

Decentralized provision of education: methodological suggestions for analysis

Giorgio Brosio
(University of Torino, Italy)

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Main goal and contents

Goal is methodological

Facilitate comparative analysis of decentralized systems and of decentralization processes in education, including vocational education and training

applicable to American Latin countries

with a view also to extracting valid suggestions for reform.

Contents

proper variables for measuring education outcomes and the success of educational policies;

meaning of decentralization and its measurement;

concomitant reform;

links between general and vocational education.

Examples are provided, using mainly México as reference.

The education production function

Effective outcomes depend on:

School characteristics: location, number of teachers, currícula, etc...

Institutions

Socio/personal characteristics of families and students

Concomitant reforms

$$EO = S (FR, I, Z, CR) \varepsilon,$$
The diagram consists of four blue arrows pointing from the equation $EO = S (FR, I, Z, CR) \varepsilon,$ on the right to the four text blocks on the left. The top arrow points from the 'S' parameter to 'School characteristics...'. The second arrow points from the 'I' parameter to 'Institutions'. The third arrow points from the 'Z' parameter to 'Socio/personal characteristics...'. The bottom arrow points from the 'CR' parameter to 'Concomitant reforms'.

1. Measuring quality and impact of education

Suggested choice is **student scores built on the basis of standardized questions** (OECD, PISA Program)

“High powered indicator” (and also prevailing option)

High comparability, *coeteris paribus*, across and within countries and over years.

Include also part of students of vocational education (those <15 years)

Very suited for checking results of policies, including decentralization.

and also for insertion in incentive schemes for teachers, and principals.

Replaces traditional measures, such as educational attainment, or simply years of schooling completed.

“sitting for years in classroom does not necessarily mean learning.

Available now for many Latin American countries PISA, SERCE, TERCE, SIMCE (Chile), SABER (Colombia)

Distribution of outcomes by levels: Mexico.

	Mathematics	Science	Reading	Mathematics
	2012		2003	
MAX-MIN	68	64	79	92
MAX/MIN	18.53	17.20	21.47	26.21
RANGE 2	0.42	0.52	0.63	0.89
Correlation Math with GDP	0.18			
Correlation Science with GDP		0.25		
Correlation Reading with GDP			0,31	

Student outcomes and interpersonal equity

PISA, SERCE, TERCE, SABER results:

distinguish between six levels of proficiency: level 1 is the lowest one- very basic proficiency - level 6 is the highest one.

Provide information about the percentage of students reaching these levels of proficiency

allowing analysis of the achievements of education policies in terms of personal equity

for example, focusing on the lowest level, level one, is somewhat equivalent to focus on extreme poverty when analyzing the distribution of income, or of consumption.

Measuring the efficiency of expenditure: unitary cost of student outcomes

Student outcomes allow also estimating simple efficiency indicators, such as

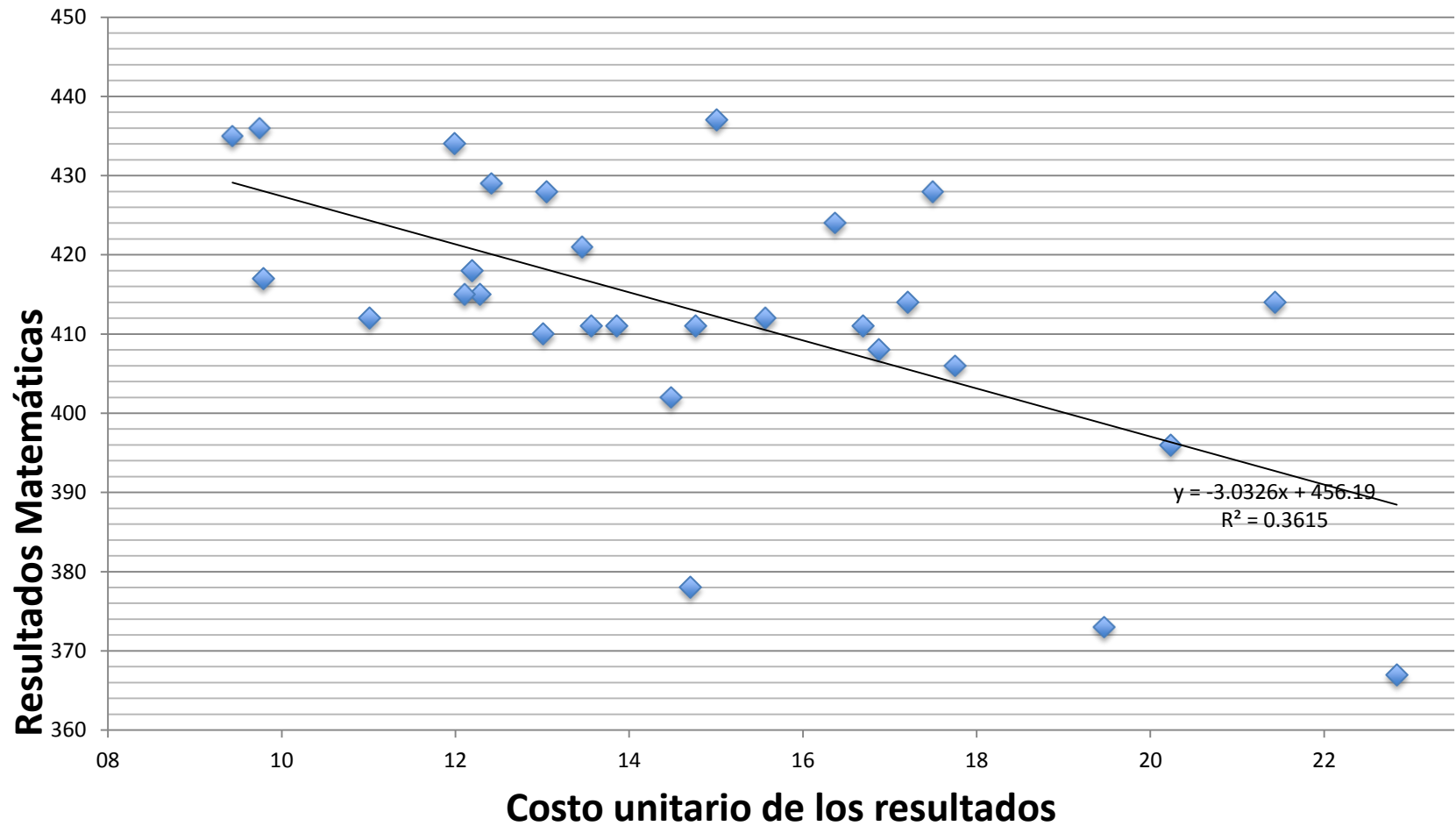
$$\frac{\text{Per capita spending}}{\text{Student outcomes}}$$

