

Rising Expectations



A woman holds a sign that reads in Portuguese "FIFA Standards for Schools" during a demonstration in Recife, Brazil, June 20, 2013.

PHOTO/AFP/GETTY IMAGES

in Brazil and Chile



Two themes connect Brazil and Chile: one is economic success; the other is social unrest. Protests rocked cities across Brazil in June 2013, and in Chile, recent student protests turned violent. Yet living conditions in both nations are better now than they've ever been. Successful economic and social reforms over the last two decades have led to major improvements in the quality of life. Millions of Brazilians and Chileans have joined the middle class, and the percentage living in poverty has plummeted. The quality of public education has also improved substantially in both countries since 1990. So why are citizens in these countries taking to the streets?

The ongoing unrest has different roots in each country. Brazilians railed against rising bus fares, while Chileans rejected higher college-tuition fees. In both countries, new groups have joined in, venting frustration over health care, corruption, inequality, extravagant spending on the World Cup and the Olympics in Brazil, megahydroelectric power projects in the Patagonia in Chile, and the remaining failings of publicly funded education systems.

Protests in both countries have been led by the middle class, the very people who have benefited from the reforms and the education and economic gains. "We want schools and hospitals on FIFA's standards," read one sign in Brazil mocking international soccer's governing body. "I'd exchange a congressman for 334 teachers," stated another banner. A slogan frequently employed by protesters in Brazil is "10% of the GDP for education," while banners in Chile read, "Copper sky high and education in the gutter."

These two South American countries have historically had little in common beyond a shared continent and high levels of inequality. The income share held by the top 10 percent of the population in Brazil and Chile is 43 percent, compared to 30 percent in the United States and 26 percent in the Netherlands.

Brazil, the largest country in Latin America and the fifth largest in the world, is a racially, ethnically, and geographically diverse federal democracy, with more than 190 million citizens who live in 27 states. The nation has 51 million

**Reforms
lift student
performance
but middle-class
families
want more**

by GREGORY ELACQUA and FATIMA ALVES

students enrolled in 200,000 schools that employ more than 2 million teachers. Chile is a small and fairly homogeneous Andean country, with just over 16 million citizens who live in 15 regions. Chile has 3.4 million students enrolled in 11,500 schools with close to 200,000 teachers.

Over the past few decades, education reforms in Brazil and Chile have been widely celebrated as successful, and most students are much better-off than their predecessors were 15 years ago. National assessments show that achievement levels have risen at a rapid rate. In Brazil, over the last 16 years, math scores for 5th graders improved by 40 percent of a standard deviation, and in Chile, 4th-grade performance in language improved by a similar amount. In a recent report, Eric A. Hanushek, Paul E. Peterson, and Ludger Woessman estimated the learning gains between 1995 and 2009 for 49 countries (see “Is the U.S. Catching Up?” features, Fall 2012). Brazil and Chile ranked in the top three among nations that significantly improved their educational standing (see Figure 1). Student achievement in Brazil and Chile increased at an annual rate of 4 percent of a standard deviation, which translates over the 14-year study period into learning gains of greater than two years, compared to less than one additional year’s worth of learning among American students over the same time span. The strong showing of the two countries is likely related to the aggressive economic, social, and educational reforms adopted over the last two decades.

Brazil and Chile in the 1990s

In the mid-1990s, Brazil and Chile were by all standards poor nations with low-quality schooling systems. Brazil’s GDP per capita was \$7,100, and Chile’s GDP per capita amounted to \$6,500, compared to \$25,000 in the United States. In both countries, more than one-quarter of citizens lived in extreme poverty. In Chile, less than half of its students graduated from high school, while in Brazil less than half completed elementary school. Less than 15 percent of high-school graduates enrolled in institutions of higher education in either country.

School quality was dismal. Brazil invested a mere \$150 per student per year and Chile \$360, compared to an average of \$8,000 per pupil per year in the United States. Public spending on education made up 2 percent of GDP in Brazil and 2.4 percent in Chile, in contrast to 5 percent in the United States. The result was substandard conditions in most schools. Many rural schools still had no electricity and water, most schools were devoid of textbooks and school materials, and the teaching force was of low quality. Many educators lacked formal training and teaching credentials. For example, in the early 1990s, less than 20 percent of elementary-school teachers in Brazil had earned a college degree.

