The World’s Smartest Countries

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The countries most likely to produce the next Google.

When Sergey Brin was 16 and his family had already been living in the United States for a decade, his father took him on a short trip back to Russia. It was 1990 and the Soviet Union was collapsing. By the second day of the **trip**, the teenager had seen enough to grasp what his life could have been. Taking his father aside, the future co-founder of Google told him in earnest: “Thank you for taking us all out of Russia.”

Although Russia has since rebounded, young Brin won the citizenship lottery, having been raised in the U.S. where he had access to great schooling and an environment to nurture his brain. As a child, he received a Montessori education, known for cultivating creativity. Later he went on to study at Stanford University where he met Larry Page and together they would go on to found one of the most valuable brands in the world.

Brin’s story illustrates how – given the proper environment – education and creativity can give rise to transformative innovation in the global knowledge economy. His sharp mind would have excelled anywhere, but it was the intellectual and entrepreneurial environment of Stanford that enabled Brin’s full talent to blossom.

Building on these parameters, the Intelligence Capital Index (ICI) was created to measure which nations are most likely to foster the big ideas of tomorrow. In that sense, the ICI can be thought of as a ranking of the world's smartest countries – with a twist.

In contrast to alternative measures of human capital and talent, the ICI has several distinguishing features:

1. It considers education outcomes both in terms of quantity and quality, while emphasizing quality.
2. It measures cognitive skills at different stages of the human life cycle, again with an emphasis on top (elite) performance.
3. It includes migration as an important external channel for countries to acquire and develop human capital.

The smart winners

The **U.S.** comes out on top. Indeed, it is the only country that gets an overall A+ on the ICI. Its dominant position is a result of its exceptional performance in terms of quality of education (at the elite level). It is home to a majority of the world's leading institutions of higher learning and has earned an outsized number of Nobel prizes and Fields medals.

In second place, the **United Kingdom** performs extremely well for both the quality of education and elite cognitive skills. With a score nearly identical to that of U.K., **Germany** places third, with strong showings for quality of education. It also ranks well for creativity and openness to foreign talent.

Australia places fourth owing to its top scores for elite cognitive skills and openness to immigration. Ranking fifth, **Singapore** is also well known for its high scores on standardised tests (e.g. PISA) and its ability to attract top foreign talent. Its performance is outstanding given that some ICI indicators (e.g. the number of top 500 universities) explicitly favour big countries (as large countries are better able to create clusters of excellence).

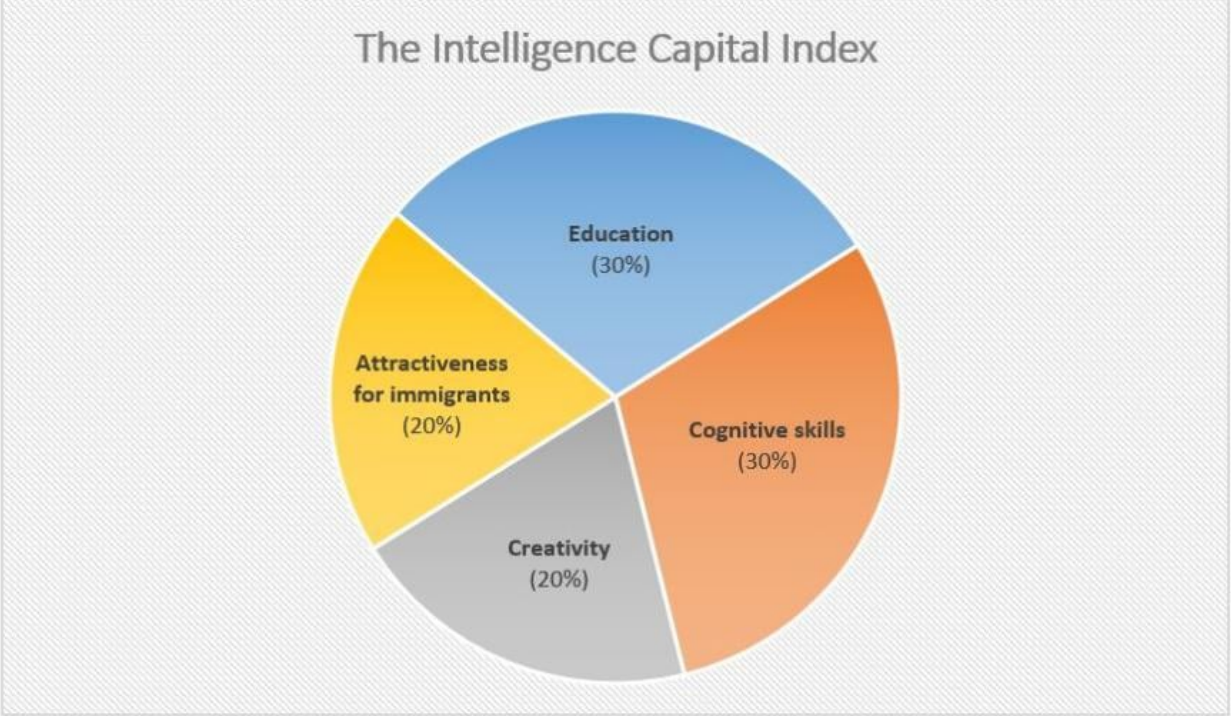
Sweden, **Switzerland**, **Canada**, **Finland** and **Denmark** round out the top 10 smartest countries, with typically high scores on the aspects of creativity and attractiveness for immigrants.

