1256 483 664

Reforming Education Finance in Transition Countries

Six Case Studies in Per Capita Financing Systems

Juan Diego Alonso and Alonso Sánchez, editors

C 265519



THE WORLD BANK Washington, D.C.

Contents

For	reword	xi
Contributors		
Acı	ronyms and Abbreviations	xv
Exe	ecutive Summary	xvii
1.	Reforming Education Financing Systems in Transition Countries: An Introduction to Six Case Studies	1
	1.1. Introduction	1
	1.2. From Input-Based Financing to Per Capita Financing	2
	1.3. About This Book	7
2.	Per Capita Financing of General Education in Armenia	10
	2.1. Introduction	10
	2.2. Background	11
	2.3. The Design of the Funding Formula	13
	2.4. The Implementation of the Funding Formula	15
	2.5. Assessment of Outcomes	
	2.6. Conclusions	
3.	Per Capita Financing of Education in Estonia	
	3.1. Introduction	
	3.2. Background	
	3.3. The Design of the Funding Formula	
	3.4. The Implementation of the Funding Formula	53
	3.5. Assessment of Outcomes	60
	3.6. Conclusions	
	Annex A. Additional Statistics	
	Annex B. List of People Interviewed for the Country Case Study	98
4.	School Vouchers in Georgia: Implementation of a Simple Idea in a Complex Environment	101
	4.1. Introduction	
	4.2. Background	
	4.3. The Design of the Funding Formula	
	4.4. The Implementation of the Funding Formula	
	4.5. Assessment of Outcomes	
	4.6. Conclusions	

5.	Student Basket Reform in Lithuania: Fine-Tuning Central and Local Financing of Education	133
	5.1. Introduction	133
	5.2. Background	135
	5.3. The Design of the Funding Formula	141
	5.4. The Implementation of the Funding Formula	151
	5.5. Assessment of Outcomes	170
	5.6. Conclusions	177
	Annex A. Methodology of Student Basket	182
	Annex B. Complete Table of Allocation Coefficients for Student Basket in 2007.	189
	Annex C. List of People Interviewed for the Country Case Study	
6.	Per Capita Financing of General Education in Poland: A Case Study	198
	6.1. Introduction	198
	6.2. Background	199
	6.3. The Design of the Funding Formula	204
	6.4. The Implementation of the Funding Formula	212
	6.5. Assessment of Outcomes	222
	6.6. Conclusions	238
	Annex A. Additional Statistics on School Funding	242
	Annex B. List of People Interviewed for the Country Case Study	249
7.	Per Capita Financing of General Education in Russia: An Assessment of the Financing Reform in the Chuvash <i>Republic</i> and the Tver <i>Oblast</i>	252
	7.1. Introduction	252
	7.2. Background	253
	7.3. The Design of the Funding Formula	255
	7.4. The Implementation of the Funding Formula	
	7.5. Assessment of Outcomes	264
	7.6. Conclusions	272
	Annex A. Factors Influencing the Implementation of PCF in 72 Regions	275
	Annex B. List of People Interviewed for the Country Case Study	277
8.	Per Capita Financing of General Education in Europe and Central Asia: Has It Delivered on Its Promise? An Overview of Six Country Case Studies	280
	8.1. Introduction	280
	8.2. Different Objectives of Per Capita Finance Reform in ECA—But in the Context of Decentralization	280
	8.3. Great Variation in Design, Structure, Coverage and Reach of Funding Formulae	284
	8.4. Assessing the Reform: What is the Evidence?	289
	8.5. Main Lessons Learned	
	Annex A. Per Capita Financing Formulae: A Comparative Analysis	302

Boxes

Box 1.1. What is Decentralization?	5
Box 3.1. The Funding of Private Schools in Estonia	42
Box 3.2. Per Student Funding: Efficiency Effects on Private Schools in Estonia	67
Box 3.3. A Look at the Effects of the Financing Reform on Quality: Equality of Outcomes in Estonia	79
Box 5.1 Teacher Qualifications and Salaries in Lithuania	169
Box 6.1. Non-Public Schools in Poland: Federation of Educational Initiatives	229
Box 8.1. To Pilot or not to Pilot? Issues in Introducing the Per Student Finance Reform	290

