Where are the innovation skills?

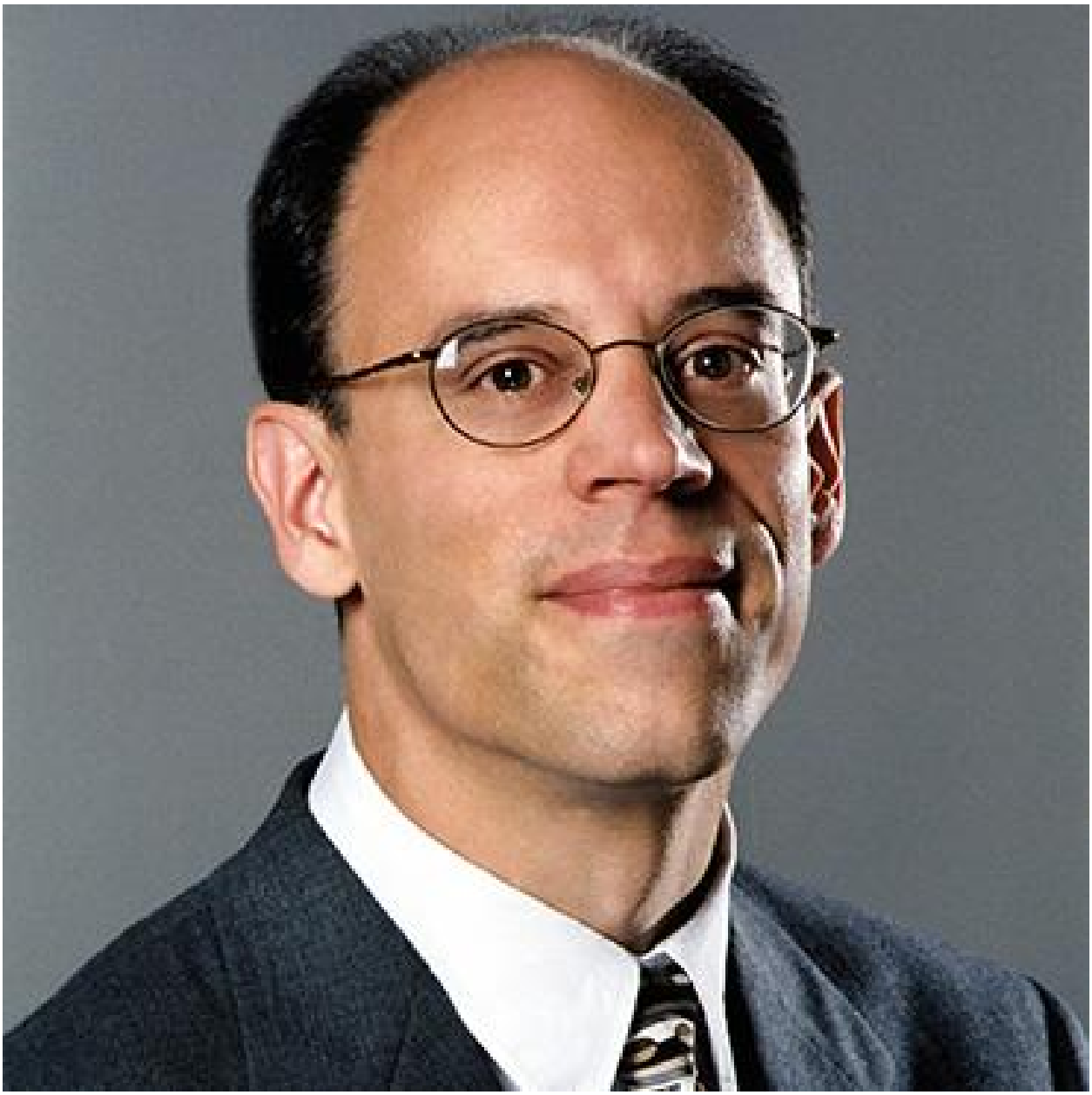
By Stuart Pallister

A study into critical innovation and knowledge economy skills in Europe and Asia by INSEAD's eLab has found there are striking differences between the regions.

According to its data, Asia came out of the global financial crisis early and, says eLab Executive Director Bruno Lanvin, as the region has been posting strong economic growth, it has also been developing the skills it will need to be competitive. In Europe, however, many countries are seen as being 'at risk' of losing ground in the skills race.

"We see leaders like Singapore that are securing their position," Lanvin told INSEAD Knowledge on the sidelines of the school's Leadership Summit Asia. "They are indeed investing and are continuing to invest heavily in skills and therefore keeping ahead." However, not all are doing so well. "Others who have been leaders like Korea are actually losing ground on the scale of skills."

Last year, the INSEAD eLab's study into innovation skills in Europe (see related article) showed that the EU was facing some difficulties and urgent attention would be needed if it were to benefit from technological innovation and investment.

