

Comment on: *Three proposals to improve education in Latin America and the Caribbean* by Amy Damon and Paul Glewwe

Alternative view paper for the *Consulta de San José*

Miguel Urquiola  
Columbia University<sup>1</sup>

July, 2007

---

<sup>1</sup> miguel.urquiola@columbia.edu

In their solution paper, Damon and Glewwe present a useful summary of options to improve education in Latin America and the Caribbean (henceforth LAC). This note presents three comments. The first simply seeks to complement the authors' sound diagnosis, making the case that while they are correct to emphasize educational quality, some issues concerning quantity remain. Specifically, achieving acceptable enrollment and particularly grade completion rates is still a challenge in many countries, which reflects issues related to delayed entry, drop out, and repetition rates.

The second comment arises because the *Consulta de San José* takes the interesting approach of comparing interventions across sectors, which necessitates the calculation of cost-benefit ratios. Damon and Glewwe note that this in turn requires knowledge of interventions' *causal* impact. They therefore reasonably choose to focus on "interventions that have been rigorously evaluated," and use an appropriately high standard to select them. This gives the paper a sharp focus but entails a cost, because the menu of options considered must originate from a limited list, excluding, for instance, some options to reduce repetition or raise school quality.

The final comment concerns the paper's third proposal: school choice. One point here is that this is not a clearly defined option—the term can stand for different interventions with potentially different results. Second, a broader look at the evidence on choice, both within and outside LAC, suggests that the specifics of these programs matter, and I would thus be wary of a blanket "most promising" classification.

## 1) Educational quantity

The literature makes an arbitrary but often useful distinction between educational *quantity* and *quality*, where the former captures the extent of contact individuals have with the school system (through measures like enrollment rates), and the latter the skills they gain from this contact (using measures like test scores). Regarding quantity, the paper gives the sense that while all may not be well in LAC, the region is well on its way:

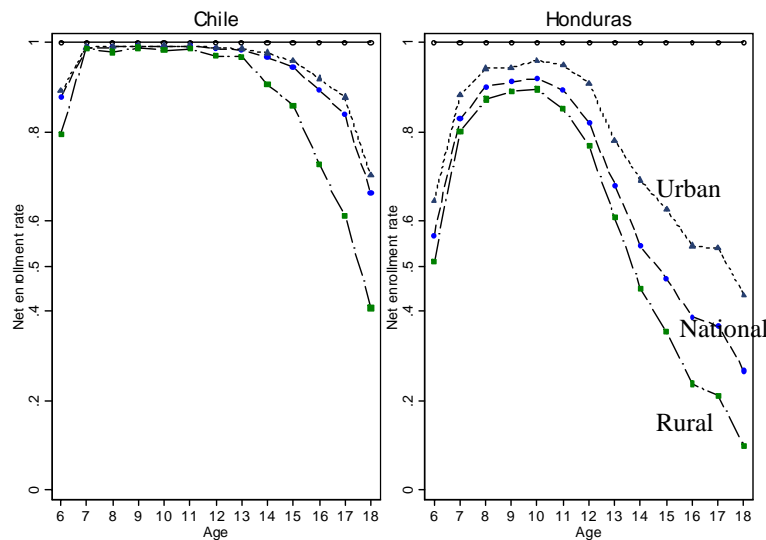
*The progress...suggests that education levels in [LAC] are moving closer to those of higher income countries...virtually all children enroll in primary school and complete the primary cycle. ... Repetition rates are generally low ...*

A first issue is that such assessments depend a bit on the reference point. For instance, Vegas and Petrow (2007) point out that regional primary completion rates did not approach 90 percent until about 2000, and that at least relative to some sets of countries, LAC has been losing ground: while in 1960 the proportion of adults who had completed upper secondary education was 7 percent in LAC and 11 percent in East Asia, by the turn of the century these numbers were 18 and 44 percent, respectively.

Perhaps more importantly, the aggregate evidence conceals relevant inter-country heterogeneity. To provide a sense of this Figure 1 draws on household survey data to plot age-specific enrollment rates in Chile and Honduras. These two countries illustrate the range of enrollment outcomes in LAC, and point to some relevant facts. First, delayed entry continues to be an issue. Even in Chile, where primary schooling is close to universal, the net enrollment rate for age 6 (the normative starting age) is below 90 percent overall, and below 80 percent in rural areas. In Honduran rural areas, roughly 50 and 40 percent of 6 and 7 year-olds, respectively, do not enroll. Second, in the 8-13 range, enrollments rates are relatively high—in urban areas they exceed 90 percent all

over the region—although in a few countries they never quite approach one hundred. Third, as is well known, enrollment begins to drop in the 13-15 age range. All this leads to an “inverted-U” age enrollment profile, which is evident for rural populations in almost all countries, and marked even for the aggregate population in countries like Bolivia, Brazil, Colombia, and Nicaragua.

