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## WORLD NEWS

## Economic Time Bomb: U.S. Teens Are Among the Worst at Math



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Fifteen-year-olds in the U.S. rank near the bottom of industrialized countries in math skills, ahead of only Portugal, Mexico and three other nations, according to a new international comparison that economists say is bad news for long-term economic growth.

Two of the study's most unsettling findings: The percentage of top-achieving math students in the nation is about half that of other industrialized countries, and the gap between scores of whites and minority groups -- who will make up an increasing share of the labor force in coming decades -- is enormous.

The U.S. ranked 24th among 29 countries that are members of the Organization for Economic Cooperation and Development, which sponsored the study. Using the OECD's adjusted average score of 500 points, the U.S. scored 483 -- 61 points behind top-scoring Finland and 51 points behind Japan. In a wider group that also included 10 nonmembers, many of them developing nations, the U.S. tied Latvia for 27th place. The bad news is likely to be repeated next week with the expected release of another international math comparison. The U.S. scored near the bottom of that survey, the Trends in International Math and Science Survey, or Timss, when it was conducted four years ago.

The OECD study, called the Program for International Student Assessment, or PISA, also looked at reading and science skills, where U.S. students scored slightly higher than in math, and at general problem-solving skills, where they scored close to the bottom. In science, U.S. youngsters scored 491 points; in reading, they scored 495 and in problem-solving, they scored 477, all using a 500-point average.

### Country Quiz

Average math scores\* of some OECD countries:

Finland	544	Germany	503
Korea	542	Slovak Republic	498
Japan	534	Poland	490
Canada	532	Spain	485
Australia	524	<b>U.S.</b>	<b>483</b>
Iceland	515	Italy	466
France	511	Mexico	385

The study devoted most of its analysis, though, to the math test, which asked youngsters to apply what they'd learned in class and which should particularly interest employers. A uniform test was administered last year to students around the world, with OECD monitors ensuring it wasn't selectively given to high performers. The OECD undertook a similar study three years ago concentrating on reading. In both test years, U.S. youngsters scored slightly above the average in

reading. In science, U.S. youngsters scored at the average in 2000 but eight points below it last year.

In the test given last year, most of the teenagers were in ninth and 10th grade. Their poor showing is expected to provide fodder for President Bush, who wants to include high schoolers in his No Child Left Behind education program. That idea is likely to face stiff opposition from some members of Congress and many state legislators, who oppose any further expansion of the federal government's role in education.

But the PISA study holds such potentially bad news for the U.S. economy that Mr. Bush might find it provides him with plenty of ammunition. The study suggests that there aren't nearly as many bright kids in U.S. schools as there are in other countries -- which could undermine U.S. dominance in technology-related fields. On average, about 4% of kids who took the test scored at the top of a six-point scale; in the U.S., only 2% scored at the top.

The study also indicated that huge numbers of U.S. students can barely do math, meaning the U.S. lacks the advantage of a generally well-educated population, which also can spur growth. One-quarter of the U.S. 15-year-olds scored at either the bottom rung or, worse, scored so low that they didn't even make that level. White and Asian youngsters in the U.S. scored above the international average, but Hispanics averaged 443 on the exam and blacks scored 417.

Those generally low-scoring groups, because of population trends, are becoming an increasing share of the labor market. "It's their productivity that will determine economic growth and whether my generation gets Social Security," says Harvard University economist Richard Murnane.

Eric Hanushek, a Stanford University economist, estimates that trailing other OECD countries on education measures may reduce U.S. economic growth by as much as a half percentage point a year. That drag will become increasingly apparent, he said, as other countries dismantle regulatory obstacles and alter tax laws that put them at a disadvantage. "It's a big deal, it really is," he said of the OECD math study.

The study comes as math scores on the SAT and ACT college-entrance exams are up slightly, and math scores for fourth- and eighth-graders were up on the federal government's National Assessment of Educational Progress last year. The gains tend to convince policy makers that math education is heading in the right direction. But Tom Loveless, a Brookings Institution education researcher, says U.S. scores are improving because the tests are too easy. In a report last month, he found that eighth-graders aren't tested on fractions and percentages, for example.

And even as entrance-exam scores improve, 17% of students at public four-year colleges currently take remedial math courses before they begin work on their degree. That means colleges are filling in the education holes left by U.S. high schools. "We've made up for weak high schools with better colleges, and we may be able to continue to play that out," says Mr. Murnane. "But maybe not."

Already, U.S. employers rely heavily on foreign applicants to fill high-tech jobs. But immigration restrictions and improving economies at home have recently made the U.S. a less-desirable place for high-skilled foreigners to work.

U.S. education officials offered few explanations for the poor U.S. showing. But Eugene Hickok,

the outgoing deputy secretary of education, said poor teacher training may be high among the reasons. And teaching's low status discourages math graduates from going into the field.

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