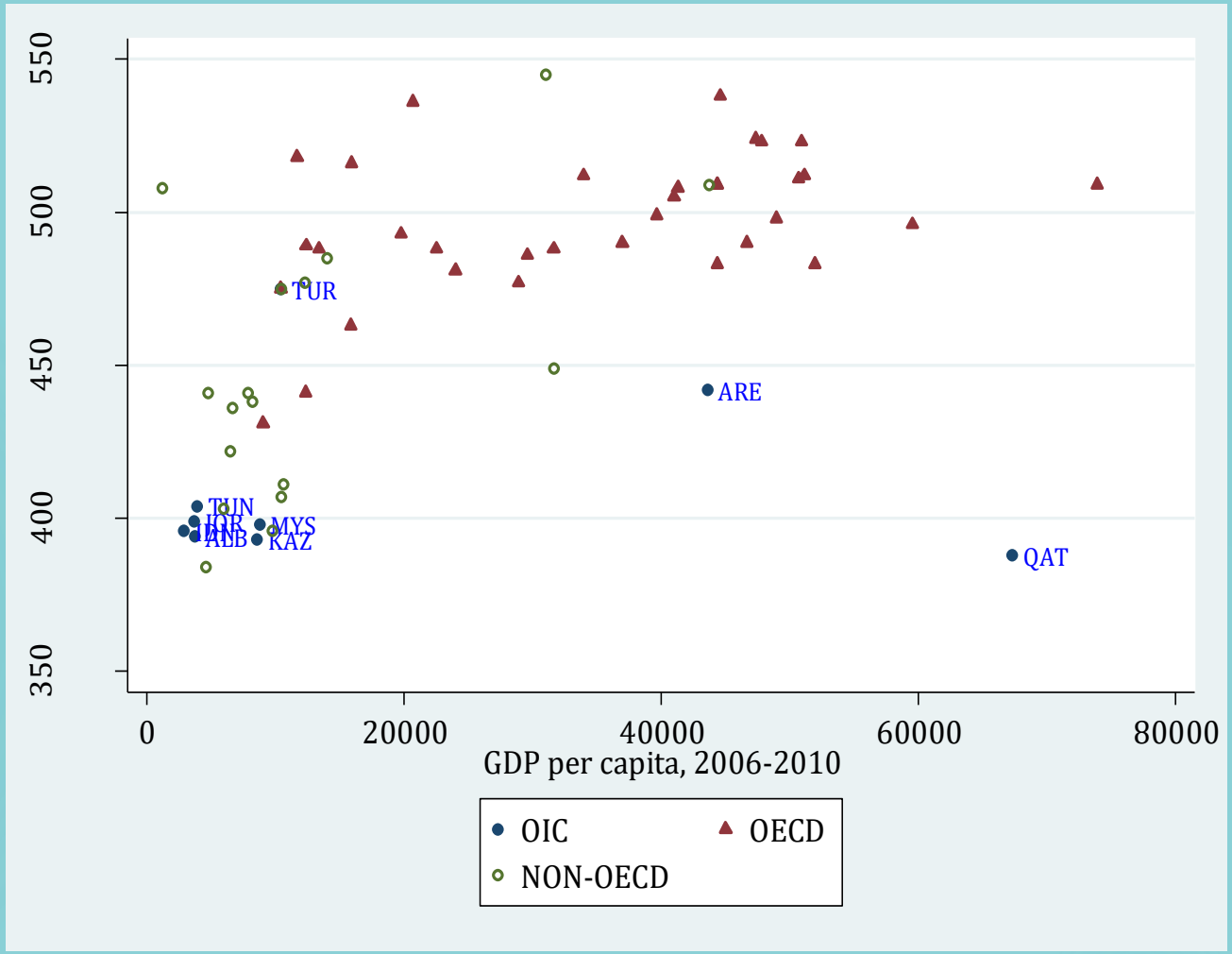


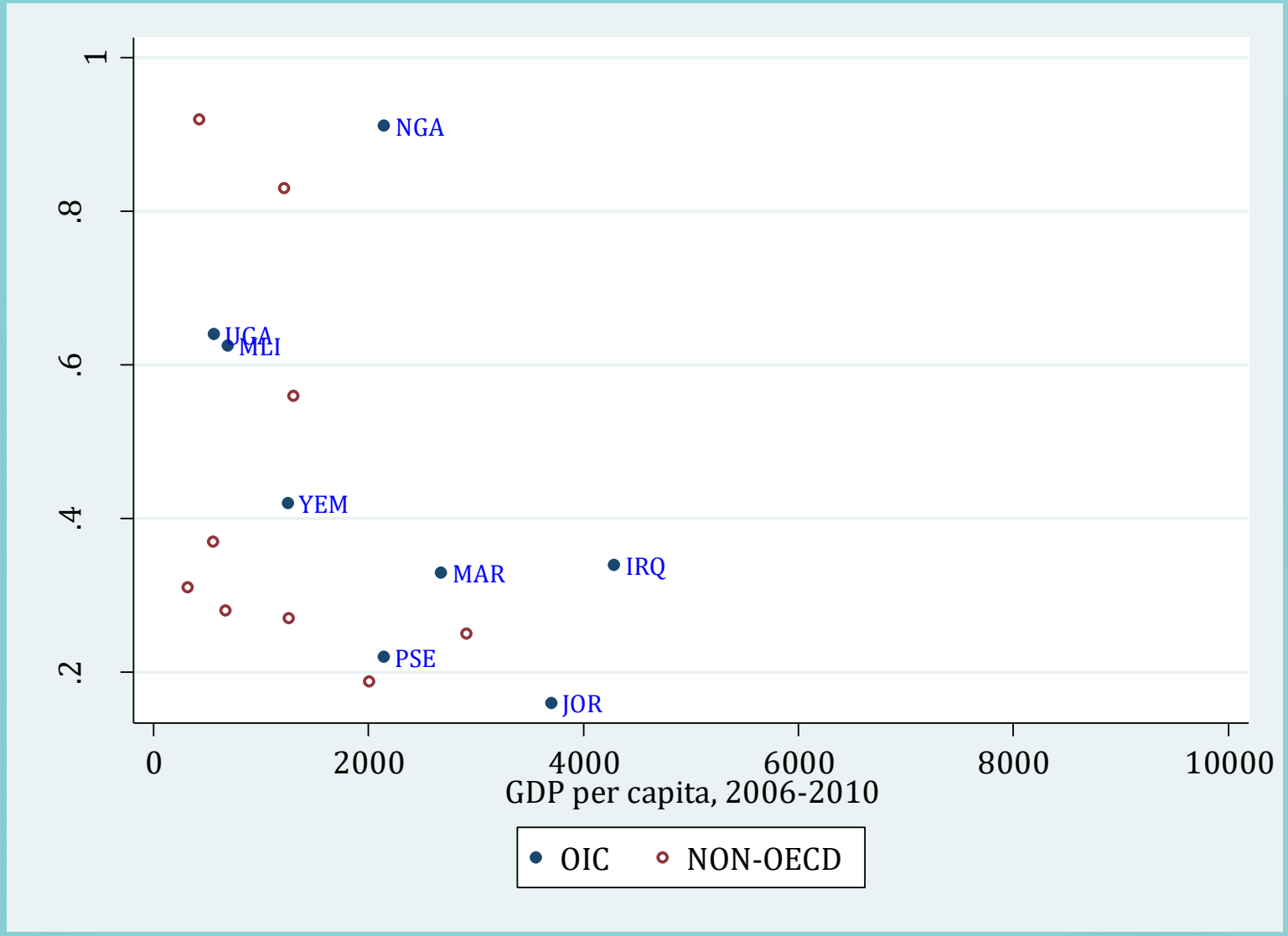
..also low in reading among 15 years old (PISA)



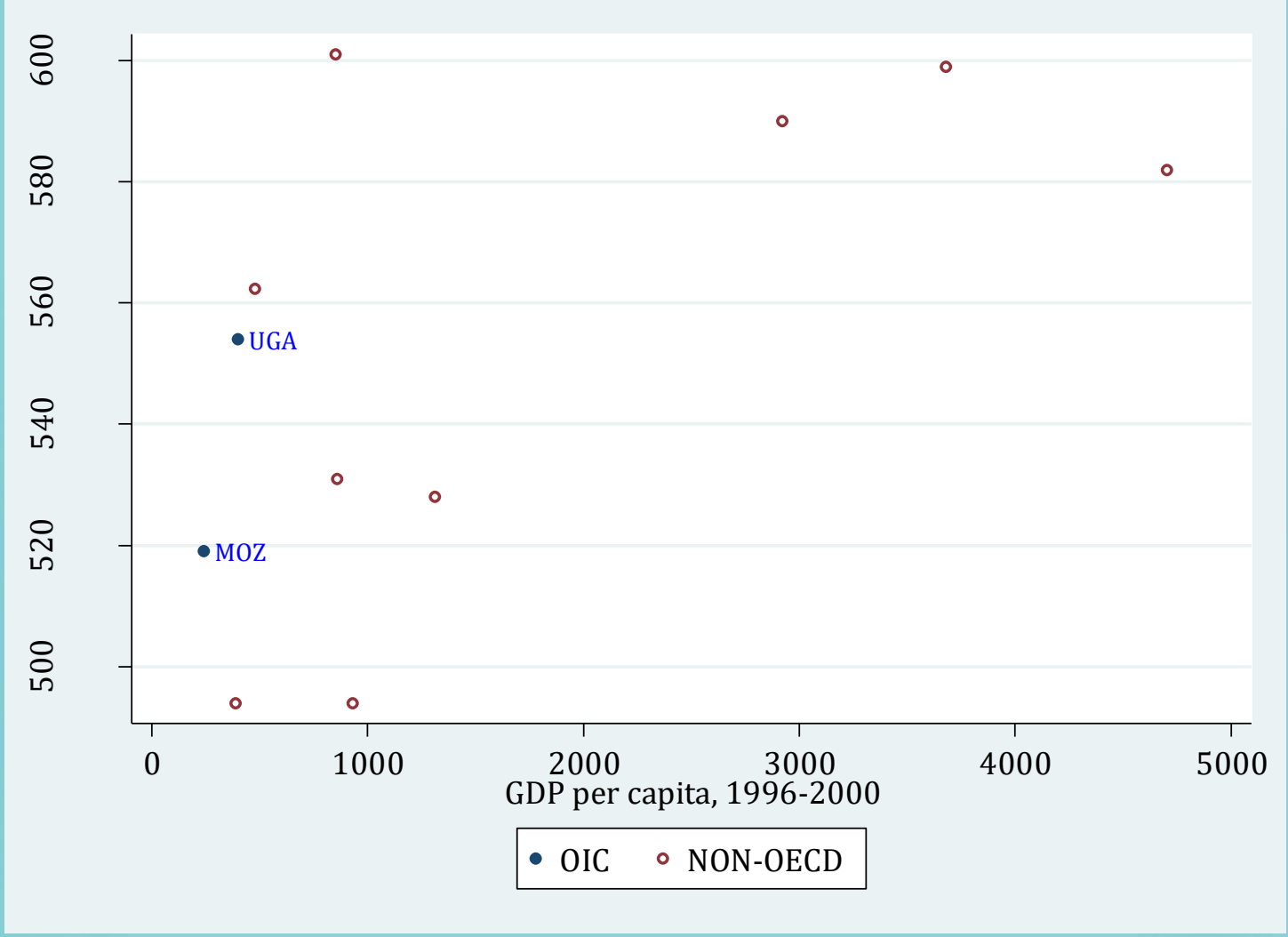
How do low income OIC countries perform internationally?