Schools in both countries lacked performance incentives as well. Most public school teachers and principals were hired through political connections to the local mayor. Rigid teacher labor laws governed both nations’ public school systems, making it virtually impossible to reward high performers or to dismiss teachers who were not carrying out their job responsibilities adequately. Most children in Brazil were assigned to a public school based on their place of residence, regardless of the quality of the school.

Chile had a poorly designed, unfettered universal school-choice program with a flat voucher that was not adjusted for a student’s socioeconomic characteristics. Private-voucher schools, run by for-profit and nonprofit religious and secular entities, competed with traditional public schools for per-pupil funding. The voucher schools were allowed to administer entrance tests, conduct parent interviews, and charge monthly school fees, thereby keeping many poor families from higher-quality schools. The system created incentives for private-voucher schools to recruit higher-performing and more-advantaged students, undermining the competitive pressures the voucher was supposed to create.

Neither schooling system made test scores available to principals and teachers or to parents

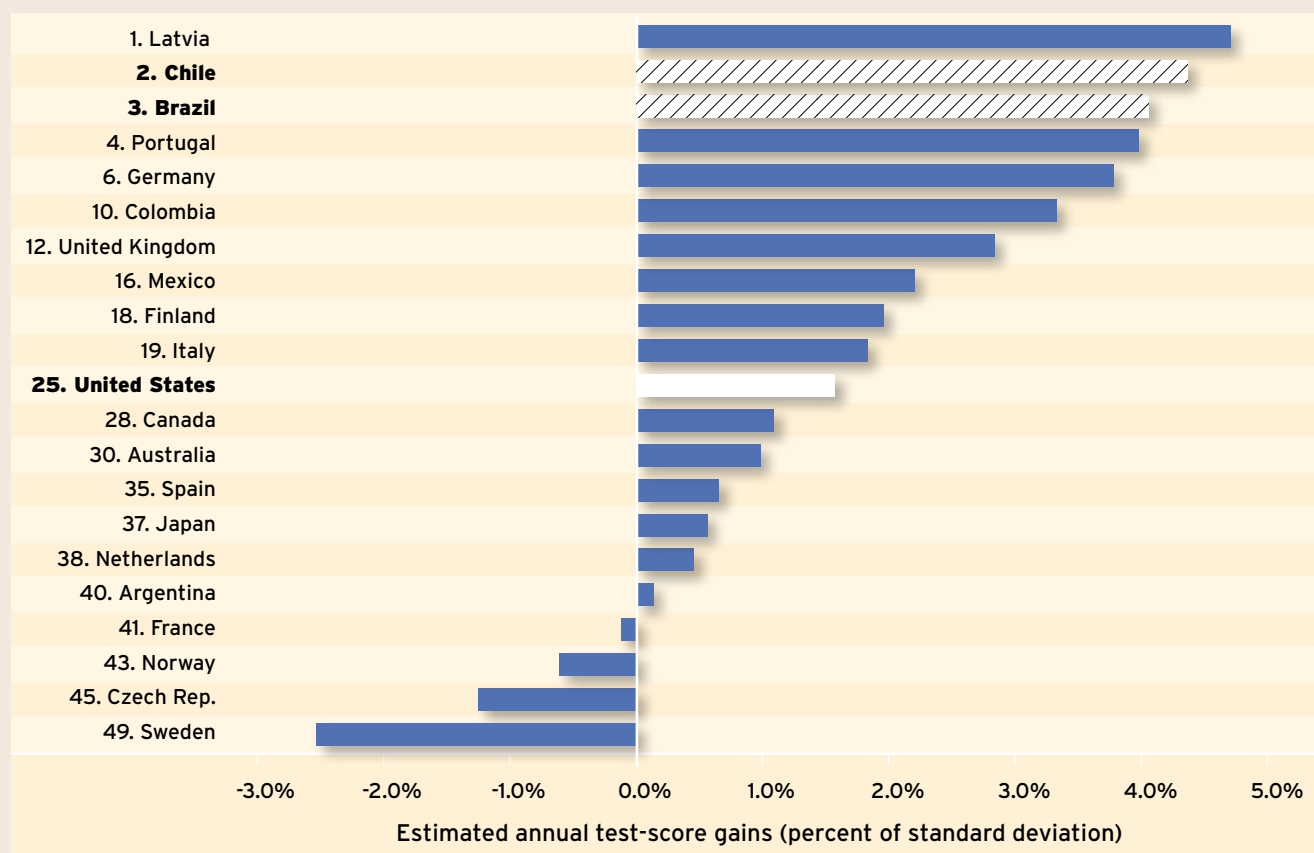


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Students in class in Monte Alegre, San Luis Gonzaga do Maranhao, Brazil, in 2008.

