Lessons from Finance and Governance
Reforms –
from other countries that have faced rapidly declining student populations

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Questions which this presentation seeks to answer

1. What are the common challenges faced by countries with rapidly declining student numbers?
2. What underlying problems are these countries facing that make it difficult to respond to this decline?
3. Country examples: What have other countries done to address these challenges?
4. What are some key lessons from these experiences?
Across the region, student numbers have declined rapidly (as a result of falling fertility rates)

Population age 5-19 in select European countries
index =100 in peak population year (since 1975)

Source: United Nations, Department of Economic and Social Affairs, Population Division (2019). World Population Prospects 2019, Online Edition. Rev. 1. For each country, year 0 is the year (since 1975) where the number of individuals age 5-19 peaked. E.g. for Bulgaria that year is 1985.
In most cases, education systems have struggled to downward adjust the number of classes, teachers and schools in response to that decline.
Classes becoming smaller and smaller and schools stand half-empty. This is costly...
... and, in many countries, we see inequality remaining large – and even increasing

Source: OECD PISA 2015
Moreover, we observe massive variations within countries.

The lowest rural value in Harguita is equivalent to Tonga, while the highest urban value in Braila is equivalent to France.

Problem 1: Difficult politics involved in addressing problem

Promise
- Improving learning environment but in fewer classes and schools
- More attractive teaching profession but reduced size of the workforce
- More flexibility and autonomy to school directors and local authorities

Concerns
- Loss of nearby school
- Loss of jobs
- Weak capacity at local level? Corruption?

Why do I need to travel longer?
What’s wrong with my current school?
What will happen to my job? How will you make it more attractive?
Problem 2: The way schools are financed does not provide incentives to think about costs.

KEY QUESTION: WHERE DO THE SAVINGS GO WHEN A CLASS IS REDUCED (and a teacher is re-assigned)?
## Summary of problems with input-based financing system

<table>
<thead>
<tr>
<th>Input-based or incremental financing system</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Equitable ?</td>
<td>It depends...</td>
</tr>
<tr>
<td>Transparent ?</td>
<td>It depends...</td>
</tr>
<tr>
<td>Incentives for efficiency?</td>
<td>None</td>
</tr>
<tr>
<td>Incentives to focus on learning?</td>
<td>None</td>
</tr>
<tr>
<td>Incentives to focus on enrolling and retaining students?</td>
<td>None</td>
</tr>
<tr>
<td>Empower local actors to take decisions?</td>
<td>None</td>
</tr>
<tr>
<td>Protect teacher’s jobs and schools</td>
<td>★★★★</td>
</tr>
</tbody>
</table>
A financing system that ties money to students enrolled provides better incentives.

One block of money based primarily (but not exclusively) on how many students are located in municipality.

MUNICIPALITY GETS TO KEEP SAVINGS!
Problem 3: A management system that focuses on compliance with norms, not results.
Problem 4: managing the system with the lights off

Relative to Latin America, countries in this region have had a slow start in setting up national assessment centers: e.g. how are students’ numeracy and reading skills at the end of grade 4? Analytical reasoning and problem-solving skills at the end of grade 8?

Data on adult education focus on participation, not the equality of education provided.

Data on tertiary education focus on participation, or research quality, not the skills acquired by students.

Very few countries track graduates’ employment outcomes.
Difficult problems and, yet, some countries have managed to undertake reforms (eg Bulgaria)
Most countries facing declining student numbers have changed *the way* they finance education.

- Per student financing widely introduced
- Piloting of per student financing
- Per student financing under discussion
- Not started/very early stages in discussions

**Very few countries still stuck with input-based financing**

- Austria
- Belgium
- Bulgaria (2008)
- Czech Republic (1992)
- Denmark
- Estonia (2001)
- Finland
- Hungary (1990)
- Latvia (2016)
- Lithuania (2001)
- Poland (2000)
- Romania (2010)
- Slovak Republic (2004)
- Slovenia (2015)
- Sweden
- United Kingdom

**Croatia (2018)**

Source: Authors’ update of “World Bank (2011) Skills, Not Just Diplomas” and OECD 2017: The Funding of School Education, Table 3.A1.1
Bulgaria’s reforms in 2007-2008 are a nice example of reforming key building blocks of the “finance and governance system.”