- "Missing Bottom" – largely absent
- Unsatisfactory performance among the few participating members

Low rank in early grade reading in EGRA



..also low in early grade reading in SACMEQ

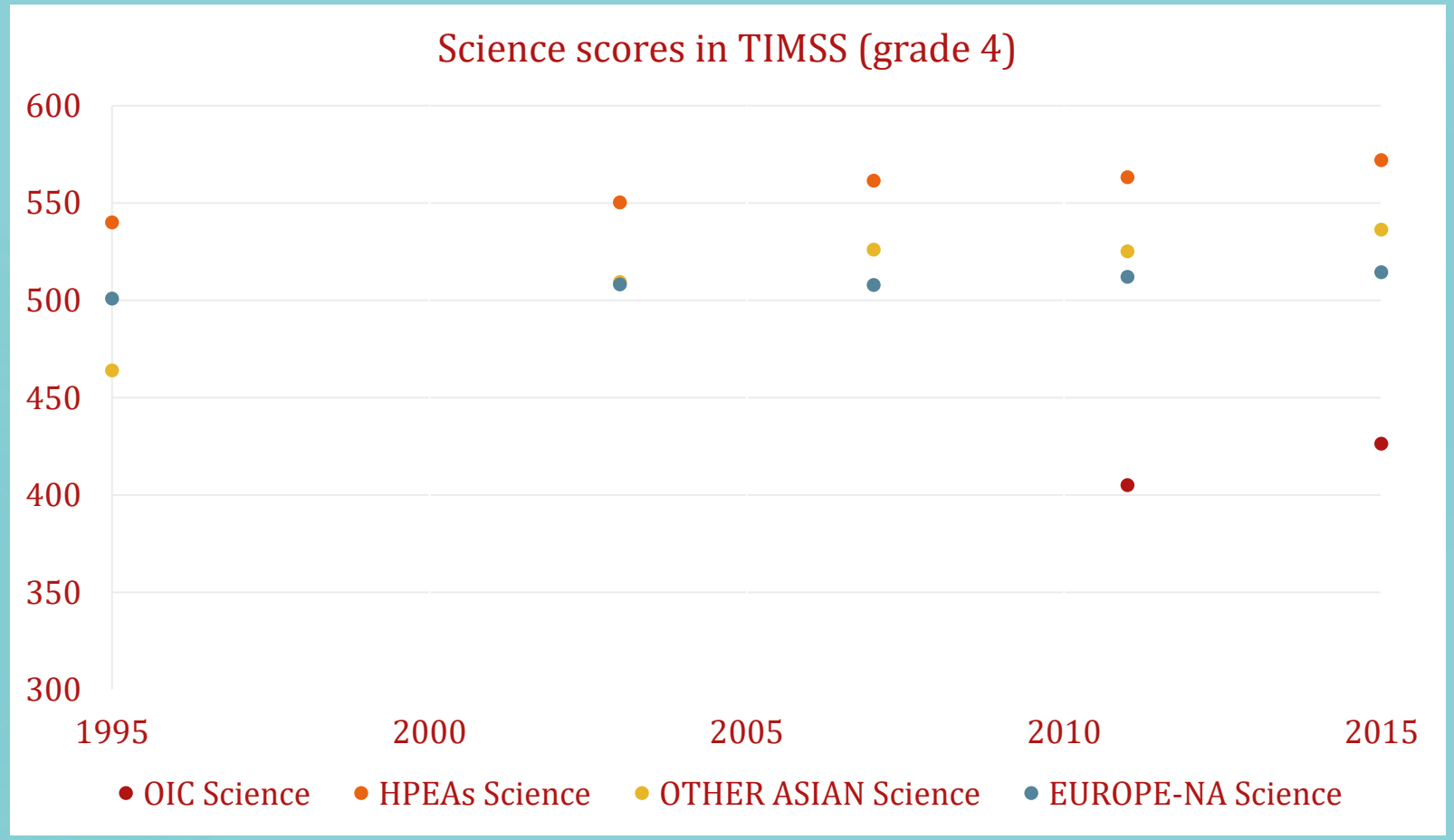


How do OIC countries perform as a group in international assessments?

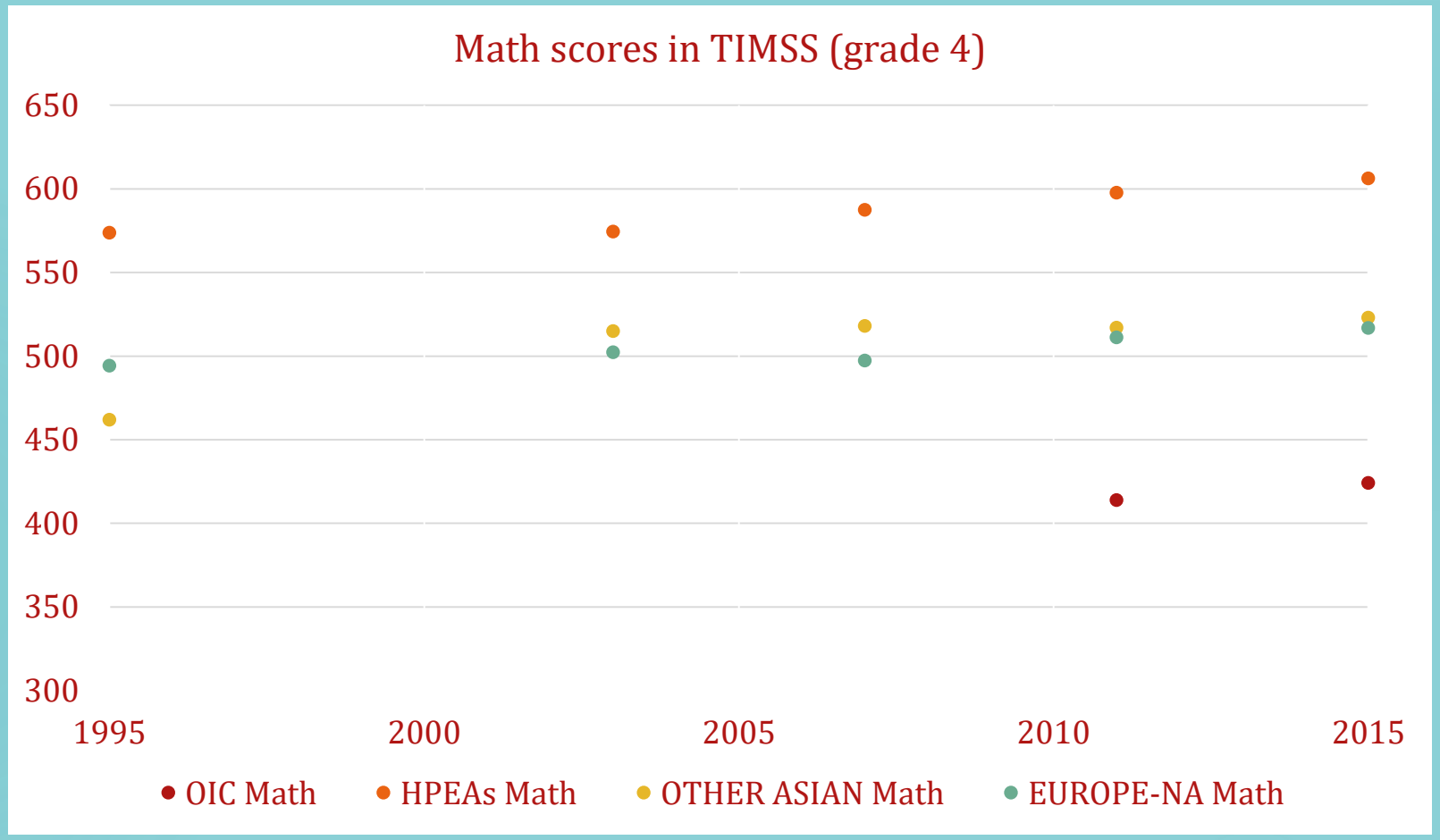
- is the performance gap closing or widening vis-à-vis high performing Asian economies (HPEAs) and other participating countries from Asia, Europe & North-America?

- Does is vary by assessment type (TIMSS vs PISA)?

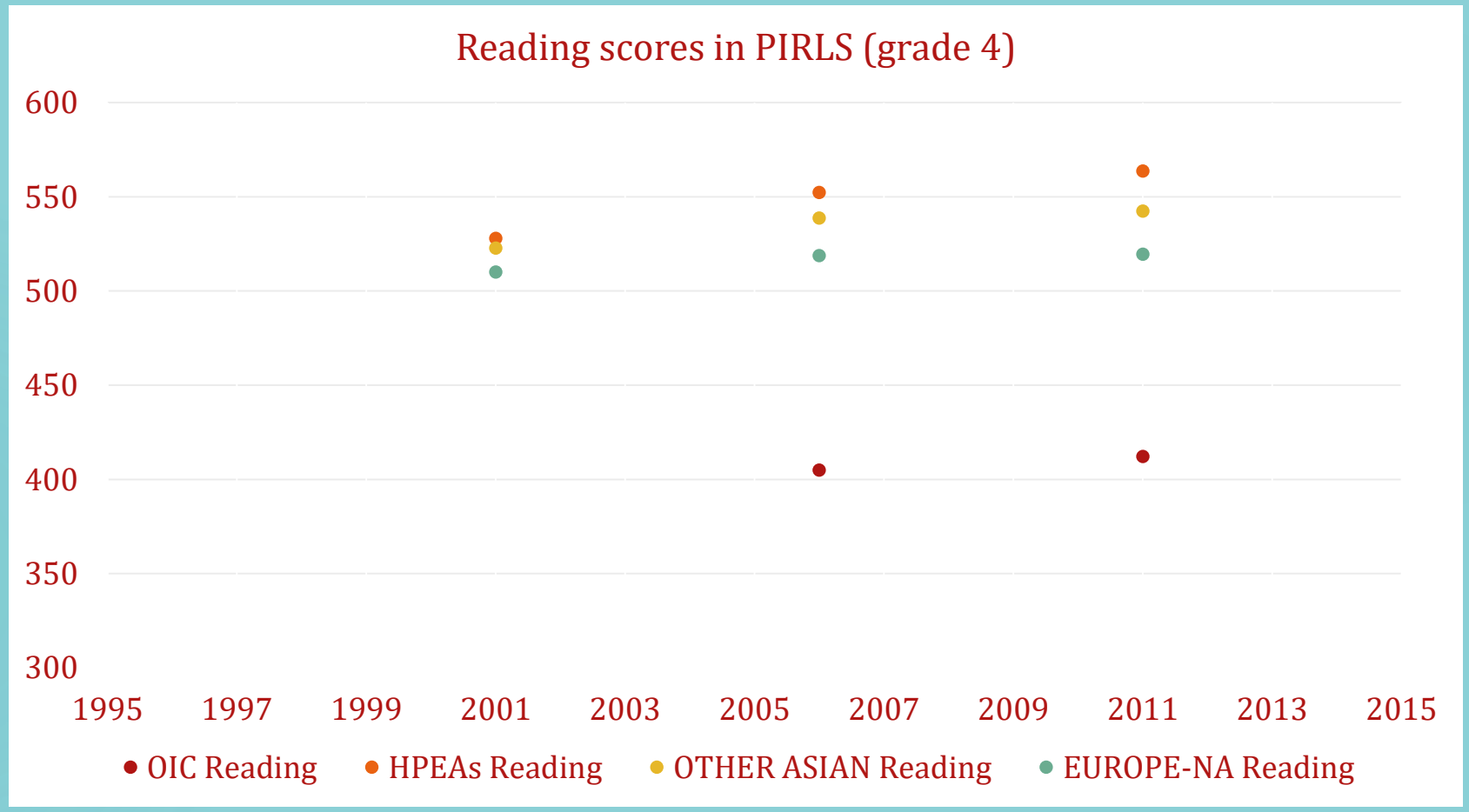
Region-level Trends in Early Grade Science Performance (TIMSS, Grade 4), 1995-2015



