



INNOVATION STRATEGY FOR EDUCATION AND TRAINING: INCLUSIVE INNOVATION IN EDUCATION

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Part of the horizontal project «Knowledge and Innovation for Inclusive Growth»

- Participants: innovation (STI), education (EDU), regional development (GOV), and development co-operation (DCD)
- Project objectives:
 - Provide evidence on the impacts of innovation and related policies on inclusive development focusing on industrial, social and territorial inequalities; and
 - Develop concrete policy solutions to support countries in reconciling their innovation and inclusive development agendas, including options for scaling up inclusive innovations in education.



inclusive innovation in education



Inclusive innovation in education

- Innovation is inclusive when it aims to give enhanced access to educational resources to low-income groups.
 - i. Makes educational products and services more affordable;
 - ii. Adapts to the social, cultural and economic environment of disadvantaged students;
 - iii. Improves parental education and offsets its negative consequences;
 - iv. Decreases school segregation;
 - v. Involves local communities in the innovation process.



Project objectives

- Document education innovations that are targeting economically deprived communities around the world, with a special emphasis on OECD partner countries (China, Colombia, India, Indonesia and South Africa).
- Collect information using the survey Inclusive Innovation in Education, developed with the purpose of analysing both government policies and private initiatives.
- Identify patterns across inclusive innovations and group them into informative categories (e.g. frugal innovations, in-kind benefits, catch-up strategies, kinaesthetic and visual pedagogy, etc.).



Barriers and facilitators to education in underprivileged communities

Educational barriers of underprivileged households

- Low purchasing power
- Public spending insufficient to make up for the lack of private investment in education
- Low parental education and first-generation learners
- Positive, but uncertain, returns to education and skills mismatch
- Insufficient awareness about the importance of education and other cultural barriers
- High levels of economic inequality > relevant for school segregation

But...

- A strong local community of relatives and friends
- Open to educational innovations
- Low cost of human capital

As a result:

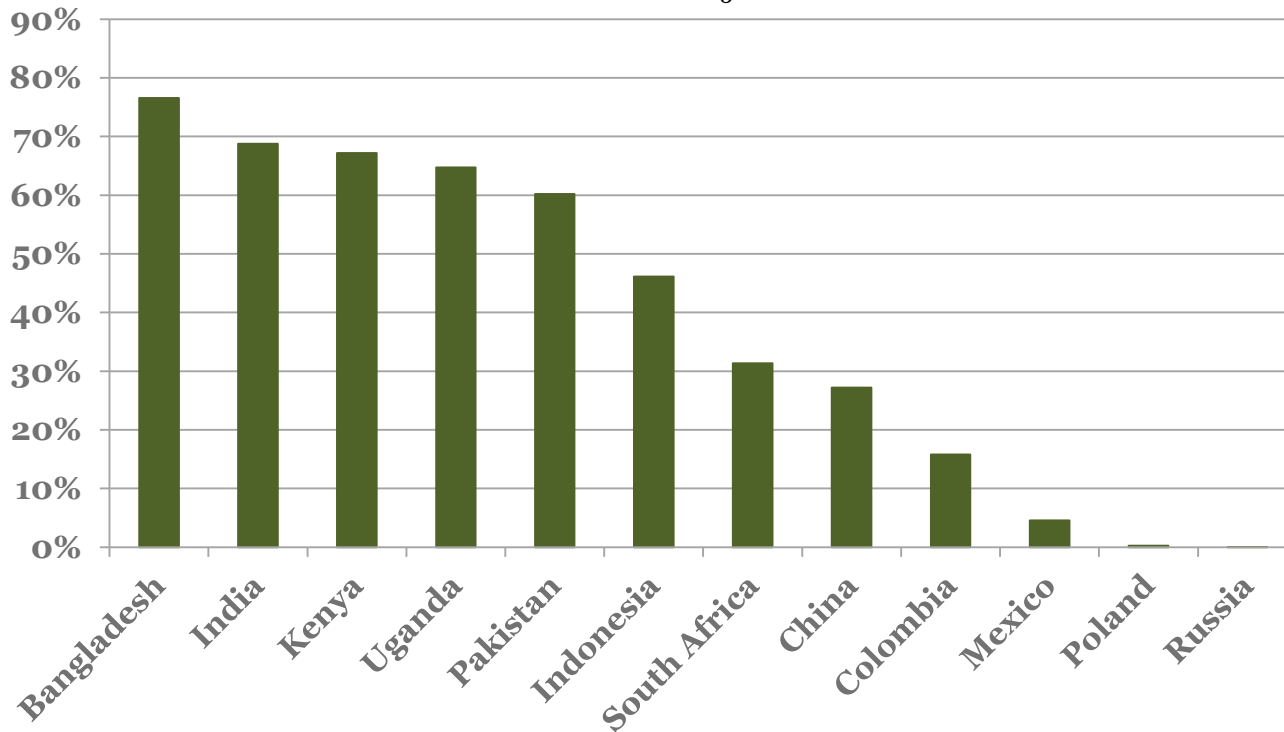
- Low educational attainment
- Low learning outcomes