The table below shows the top 10 countries according to the ICI. The score and letter grade are computed based on the countries' global ranks for each of the ICI's underlying four aspects.

RANK	SCORE	GRADE	COUNTRY	EDUCATION (30%)		COGNITIVE SKILLS (30%)		CREATIVITY (20%)	ATTRACT (20%)
				QUANTITY	QUALITY	AVERAGE	ELITE		
1	74.88	A+	USA	1	1	35	24	3	7
2	64.19	A	UK	22	2	8	3	16	11
3	64.18	A	Germany	19	3	12	10	7	9
4	63.96	A	Australia	2	15	7	1	17	4
5	63.60	A	Singapore	15	52	2	2	12	2
6	61.58	A	Sweden	21	6	36	14	1	10
7	61.57	A	Switzerland	27	5	22	20	6	3
8	61.15	A	Canada	12	7	19	5	18	5
9	60.45	A	Finland	14	23	15	9	2	19
10	60.25	A	Denmark	5	9	21	15	9	12

The ICI assessed 128 countries. The full rankings and methodology can be found **here**.

How the ICI is built



Under the education aspect, indicators measuring quality, such as a country's number of global top 500 universities, are given twice the weight compared to indicators that measure quantity, such as education enrolment ratios.

Similarly, under the cognitive skills aspect, double the weight is given to indicators measuring elite performance (e.g. the 95th percentile scores on

standardised tests such as PISA, or the share of GMAT scores above 700) compared to average performance (e.g. the mean scores on such tests).

Why this insistence on education quality and elite skills indicators? Because the people who will go on to become the next Sergey Brin, Mark Zuckerberg or Jeff Bezos are not middle-of-the-pack students. Rather they are drawn from the right tail of the distribution of talent. Moreover, measures of quantity of education are meaningless without adjusting for quality. To take the most obvious example, a degree from an unknown university simply doesn't provide the same nurturing as one from Oxford or Princeton.

Creativity should be part and parcel of any measure of human capital. Rote learning and memorisation are fast losing value in an era increasingly relying on computers and robots. Indeed, creativity is what separates humans from robots – it is the key that unlocks the power of education. For the purpose of the ICI, creativity is assessed using the Global Creativity Index and R&D expenditures as a share of GDP.

Last but not least, the attractiveness and openness to foreign talent aspect is key to a country's stock of "smarts". Cities such as New York, London, Paris and Singapore are magnets for bright and ambitious people. Even in the absence of a good pipeline of domestic talent, these cities, and thus their respective countries, create fertile conditions for boundary-pushing knowledge and innovation.

Location still matters

If you are an employer, the ICI can be used as a tool in guiding where to look for or where to base talent/staff that will give your company the cutting-edge ideas you need to succeed in the knowledge economy.

As humans have a tendency to push themselves harder around peers who challenge them, students and working professionals hoping to change the world (or simply grow their own human potential) may look at the ICI as a favoured-destination guide. While it is often said that talent can be based anywhere these days thanks to modern telecommunications, **location** still deeply matters – in fact, its importance has actually increased.

Wall Street, Hollywood, and Silicon Valley are geographic clusters of excellence that have grown in prominence along with the internet. Likewise, although the educational material taught at Ivy League schools is not much

different than at less-competitive institutions, the attractiveness of an elite education has similarly jumped. The urban theorist Jane Jacobs opined that clusters allow for greater interaction and chance encounters of like-minded people holding different pieces of the puzzle.

Education for all

Policymakers may draw insights from their own country's scorecard details. Although the ICI emphasises the role of geniuses in generating society's innovations, these elite performers function within the parameters of the national infrastructure. That is, it is necessary to raise the bar for society as a whole while simultaneously harnessing the capabilities of the Einsteins. Take India, ranked 66, as an example of a country that needs to balance the capabilities of its masses and its elites. As **The Economist** wrote, "India may be famous for its elite doctors and engineers, but half of its nine-year-olds cannot do a sum as simple as eight plus nine." This gap creates a brain drain, as the elite finds too little support at home in a largely under-educated society.

Of course, a country must also raise its creativity quotient (an important fertiliser being **diversity**) and remain open to foreign talent. In this sense, global political movements limiting migration (e.g. Brexit) may impede the ability of countries to take advantage of the global talent pool. For instance, if the U.S. had closed its borders to the Brin family when they immigrated in the 1970s, the U.S. – and the world – would have missed out on Google and possibly even the development of Silicon Valley. In that regard, French President Emmanuel Macron's invitation to the world's scientists to come to France (ICI rank 16) is a step in the right direction for its ascendency as a hub for smart people.

Might these political developments lead future generations to search the internet in French one day?

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