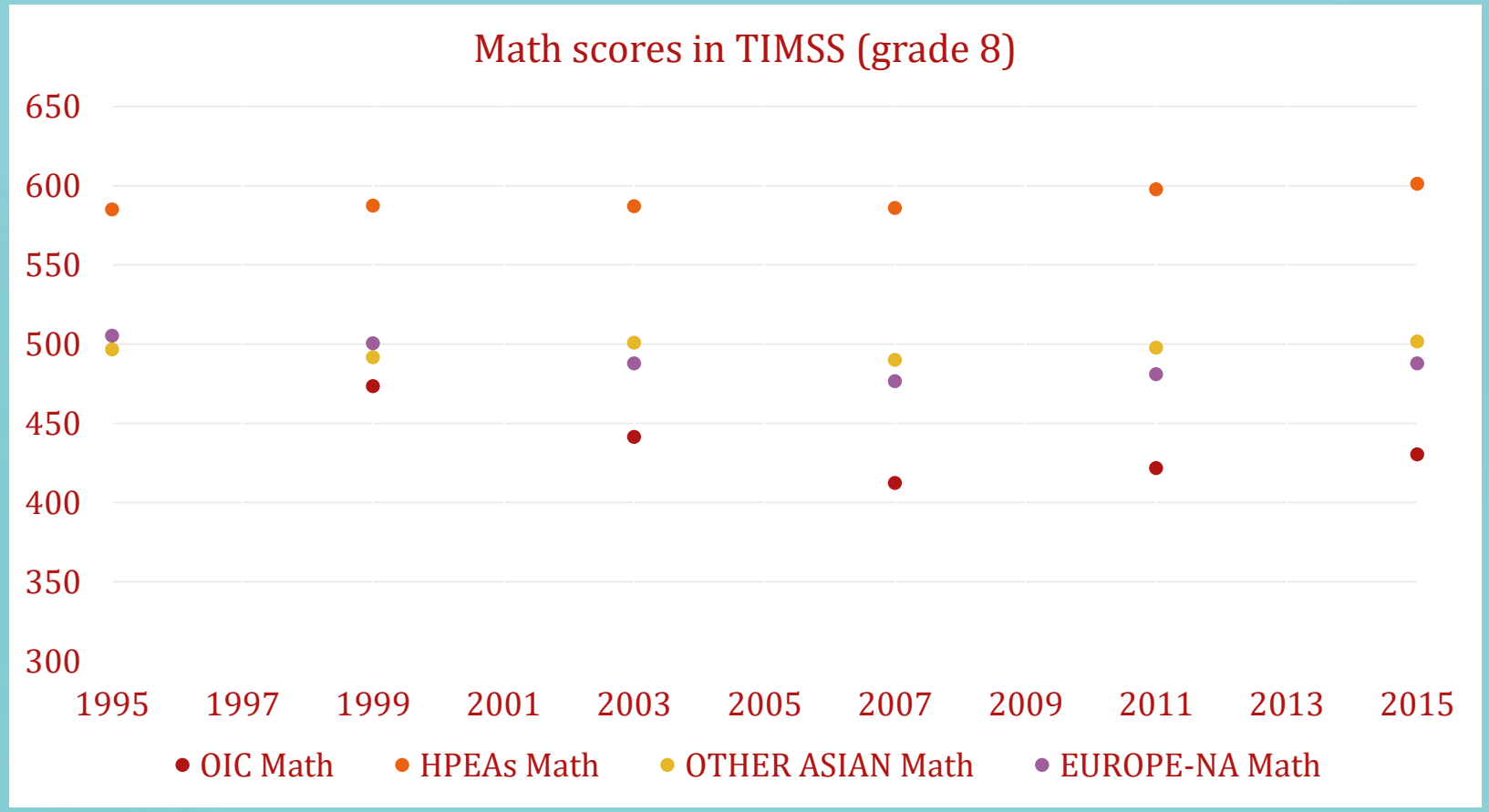
Region-level Trends in Early Grade Math Performance (TIMSS, Grade 4), 1995-2015



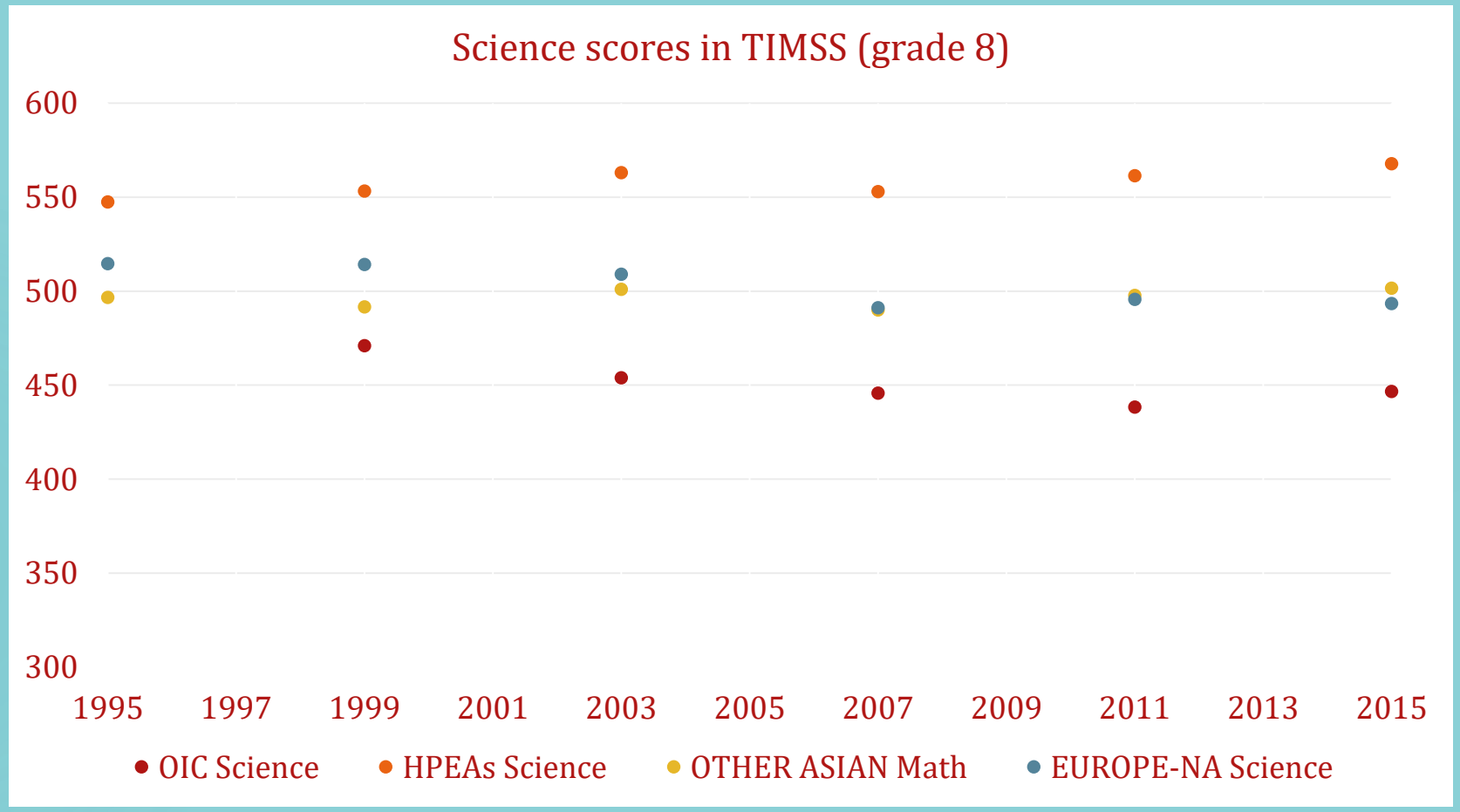
Region-level Trends in Early Grade Reading Performance (PIRLS, Grade 4), 1995-2015



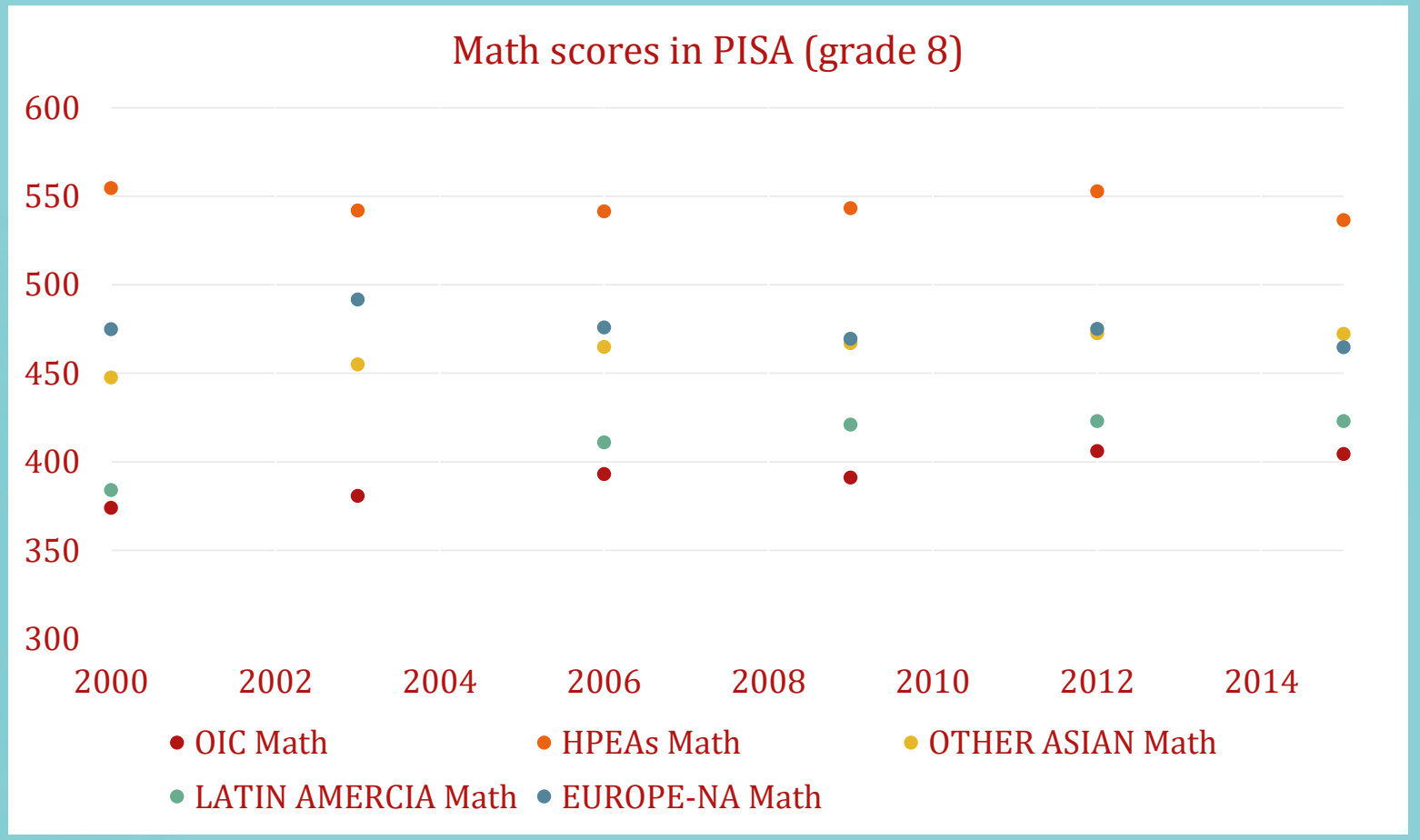
Region-level Trends in Later Grade Math Performance (TIMSS, Grade 8), 1995-2015