Figures

Figure 1.1. Decline in the Proportion of School-Age Population in Selected ECA Countries: 1990-2004	2
Figure 2.1. Per Student Expenditures by School: Historical Input-based (1999) vs. Formula-based (2000) Allocations	14
Figure 2.2. Formula-Based Per Student Unit Cost by School Size, 1999-2007	17
Figure 2.3 Kotayk Region: Budgets vs. Actual Expenditures by School, 2006 (consolidated picture)	23
Figure 2.4 Kotayk Region: Budgets vs. Actual Expenditures by School, 2006 (breakdown of key portions of picture)	24
Figure 3.1. Number of Schools and Student Enrolments: 1980 to 2005	35
Figure 3.2. Education Grant as a Proportion of Total Municipal Education Expenditure, 2005	53
Figure 3.3. Education Expenditure as a Proportion of Municipal Total Expenditure, 2005	54
Figure 3.4. Municipalities: Sources of Revenue, 2005	54
Figure 3.5. Municipal Tax Revenues Before and After Equalization Grant, 2008	55
Figure 3.6. Percentage Change in Students Enrolled in Grades 1 to 12, 2006 Compared with 1992	61
Figure 3.7. New Formula (2008): How Per Student Allocation Varies with Number of Students per Grade	71
Figure 3.8. Average Salaries Compared: Teacher vs. Other Workers, 2006	72
Figure 3.9. Distribution of Municipal Tax Revenues Per Student, 2005	
Figure 5.1 Student Basket Allocation to Initial Schools as a Function of Student Numbers	163
Figure 5.2. Per Class Allocation for Grades 1 to 4 by Class Size	166
Figure 5.3. Average Per Class Allocation by Class Size	166
Figure 5.4 Average Class Sizes and Actual Student Basket Allocation Per Student	167
Figure 5.5. Average Class Sizes and Actual Per Class Student Basket Allocation	168
Figure 6.1. Number of Schools by Type	224
Figure 6.2. Primary Schools in Poland by Size	225
Figure 6.3. Student-Teacher Ratio (Full-Time Teachers) and Average Class Size	226

Figure 6.4. Distribution of Current Expenditure Per Student in Gminas in 2005	.232
Figure 6.5. Subvention for Education as a Proportion of Total Expenditure on Education in 2005	.232
Figure 6.6. Gminas' Per Capita Income	.233
Figure 7.1. Chuvash Republic: Per Student Normatives—Urban vs. Rural Schools, 2001-2007 (at nominal and 2001 prices)	.260
Figure 7.2. Cheboksary Municipality: Per Student Education Budget—Regional Subvention and Municipal Budget (at 2004 prices)	.260
Figure 7.3. Tver Oblast: Diversions from the Per Student Normatives, by Municipality	.262
Figure 7.4. Tver Oblast: School Budget Adjustment Coefficients Applied by Municipalities	.263
Figure 7.5. Cheboksary Municipality: Number of Students and Teachers— 2001/02-2006/07	.265
Figure 7.6. Cheboksary Town: Per Student Wages and Salaries by School-2004-2007 (at 2004 prices)	266
Figure 7.7. Vishny Volocheck Municipality: Per Student Unit Cost Relative to the Normatives by School, 2006-2007	268
Figure 7.8. Zubtsov Municipality: Per Student Indicators by School – 2004-2007 (at 2004 prices)	270

.