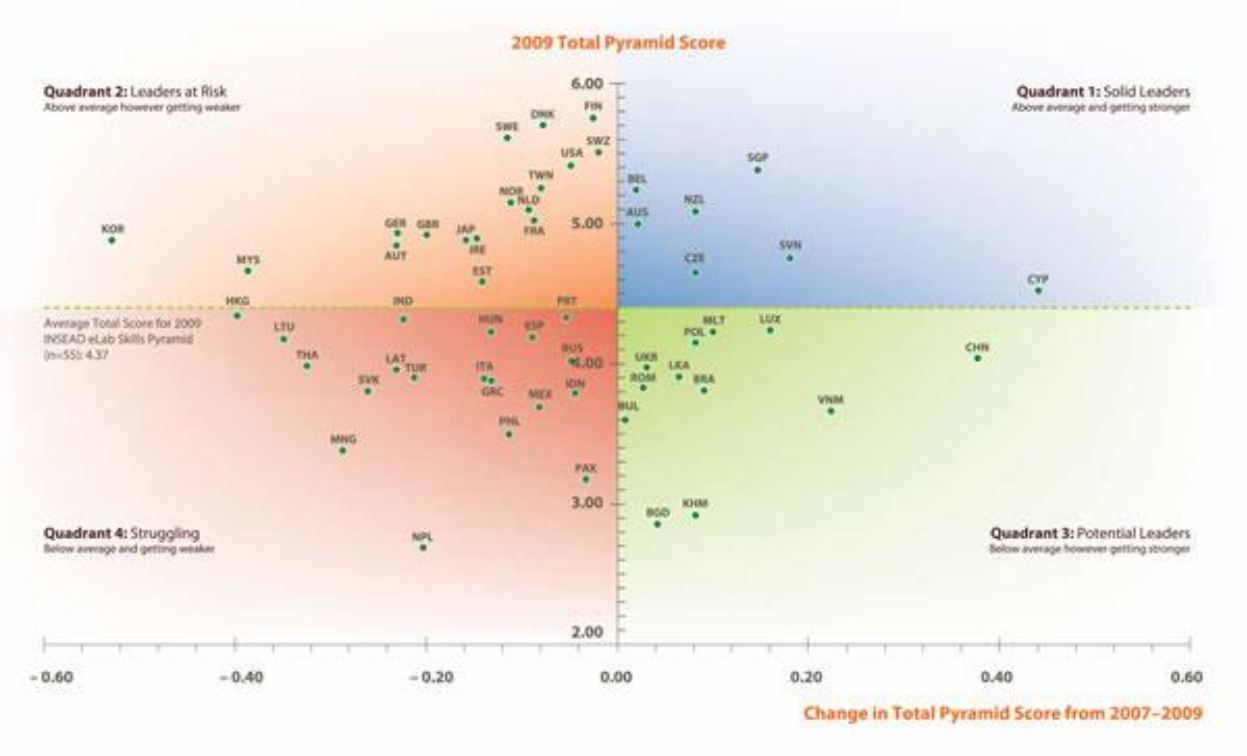


Based on its skills pyramid (see diagram) and three years of data, the eLab team updated the scores for some 55 countries: the 27 member countries of the European Union, 20 countries from the Asia-Pacific region, and eight other countries which compete with EU and Asia.
In addition, it also examined which countries had improved their scores over the past three years when the financial crisis was at its height, and those which have seen their scores weaken in that period.

“Singapore is an excellent example of a country that continues to invest in all three levels of skills: basic literacy, occupational skills and global knowledge skills”, says Nils Olaya Fonstad, Associate Director of INSEAD’s

eLab.

The eLab report identifies four types of countries (see chart below): ‘solid leaders’ (countries with high scores for skills which kept improving); ‘leaders at risk’ (countries that scored above average but whose scores have declined over the past three years); ‘potential leaders’ (countries that are still below average but who are getting stronger); and countries which are struggling.



Solid leaders include Singapore, Australia and New Zealand in the Asia-Pacific region, and the Czech Republic and Cyprus in Europe. As for countries at risk of losing their leading positions, these include South Korea, Taiwan, Japan in Asia, as well as Finland, Sweden, Germany, France, the Netherlands, the UK and Ireland in Europe.

Among the potential leaders are China, Vietnam and Sri Lanka in Asia, and Luxemburg, Poland and Romania in Europe.

The initial study came about in response to a request from the IT sector, as Lanvin points out: “Some large companies came to INSEAD and said ‘we want to invest in Europe, but we don't find enough people who would be programmers, engineers, scientists. What can be done about it? Should we expect to face the same situation in 10 years from now? Are governments going to take specific measures, or should we the private sector start getting

our act together and churn out more of these skills internally?’”