Context I. Poverty

Extreme poverty in selected countries:
poverty headcount ratio at PPP \$2 a day (% population)

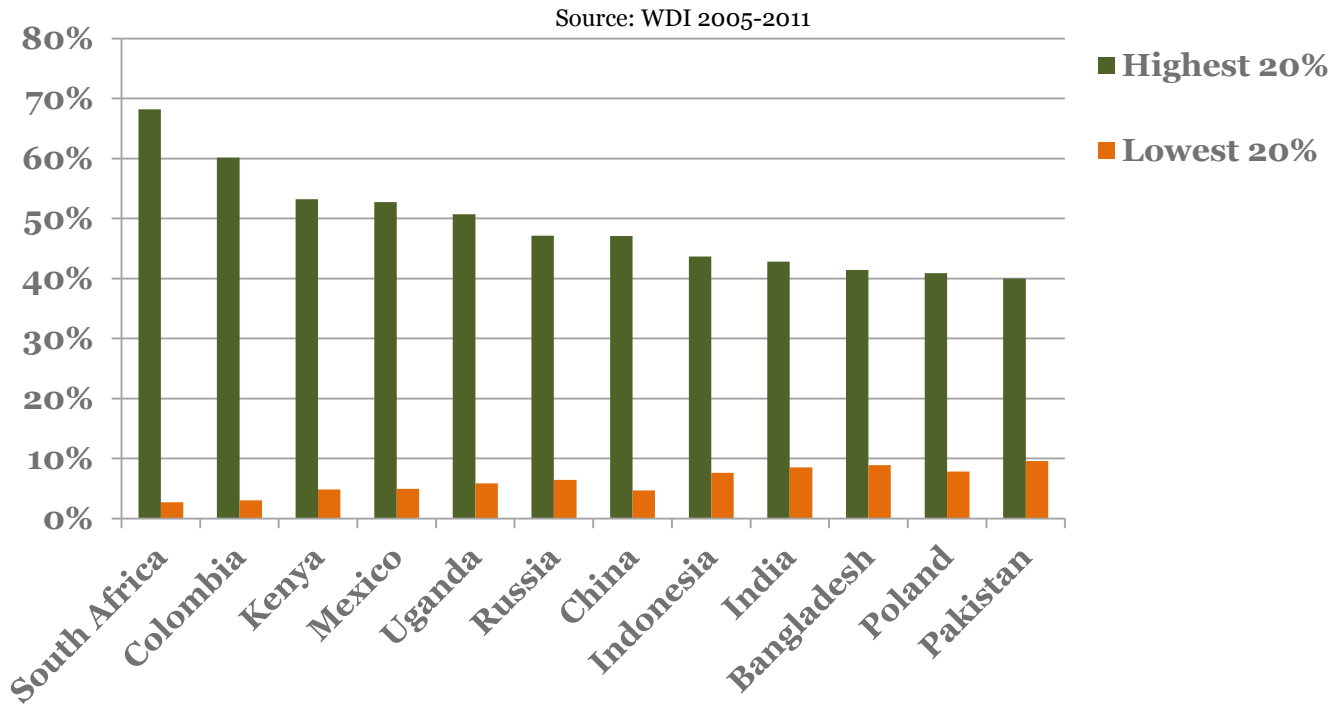
Source: WDI 2005-2011





Context II. Economic inequality

Economic inequality in selected countries:
income share held by highest and lowest 20% of the population