Growth Leaders (Figure 1)

Students in Brazil and Chile made test-score gains at an annual rate of 4 percent of a standard deviation between 1995 and 2009, equivalent to more than two extra years of learning, compared to less than one additional year's worth of learning gained by American students over the same time span.



NOTE: The bars represent the overall annual rate of growth in student achievement in math, reading, and science from 1995 to 2009 in 21 countries selected from the 49 for which the data are available. The countries shown are representative of the range of gains achieved.

SOURCE: Eric A. Hanushek, Paul E. Peterson and Ludger Woessmann, "Is the U.S. Catching Up? International and state trends in student achievement," features, Fall 2012.

and the public, and schools were not held accountable for their performance.

Factors in Achievement Growth

So what accounts for the reported rise in student achievement over the last 15 years? The three main contributors to the gains experienced in Brazil and Chile are school reforms, increased standards of living, and improved schooling conditions.

Since the early to mid-1990s, Brazil and Chile have introduced a number of aggressive education reforms. Chile has used a two-pronged strategy to improve schools and make them more accountable for their performance. First, to give

parents more schooling options for their children, the government introduced a number of changes to its national voucher program, instituting a weighted voucher (more than 50 percent over the base voucher) to compensate for the higher costs of educating disadvantaged students and to provide schools with financial incentives to enroll low-income students. Second, it banned any kind of student selection procedure in elementary school. In secondary school, schools could administer student assessments, but parent interviews were prohibited. Schools also could no longer expel students because of their inability to pay the monthly school fees. Finally, private voucher schools could not charge monthly fees to low-income families. These reforms gave parents, at every income level, more access to

private schools. Over the last 15 years, the private-voucher enrollment rate increased from one-third to more than one-half of all school-age children.

The second strategy was to introduce test-based incentives, which included regular testing of 4th-, 8th-, and 10th-grade students, and making the results, aggregated to the school level, public and understandable to different stakeholders (parents, teachers, principals, media, researchers). The program called for rewarding schools with high and improving scores and imposing sanctions, including school closure, on low-performing schools.

The Chilean government began to rank all publicly funded (public and private-voucher) schools into three categories based on student performance and other outcomes measured over time, adjusting for students' background characteristics. The ranking affected the degree of autonomy schools had in spending public funds: schools classified in the two lowest categories had to develop improvement plans and were subject to increased oversight by the government. If the schools that were ranked in the lowest category did not show adequate improvement over four years, they could lose their license. The government published the school classifications on its web site, and schools were required to explain to parents the consequences of the ranking.

While more studies need to be conducted, preliminary research has found that improvements to the voucher program combined with the test-based accountability policies provided schools in Chile with incentives to operate more efficiently. A recent study by co-author Elacqua and his colleagues, for example, found that low-performing schools facing accountability pressures modified their teaching policies and practices in meaningful ways. Surveys conducted by the Public Policy Institute at the Universidad Diego Portales prior to the policy shifts and after the changes were implemented found that parents gathered more information on schools and traveled greater distances in search of schools for their children, and that low-income families became more likely to enroll their children in private-voucher schools after the changes to the voucher program were introduced.

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Brazil's school reforms have emphasized test-based solutions over market-based strategies. The National Education Law, enacted in the mid-1990s, allowed states and municipalities to define their education policies, including those pertaining to school assignment. Some municipalities, Rio de Janeiro for example, granted families the right to choose among public schools. Most Brazilian students, however, are still assigned to a public school based on their place of residence. Independent private schools compete for students; they represent about 15 percent of enrollments nationally and more than 25 percent in major metropolitan areas. While the government does not provide any direct subsidies to private schools, tuition tax credits capped at \$1,500 a year are available to offset the costs of private school fees.

