

## Education in East Asia – *by the numbers*

Breaking down the region’s strong performance on the PISA 2012 exam

Secondary school students in East Asia continue to outperform their peers in other regions of the world and the gap appears to be growing, according to the latest results of an international standardised test. The Programme for International Student Achievement (PISA) exam, [released](#) earlier this month by the OECD<sup>1</sup>, show that the top six scores globally all belong to countries and economies located in East Asia. This is an improvement from 2009, when “only” five of the top eight scores came from the Far East.

### Top scores on the PISA 2012 exam

Region	Mathematics	Reading	Science
Shanghai	613	570	580
Singapore	573	542	551
Hong Kong	561	545	555
South Korea	554	536	538
Japan	536	538	547
Taiwan	560	523	523
OECD average	494	496	501

Source: OECD

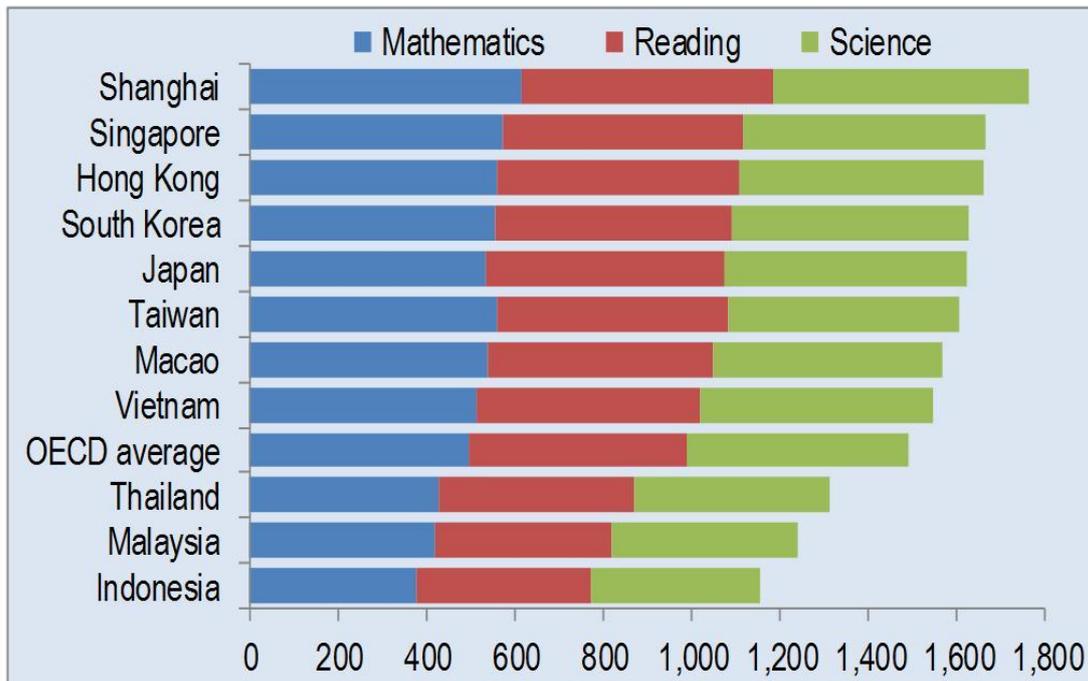
The PISA exam assesses the capabilities of more than half a million 15-year-old students across 65 participating countries in three broad subject areas: mathematics, reading and science. All told, eight countries/economies in East Asia achieved total scores higher than the OECD average, with only three countries – all located in Southeast Asia – falling short of this standard.

Among East Asian countries and economies which participated in the last PISA exam in 2009, only Indonesia recorded a net decline in its 2012 score, while Thailand, Taiwan and Singapore, Japan and Shanghai all increased their total scores by more than 10 points since 2009.