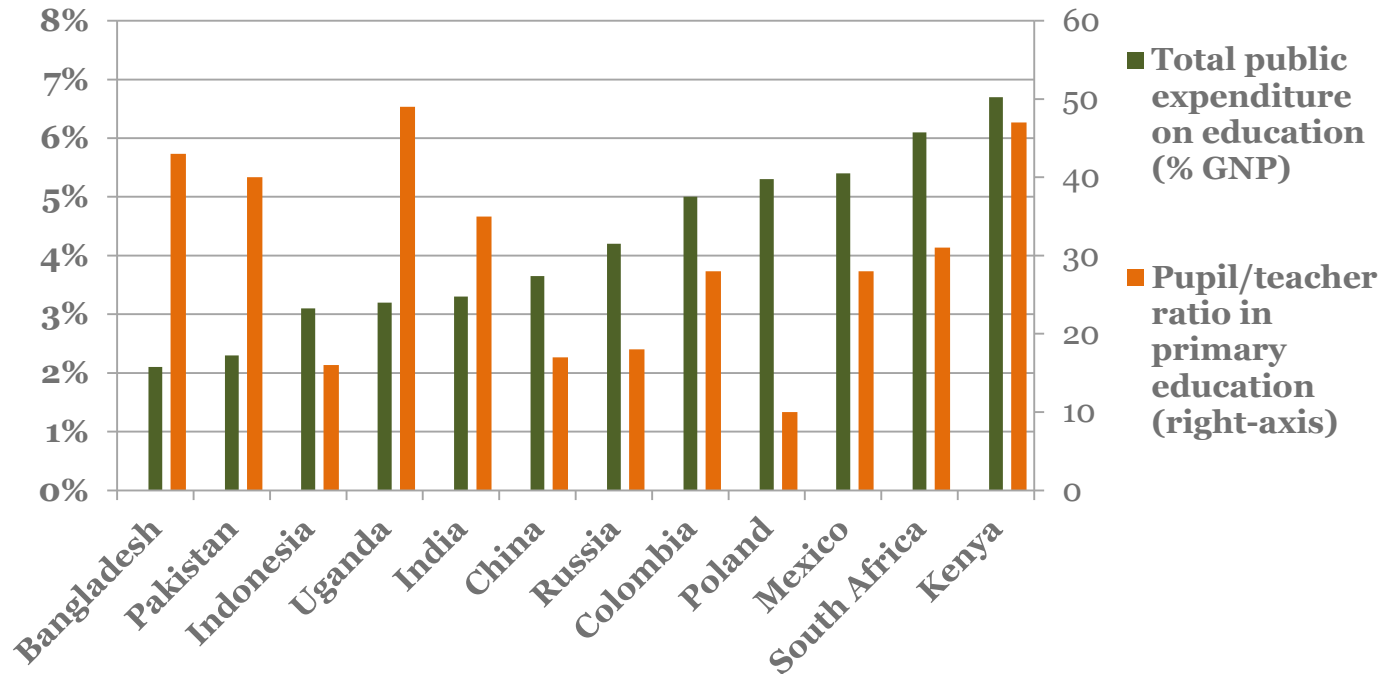




Context III. The role of the public sector

Public spending on education and teacher/student ratio (2010)

Source: EFA Global Monitoring Report (2012)