Figure 1: Age-enrollment profiles for Chile and Honduras



Note: This and all subsequent figures are based on Urquiola and Calderón (2006).

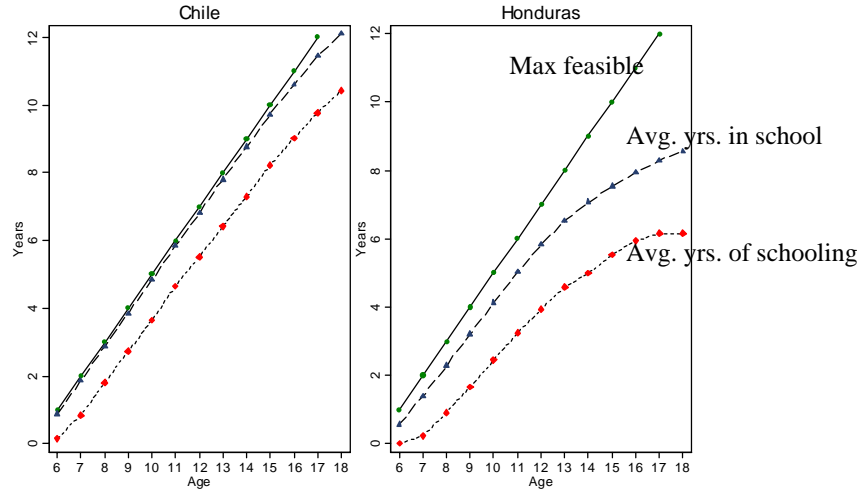
The data in Figure 1 can be summarized by a measure which we term *average years in school*, obtained by cumulatively adding the observed age-specific enrollment rates. This yields the expected number of years that individuals will spend in school by a given age, given the enrollment patterns *currently* observed in their country. This measure provides a useful benchmark against which to compare countries’ performance in producing *years of schooling*—i.e., actual grades completed.<sup>2</sup>

To illustrate the usefulness of this measure, the top segment in Figure 2 first graphs the maximum feasible attainment (measured in years of schooling) that an individual of a given age could reach if she entered school at age six and made “normal” progress. For instance, this person could complete a maximum of one year of schooling by age six, two by age seven, and so on. The middle line plots our *average years in school* measure.

<sup>2</sup> The calculation of average years in school is illustrated below. For age six, the measure equals the enrollment rate expressed as a proportion, e.g., by the time they are six, children have spent an average 0.88 years in school in Chile, and 0.57 in Honduras (Columns 2 and 4). These entries are then cumulated.

Age	Chile		Honduras	
	Net enrollment rate (1)	Average yrs. in school (2)	Net enrollment rate (3)	Average yrs. in school (4)
6	87.7	0.88	56.8	0.57
7	98.9	1.87	82.8	1.40
8	98.9	2.86	90.1	2.3
9	99.2	3.85	91.3	3.2
...				

Figure 2: Maximum schooling, average years *in school*, and average years *of schooling*



Focusing first on Honduras, even at age 6 there is a clear gap between the top two segments, partly because of delayed entry. These then run roughly parallel up to age 10, reflecting the high enrollment rates in this age range. After that, they diverge markedly, as dropout rates increase. For Chile, the average years in school segment begins slightly below the maximum, reflecting the non-zero delayed entry observed even in this case, but the low dropout rates limit the divergence between the two top segments.

The third segment plots average years *of schooling*—the grades individuals report they have actually passed. Comparing the second and third segments thus indicates how effectively an educational system turns average years *in school* (contact with the system) into average years *of schooling*. In other words, Figure 2 answers the question “why doesn’t every 18 year old in Honduras achieve 12 years of schooling?” It makes clear this is due to two factors: the lack of universal attendance (the gap between the first and the second segment), and the failure to turn years in school into years of schooling (the gap between the second and the third), largely but not exclusively due to repetition.