Provide useful indications for policy.

For example, if low scores are correlated with low unit costs, then it is possible to increase scores by providing more funds to regions where low scores prevail.

But if scores and unit costs are inversely correlated, funding could not help, unless a huge disbursement is done.

Unit cost of outcomes: Mexican states, 2012



Fuente: elaboración con datos de la SHCP (aportaciones), INEGI (población) y PISA 2012

Measuring decentralization

Transfers of resources, to spend, or to collect , from higher to lower levels of government

Such as reassignment of education expenditure from the central to regional budgets

Do not imply, *per se*, an increase of the degree of decentralization

if not accompanied by the transfer of decision-making power.

Rather, we have decentralization **when decision-making power on use of resources is devolved down**, even with no change in the share of subnational expenditure, or revenues.

New OECD Index allows substantial progress in the analysis of the decentralization impact

- The index singles out the importance, calculated in percentage terms, of the decision-making power assigned to each of a set of five stakeholders with reference to four different areas of decision-making.
- The stakeholders
 - principals,
 - teachers,
 - school boards,(can include businesses in the case of vocational training)
 - subnational governments
 - central government

New OECD Index (cont.)

Areas of decision-making power

- Curriculum and assessment, defining curricula, choosing textbooks, determining courses to offered and their content.
- Resources, meaning authority to appointing and dismissing teachers, establishing teachers' starting salaries and salary raises, formulating school budgets and allocating them within the school.
- Establishing student-assessment policies.
- Approving students for admission to the schools.