1

Tables

Table 2.1. Key Events in Education Financing Reforms in Armenia	.15
Table 2.2. PCF Participating and Non-Participating Schools and Protected Schools	.16
Table 2.3. Number of Protected Schools by Year and by Region	.16
Table 2.4. Per Student Unit Cost and Fixed Cost for the PCF formula, 1999-2007 in Armenian Dram (AMD)	. 17
Table 2.5. Key Statistics of General Education Schools: 2001-2007	. 19
Table 2.6. Key Statistics of General Education Schools: 2001-2007: PCF, Protected and Non-PCF Schools	.21
Table 2.7. Distribution of General Education Schools by Size, 2001 and 2006	.22
Table 2.8 Indicative Average Monthly Salaries (incl. Benefits), in AMD	.26
Table 2.9. Indicative Average Monthly Salaries (incl. Benefits) for School Directors and Deputy Directors, in AMD	.27
Table 2.10. Indicative Average Monthly Salaries (incl. Benefits) for Teachers by Categories, in AMD	.27
Table 3.1. Summary of Key Events in Estonian General Education: 1989 to 2008	.34
Table 3.2 General Education Grant: 2003 to 2007	.39
Table 3.3. Per Student Coefficients in the Funding Formula in 2007	.40
Table 3.4. Number of Students by Category, 2006	.40
Table 3.5. Additional Factors in the Per Student Funding Formula	.41
Table 3.6. Grants for General Education to Municipalities by Type of Grant, 2007	.42
Table 3.8. Minimum Number of Students Needed to Bring in Sufficient Funds to Pay for Teaching Costs	. 46

Table 3.7. Calculation of Per Student Funding Amount	46
Table 3.9. Additional Funding in Stages I to III for Small and Under-sized Full Classes	47
Table 3.10. Additional Funding for Grades 1 to 6 with Fewer than 7 Students	48
Table 3.12. Allocation for School Directors and Deputies	49
Table 3.11. Funding for Additional Lessons and for Enhanced Costs	49
Table 3.13. Allocation of State Education Grant to Sub-categories of Grant, 2008	51
Table 3.14. Case-Study Municipalities: Descriptive Statistics	56
Table 3.15. Tallinn City: Formula for Determining the Part of the Municipal Budget Allocation that Goes to Schools, 2007	58
Table 3.16. Tallinn City: Method of Allocating State Budget for Teaching	59
Table 3.17. Number of Schools, by Type: 1992-2006	
Table 3.18. Distribution of Public Schools by Size Categories: 1992 to 2006 (Percentage of Total)	62
Table 3.19. Average Class Size in Estonian Public Schools: 2000-2004	62
Table 3.20. Student-Teacher Ratio in Estonian Public Schools: 1990-2006	63
Table 3.21. Tallinn City: Distribution of Schools by Size (Percentage of Total), Selected Years	63
Table 3.22. Tallinn City: Classes and Students in the Two Gymnasium Schools, 2007	
Table 3.23. Tallinn City: Distribution of General Education Expenditure by Category, Selected Years	68
Table 3.24. Municipalities' Education Expenditure Per Student and Fiscal Burden on Residents, 2005	75
Table 3.25. Determinants of Education Expenditure Per Student, by Type of Municipality, 2005	76
Table 3.26. Comparison of Per Student Expenditure in 7 Schools in 4 Municipalities, 2007	78
Table 3.27. Estonian National Test: 2006 Results (Average Student Marks)	79
Table 3.28. Constraints and Flexibilities in the Estonian School Funding System	83
Table A1. Calculation of State Grant for Funding a School in a Municipality with Less Than 1600 Students in Each Language Medium, according to the 2008	
formula	
Table A2. Numbers of schools in Estonia, 1981 to 2006	
Table A3.1. Budget of Prangli Basic School (2007)	
Table A3.2. Budget of Viimsi Secondary School (2007)	
Table A3.3. Budget of Juri Gymnasium School (2007)	
Table A3.4. Budget of Mustvee Russian Gymnasium School (2007)	
Table A3.5. Budget of Mustvee Estonian Gymnasium School (2007)	94
Table A3.6. Budgets of Tallinn's Gymnasium Schools: School 21 and Russian Gymnasium (2007)	95
Table 4.1. Timeline of Key Events Related to the Education Finance Reform	
Table 4.2. Number of Schools, by School Size	
Table 4.3. Number of Students, by School Size	
Table 4.4. Change in the Average Size of Schools	107