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<sup>1</sup> OECD, Programme for International Student Assessment, “PISA 2012 Results in Focus”

### PISA 2012 scores in East Asia



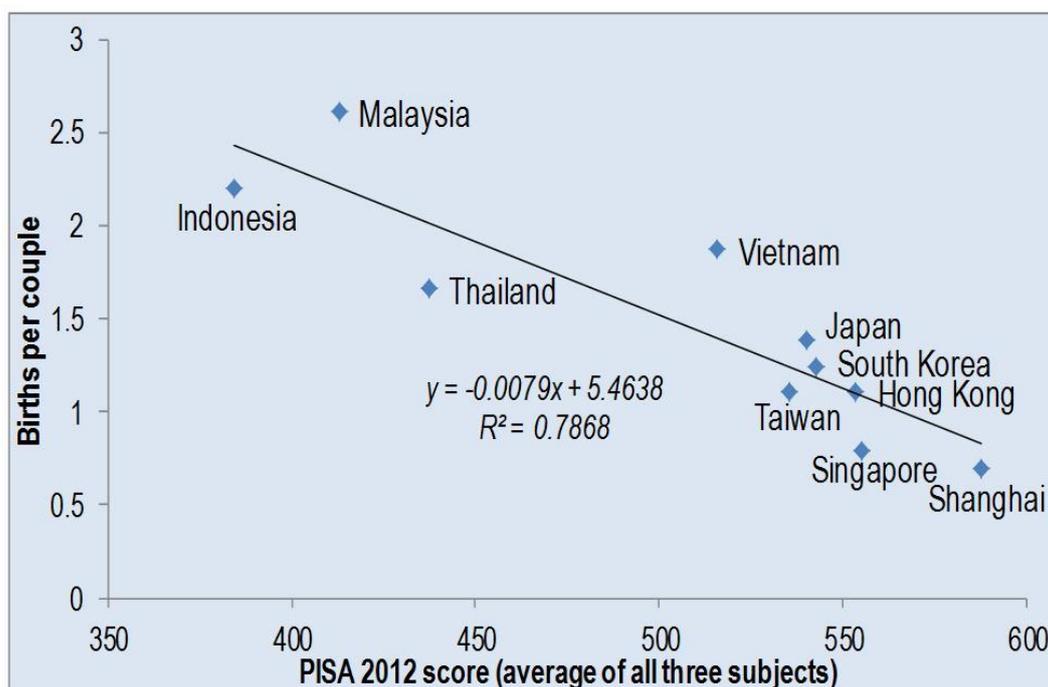
Source: OECD

Much [media attention](#) has been paid to the latest results, particularly the [sterling performance](#) of Shanghai's students, who again topped the charts in all three subjects by a sizeable margin. At the same time, sceptics have [pointed out](#) that Shanghai's scores are hardly representative of China as a whole, where more than half of eligible students fail to finish secondary school. What's more, while Shanghai is the wealthiest major city in China, it forbids children of migrant workers – who have moved to Shanghai from other regions of China – to enrol in the city's secondary schools, thus removing them from the pool of students participating in the PISA exam. Even when accounting for Shanghai's inflated scores, however, the latest results show strong and improving academic performance across the East Asia region.

On the other hand, these high levels of educational achievement have come at great expense, both for governments and households in East Asia, resulting in [downward pressure](#) on birth rates in all of the top-scoring countries and economies. As education standards increase in East Asia and parents respond by enrolling their children in expensive private academies and tutors to supplement their education, the costs of child rearing are also on the rise, leading to smaller family sizes.

Fewer births per woman mean greater educational resources are concentrated on each child, but a shrinking labour force in the future will slow economic vitality, putting even greater burdens on today's students to one day support an aging population.

## Rising PISA scores have coincided with falling birth rates in East Asia



Source: OECD, CIA World Factbook (2013); note: birth rate data for Shanghai based on academic [estimates](#)<sup>2</sup>

While many [columnists](#) and policy makers will point to the latest PISA results as an indication of rising competitiveness in East Asia and a concomitant decline in Western countries, low birth rates throughout the East Asia region also mean that many of these countries/economies will be forced to import workers in the future. This will naturally impact their overall human capital stock and should drive greater competition in East Asia to attract and retain internationally mobile students.