Over the last 15 years, Brazil has introduced more aggressive test-based reforms. The state implemented the National Assessment of Basic Education (SAEB) in 1995 that evaluated a sample of public and private schools every two years, administered in 5th, 9th, and 11th grade. In 2005, the design of the evaluation changed, and all public-school students in the 5th and 9th grade are now assessed every two years (Prova Brasil). The government continues to test a sample of 11th-grade public-school students and private-school students in 5th, 9th, and 11th grade. The school-level assessment results are made available to the public. The scores are also used to construct the Index of Basic Education Development (IDEB), which combines school performance and grade repetition data. If the schools do not meet the IDEB target set by the federal government, they must develop an improvement plan, which must be implemented over the subsequent two years, and they are subject to more oversight by the federal, state, and municipal governments.

Both Brazil and Chile introduced more transparent and competitive principal hiring processes, newly based on merit rather than political connections. Many states in Brazil now hire their principals (who must have passed a school management program) through school elections. Chile modified the teacher labor statute to allow mayors to dismiss teachers in the event of enrollment declines (and budget reductions) and permitted the lateral entry of teachers from other professions. The Chilean government also instituted a collective and individual merit-pay program, which provides monetary incentives to teachers who work in the highest-performing and most rapidly improving schools, after adjusting for student demographics. The performance-based rewards are greater for teachers who work in schools that serve students from low-income families. Some Brazilian states and municipalities, including Rio de Janeiro, have introduced teacher merit-pay schemes based on school IDEB scores. Rio's program establishes improvement targets for schools at different levels of achievement (based on the IDEB score)



PHOTO/AFP/GETTY IMAGES

Students from public schools walk by the San Inacio private school in Rio de Janeiro, Brazil.

and rewards schools that meet the goals. Chile introduced a national public-school teacher-evaluation plan that allows municipalities to dismiss teachers who receive a negative evaluation for three consecutive years. Chile also introduced a voluntary national teacher competency exam for recent college graduates. Several states in Brazil are developing similar programs.

The emphasis on student assessment, performance accountability incentives, and more transparent hiring and evaluation of school leaders and teachers in Brazil and Chile over the last 15 years has increased pressure on schools to improve outcomes. These factors likely explain part of the observed performance gains in both countries. It is unlikely that these gains would have been generated, however, without the improvements in the standard of living and conditions for learning in publicly funded schools that occurred over the period.

School Quality

Brazil and Chile are two of Latin America's economic success stories. Both economies grew quickly over the last 15 years, and the benefits were widely shared, unlike in other periods in both

countries' histories. During the same time span, both countries also made significant investments in public education.

In less than two decades, Chile rose from its position as the country with the seventh highest income in Latin America to the wealthiest nation in the region. GDP per capita (in constant USD 2005) increased from \$6,500 in the early 1990s to more than \$15,000 today. Brazil's improvements in GDP per capita were more modest, but nonetheless significant, advancing from \$7,100 in 1990 to \$10,300 today. Economic growth combined with effectively targeted public policies (e.g., Brazil's Bolsa Familia conditional cash-transfer program) helped move millions of citizens in both countries out of poverty and into the middle class. In Brazil, the poverty rate fell by half (from 50 percent to 25 percent), and those living in extreme poverty, on less than \$2 a day, declined from 25 percent of the population to 10 percent. Since 2003, almost 40 million Brazilians have moved into the middle class. Chile cut its poverty rate by two-thirds and has nearly eradicated extreme poverty.

High-school graduation rates and college enrollment have also risen rapidly in both countries since the 1990s. In Brazil, less than one-third of students graduated from high school; today nearly two-thirds do. In Chile, about one-half of

high-school students graduated, compared to close to 90 percent today, which is similar to the rates in the United States, Germany, and Australia. Higher education has also expanded. In Brazil, between 1999 and 2010, enrollment in higher education increased from 11 percent to 27 percent of students within five years of high-school graduation age. The parents of half of Brazil's current college students never finished 4th grade. In Chile, only 15 percent of students enrolled in higher education in the early 1990s, while today more than 50 percent do.

Seven out of 10 college students in Chile are the first generation in their families to attend college.

