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# **Evaluating Impact: Turning Promises into Evidence**

## **Introducing Per Capita Financing in Education in Serbia**

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# 1. Background

## Key problems

### 1) Educational system is inefficient

- **Disproportionately large number of schools, classes and teachers** when compared to the number of total students in the system (and the currently decreasing demographic trends) due to a series of regulations that do not provide incentives for consolidation;

### 2) Educational system is inequitable

- **Inadequate funds for specific requirements** (e.g. cost of living across the country, cost of educating minorities, cost of educating students with special needs)
- **Largest drop-out rates seen in the transition from 4<sup>th</sup> to 5<sup>th</sup> grade due to the current configuration of rural schools, especially for females** (1<sup>st</sup> to 4<sup>th</sup> grade only)

### 3) Educational system is low quality

- **Learning outcomes of students in Serbia are well below what would be expected according to the GDP per capita of the country** (e.g. PISA 2003 and 2006 scores; TIMSS 2003 and 2007)

## Main policy intervention considered

- The reform of the current way the system is financed is expected to significantly improve the first two issues and potentially contribute to improve the third one.
- A possible intervention whose impact has not yet been evaluated is the **introduction of a capitation financing scheme for the sector.**

# 2. Results Chain



## Inputs

- Maintain current level of funds for the education sector as a whole
- New regulation on the financing of the Educational System
- Improved EMIS (Education Management Information System)
- Baseline analysis

## Activities

- Information campaign
- Capacity building and expert support
- Coordination btw legitimate representatives of ultimate users (LSG)
- Social outreach of the vulnerable population to prevents drop-outs as a result of transition to the new system
- Transportation system for busing students

## Outputs

- New financing system in place by the specified dates with the specified format
- Tracking system (for tracking whether money arrives to school)
- Thorough analysis of the impact of the new system

## Outcomes

- Increased efficiency indicators (in terms of installed capacity of the system)
- Reduction of drop-out rates from 4<sup>th</sup> to 5<sup>th</sup> grade of primary school
- Increased equity of the system (disabled, minorities, urban/rural)
- Increased access to schools, especially of minorities
- Better-informed decision making at the LSG level and more responsive system to local needs

## Long-Term Outcomes

- Increased quality for the education system as a whole, and for less developed areas, in particular

# 3. Primary Research Questions

- Will a Per Capita Financing (PCF) scheme lead to:
  - ❖ 1) more efficient allocation of funds?
  - ❖ 2) a decrease in drop-out rates?
  - ❖ 3) an increase in attendance?
  - ❖ 4) an improvement in the quality of education?
  - ❖ 5) an improvement in the equity of the system?
  - ❖ 6) an improvement in the satisfaction of parents about schools?

# 4. Outcome Indicators

- ❑ 1) Increase in **Student-Teacher Ratio and Class Size**;
- ❑ 2) Decrease in **drop-out rates**, especially for the transition from 4<sup>th</sup> to 5<sup>th</sup> grade;
- ❑ 3) Increase in **enrollment rates, completion rates, and transition rates from primary to secondary level**, and reduction in **repetition rates**, especially for Roma, girls and rural populations;
- ❑ 4) Increase in **test scores** in annual National Assessments of Student Learning for 3<sup>rd</sup> and 4<sup>th</sup> grade, and increase in test scores in International Assessments like PISA 2009 and TIMSS 2011;
- ❑ 5) Improvement in **test scores, especially of Roma, and girls in rural areas**;
- ❑ 6) Improvement in **parental satisfaction** from schools compared to the situation before the intervention

# 5. Identification Strategy/Method

## □ Identification strategy

- The 167 municipalities of the country will be subject to the PCF scheme by 2015, but the system will start being rolled out in 2011.
- Prior to that, in the year 2010, about 20 municipalities will be used as pilots for trying the system (in logistical ways) → *Constraint of the system*

## □ Method: Random Sampling and Phased-in Approach to the Roll-Out

- All the municipalities in the country, with exception of the initial 20 for which the intervention was tested, will be subject to a **random sampling selection** out of which approximately 4 groups of equal size will be selected.

Group number 1: Will receive the intervention in year 1 (2011)

Group number 2: Will receive the intervention in year 2 (2012)

Group number 3: Will receive the intervention in year 3 (2013)

Group number 4: Will receive the intervention in year 4 (2014)

- This way, it will be able to **evaluate the impact of the intervention after 1, 2, and 3 years.**

## 6. Sample and data

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- All the 167 municipalities in Serbia will participate of the roll-out starting in 2011.
- Data will be collected at the school level, including student- and parent-level data.

# 7. Time Frame/Work Plan

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- **Time frame** is set by the Education Law, issued last August 31, 2009.
  
- **Workplan:**
  - 1) First stage: Development of models and formulas and adjusting the model in approximately 20 municipalities, starting in school year 2009/10.
  - 2) Second stage: Roll-out of the system in impact evaluation mode in 2011/12. System fully blown in 2014/15.

# 8. Sources of Financing

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- **First stage**: Financing from the World Bank (DILS Project)
- **Second stage**: Financing from national sources, but other international financial sources will chip in (e.g. Spain, Netherlands, etc.)