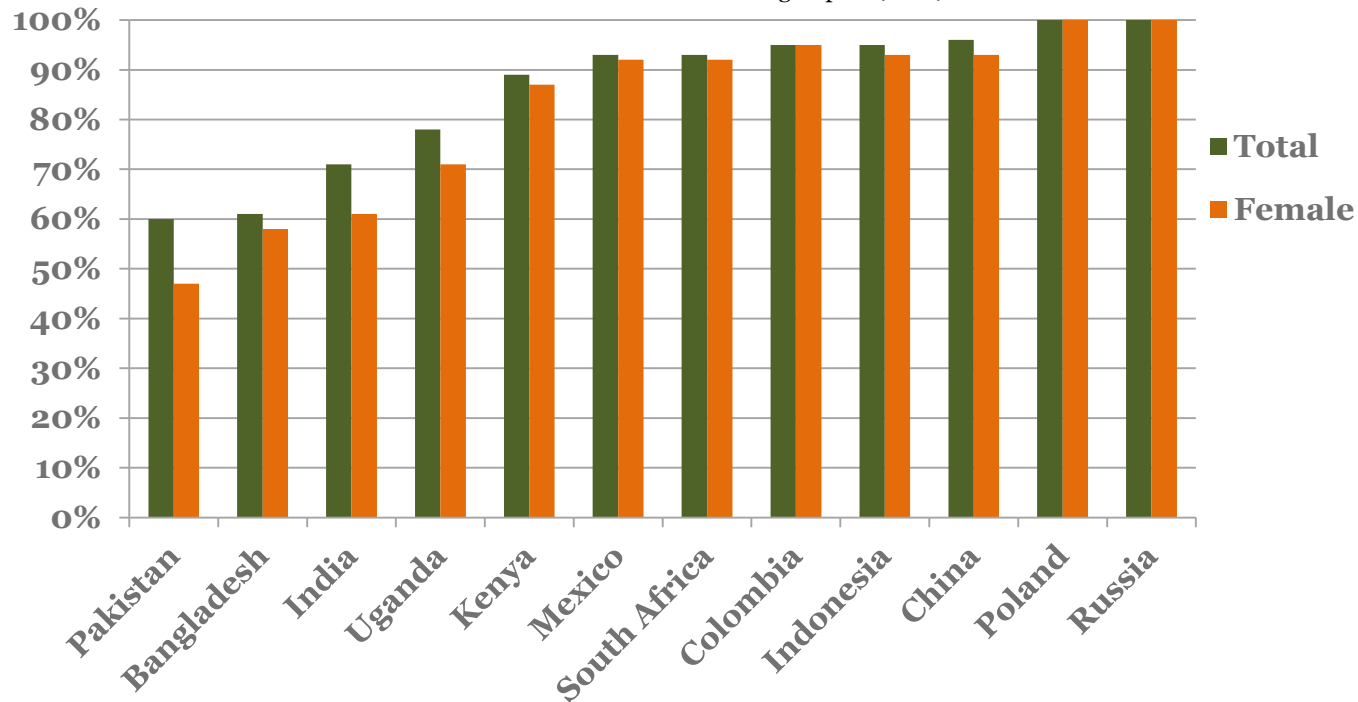




Context IV. Parental education

Projected adult literacy rate for 2015, by gender

Source: EFA Global Monitoring Report (2012)