Of particular relevance is the growth in the gap between the two lower segments—by age 18 this has grown to about one year in Chile, and more than two in Honduras. To

Table 1: Average years in school and years of schooling, age 18

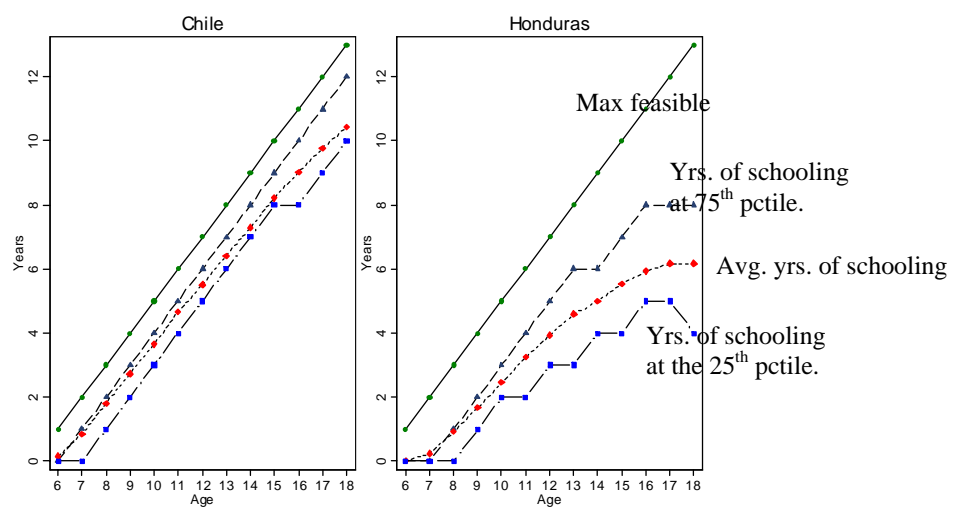
Country	Avg. yrs. in school (1)	Avg. yrs. of schooling (2)	Difference (1)-(2)
Brazil	11.4	7.3	4.1
Nicaragua	9.7	5.9	3.8
Dominican Republic	11.8	8.3	3.5
Jamaica	11.7	8.8	2.9
Uruguay	11.4	8.7	2.7
...			
El Salvador	10.0	8.0	2.0
Panama	11.5	9.5	2.0
Mexico	10.6	8.7	1.9
Ecuador	10.4	8.7	1.7
Chile	12.1	10.4	1.7

Note: Based on data in Urquiola and Calderón (2006).

further illustrate the variation in this gap, Table 1 lists ten “extreme” countries, showing it ranges from 1.7 years in Chile and Ecuador, to 4.1 in Brazil. These data thus suggest that many countries produce significantly less attainment than they could.

Figure 3 summarizes the consequences of some of the above information by describing the years of schooling observed at the 25<sup>th</sup> and 75<sup>th</sup> percentiles of the distribution in Chile and Honduras. It shows that a non-trivial proportion of Honduran children leave the system with only three or four years of schooling. Even in the context of rapid progress, therefore, there are still countries/areas in LAC where attainment, even in terms of quantity, is quite low.

Figure 3: Max. schooling, avg. years in school, and avg. years of schooling



To summarize, while Damon and Glewwe are right to emphasize educational quality, some issues concerning quantity remain. Specifically, achieving acceptable enrollment and particularly completion rates is still a substantial challenge in many countries. Indeed, the gist of the comparison by Vegas and Petrow, cited in opening this comment, is that the region has made less progress in attainment than in enrollment.

## 2) Restrictive focus

The *Consulta de San José* calls for cost-benefit comparisons of interventions across sectors. Damon and Glewwe note that this requires knowledge of interventions’ *causal* impact, and therefore reasonably restrict their attention to “interventions that have been rigorously evaluated.” This gives the paper a sharp focus, but at the cost of omitting interventions that might have high returns.

For example, conditional cash transfers (henceforth CCTs) are one of the solutions proposed, which might reflect that perhaps no other social policy in LAC has been as rigorously evaluated. The previous section suggests, however, that in some countries tackling repetition might deliver greater results: while many children do show up for school, they and/or the system fail to turn this into years of schooling. In terms of Figure 2, CCTs address the gap between the top and the middle segment, but in many countries that between the middle and the bottom one (which largely reflects repetition) is larger.

More specifically, Schultz (2004) estimates that *Progresá* raised years of schooling in Mexico by 0.5-0.7 years. Table 1 (loosely) suggests that eliminating repetition—admittedly a tall order—could have three to four times that impact in Mexico, and seven to eight times that effect in Brazil. This is not to argue we should abandon CCTs, but to point out that initiatives to understand and reform what actually goes on in schools in terms of repetition might have a higher return. Of course, Damon and Glewwe do not cover such interventions—in most cases they are not clearly defined or (to my knowledge and apparently to theirs) clearly evaluated.