Moving from “rowing the boat” to “steering the boat”
Tie financing to students, not inputs

- Money follows the student
- Principals receive the bulk of their resources in a block grant calculated as: number of students enrolled \( \times \) per student amount.
- The “per student amount” varies across the country (and types of schools)
Per student amount varies, depending on “structural” features to increase the cost of providing education.

### Table: Per student amounts

<table>
<thead>
<tr>
<th>Type</th>
<th>BGB</th>
<th>USD</th>
<th>Number of municipalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large urban areas</td>
<td>796</td>
<td>510</td>
<td>15</td>
</tr>
<tr>
<td>Group 2</td>
<td>849</td>
<td>544</td>
<td>40</td>
</tr>
<tr>
<td>Group 3</td>
<td>894</td>
<td>573</td>
<td>139</td>
</tr>
<tr>
<td>Small mountainous municipalities</td>
<td>958</td>
<td>614</td>
<td>70</td>
</tr>
</tbody>
</table>

**Figure 1: Groupings of municipalities, along with baseline amounts and adjustment coefficients for 2007**

- **Large municipalities**: population ≥ 70,000 in the municipal center
  - Number of municipalities: 15
  - Baseline amount: BGN 796
  - Adjusted amount: BGN 849

- **Other municipalities**: population < 70,000 in the municipal center and population density < 65 persons per square meter
  - Number of municipalities: 139
  - Baseline amount: BGN 894
  - Adjusted amount: BGN 958

- **Underpopulated municipalities**: population < 70,000 in the municipal center and a population density ≥ 65 persons per square meter
  - Number of municipalities: 40
  - Baseline amount: BGN 849
  - Adjusted amount: BGN 958

Source: World Bank staff
More school level autonomy

- Schools are given the ability to raise and retain earnings
- Prepare and executive the entire budget for non-capital spending (a “unified standard”)
- Determine teachers’ salary (within overall pay scale)
- Determine teachers’ workload (subject to labor laws)
- Determine class size (with min/max norms)
- Schools given freedom to hire and fire staff
Can they really determine class sizes, teacher workload etc?

Ministry has increased the max to give principals more room to operate, e.g. increase in class sizes in 2009

- From 22 to 24 in primary
- From 26 to 29 in secondary

(and schools are allowed to have classes above these threshold but this requires a permission from Ministry)
Accountability for results?

- Introducing a national assessment system
  - 4th graders tested for the first time in 2007, and 4th, 5th and 6th graders in 2008.
  - School-leaving examination (Matura) re-introduced in May 2008
- Participating in PISA, TIMSS, TALIS

... but who is using those results to inform decision-making?
... and hold actors in the system to account for poor performance?
... is there capacity to analyze results and draw conclusions?
Accountability for results

How is information on students’ learning driving school improvement?

NL: Assessment used to do “Early warning analysis” (and direct support and focus)

UK: Office for Standards in Education, Children’s Services and Skills. School league tables
Reflections on Bulgaria’s reforms

• Efficiency of spending improved
  – Quality of education?

• “Lights on” with new tests
  – But tests underutilized to drive improvements in learning

• Big bang reforms
  – Little time to adjust
Reminder: Don’t waste time talking about the wrong things

• “Our roads are very bad”
• “We must provide education to all our children”
• “You cannot close down a school if there are no nearby schools for a child to go to”
• “Our country is very mountainous and this means we need a lot of small schools”
• “We have a lot of islands which is why we need so many small schools”
The isolated schools are usually only a small fraction of all schools.

Duration to closest school (school level)

- 20+ min drive (isolated): 2%
- 0-20 min drive: 90%
- 31-60 min walk: 8%
- 11-30 min walk: 36%
- 10 min walk: 22%
- Isolated 6+ km from nearby school: 19%

Detailed school mapping analysis of Croatia’s schools and Ukraine’s schools
Key lessons to undertake reforms in this area

1. Focus reforms on delivering a better more inclusive education, not on the savings it will generate.
   - What will be the “driver” of those quality improvements?

2. If reforming the way schools are financed, reforms will be needed on autonomy and accountability as well
Key lessons to undertake reforms in this area (continued)

3. These reforms require government-level decisions and support, not just the Ministry of Education.

4. Detailed school mapping can provide invaluable information on what is possible in terms of school network optimization.

