THE EXPERIENCES OF MIDDLE-INCOME COUNTRIES PARTICIPATING IN PISA, 2000-2015

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The experiences of middle-income countries participating in PISA
Six Questions

1. Which countries have participated in PISA and other international large-scale assessments?
2. Why have countries participated in PISA?
3. What are challenges for middle-income countries participating in PISA?
4. What capacities are built from participating in PISA?
5. How have PISA results informed education policy in middle-income countries?
6. What do PISA data tell us about education in middle income countries?
How these questions were answered

• **Reviews of:**
  - Published academic literature
  - OECD documents and reports
  - World Bank education projects and reports

• **Stakeholder interviews**

• **Case studies of 9 middle-income countries**

• **New empirical analyses of:**
  - On-line media from 9 middle-income countries
  - PISA 2012 data from 18 middle-income countries
  - Country participation in large-scale assessments
1. Some countries have participated in many international large-scale assessments.
2. Share of high- and upper-middle income countries that participate in PISA is growing

- OECD
- High income (includes OECD)
- Upper middle-income
- Lower-middle-income
- Low income

*Includes PISA Plus
3a. Three challenges face middle-income countries participating in PISA

- Financial
  - Information about costs
  - Costs of specific expenditure Items
  - Donor support important

- Technical

- Contextual
PISA costs are low, but financing is a challenge in many lower income countries.
3b. Three challenges face middle-income countries participating in PISA

- **Financial**
- **Technical**
  - Analytic
  - Operational
- **Contextual**
  - Political economy
  - Regulatory environment
  - National culture
4. PISA participation can build some assessment capacities

• **For countries with prior assessment experience**
  - PISA benefits from the existing capacity
  - Substantial additional capacity building is not required

• **For countries with little or no prior assessment experience, PISA provides:**
  - Exposure to the processes required for cross-country standardization of an assessment
  - Training for operational tasks: sampling, data collection, data entry, professional scoring of constructed-response items, translation
5. PISA results have informed education policy, but mainly in higher income countries

- Research on OECD countries
  - "PISA shock" and much public dialogue on education
- Research on middle-income countries?
  - New research needed
- New research
  - Public dialogue about education, related to PISA
  - Discussions between countries and donors
  - Search for evidence of policy change
5b. Results: PISA used in private dialogue between governments and donors

• PISA data shows evidence of need to improve quality (5 countries)
  – MCC-supported project (Georgia 2014)

• WB projects may provide support for PISA participation (6 countries)
  – World Bank (Senegal, Peru, Moldova, Sri Lanka, Lebanon, and Jordan)
5c. Results: **Impact** of PISA on education policy in middle-income countries?

- **More evidence on policy effects in high income OECD countries than in middle-income countries**

- **Reports of education policy impact in middle-income countries:**
  - Brazil used PISA to benchmark its national assessment system
  - Other countries may have used the results of PISA in internal policy discussions regarding curriculum change, targeted education programs, and resource allocations.
6a. PISA provides some information about education in middle-income countries

- **Evidence from PISA 2012 mathematics**
  - Multi-level analyses
  - Analysis of odds

- **Results about**
  - Quality
  - Equity
  - Determinants of quality
6b. Results from PISA 2012 (18 middle income countries, including two OECD)

- Education quality lower in middle-income countries
  - Higher share of students do not reach basic skills in mathematics
- Greater between school variance in performance and socio-economic background
- Explanatory variables differ among countries
Higher share of students scoring at Level 1 or below, compared with OECD average.
More variance in performance between schools (academic segregation) than OECD average.
More variance in socio-economic status between schools (social segregation) than OECD average
## Multi-level analyses results: correlates of math performance in 18 middle-income countries

### Student-level variables important in many countries

- Grade (18), Socio-economic background (17), Gender (17), Repeater (15), Preschool (11), Language (8), Vocational track (6)

### School-level variables important in > 1 country

- School average socio-economic background (18), More learning time (18), Positive disciplinary climate (13), Less student absenteeism (8), Size (7), Private (6), % girls in school (5), Infrastructure (3), Better educational resources (3)

### School-level variables not important

- Teacher absenteeism, Teacher shortage, % teachers with professional development, School policies on selecting and grouping students, School governance, Assessment and accountability policies
Odds results: Disadvantaged students have lower odds of attending advantaged schools

Odds of being in school with sufficient instructional materials
What has been the experience of low and middle income countries in PISA?

- Participation built on prior experience with national, regional or international assessments
- Financial challenges of PISA participation greater than technical ones
- PISA results have informed some education policy
- PISA results highlight differences in education quality between high income and middle income countries – tests for low income countries should be targeted at lower levels of proficiency
- Contextual data collected in PISA not always relevant to low income countries
- Countries and OECD could do more to maximise participation by low and middle income countries
Thank You

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