Given the substandard learning conditions that had prevailed for Brazilian and Chilean students, the increased expenditures on traditional inputs were fundamental to reach even the most basic level of what is needed to effectively teach students. Spending per primary and secondary student increased by more than 120 percent in Brazil and by more than 54 percent in Chile. Expenditure on institutions as a percentage of GDP has also doubled over the last two decades. Both countries have invested abundant resources in new school facilities, textbooks, and higher teacher salaries. Public-school teacher salaries increased in real terms by 400 percent in Brazil and by 200 percent in Chile, which had a positive impact on the quality of the teaching force. In Chile, the college admission test scores for students in undergraduate education programs rose by more than 20 percent. In Brazil, almost 75 percent of public school teachers now have a college degree, compared to less than 20 percent in the early 1990s.

Brazil introduced an aggressive conditional cash-transfer program (Bolsa Escola) that increased primary and secondary school attendance and reduced dropout rates, while Chile implemented a number of compensatory programs that improved student achievement in the lowest-performing

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and most-disadvantaged schools. In Chile, most primary and secondary schools moved to a full school day (from less than 1 out of 4 in the early 1990s). Both countries also nearly doubled pre-school coverage, and have introduced more and higher-quality technology into the classroom. In Chile, over the last decade, students per computer declined from 79 to 9. Most public schools in Chile and a growing number in Brazil are now connected to the Internet.

These improvements in wealth and spending were essential to achieving an adequate level of conditions to effectively educate students and take advantage of the education reforms being executed in both countries.

Middle-Class Discontent

If schools are improving so rapidly in Brazil and Chile, why are people still taking part in demonstrations to protest, in part, the poor quality of schools?

The core problem is that the quality of schooling has not caught up with the improvements in the standard of living. Brazil and Chile are increasingly middle-class nations but still have the school systems of developing countries. Both are ranked in the bottom quarter of participating countries on PISA (Program for International Student Assessment). Brazil ranked 53 and Chile 44 out of 65 countries that participated in the most recent PISA reading exam. Brazil's scores are similar to those of Colombia and Tunisia; Chile ranks just above Serbia and significantly below Turkey.

While both countries, especially Chile, have made progress in narrowing test-score gaps among their students, large differences persist. In Brazil, 50 percent of white elementary-school students perform above the country's proficiency level in mathematics compared to only 5 percent of black students. In Chile, two-thirds of high-income students perform above the country's proficiency level in mathematics compared to only 11 percent of low-income students. Public-school teachers, while improving in both countries, are far from high quality. The International Association for the Evaluation of Educational Achievement's Teacher and Development Mathematics Study (TEDS), conducted in 16 countries, ranked Chile next to last in mathematics content and



Children return home after attending school in Xapuri, in the northern Brazilian state of Acre.

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Students demand free university education in Santiago, Chile, May 28, 2013.

pedagogical knowledge, below Botswana. The Teaching and Learning International Survey (TALIS), administered by the Organization for Economic Co-operation and Development (OECD), ranked Brazilian teachers last out of 23 countries on the effective use of classroom time, below Mexico. The study finds that Brazilian teachers spend a significant portion of class time on administrative tasks and maintaining order.

The wealthy in Brazil and Chile are able to insulate themselves from low-quality public schools. They live in gated suburban communities, send their children to elite independent private schools, hire private tutors, and pay for college admission test-prep courses throughout high school. Wealthy students then attend subsidized (free in Brazil) elite public or publicly funded universities. These options are out of reach for most families in the Brazilian and Chilean middle class.

In his recently published memoir, *O Soma e o Resto: Um Olhar sobre a Vida Apos 80 Anos* (The Sum and the Rest: A Glimpse of Life After 80 Years), Fernando Henrique Cardoso, Brazil's former president, discusses the basic paradox of new economic prosperity: as people become better-off, they are often less happy and more demanding because they expect improved services. Rising affluence has turned more

Brazilians and Chileans into taxpayers, which increases pressure on the government to provide better public services and to meet citizens' demands. Political scientist Samuel Huntington argued in his 1968 book, *Political Order in Changing Societies*, that in societies that experience rapid progress quickly, citizens' demand for quality public services grows at a faster rate than the government's capacity to satisfy the expectations. This helps explain why rather than celebrate the tangible educational and social progress, middle-class Brazilians and Chileans take to the streets to demand more rapid change.

While the demonstrations in Brazil and Chile will eventually subside, their roots will surely remain a societal force. Newly empowered middle-class citizens will continue to engage, until leaders are able to propel society forward at a faster rate and the schools are ranked among the top performers rather than just the top improvers.

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