5. Lots of global experiences from which to learn.
Want more information on finance and governance reforms?

- Harry Anthony Patrinos
  hpatrinos@worldbank.org

- Lars Sondergaard,
  lsondergaard@worldbank.org

- Marcus Bernhard Heinz
  mheinz@worldbank.org
Annex slides
Bulgaria: Workload and teacher pay

- New ordinance on salaries at schools sets out **only** the general salary structure rules and minimum salaries by position; principals determine the rest
- Mechanisms applied to determine individual teacher salaries are negotiated in collective labor contracts and/or in internal salary rules
- School principals determine individual salaries
- Mechanisms have been set up to pay for additional teaching loads above the maximum workload norms
Persuade, promote and monitor quality and access

• Upgrade education management information system to:
  – Monitor class and school size
  – Develop a “registrar”: be able to track individual students

• Use national and international assessments of student learning outcomes to track quality of students moved as a result of optimization

• Put in place “communication strategy” that focuses on why the reforms are needed; and how the quality of education will be improved.
Using the power of the purse

- Provide incentives to local authorities: e.g. offer expansion of school hours; after school programs; refurbish central/hub schools; offer to convert schools into kindergartens etc
- Introduce per student financing to provide incentives to consolidate
- Squeeze budgets: force districts to consolidate
  - Wage ceilings
  - Head count ceilings
- Make education allocation “ear-marked”
- Create “performance-oriented” programs where distribution of funds are conditional on making progress on consolidation
Identify and remove district’s constraints to optimize

- Transportation: provide solutions (e.g. procure busses, provide funds for renting busses, road repairs)
- Refurbishing costs for receiving schools
- After school program for kids having to wait for busses
- Costs of eliminating staff positions (e.g. severance payments, unused vacation time, etc)
Improve legal and regulatory environment

- Change class size norms (Out of education laws -> Ministerial order; No or high maximums; higher minimums)
- Provide legal framework for per student financing
- Eliminate norms on non-didactical staff
- Introduce notion of hub school, and “satellite school” (i.e., a small school which is “subordinate” to a bigger school)
- Make schools subordinate to districts, not villages
- Introduce term contracts for teachers; specify what happens at retirement age
## Experience with funding formulas in Europe (covered in recent OECD review)

<table>
<thead>
<tr>
<th>Formula financing for Primary and/or secondary education</th>
<th>Input-based/historical, incremental budgeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>Portugal</td>
</tr>
<tr>
<td>Belgium</td>
<td><em>Greece?</em></td>
</tr>
<tr>
<td>Czech Republic</td>
<td></td>
</tr>
<tr>
<td>Denmark</td>
<td></td>
</tr>
<tr>
<td>Estonia</td>
<td>Many others, incl.</td>
</tr>
<tr>
<td>Lithuania</td>
<td>Finland, UK, Australia</td>
</tr>
<tr>
<td>Slovak Republic</td>
<td></td>
</tr>
<tr>
<td>Slovenia</td>
<td></td>
</tr>
<tr>
<td>Sweden</td>
<td>New Zealand</td>
</tr>
</tbody>
</table>

Source: OECD 2017: The Funding of School Education, Table 3.A1.1
School Resources Review - Reports for Participating Countries

See which countries are taking part in the School Resources Review in the table below. There are two modes of participation for countries: Country Full Review or Participating Country Review.

Full Country Review

- **Austria**
  - Country Review [English](link)
  - Country Review Summary [English, German](link)
  - Country Background Report [English](link)

- **Chile**
  - Review Visit Dates: 22-29 September 2015
  - Country Review [English, Spanish](link)
  - Country Review Summary [English, Spanish](link)
  - Country Background Report [English, Spanish](link)

- **Czech Republic**
  - Review Visit Dates: 20-27 October 2014
  - Country Review [English](link)
  - Country Review Summary [English](link)
  - Country Background Report [English](link)

- **Estonia**
  - Review Visit Dates: 20-27 October 2014
  - Country Review [English](link)
  - Country Review Summary [English](link)
  - Country Background Report [English](link)

Participating Countries

- **Belgium** (Flemish Community)
  - Review Visit Dates: 3-10 November 2014
  - Country Review [English](link)
  - Country Review Summary [English](link)
  - Country Background Report [English](link)

- **Colombia**
  - Review Visit Dates: 5-13 December 2017
  - Country Review [English](link)
  - Country Review Summary [English, Spanish](link)
  - Presentation [English, Spanish](link)