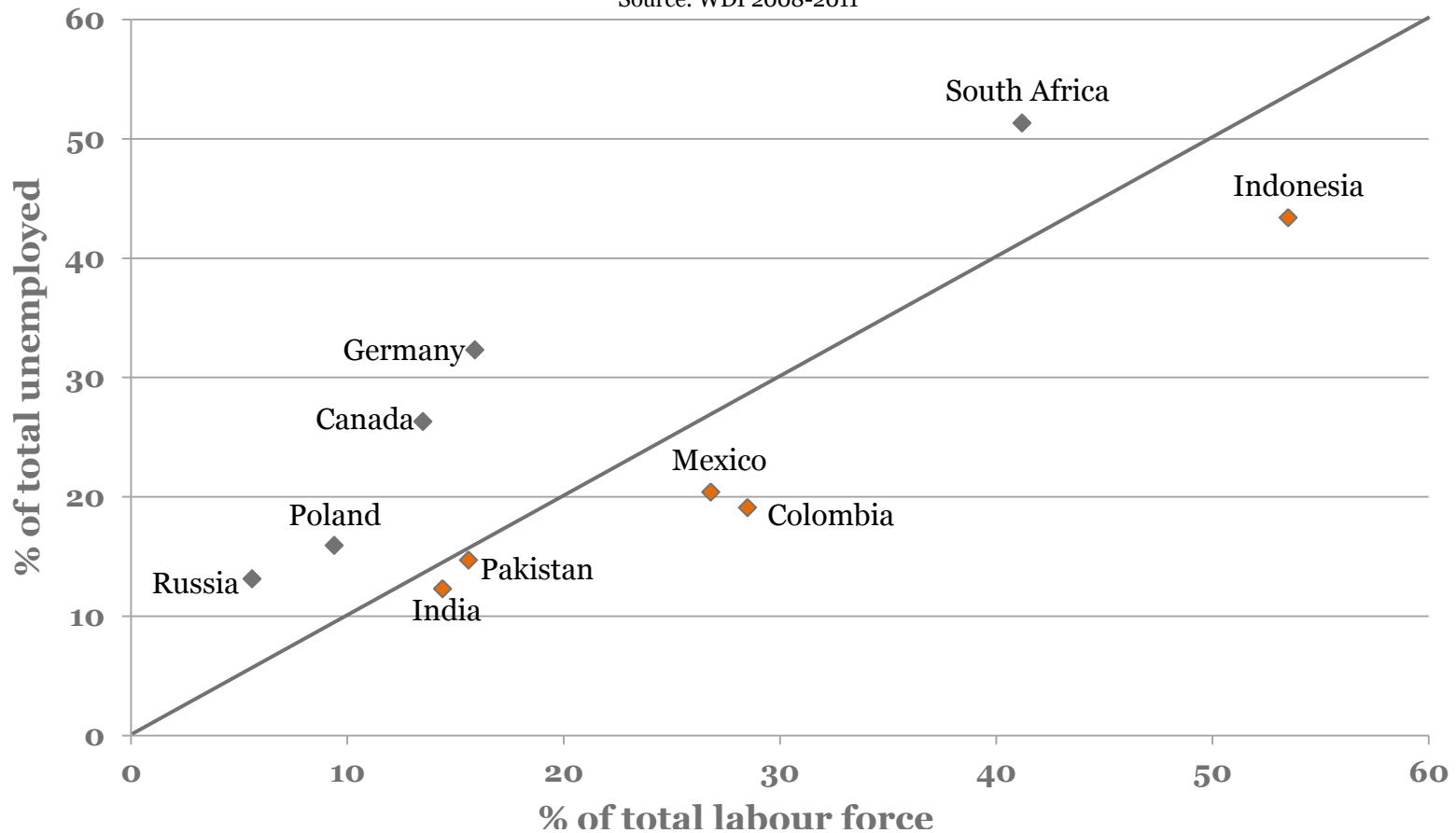




Context V. Returns to education

Share of the labour force and the unemployed population:
primary education

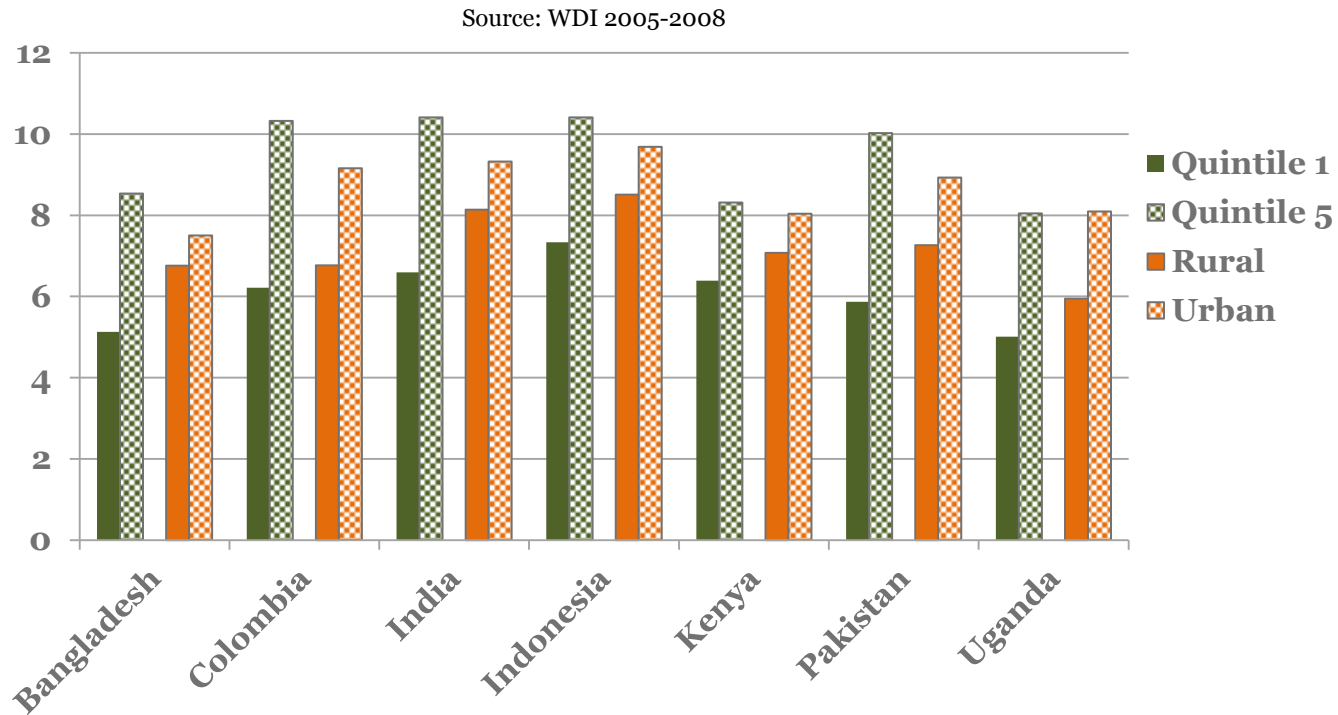
Source: WDI 2008-2011





Context VI. Schooling