Table 4.5. Number of Teachers, by School Size	
Table 4.6. Student-Teacher Ratio, by School Size	108
Table 4.7. Average Number of Teaching Hours per Week per Teacher, by School Size	108
Table 4.8. FTE Teachers, by School Size	109
Table 4.9. Students per FTE Teacher, by School Size	
Table 4.10. Administration Staff, by School Size	110
Table 4.11. Administration Staff per School, by School Size	110
Table 4.12. Values of the Vouchers in Successive Years	.112
Table 4.13. Values of the Vouchers in Successive Years as Percentage of City Voucher	.113
Table 4.14. Number of Schools in 2006, 2007, 2008, by Size Category and Voucher	
Туре	. 113
Table 4.15. Number of Students and FTE teachers in 2006/07, by School Size and Voucher Type	.114
Table 4.16. Number of Non-Teaching Staff in 2006/07, by School Size and Voucher Type	.114
Table 4.17. Students per FTE Staff in 2006/07, by Size Category and Voucher Type	, 115
Table 4.18. Minimum Number of Students per FTE Staff, by Voucher Type	.117
Table 4.19. Average Value of Student Voucher, by Size Category (in GEL)	.117
Table 4.20. Minimum Required Expenditures and Their Coverage by Vouchers, by School Size	.118
Table 4.21. Required Funding above Voucher, by School Size	.119
Table 4.22. Average Class Size, by School Size and Voucher's School Location Categories	.121
Table 4.23. Average Per Class Allocation, by School Size and Voucher's School Location Categories	.122
Table 5.1. Timeline of Key Events Related to the Education Finance Reform	.135
Table 5.2. Students by School Type: 2000 to 2005	.136
Table 5.3. Schools by School Type: 2000 to 2005	.136
Table 5.4. Students by Instruction Language, Selected School Years	.137
Table 5.5. Founders by Type of School	. 137
Table 5.6. Students by Transportation Mode	.138
Table 5.7. Expenditures of Teaching Process and Teaching Environment	.142
Table 5.8. Education as Part of Lithuanian Public Finances (million Lt)	.144
Table 5.9. Education as a Proportion of the GDP, Central, and Local Budgets	.144
Table 5.10. Structure of Education Spending in Lithuania	. 145
Table 5.11. Revenues of Panevezis Budget, 2006	.145
Table 5.12. Expenditures of Panevezis Budget, 2006	.145
Table 5.13. Structure of the Student Basket: 2002 to 2007	.146
Table 5.14. Simplified Structure of the Student Basket: 2002 to 2007	.147
Table 5.15. Yearly Rates of Growth of the Student Basket: 2002 to 2007	
Table 5.16. Major Components of the Student Basket: 2002 to 2007	.148