- **Denmark**
  - Review Visit Dates: 21-22 April 2015
  - Country Review [English](link)
  - Country Review Summary [English, Danish](link)
  - Country Background Report [English](link)

- **Kazakhstan**
  - Review Visit Dates: 31 March - 8 April 2014
  - Country Review [English, Russian, Kazakh](link)
Lots of differences in how the formulas are designed and what they cover

<table>
<thead>
<tr>
<th>Allocation mechanism</th>
<th>Purpose</th>
<th>Funding allocation</th>
<th>Level of education (ISCED)</th>
<th>Basic unit</th>
<th>School characteristics</th>
<th>Curriculum</th>
<th>Student characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Austria</td>
<td>DG</td>
<td>Teacher salaries</td>
<td>CA</td>
<td>St</td>
<td>2 3</td>
<td>S/C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>Teaching students with SEN</td>
<td>CA</td>
<td>Sc</td>
<td>1 2 3</td>
<td>T/S</td>
<td></td>
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<tr>
<td>Belgium (Fr. and Fr.)</td>
<td>BG</td>
<td>Operational budget (inc. maintenance staff)</td>
<td>SA</td>
<td>SP</td>
<td>1 2 3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>RBG</td>
<td>Disadvantaged students; immigrants; refugees</td>
<td>SA</td>
<td>SP</td>
<td>1 2 3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>DG</td>
<td>Staff salaries (teachers, management, admin)</td>
<td>SA</td>
<td>St</td>
<td>1 2 3</td>
<td>T/S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Chile</td>
<td>BG</td>
<td>General and pro-retention subsidies</td>
<td>CA</td>
<td>SP</td>
<td>1 2 3</td>
<td>At/S</td>
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</tr>
<tr>
<td></td>
<td>EG</td>
<td>Complement for teacher salaries</td>
<td>CA</td>
<td>SP</td>
<td>1 2 3</td>
<td>T</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>Students with SEN; disadvantaged students</td>
<td>CA</td>
<td>SP</td>
<td>1 2 3</td>
<td>T</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<tr>
<td></td>
<td>EG</td>
<td>Staff salary incentives in top performing schools</td>
<td>CA</td>
<td>SP</td>
<td>1 2 3</td>
<td>At/S</td>
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</tr>
<tr>
<td>Czech Republic</td>
<td>EG</td>
<td>Direct costs of school education</td>
<td>CA</td>
<td>RA</td>
<td>1 2 3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<tr>
<td></td>
<td>RBG</td>
<td>Direct costs (inc. salaries)</td>
<td>RA</td>
<td>Sc</td>
<td>1 2 3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<tr>
<td>Denmark</td>
<td>BG</td>
<td>For current expenditure</td>
<td>CA</td>
<td>Sc</td>
<td>3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<tr>
<td>Estonia</td>
<td>EG</td>
<td>General education (inc. salaries)</td>
<td>CA</td>
<td>SP</td>
<td>1 2 3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>Policy priorities (specialised provision)</td>
<td>CA</td>
<td>SP</td>
<td>1 2 3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>RBG</td>
<td>Schools owned by CA</td>
<td>CA</td>
<td>Sc</td>
<td>1 2 3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>State commissioned VET study place</td>
<td>CA</td>
<td>LA</td>
<td>2 3</td>
<td>Study place</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>Study allowances (VET) to 3 municipalities</td>
<td>CA</td>
<td>LA</td>
<td>2 3</td>
<td>Study place</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Iceland</td>
<td>BG</td>
<td>Any type of expenditure</td>
<td>CA</td>
<td>Sc</td>
<td>3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>BG/EG</td>
<td>Equalise differences in LA income/expenditure needs</td>
<td>CA</td>
<td>LA</td>
<td>1 2</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td>Israel</td>
<td>EG</td>
<td>Non-teacher salaries and operational costs</td>
<td>CA</td>
<td>LA</td>
<td>1 2 3</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
<td></td>
<td>EG</td>
<td>Teacher salaries</td>
<td>CA</td>
<td>LA</td>
<td>3</td>
<td>S</td>
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<tr>
<td></td>
<td>DG</td>
<td>Teacher salaries</td>
<td>CA</td>
<td>St</td>
<td>1 2</td>
<td>S</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
</tbody>
</table>