Similarly, the paper stresses that improving quality should be a priority. Yet one issue with CCTs, as raised by Reimers et al. (2006), is that they do not target quality, and Berhman, Parker, and Todd (2006) suggest that *Progresá* indeed did not raise test scores.

To summarize, my sense is that Damon and Glewwe make a reasonable decision to focus on interventions that have been credibly evaluated, but this comes at a cost. Noting this also serves to underline my agreement regarding their call to expand the knowledge base of educational interventions in LAC (and around the world)—populating the list of policy options will require aggressive long term research.<sup>3</sup>

### 3) School choice

The evidence on the impact of school choice, when one looks around the world, is mixed. There has been a lot of work beyond the (high quality and highly influential) study by Angrist et al. that the authors highlight. To elaborate, the gains from choice are expected to originate in two sources: i) if private schools are more effective, there will be gains from transferring students to the private sector, and ii) competition may force all schools, particularly public ones, to improve.

The international evidence suggests that private schools do have higher tests scores than public ones, but this difference largely disappears if one controls for socioeconomic status, leaving open the possibility that private productivity is at best modestly higher. Indeed, controversies in this area often concern whether the difference is zero or modest—see the evidence on Chile, Milwaukee, and New York, among other cases.<sup>4</sup> In part, these discussions reflect difficulties in identifying causal effects, but in some cases they persist despite experimental data.

Further, even if one could get clear answers from public/private comparisons (such as the study the authors focus on arguably produces), Hsieh and Urquiola (2003, 2006) illustrate that these would mainly answer the question “would a randomly selected student perform better in a private than in a public school?” If part of that better performance is due to peer effects, for example, such evidence would not answer the question “what would happen to achievement if we shifted a substantial proportion of children to the private sector?” To answer the latter question, one needs to examine the effects of school choice on aggregate outcomes and/or public sector performance, which

---

<sup>3</sup> One intervention the authors might want to consider involves tutoring for lower achieving students. For evidence on India and Chile, see Banerjee et al. (forthcoming) and Chay et al. (2005), respectively. Additionally, the discussion on decentralization could note Galiani, Gertler, and Schargrotsky (2005), although this would probably not affect the results of their review.

<sup>4</sup> On Milwaukee see for example Greene et al. (1996), Rouse (1998), and Witte (1998); on N.Y., Peterson et al. (1998) and Krueger and Zhu (2004); on Chile, Mizala and Romaguera (2000) and Contreras (2005).

turns out to be empirically even more challenging and has likewise often resulted in controversy—see for instance studies on Chile, Sweden, the U.K., and the U.S.<sup>5</sup>

While much of this evidence is from outside LAC, a few words should be added about Chile, which has undertaken the largest expansion of school choice in the region and arguably the world. (Suffice it to note that more than half of all urban schools in Chile are private, that these are often run for-profit, and that parents can use any subsidized school—religious or not—willing to take their children).

Surprisingly, national and international testing data leave open the possibility that this initiative has not improved average performance substantially. Indeed, within Chile there is a generalized perception that more must be done to improve learning. This is not to say that choice did not raise aggregate welfare, but to point out that for reasons we do not fully understand, its impact on test scores seems to have been smaller than expected.

Additionally, the Chilean and U.S. evidence suggests school choice can lead to stratification—in simple terms, the poor going to school with the poor and the rich with the rich. Without knowledge of the functional form of peer effects, it is not clear what to make of this. Nonetheless, Chile’s government has concluded it is of concern, and is promoting initiatives that might limit sorting, such as making the voucher worth more when used by poor children, and limiting schools’ ability to select students (interestingly, the first of these seems to have clear support from the opposition parties as well).

The bottom line here is twofold. First, much more than CCTs, “school choice” is not a clearly defined intervention—a Chilean and a Colombian educator, for instance, might understand it to entail different interventions that might have different results. For example, a smaller scale “American style” voucher program is unlikely to produce the stratification seen in Chile. Second, a broader look at the evidence on choice suggests that the specifics of these programs matter, and I would thus be wary of a blanket “most promising” classification.

In closing, let me state two more points. First, I do not have comments on the first solution proposed by the paper—nutrition programs for pre-school-aged children—except to say these indeed seem to be a promising option (for instance, as Glewwe has suggested in other work with Hanan Jacoby, they may help ensure prompt entry into school and adequate learning readiness). Finally, as mentioned above, I fully share the authors’ recommendation that more evaluation be undertaken in education in LAC.