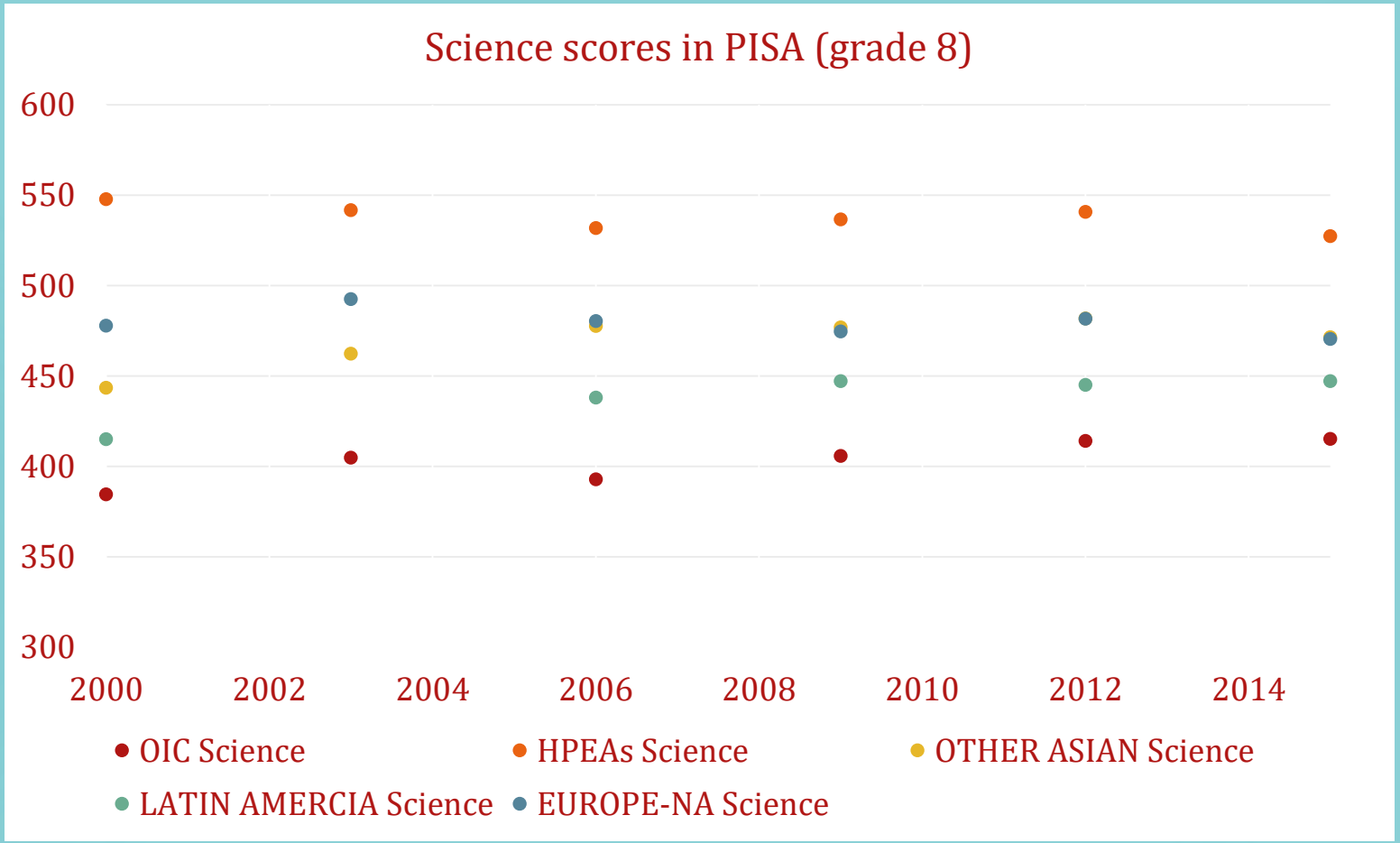
Region-level Trends in Later Grade Science Performance (TIMSS, Grade 8), 1995-2015



Region-level trends in Later Grade Math Performance (PISA, 15 yrs old), 2000-2015



Region-level trends in Later Grade Science Performance (PISA, 15 yrs old), 2000-2015



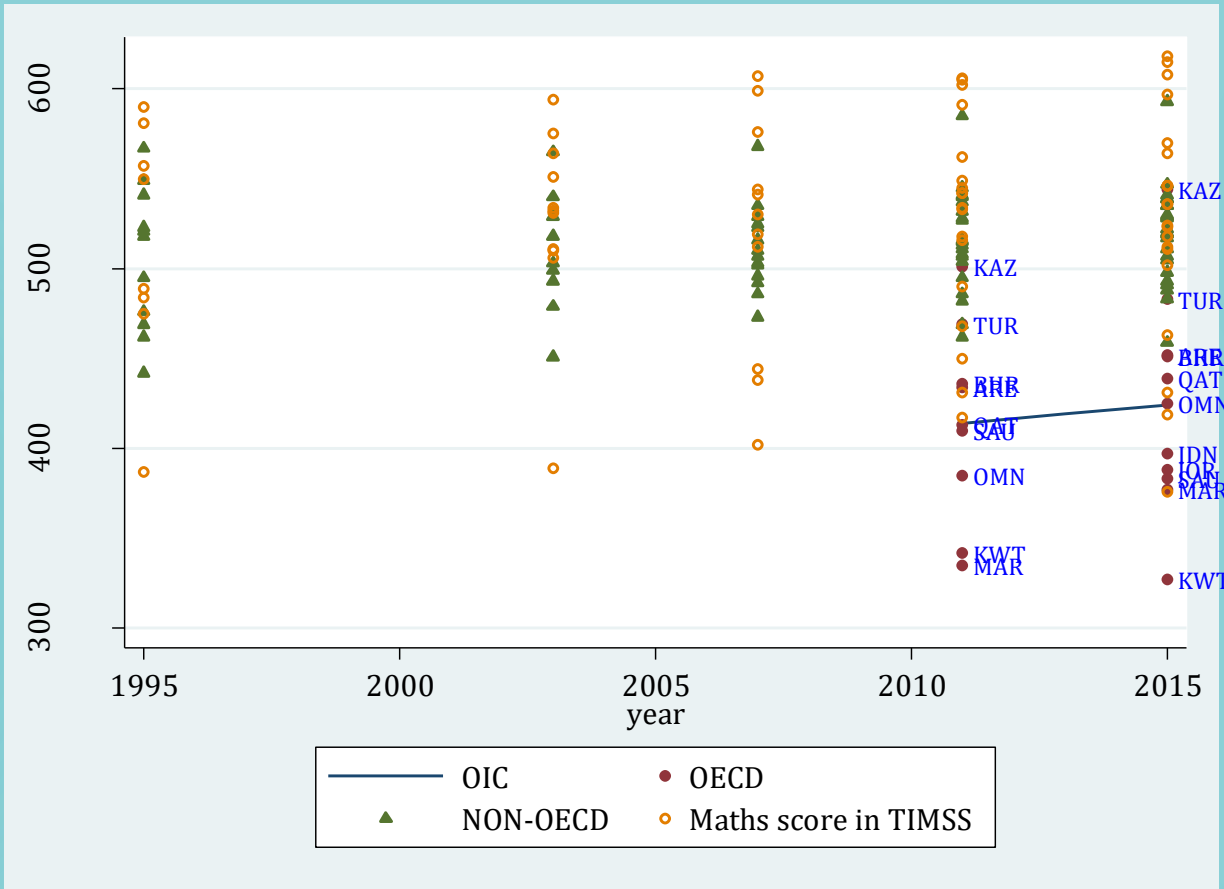
Region-level trends in Later Grade Reading Performance - (PISA, 15 yrs old), 2000-2015

How do OIC countries perform individually in international assessments?

- Is their convergence within the OIC?
- Which member country is catching up?

Country-level trends in Early Grade Math Performance (TIMSS, Grade 4), 1995-2015

Large gap between regions (OIC vs OECD) and countries (Kazakhstan vs Kuwait)

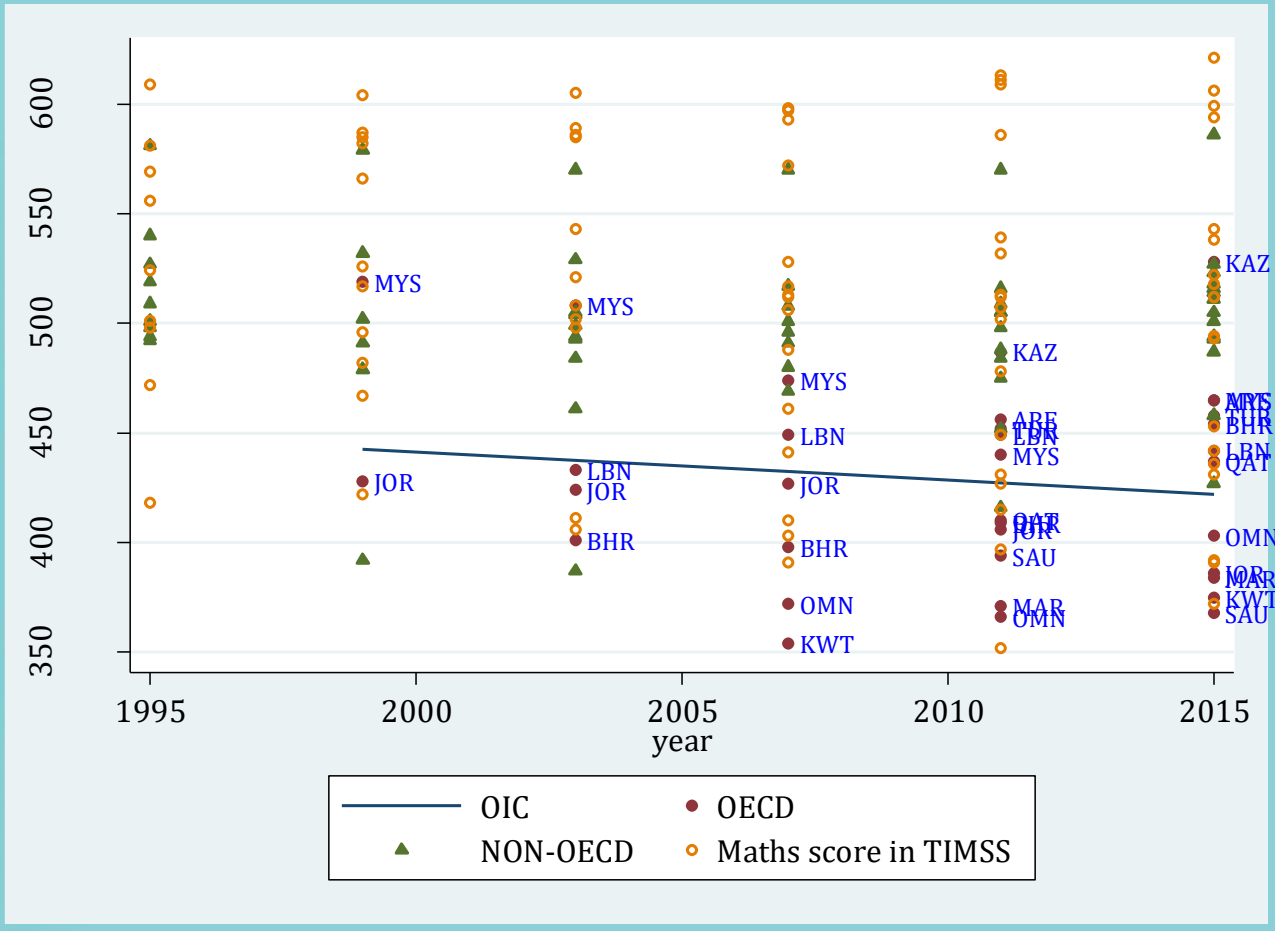


Country-level trends in Early Grade Science Performance (TIMSS, Grade 4), 1995-2015

