

in brief...

# Producing superstars for the economic World Cup

Most countries' education policies make raising average student performance their priority. Yet just as in the football World Cup, the quality of the top performers is the key to competing successfully at the global level. **Lant Pritchett** and **Martina Viarengo** explore this challenge in the particular context of policy-making in Mexico.

Like many emerging economies, Mexico faces the challenge of how to position itself to compete more effectively in international markets. A key issue is the quality of the skills of the labour force – and in increasingly knowledge-based economies, it is not just the skills of the typical worker that matter, but also the skills of the most highly skilled.

It is not always appropriate to make comparisons between economic 'competition' and athletic 'competition', since a country can make every citizen richer (a good thing!) and still fall down the international rankings if other countries do the same but more quickly. We still think that the football World Cup is a useful metaphor in this case because:

■ First, in the World Cup, global competitiveness matters as it stacks players of different countries up against each other on a level playing field. While victory in any given league is relative, players can be the best in a local league without being very good.

■ Second, in the World Cup, it is not the *average* quality

of the players that matters: it is the very upper tail – the best of the best. The quality of the players in the upper tail depends not just on the average of the distribution, but also on how it is shaped – for example, whether it is skewed towards higher performers.

■ Third, simple mathematics suggests that the absolute quality of the players depends in part on the size of the pool from which they are drawn.

Every boy in Mexico believes that they are in the running to be picked for the World Cup (known there as the *Mundial*). But can the same be said for the economic World Cup: does every child really believe they have a shot at rising to be the best of the best economically?

Internationally comparable measures, such as the OECD's Program for International Student Assessment (PISA), indicate that Mexico's educational performance is below that of many other OECD countries. What has been less explored is the consequence of that for the *absolute* number of *very highly skilled*.

Image: Ron Fu

Competing in the  
knowledge-based  
global economy  
requires encouraging  
better performance  
among the top  
performers



Our research examines how many students Mexico produces per year above the 'high international benchmark' of the PISA in mathematics. (The benchmark is related to the score of 625 and above, where the OECD average is equal to 500 and the standard deviation is equal to 100.) We find that out of a cohort of roughly two million 15-year-old students, Mexico produces only between 3,500 and 6,000 students per year above the benchmark.

The comparable number for the United States, where the educational performance of high school students is widely lamented, is a quarter of a million. In South Korea (a country whose population is half the size of Mexico's), it is 125,000. And even India, which in general has a much lower average performance, produces over 100,000 high performance mathematics students per year. The issue is not about mathematics *per se*: similar findings are likely to hold in other subjects.

By comparing differences in performance at the very top, we also find that the top Mexican students lag behind: they achieve a level that is only middling in better performing countries. Moreover, only a very small number of students are ready to go into higher education and compete globally. Rankings of universities indicate that the low quality of Mexican secondary schools is not overcome at higher levels of education.

We then review the effect of some of Mexico's traditional education policies, such as *Carrera Magisterial*, a performance-based pay bonus for teachers introduced in 1992 to modernise primary schooling. The reform replaced the five-year seniority teacher pay scale with a new pay structure weighted by improvements in students' performance (which represented 20% of the total weight). It also allowed principals to receive awards based on their schools' overall performance

Empirically, a small positive but statistically insignificant effect has been found on students' average performance. This may be partly due to the weak incentives faced by teachers and the significant role played by unions in determining the final teachers' pay improvements

We relate the effect of these policies to the distribution of test scores in Mexico. We observe that even in the 'best-case scenario', policies that appear to have a considerable effect on students' achievement would lead to a modest gain in the average score, and only to a small increase in the number of global high performers.

What new policies should be pursued to position Mexico to compete internationally? We identify three areas:

■ First, the focus should be on encouraging better performance among the top performers. To be able to produce high-end 'ideas', Mexico must be able to compete with leading countries like the United States and

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Israel. The country needs a critical mass of people of high ability to produce ideas and innovate.

■ Second, there needs to be an emphasis on broadening the base of talent across socio-economic groups. Mexican education is currently stratified by income and ability to pay rather than by talent and ability to learn. The country must stop recruiting from a narrow base; instead, it should actively identify and encourage academic excellence among those who are not currently well off.

■ Third, creating a conducive environment for entrepreneurship so that new ideas can flourish should be a priority. If institutions do not encourage private initiative, social mobility and productive activities, talented people will choose occupations that do not face competition and which are often socially unproductive.

There may be many benefits to traditional policies that focus on improving the average quality of the educational system. But our research suggests that they are unlikely to make Mexico competitive in the knowledge-based global economy.

Instead, what is needed is a combined focus on expanding educational opportunities for all and encouraging the upper tail of top performers. Many other countries could no doubt learn from this challenge of producing superstars for the economic World Cup.

This article summarises 'Producing Superstars for the Economic Mundial: The Mexican Predicament with Quality of Education' by Lant Pritchett and Martina Viarengo, chapter 2.5 in *The Mexico Competitiveness Report 2009*, edited by Ricardo Hausmann, Emilio Lozoya Austin and Irene Mia and published by the World Economic Forum ([http://www.weforum.org/pdf/Mexico/MCR\\_2009.pdf](http://www.weforum.org/pdf/Mexico/MCR_2009.pdf)).

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