---

<sup>5</sup> On Chile see for example Hsieh and Urquiola (2006) and Gallego (2006); on Sweden, Bohlmark and Lindahl (2007); on the U.K., Clark (2005); and on the U.S., Hoxby (2000) and Rothstein (forthcoming).

## References

- Barrera, F., and C. Domínguez (2006) *Gratuidad en provision de educación básica*. Debates de coyuntura social, Noviembre, Número 19, Fedesarrollo.
- Banerjee, A., S. Cole, E. Duflo, and L. Linden (forthcoming) *Remedying Education: Evidence from Two Randomized Experiments in India*, Quarterly Journal of Economics.
- Barrera, F., L. Linden and M. Urquiola (2006) The Effects User Fee Reductions on Enrollment: Evidence from a quasi-experiment, Mimeo, Columbia University.
- Behrman, J., S. Parker, and P. Todd (2006) Do school subsidy programs generate lasting benefits? A five year follow-up of Oportunidades participants. Mimeo, University of Pennsylvania.
- Bohlmark, A. and M. Lindahl (2007) The impact of school choice on pupil achievement, segregation, and costs: Swedish evidence. Mimeo, Stockholm University.
- Chay, K., P. McEwan, and M. Urquiola (2005) The central role of noise in evaluating interventions that use test scores to rank schools, **American Economic Review**, 95(4), 1237-1258.
- Clark, D., (2005) Politics Markets and Schools: Quasi-Experimental Evidence on the Impact of Autonomy and Competition from Truly Revolutionary UK Reform. Mimeo, University of Florida.
- Contreras, D. (2005) Políticas educacionales en Chile: Vouchers, concentración, incentivos y rendimiento, in S. Cueto, Editor, **Uso e impacto de la información educativa en América Latina**. Santiago: PREAL.
- Galiani, S., P. Gertler, and E. Scharfgrösky (2005) *School decentralization: Helping the good get better, but leaving the poor behind*. Mimeo, Universidad de San Andrés.
- Gallego, F. (2006) *Voucher-school competition, incentives, and outcomes: Evidence from Chile*. Mimeo, Universidad Católica de Chile.
- Greene, J., P. Peterson, and J. Du (1997) *Effectiveness of school choice: The Milwaukee experiment*. Mimeo, Harvard University.
- Hoxby, C. (2000) Does Competition among Public Schools Benefit Students and Taxpayers? **American Economic Review**, 90(5), 1209-38.
- Hsieh and Urquiola (2006) The effects of generalized school choice on achievement and stratification: Evidence from Chile's school voucher program, with C.-T. Hsieh, **Journal of Public Economics**, 90, 1477-1503.
- Hsieh and Urquiola (2003) *When schools compete, how do they compete? An assessment of Chile's nationwide school voucher program*. NBER Working Paper No. 10008.
- Krueger, A. and P. Zhu (2004) Another Look at the New York City School Voucher Experiment, *American Behavioral Scientist*, January 2004, pp.658-98.
- Mizala, A. and P. Romaguera (2000) *School performance and choice: The Chilean experience*, **Journal of Human Resources** 35(2).
- Parker, S., P. Todd, and K. Wolpin (2006) *The impact of Oportunidades on schooling in Mexico*. Mimeo, University of Pennsylvania.
- Peterson, P., D. Myers, and W. Howell (1998) *An Evaluation of the New York School Choice Scholarships Program: The First Year*, Mathematica Policy Research and Harvard University Program on Education Policy and Governance.
- Reimers, F., C. DeShano da Silva, and E. Trevino (2006) *Where is the "education" in conditional cash transfers in education?* Mimeo, UNESCO Institute for Statistics, Montreal.
- Rouse (1998) Private school vouchers and student achievement: An evaluation of the Milwaukee parental choice program. **Quarterly Journal of Economics**, CXIII, 553-602.
- Rothstein, J. (forthcoming) Does Competition Among Public Schools Benefit Students and Taxpayers? A Comment on Hoxby (2000). **American Economic Review**
- Schultz, T. P. (2004) *School subsidies for the poor: Evaluating the Mexican PROGRESA poverty program*, **Journal of Development Economics**, 74(1), 199-250.
- Urquiola, M. and V. Calderón (2006) *Apples and oranges: Educational enrollment and attainment across countries in Latin America and the Caribbean*. **International Journal of Educational Development**, 26, 572-590.
- Vegas, E., and J. Petrow (2007) *Raising student learning in Latin America: The challenge of the 21<sup>st</sup> century*. Mimeo, the World Bank.
- Witte, J. (1998) *The Milwaukee Voucher Experiment*, **Educational Evaluation and Policy Analysis** 20(4), 229-251.