Large gap between regions (OIC vs OECD) and countries (Kazakhstan vs Kuwait)

Country-level trends in Later Grade Math Performance (TIMSS, Grade 8), 1995-2015

- Large gap between regions (OIC vs OECD) and countries (Kazakhstan vs Kuwait)
- Some improved (Malaysia, Kazakhstan…) while others saw a decline (S Arabia & Jordan)

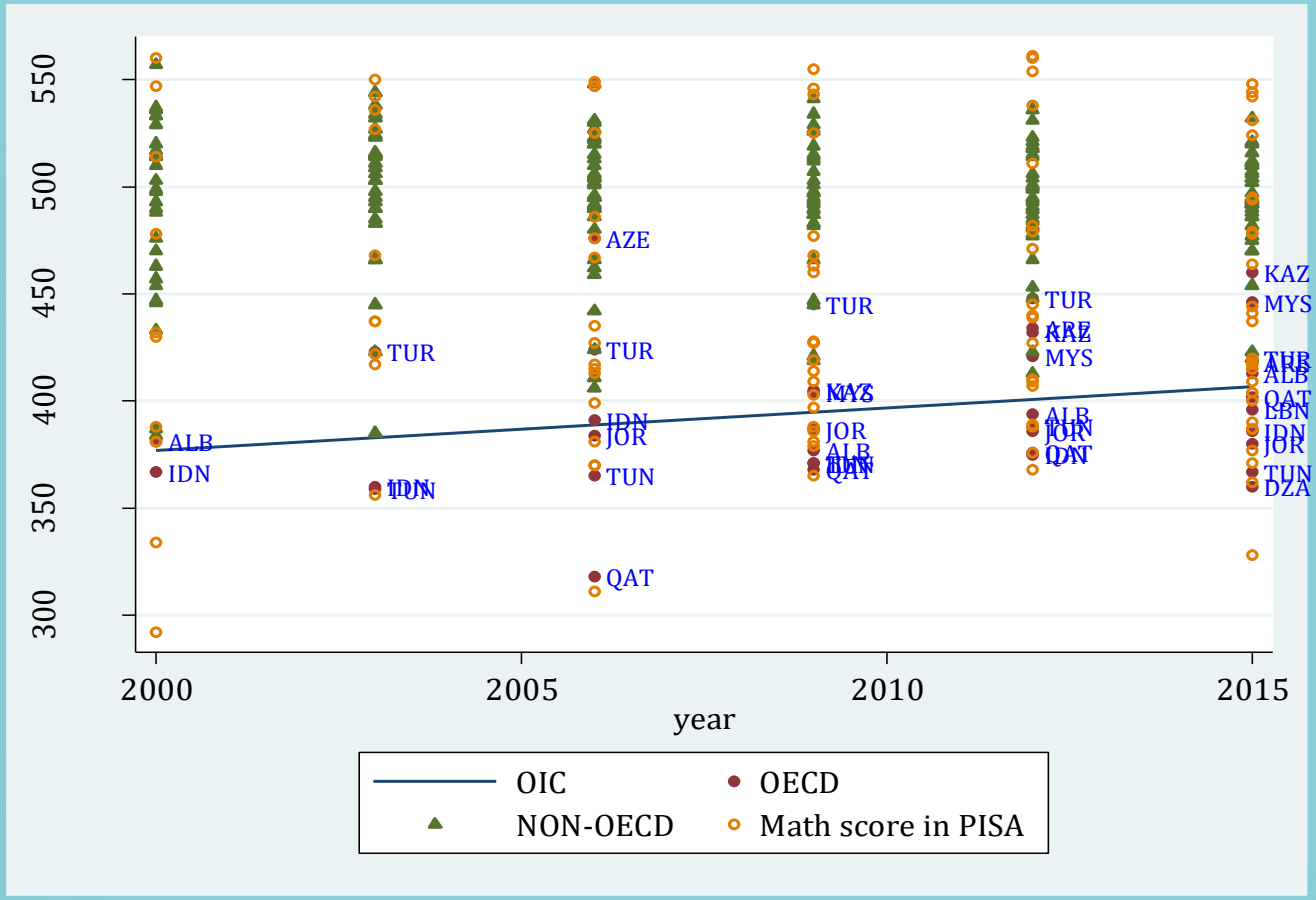


Country-level trends in Later Grade Science Performance (TIMSS, Grade 8), 1995-2015

- Large gap between regions (OIC vs OECD) and countries (Kazakhstan vs Kuwait)
- Some improved (Malaysia, Kazakhstan, Turkey, Oman…) while others saw a decline (Jordan)

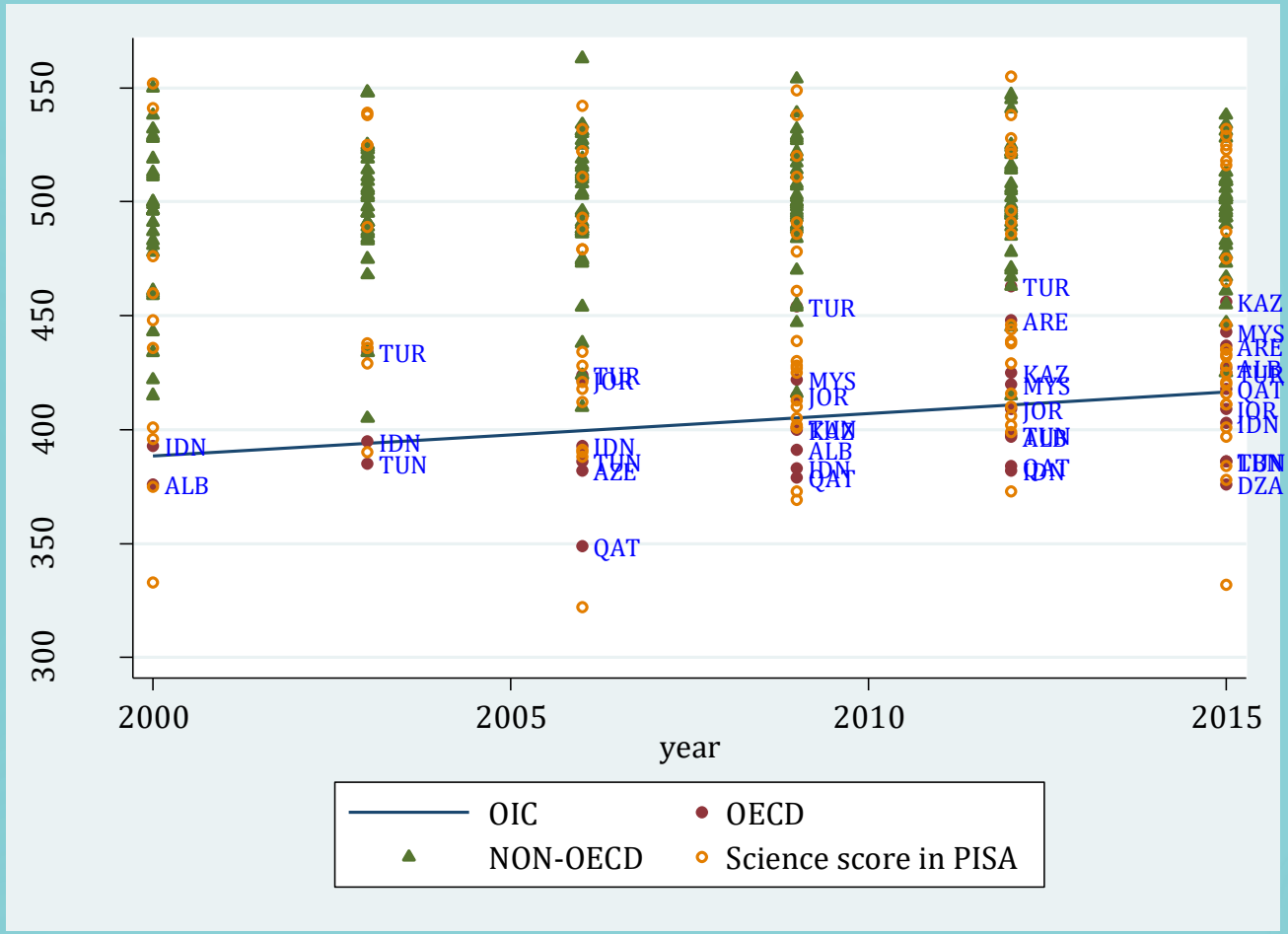
Country-level trends in Later Grade Math Performance (PISA, 15 yrs old), 2000-2015

Some improved (Malaysia, Kazakhstan, Qatar) while others saw a decline (Turkey)



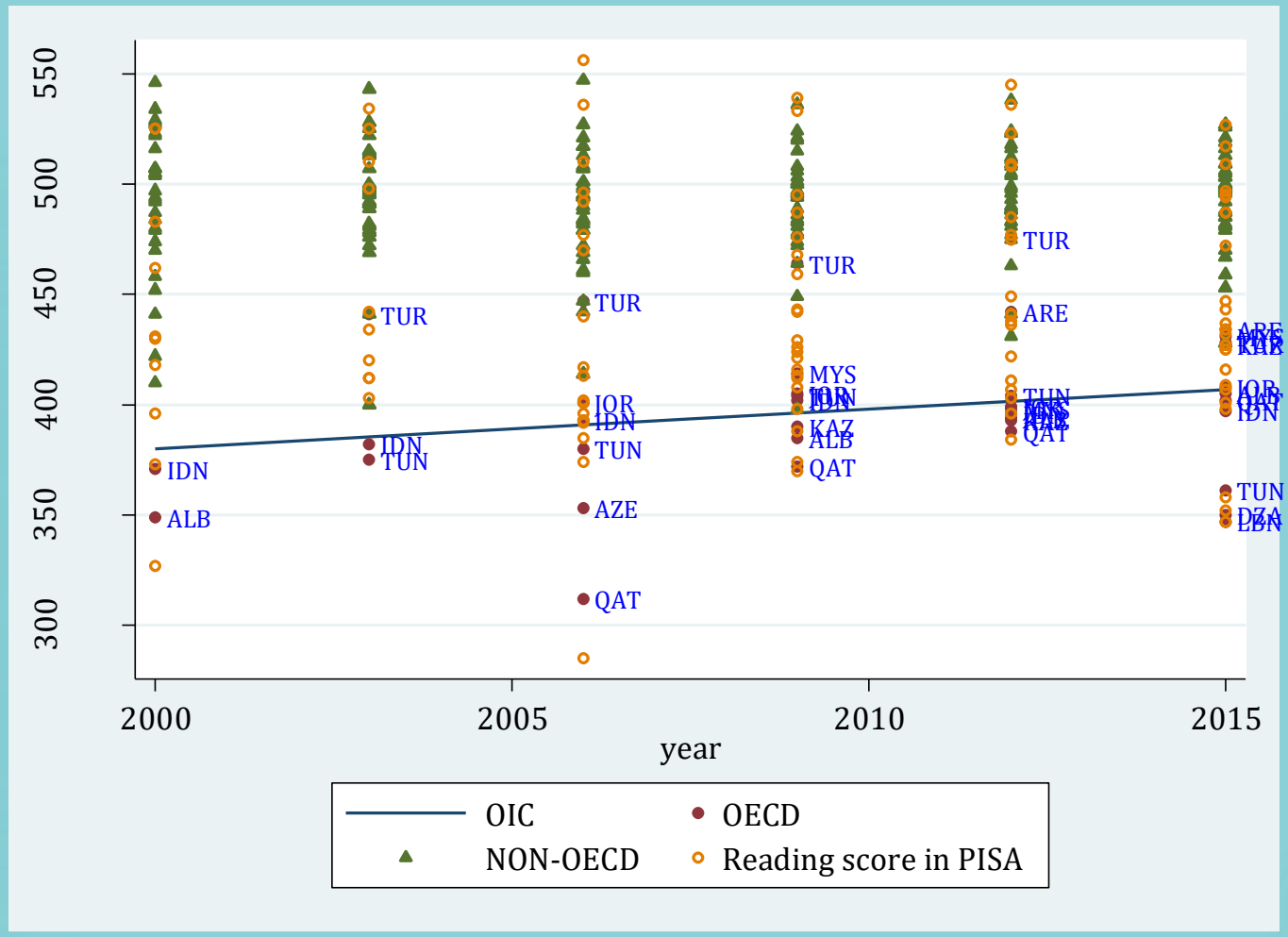
Country-level trends in Later Grade Science Performance (PISA, 15 yrs old), 2000-2015

Some improved (Malaysia, Kazakhstan, Indonesia, Qatar) while others saw a decline (Turkey)



Country-level trends in Later Grade Reading Performance (PISA , 15 yrs old), 2000-2015

Some improved (Malaysia, Kazakhstan, Indonesia, Qatar) while others saw a decline (Turkey)



What about performance of children by gender and SES?