The INSEAD research centre began investigating the issue and found it didn’t make sense to consider IT skills in isolation – hence the pyramid, Lanvin says, which also takes into account basic literacy as well as key knowledge skills which are “required for innovation, and not just technological and IT innovation, just to produce the innovative mindsets that economies will need to compete in this century.”

“Increasingly, what we've seen over the last couple of decades, is that infrastructure, like telecommunication infrastructure and connectivity, is key”, says Lanvin. “At the same time, he adds, without the related skills, infrastructure in itself would not bring about the right business environment”.

“It has often been said, for instance, that, in the 1960s, countries like Korea and Ghana had about the same income per capita. A few decades later, the multiplier was between eight and 10 to the advantage of Korea. And people tend to focus on broadband, saying ‘yes, this is a country that has developed its IT sector’, forgetting that indeed the skills and education component has been absolutely key for Korea to take advantage of this massive investment.”

This is why it’s now a cause for concern that, according to eLab’s data, skills in Korea are deteriorating because, as Lanvin says, the authorities there “know that it's a primary condition for creating the right environment for investment and growth.”

Another good example of the dynamics involved is India, which is seen as struggling (albeit a borderline leader at risk). Fonstad points out that for decades it has been investing in the development of skills to attract foreign investment to sectors such as ICT.

“Interestingly now, they've been so successful that the demand for those type of skills and even more sophisticated skills far exceeds the supply”, says Fonstad. Consequently India now realises that it has to invest more in skills.

“So both the example of Korea and India highlight that it actually is quite an investment to initiate and create attractive conditions for foreign direct investment, but it's also a challenge to maintain that investment in skills, because the skills requirements are constantly evolving. And it requires a

partnership between industry, between academia and between governments in order to maintain an understanding of the future demand and to maintain the supply of those new skills."

China is often regarded as the factory of the world, but Beijing is trying to steer the country up the value chain and so China is moving some lower-end processes out to countries like Vietnam.

"This regional dynamics is a critical element that we will see more of in the years to come. But it's clear that some countries may have the critical mass to regenerate skills by themselves. Others will have to rely on dynamics which will include also economic dynamics in terms of where the investment is going, how they get production to be combined in their own regions."

"What is one of the striking elements in our analysis is that in the world, we were able to identify only three countries, that have grown on all three tiers of the skills pyramid. And the three countries are Singapore, China, and Vietnam in Asia. Another example is Cyprus in Europe, but it is a rather specific example due to the convergence of EU policies", says Fonstad.

"But if you look at what China, Vietnam and Singapore represent in Asia, we have three totally different kinds of environment. Singapore is an established leader, which is consolidating its position. Vietnam is the up-and-coming new kid on the block with spectacular rates of growth over the last few years. And China is also investing massively in skills, because they look at the longer-term competitiveness of their economy", adds Lanvin.

The eLab study provides action plans for three main stakeholder groups: academia, government and industry. These include making teaching a prestigious profession, developing curricula to help build occupational and knowledge economy skills, getting academia and business to work together, and leveraging foreign investment to build competencies.

Governments, businesses and universities cannot "tackle these skills issues on their own", says Fonstad. "They each have a role and they each have overlapping roles in this."

"Vietnam is an excellent example (of this collaboration). They've invested in skills and now they've attracted huge foreign direct investment, such as Intel whose largest manufacturing plant in Asia is now in Vietnam. However Intel has had to invest heavily in collaboration with the government and with universities both in Vietnam and the United States. All of these folks are

working together to build the skills in Vietnam to sustain these investments."

So investment in education is key? "Definitely, but it also points at the quality of investment, not just the quantity of investment necessary," says Lanvin. "One of the elements of our analysis for Europe which we would very much like to extend to Asia very soon based on this first report, has been the identification of what we call best practices."

"Finland, for instance, has been the key source of such practices in Europe. And one of the examples we looked at in detail is the example of Aalto University, whereby the Finnish public authorities with the support of private companies, decided to bring together their best business school, their best engineering school and their best design school and merge them into one single entity called Aalto, which has now started to produce people who have a major and two minors. So they are not just business-oriented people or technicians or artists. They combine all three. And this is one of the best practices we found to actually produce innovators."

"What we've found -- and I think there's consensus around this -- is that diversity is a key element of the top tier of the knowledge skills we've identified. Clearly INSEAD is a good example of how to build multicultural education across different campuses, time zones and areas of the world, which have helped make it a top business school in the world, but this is spreading to other areas. When innovation is the key word, diversity is a key ingredient."

INSEAD's eLab now plans to extend its study into critical innovation skills to Latin America and other parts of the world, "because each of these regions offer their own types of success stories and critical success factors", says Fonstad. Meanwhile, he adds, "there are lots of lessons in the Asia-Pacific region that Europe, the US, other parts of the world could learn from."

For the full INSEAD eLabs report 'Economic Tigers: Sustaining the Roar', click **here**.

The INSEAD Leadership Summit Asia was held on November 12.

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