OECD education decentralization index in Latin America

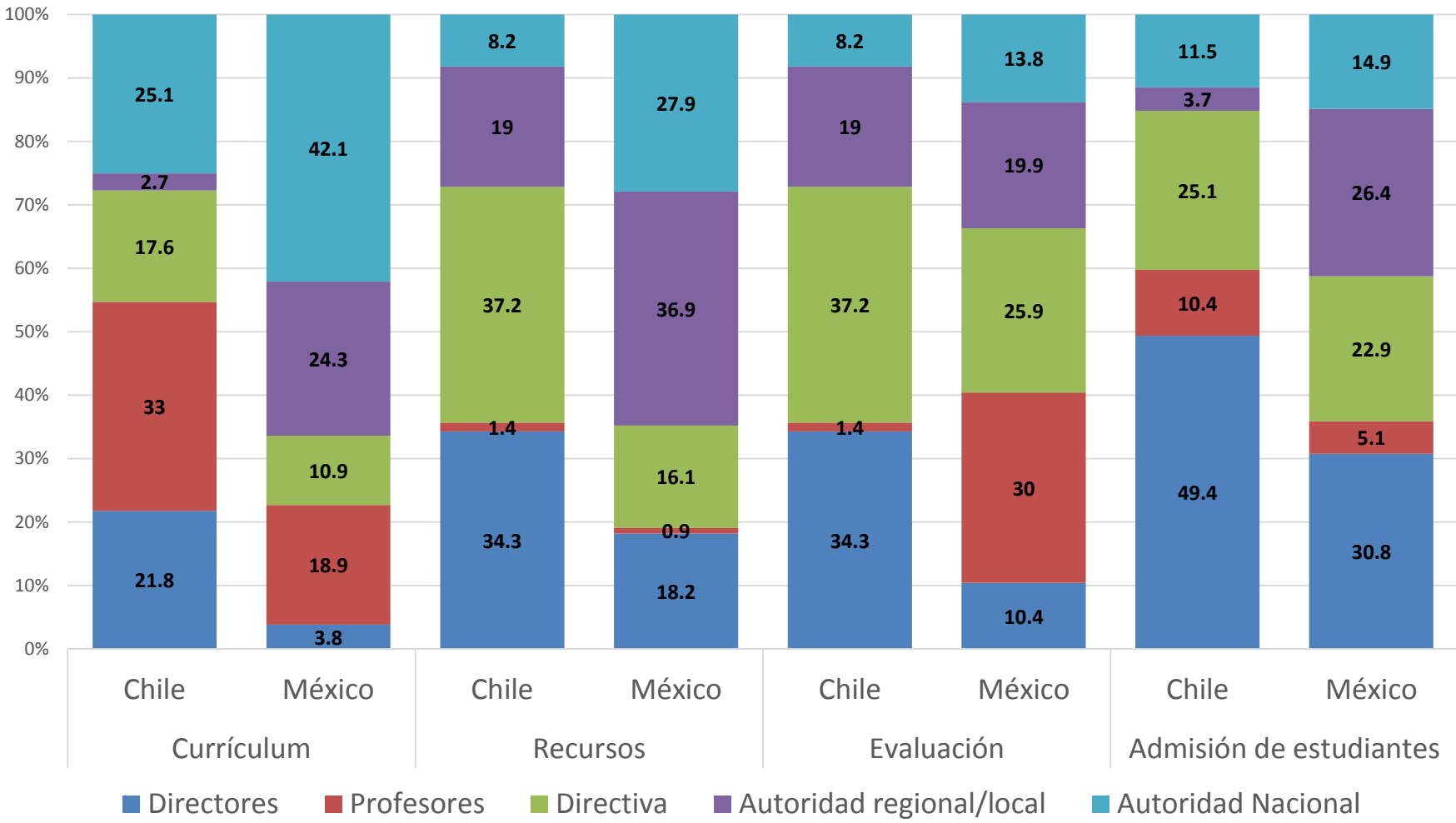
In general, Latin American countries , including federal systems, such as *México*, look centralized, with large concentration of decision-making processes at the center.

Interestingly, unitary countries, such as Chile and Uruguay, have lesser centralization.

They even show better results.

Although much deeper analysis is needed to confirm this finding.

Education decentralization Index: Chile and México



Fuente: elaboración con datos de OCDE, PISA 2015 Database

Concomitant reform

During a decentralization process, other levels of governments or agencies implement policies intersecting with local policies and/or operating against them.

Intersections can be more frequent with vocational education given the relevance and frequency of labour policies.

May lead to attribute to a policy/level of government the merits/demerits that have in the reality their origin in another policy.

Best example is provided by conditional cash transfers (such as, Prospera, Chile Solidario, Progresa in Mexico, Mas familias en Acción in Colombia), whose implementation is positively impacting on school enrollment and attainment, but whose merits/demerits remain outside the local ambit.

Concomitant reform in México

Mexico has been pioneering conditional cash transfers, providing financial support to families conditional to sending children to school.

CCT are expected to impact also on student scores, as the distribution of talent is not correlated with the socio-economic conditions of families.

Mexico has also increased support to poor students with more scholarships.

This cannot be strictly considered a concomitant reform, because it applies to education.

It is enacted, however, by the central government.

CCTs allocations and scholarships are expected to be associated with student achievements in terms of scores than in share of 15 years old still in schools.

This does not seem to be case.

CCTs and scholarships are allocated with a clear redistributive intent. They do not impact, however, decisively on student achievements.

Mexico. Correlation between income, revenue from CCTs scholarships and changes in education scores

Correlation of scholarships and CCT with maths scores 2012	Correlation household gross income with CCT and scholarships	Correlation of scholarships and CCT with change in maths scores	Correlation scholarships with change of 15 years out of school
-0.79	-0.76	-0.02	-0.02

Vocational training

Crucial to reduce the mismatch between demand by firms and supply by families.

Remains largely neglected in economic analysis, with some encouraging signs of revival (that use PISA results).

Continuing debate about best approach:

- Dual system, with extensive vocational education and training provided at the secondary level of general education – sometimes with direct involvement of industry through apprenticeships
- Separate system developing specific job-related skills with a focus on on-the-job training. Activities usually of short duration and larger flexibility in adapting curricula to the needs of the economy.

Vocational training

Must develop capacity to gather to the specific needs of territories.

This implies, independently of the model, decentralized governance, including modified (tripartite) school-based management.

In most of the Latin American region is characterized by a substantial degree of centralization

- provision of services, meaning the management of schools is done at the subnational levels
- but strategies and policy orientations are elaborated at the national level, also in federal and decentralized countries.

Centralization is also supported by the financing system, with payroll taxes and transfers from the national budget representing the predominant source of revenue.

Conclusions

The main messages are about method

Need of using good indicators of effective outcomes and governance.

Happily, new very useful information is being provided, also for Latin America, under the initial impulse of the OECD.

Important to consider the impact of concomitant reforms, in view of the variegated policy attention given to education, especially in Latin America.

Need to fully integrate vocational training and education into the analysis, strategies and policy prescriptions.