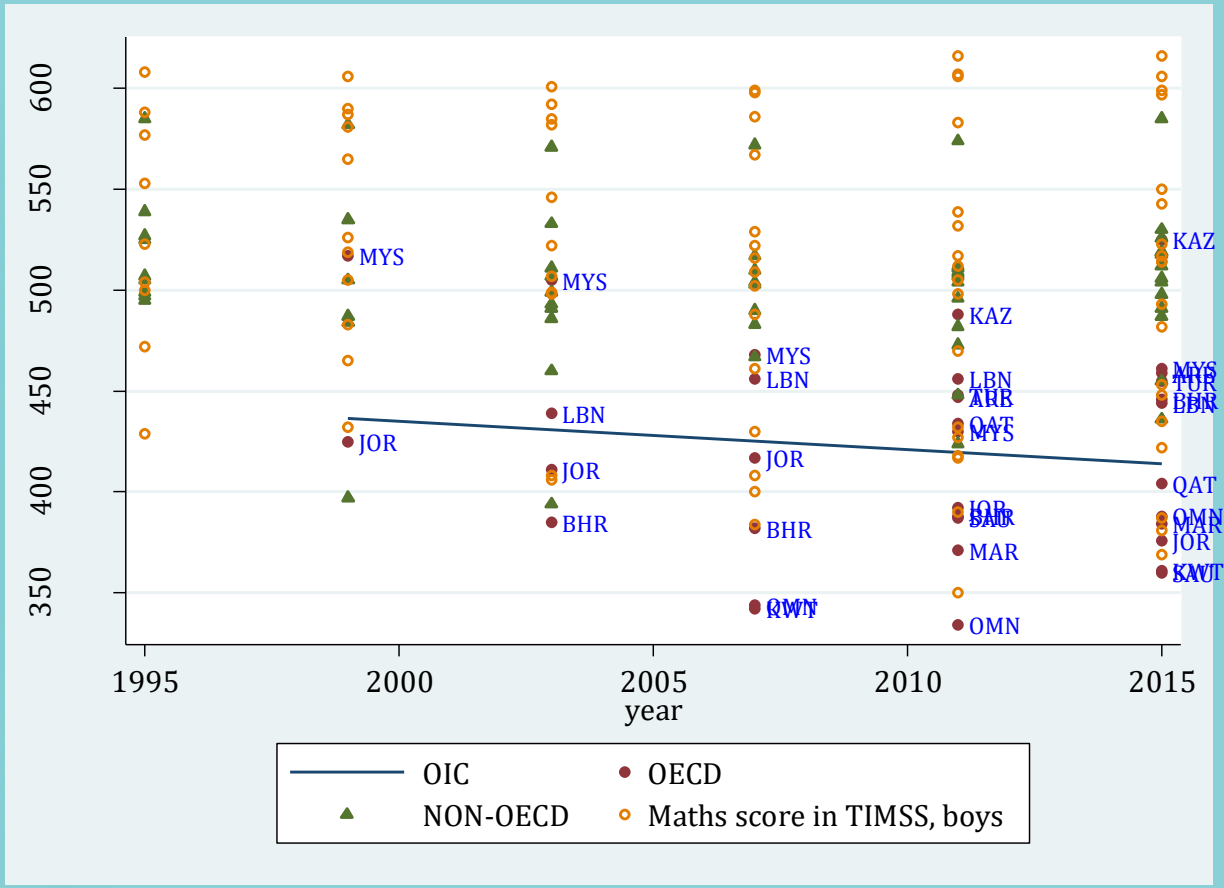
- Is there a wealth gap?
- Is it widening?

Country-level trends in Later Grade Math Performance among GIRLS (TIMSS, Grade 8), 1995-2015

Reverse gender gap in the OIC

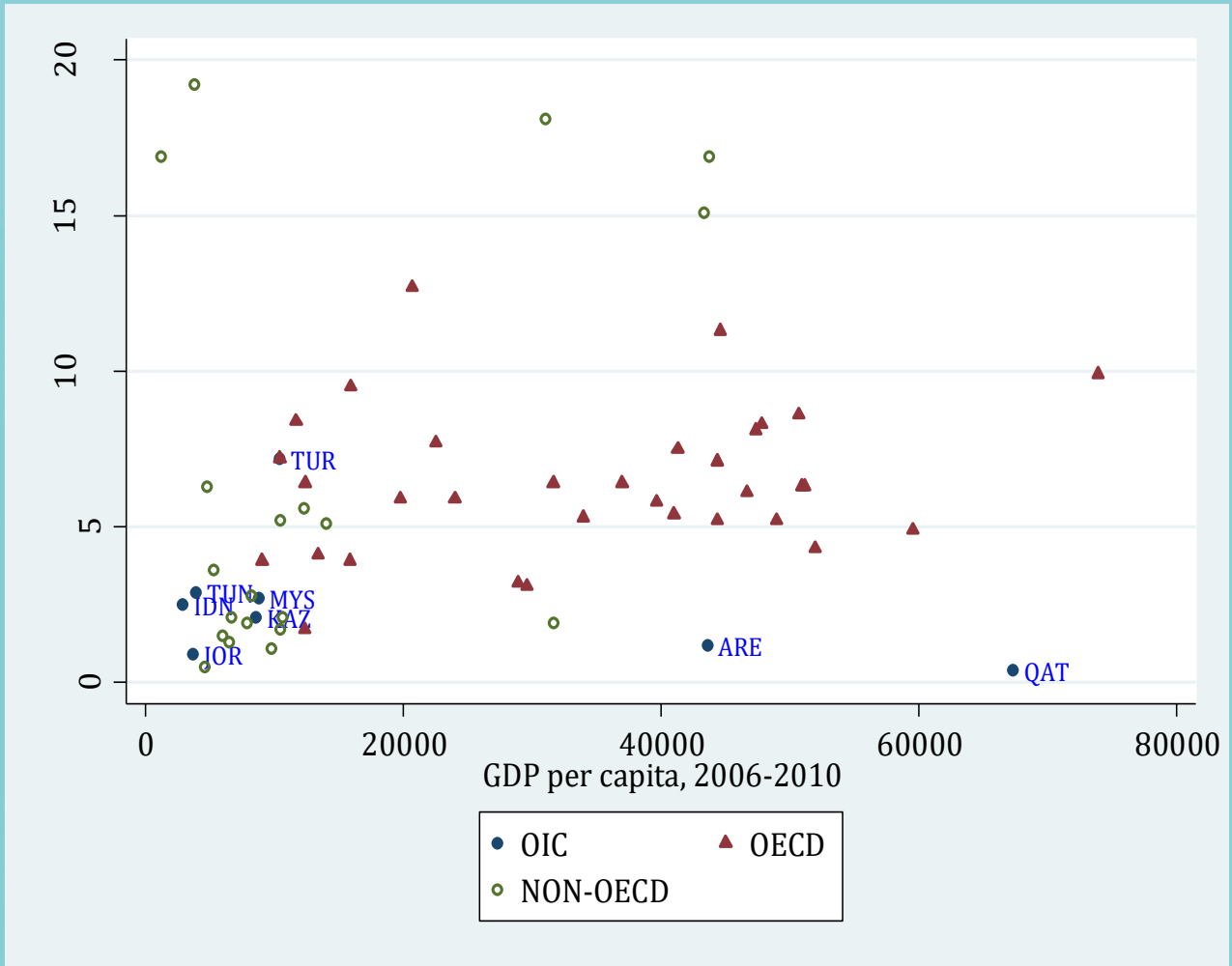
Country-level trends in Later Grade Math Performance among BOYS (TIMSS, Grade 8), 1995-2015

- Larger gaps between regions (OIC vs OECD) and countries (Kazakhstan vs Kuwait) for BOYS
- Sharp improvement among boys in some (Malaysia)