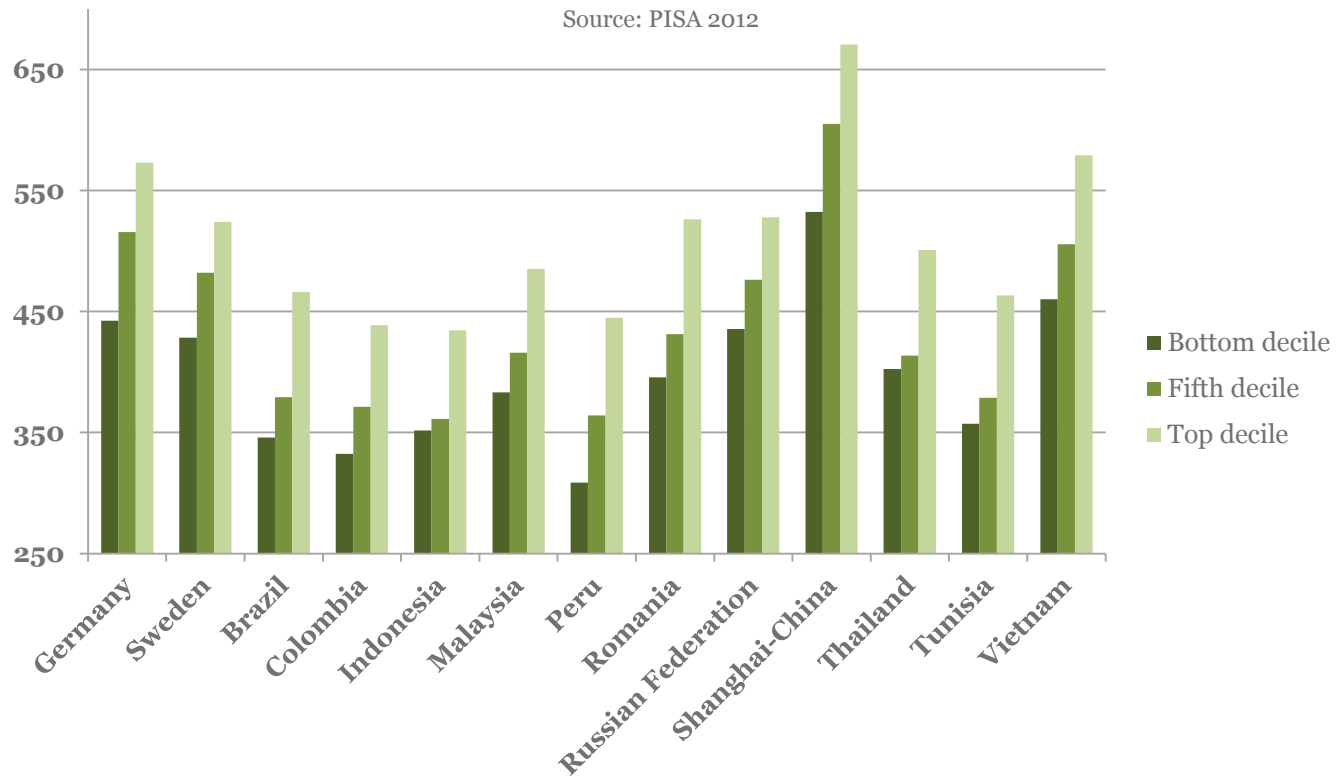
Average years of schooling by quintile and rural/urban context





Context VII. Learning outcomes

Performance on the mathematics scale, by national deciles of the PISA index of social, economic and cultural status





Solutions?