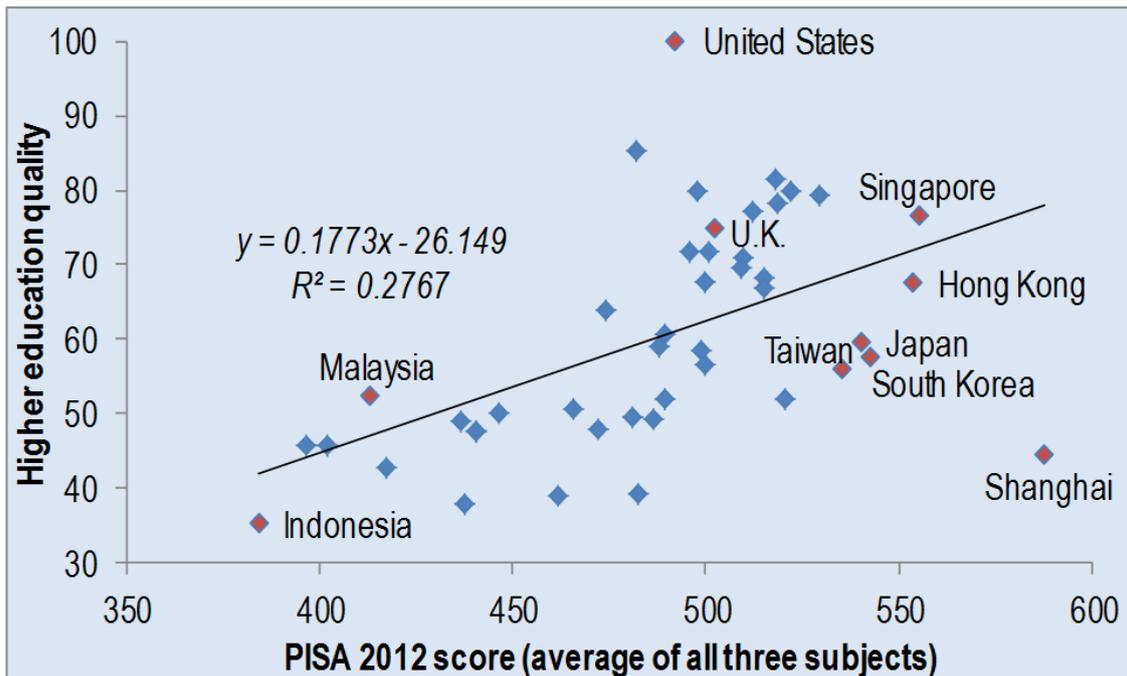
Somewhat surprisingly, there is little to no correlation between the performance of countries and economies on the PISA exam and the quality of their domestic higher education sectors. The U.S. and U.K. higher education systems, for example, are ranked among the very [best in the world](#)<sup>3</sup>, but their secondary school students generally perform poorly on the PISA exam; meanwhile, the quality of China's higher education sector lags far behind developed country levels, but students in Shanghai achieved scores nearly 20 per cent higher than their American counterparts on the latest PISA exam.

This disparity between student performance and education provision is what drives international mobility, particularly at tertiary levels, and helps explain why the U.S. and U.K. remain the world's largest host destinations for international students, and China the world's largest source.

<sup>2</sup> [http://www.china.org.cn/china/2012-04/27/content\\_25253726.htm](http://www.china.org.cn/china/2012-04/27/content_25253726.htm)

<sup>3</sup> U21 Ranking of National Higher Education Systems, 2013

## Smarter secondary school students, underperforming tertiary sectors in East Asia



Source: OECD, U21 Ranking of National HE Systems; HE data for Shanghai based on China's national score.

So what lessons can UK institutions draw from the PISA 2012 results? For one thing, that strong academic performance across East Asia is driving up demand for high quality higher education – whether at home or abroad. It is not a coincidence that the countries and economies which score highest on the PISA exam also send students overseas at above-average rates; UK institutions will continue to benefit from this influx of talented and motivated international students so long as this gap in perceptions exists between the quality of higher education provision in the UK and in East Asia.

Yet, if this quality gap begins to shrink, it is not difficult to imagine a future in which East Asia's students seek alternate education options closer to home. Malaysia and Singapore already have designs on becoming regional education hubs, and China is not too far behind. In this sense, the PISA results speak less to the global competitiveness of secondary school students than to the increasingly global competition among education institutions to recruit these students.

*This article was written by Jeremy Chan, British Council Head of Research and Consultancy (East Asia). Specialising in the economics of education, Jeremy works with a team of analysts throughout the East Asia region to provide external clients with the data, analysis and insights required to succeed in Asia's dynamic education sector.*