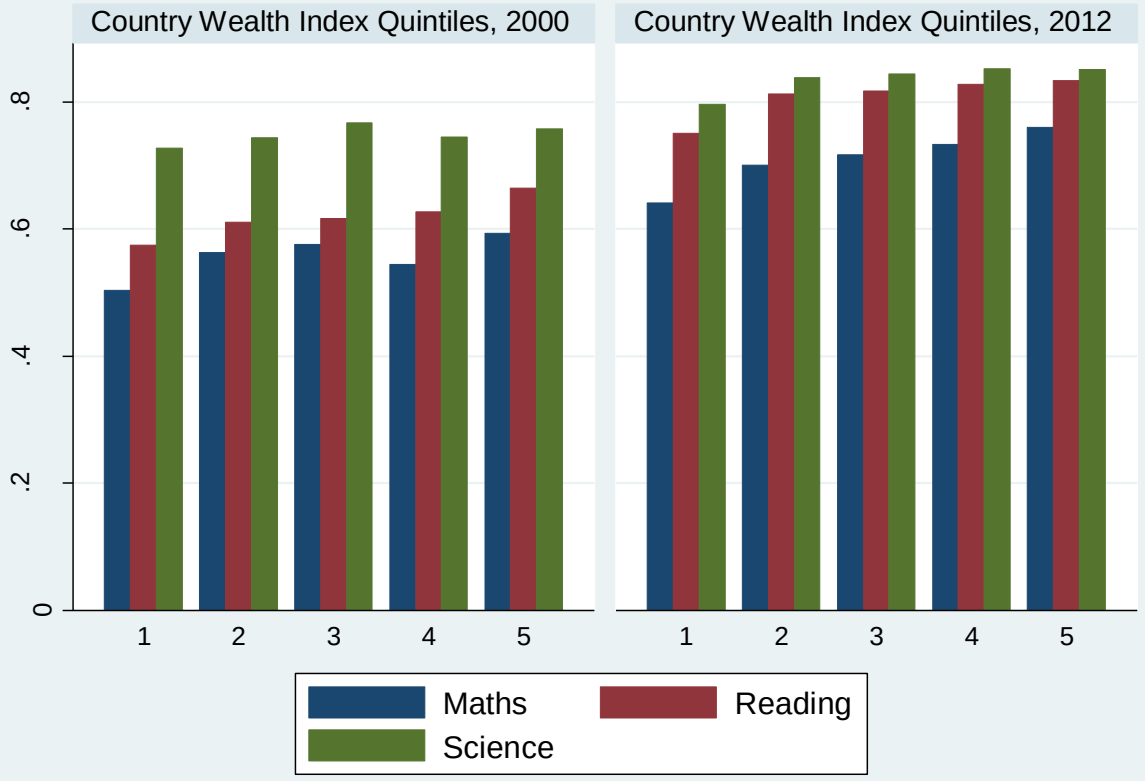


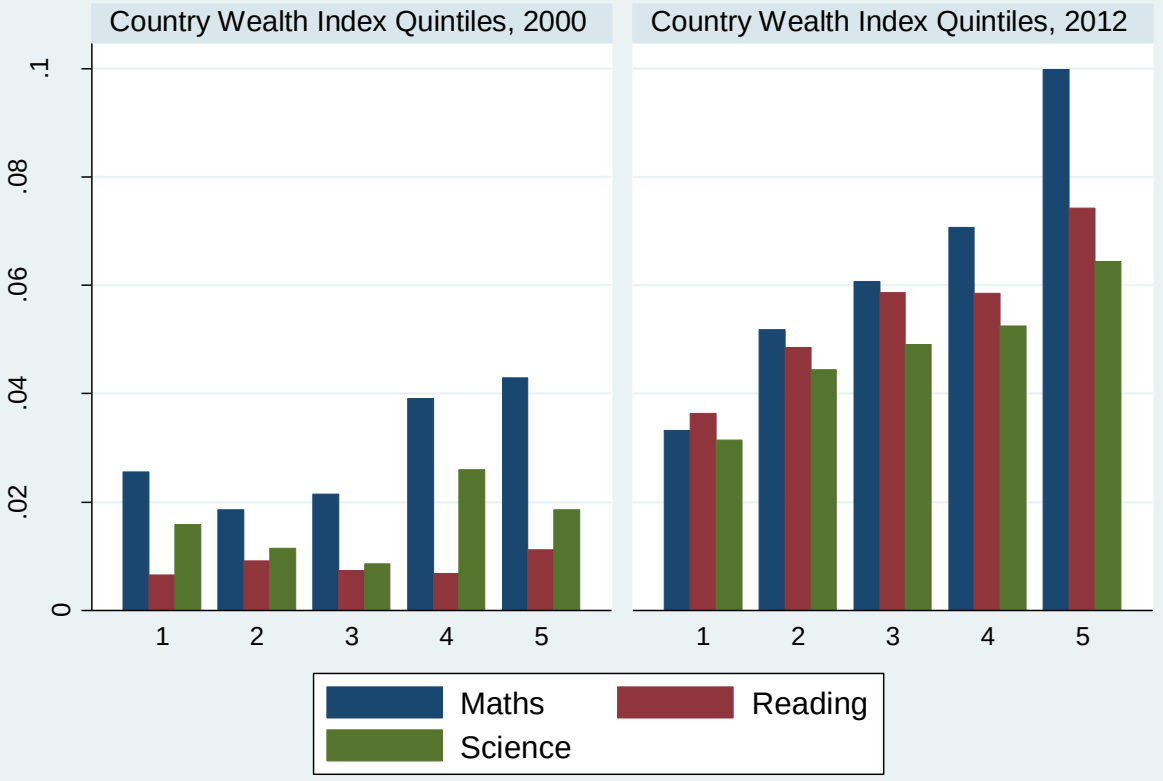
Share of Resilient Students in PISA 2012

- Low share of resilient students even in countries with high equality in access to school

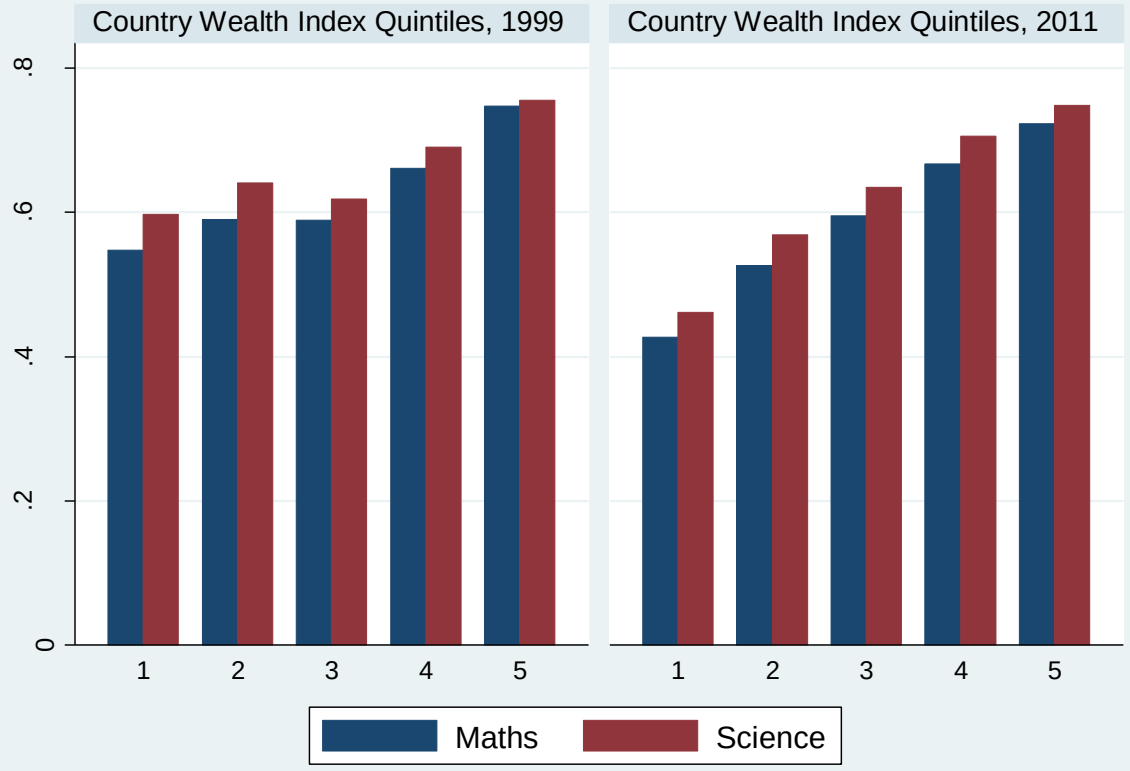


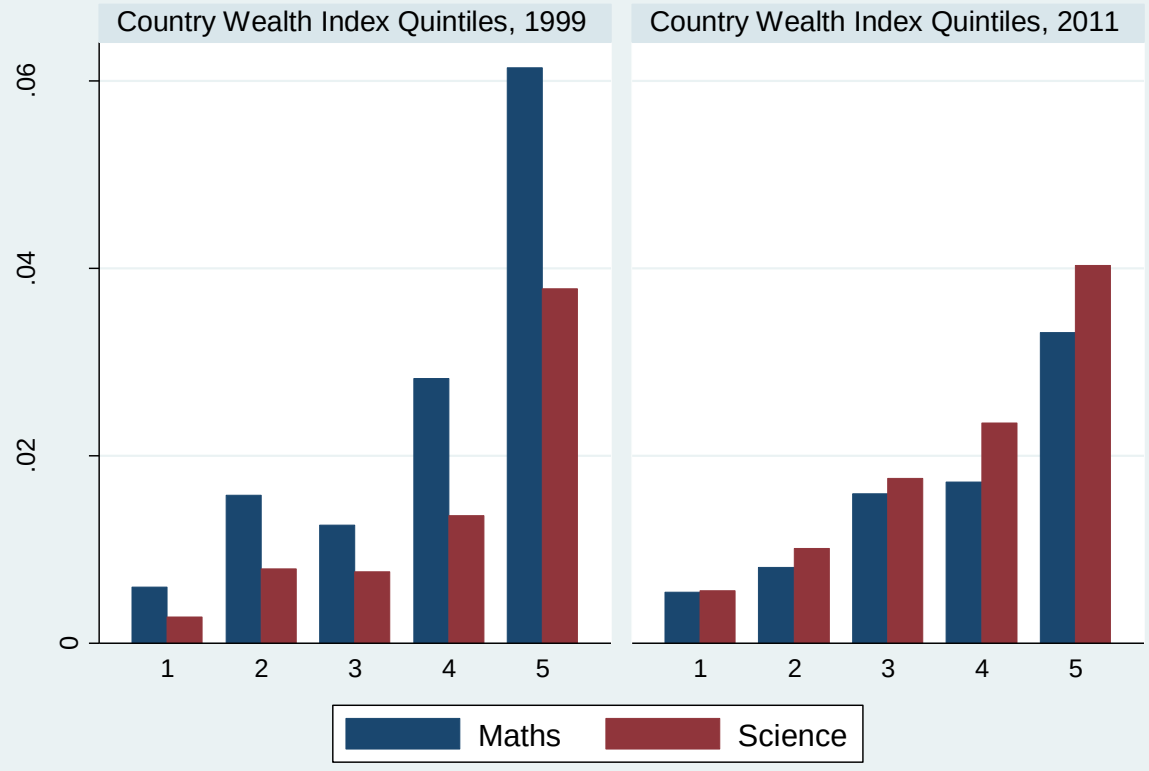
Wealth-Learning Profiles, PISA 2000 & 2012





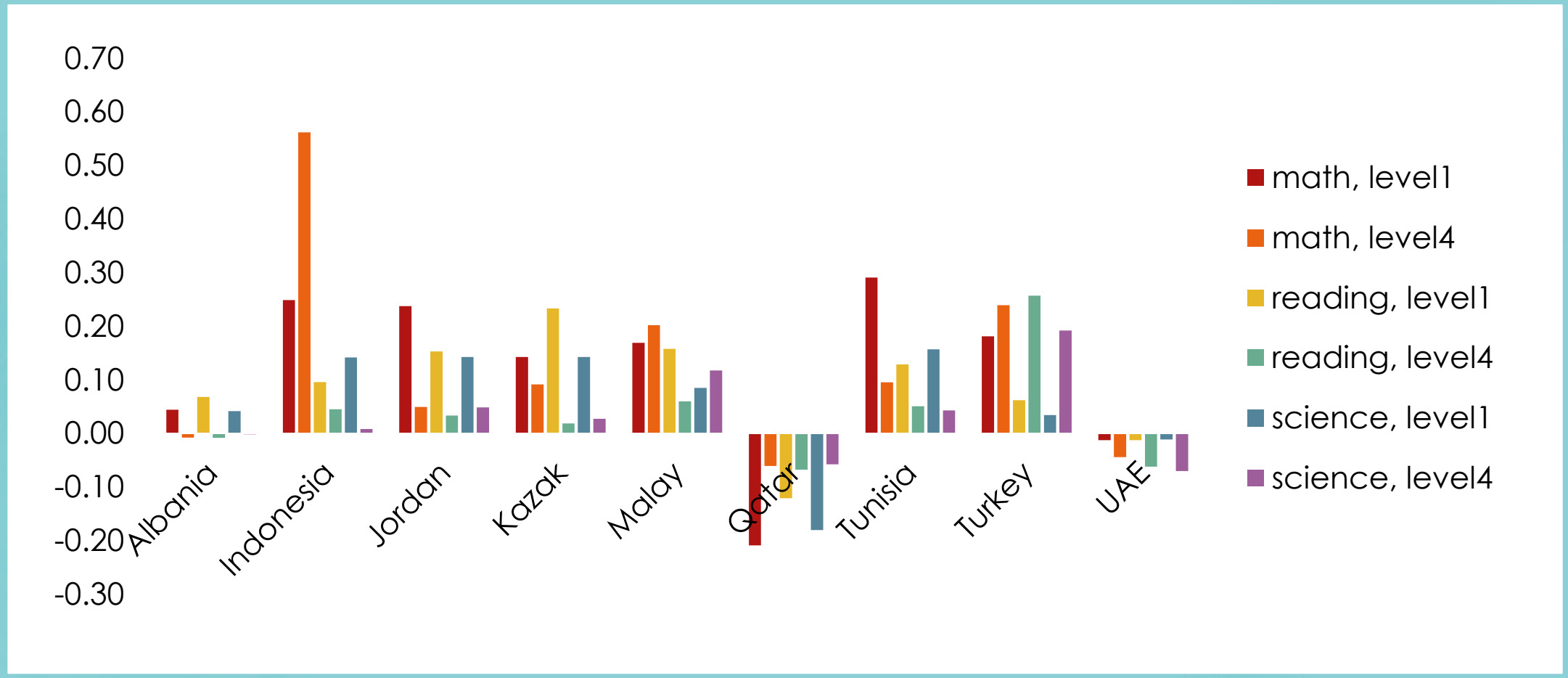
Wealth-Learning Profiles In The OIC, TIMSS 1999 & 2011