Table 5.17. Size Categories of Schools and Normative Class Size	148
Table 5.18. Initial Allocation Coefficient by Size Category and Grade Level	149
Table 5.19 Corrected Allocation Coefficient, by Size Category and Grade Level	149
Table 5.20. Per Student Allocation to Municipalities 2003 to 2007	154
Table 5.21. Student Basket Grant and Expenditures on Teaching Process (Thousands Lt.)	155
Table 5.22. Municipalities That Contribute Most to the Teaching Process above the Student Basket Grant	155
Table 5.23. Non-Salary Elements of the Teaching Process: 2003 to 2006	156
Table 5.24. Expenditures on Non-Salary Items in Student Basket Expenditures: 2003 to 2006	157
Table 5.25. Incoming and Outgoing Students in Panevezis Municipalities	157
Table 5.26. Reallocation of Student Basket Funds by Municipalities: 2003 to 2006	159
Table 5.27. Average School Sizes by School Type 2000 to 2005	161
Table 5.28. Allocation Thresholds for Initial Schools	163
Table 5.29. Allocation Thresholds for Basic Schools	164
Table 5.30. Allocation Thresholds for Full Secondary Schools	164
Table 5.31. Initial Per Class Allocation by Size Category and Grade Level	165
Table 5.32. Corrected Per Class Allocation by Size Category and Grade Level	165
Table 5.33 Salary Coefficients of Lithuanian Teachers, 2002 and 2007	169
Table 5.34 Distribution of Teachers by Career Level, 2002 and 2007	169
Table 5.35 Student-Teacher Ratios in Lithuanian General Education Schools ⁷¹	171
Table 5.36. Private Schools: 2000 to 2005	177
Table 5.37. Value of Factors Used to Calculate the Basic Student Basket Amount	182
Table 5.38. Teaching Student Basket Coefficient: 2002 to 2007	184
Table 5.39. Non-Teaching Student Basket Coefficient: 2002 to 2007	184
Table 5.40. Complete Student Basket Coefficient: 2002 to 2007	185
Table 5.41. Stipulated Structure of the Student Basket: 2002 to 2007	186
Table 5.42. Stipulated Structure of the Average Student Basket: 2002 to 2007	187
Table 5.43. Official Lithuanian Allocation for Teacher Professional Development: 2002 to 2007	187
Table 5.44. Adjusted Structure of the Average Student Basket: 2002 to 2007	188
Table 5.45. Coefficients for Allocation of Student Basket (From January 1, 2007)	190
Table 6.1. Summary of Key Events in Polish General Education, 1989 to 2005	200
Table 6.2. Total Amount of Subvention for Education, 2000-2007	209
Table 6.3. Kwidzyn Gmina: Education Budget 2006	212
Table 6.4. Annual Per Student Funding of Each School in Kwidzyn (2007)	214
Table 6.5. Kwidzyn City Gmina: Number of Pupils, 1998 to 2006	215
Table 6.6. Kwidzyn City Gmina's Schools: Teaching and Non-Teaching Posts	215
Table 6.7. Kwidzyn City Gmina: Students and Classes at Gimnazjum 2	216
Table 6.8. Kwidzyn City Gmina: Budget for Gimnazjum 2 (2007)	217
Table 6.9. Czosnów Gmina: Education Expenditure and Budget Revenue	218

٠

Table 6.10. Czosnów Gmina: The Composition of Total Teachers' Salaries (2006)219
Table 6.11. Czosnów Gmina: Total Actual Expenditures of Schools (2006)
Table 6.12. Czosnów Gmina: Student Rolls, 2001/2 to 2006/7
Table 6.13. Staffing Ratios at Czosnów Schools Compared to Kwidzyn Ones (2007)221
Table 6.14. Comparison of Per Student Expenditure in Czosnów and Kwidzyn (2007)
Table 6.15. Educational Expenditure per Student (Primary and Lower Secondary) in Gminas in 2005, in zł
Table 6.16. Factors Explaining Current General Education Expenditure Per Student in Different Type of Gminas
Table 6.17. Constraints and Flexibilities in the Polish School Funding System
Table 6.18. Shares of the Education Subvention by School and Student Type in $2000 \dots 242$
Table 6.19. Kwidzyn's Subvention for 2007 Determined by the Formula243
Table 6.20. Kwidzyn: Calculating Part A of the Voucher245
Table 6.21. Czosnów's Subvention for 2007 Determined by the Formula
Table 7.1. Key Events in Education Financing Reforms in Russia
Table 7.2. Adjustment Coefficients by Level of Education
Table 7.3. Adjustment Coefficients by Type of Class (Educational Program)257
Table 7.4. Chuvash Republic: Adjustment Coefficients, 2003 and 2007259
Table 7.5. Tver Oblast: School Education Budget-Total for 43 Municipalities262
Table 7.6. Tver Oblast: School Statistics - Total for 43 Municipalities
Table 8.1. Policy Objectives of Per Capita Financing in Case Study Countries
Table 8.2. Details of Per Capita Financing Formulae: Main Features
Table 8.3. Details of Per Capita Financing Formulae: Adjustment Factors

,