Frugal innovations versus other types of related innovations

Frugal innovations are innovative, efficient, low-cost and high-quality products and business models

Related concepts	Efficiency	Resource scarcity			From developing to developed countries
		Low overall costs	Low cost to participants	Good-enough quality	
Inclusiveness	MAYBE	MAYBE	YES	YES	MAYBE
Disruptive innovation	YES	MAYBE	MAYBE	YES	MAYBE
Reverse innovation	YES	YES	YES	YES	YES
<i>Jugaad/shanzai/bricolage</i>	YES	YES	YES	NO	MAYBE
Frugality	YES	YES	YES	YES	MAYBE



Families of inclusive innovations: low purchasing power

Frugal innovations

- Low-cost products: Aakash tablet (India), Tutudesk (SubSaharan Africa), Pratham books (India)
- Intensive/efficient use of facilities: BaLA (India)
- Extensive use of volunteers: Teach for India/America, Kibera School for Girls
- Work/study programmes: Fundación Paraguaya
- Low-fee private schools

Other inclusive innovations

- Scholarship and voucher systems
- Cross-subsidies
- In-kind (free) services, lunch, uniform, materials, transport: Bolsa Familia (Brazil), Programa Oportunidades (Mexico), Midday Meal Scheme (India)



Families of inclusive innovations: low parental education

Frugal innovations

- Accelerated teaching: Udaan School (India), Operation Rescue (Cambodia)
- Teaching parents: Reading for Children (India)
- Teaching ICTs as a leapfrog strategy: Center for Digital Inclusion (Brazil)

Other inclusive innovations

- Catch-up strategies; long hours, reinforcement classes, out-of-school teaching, remedial and compensatory education: Reading Partners (US), Full-time School programmes (Chile, Uruguay...)
- Mentoring schemes: Ikamva Youth (South Africa)



Families of inclusive innovations: low quality of school management and teaching

Frugal innovations

- Using ICTs for distance learning: Khan Academy (US), Nokia Life, BBC Janala
- Using ICTs for deskilling: NEH Free Learning Centers (Myanmar)

Other inclusive innovations

- Turnaround schools: Matchbox Learning (US), Unlocking Potential (US)
- Customised training for staff in underserved schools: Match Education (US)



Families of inclusive innovations: uncertain returns to education and skills mismatch

Other inclusive innovations

- Adapting the curriculum to the local labour market needs
 - Rural development: Gramodaya (India)
 - Informal economy



Families of inclusive innovations: lack of awareness and other cultural barriers

Other inclusive innovations

- Visual and kinaesthetic teaching: Life-Lab (India), BaLA (India)
- Awareness campaigns
- Eliminating life and career options: Uncommon Schools (US)
- Watered down curriculum: Scholing Voor Arbeid (Netherlands)
- Flexible timetables: Charity School for the Children of Migrant Workers (China), Evening schools (early 20th century US)



Families of inclusive innovations: school segregation and peer effects

Other inclusive innovations

- Desegregation policies: Desegregation busing (US)
- Vouchers, scholarships and cross-subsidies to promote mixed-income schooling



Challenges and questions for debate I

1. What is the role of education in the poverty trap?
2. Scaling up and diffusion
 - Desirable?
 - Adaptation to the local circumstances
 - The meso-macro link
 - Feasible financially?
 - Feasible in terms of organisational capacity? Leader dependence and motivational constraints
 - Designed for the average implementer
3. Sustainability and the importance of frugality
4. How to assess an innovation in education? The existence of multiple goals, the long-term impact and the “new versus different” distinction
5. The role of the state and the PPPs



Challenges and questions for debate II

6. How to measure inclusiveness? Criteria in the literature
7. The reaction of stakeholders : cautious parents, inactive public sector, asymmetric information, etc. (Lubienski)
8. Innovations in education in developing and advanced economies: differences in its rationale, goals and impact
9. What is specific to education?
 - The role of technology in education is “peripheral”
 - Most knowledge is transmitted P2P > Baumol’s cost disease
 - Deskillling is possible/desirable in education?
 - Multiple goals
 - Role of the government is pervasive
 - Baumol’s distinction between productive, destructive and unproductive entrepreneurship is irrelevant



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THANK YOU

www.oecd.org/edu/innovation