Top-Bottom Wealth Quintile Learning Gaps in OIC Countries, PISA 2012 (basic and advanced level)

- Large wealth gaps in mathematics
- Reverse gap in two OIC countries



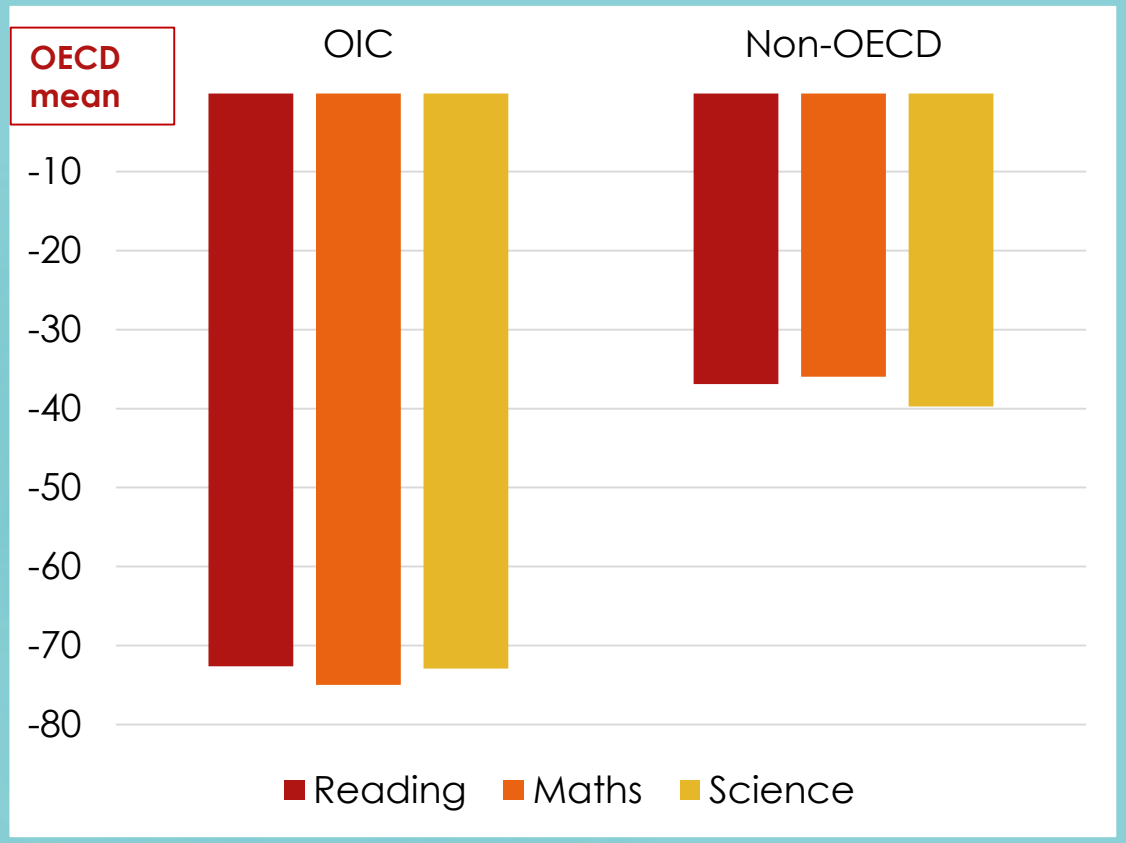
What do multivariate analysis tell us about the role of gender, family SES and other correlates of reading, math and science performance in OIC countries?

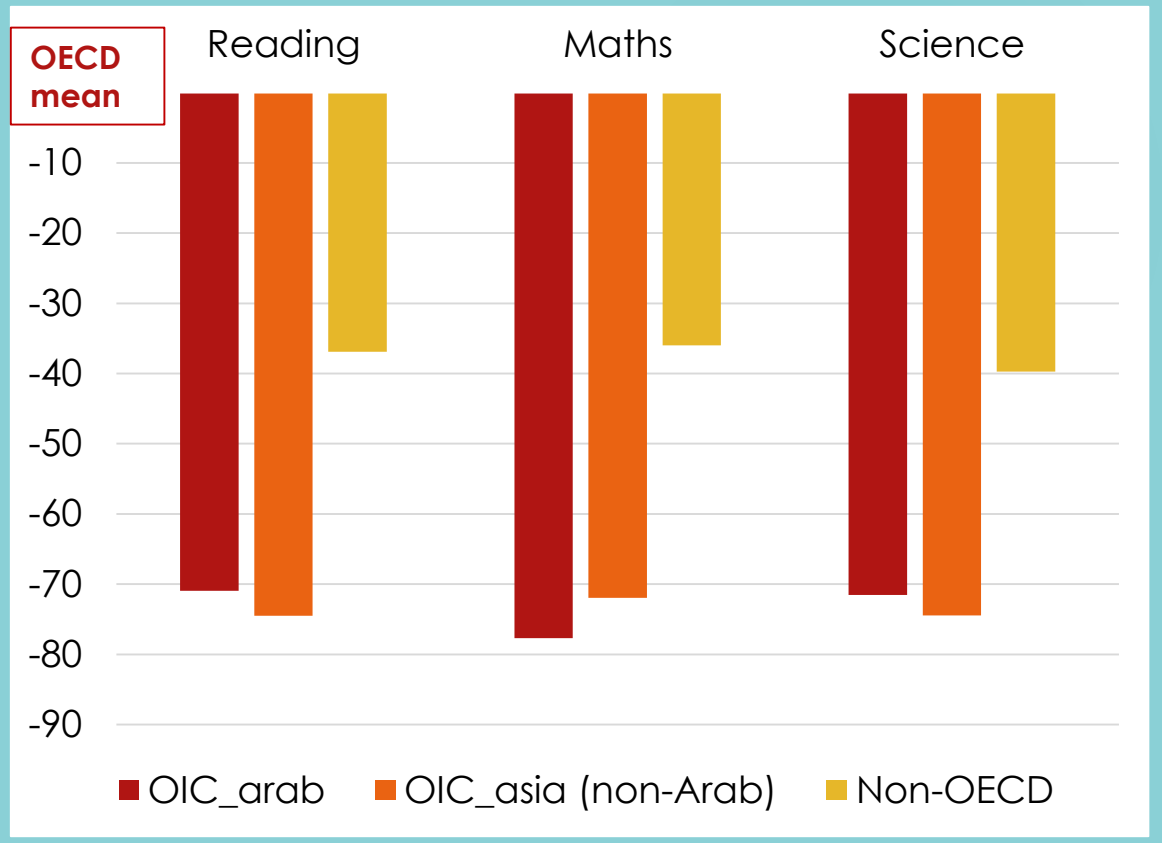
- How do the correlations compare with non-OIC countries?

Correlates of Learning in OIC & non-OIC countries, PISA 2012: Multi-variate regression analysis

- **Child-specific**
  - Female disadvantage in OECD countries paradoxically reversed in the OIC
  - ECD/ pre-primary attendance has a positive influence
  - Test language spoken at home
- **Family-specific**
  - Wealth gap bigger in OIC countries
  - Parental pressure has a +ve influence
  - City advantage
- **School-specific**
  - private school advantage; computer access
- **No/mixed influence**
  - teacher shortage, school autonomy

Learning Shortfalls in OIC and Non-OECD vs. OECD Countries, PISA 2012





Review of the global evidence on determinants

- Evidence of flat learning profile in the **"missing bottom"**
  - Child sample: Pakistan, Bangladesh & Afghanistan
    - Asadullah and Chaudhary 2015; Asadullah, Alim, and Hossain, 2018
  - Adult sample: Nigeria, Uganda, Pakistan & Bangladesh
  - Low foundational skills (UNICEF 2015):
    - Reading: Morocco, Burkina Faso and Senegal
    - Math : Yemen, COTE D'IVOIRE, Morocco, Pakistan, Burkina Faso
- 3ie (2016) systematic review of randomized control trial (RCTs) evaluation
    - 52 developing countries
    - 238 impact evaluation studies
    - 21 different types of education interventions
    - Impact on enrolment, attendance, completion and learning achievement (scores on cognitive, language and mathematics tests).
  - Few OIC countries in studied, particularly from the Arab world

Review of the global evidence on determinants

Summary of 3ie (2016)

- **No 'silver bullets' to ensure high-quality education for all**
- **Most schemes improve either school enrolment or learning outcomes; very few improved both.**
- *Child-specific interventions*
  - **Promising:** merit-based scholarships and school meals.
  - **Further evidence needed**: information provision and school-based child health improvement
- *Household-specific interventions*
  - **Doesn't work**: Abolishing school fees, cash transfers.
- *School & teacher-specific schemes*
  - **Promising:** structured pedagogy programmers (customised curricula, new instructional approaches for teachers and educational materials for students).
  - extended school day and remedial education programmes , Public-private partnerships are also promising for improving participation outcomes.
  - **Doesn't work**: school-based management programmes and computer-assisted learning; teacher accountability & incentives schemes
  - **Unknown**: the impact of teacher training and hiring

Coordinated Policy Efforts To Improve Education Quality In The OIC Countries

- No OIC-wide forum on education quality
  - E-9 (five OIC countries -- Bangladesh, Egypt, Indonesia, Nigeria and Pakistan)
  - "Islamic Education, Science and Culture Organization" (ISESCO)
  - "Arab League Education, Culture and Science Organization" (ALECSO)
  - "Arab Regional Agenda for improving Education Quality" (ARAIEQ)
  - "Arab Program for Early Childhood Development" (APECD)

- A welcoming shift in focus to quality education
  - ALECSO Strategic Plan for 2017-2022 "Plan for the Development of Education in the Arab World"
    - High illiteracy rate
    - Deficient educational curricula
    - Poor teacher training
    - Girls' unequal access to education
    - Low attention to pre-school education
    - Low enrolment rates in primary school
    - Low achievement in scientific subject
    - Low scientific research performance
    - Low spending on education

Conclusion

- Learning crisis is likely to be much more serious in the OIC
- 'Missing bottom" : low income OIC countries absent from international assessments
  - Flat-learning profiles & high inequality
  - Bringing all children to school will only worsen the situation
- "Bottom third" : upper-middle income members rank unfavorably in international assessment
- Pursuit of 'inputs'-based educational policies assuming that improving inputs alone will improve educational quality proved wrong
- Upper-middle income members also face inequality in access to quality
  - Widening wealth and reverse gender gaps
  - Sizable rural-urban gaps
  - Consequences for economic inequalities
- Some OIC members responded to poor performance by introducing reforms
  - Signs of improvement in at least 5 members

Thank You

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