



## Closing the Digital Divide: Connectivity is just the start

**It's no longer about having the link or the hardware or the infrastructure. It's about what you do with it all**

Despite global advances in technological infrastructure, countries without the skills and the regulatory environment to leverage technology are being left behind, according to the 12th Global Information Technology Report (GITR) "Growth and Jobs in a Hyperconnected World".

The 12th annual report is produced by INSEAD and the World Economic Forum, with sponsorship from Booz & Company. This year, the report shows that developed economies - particularly the Nordic nations and the Asian Tigers of Singapore, Taiwan (China), the Republic of Korea, and Hong Kong SAR - are becoming more adept at finding innovative ways to turn ICT investment into tangible benefits.

The report suggests that when it comes to harnessing ICT investment to improve competitiveness, development, employment and well-being, there is a "profound" and growing gap between Northern and Southern European nations and an even greater disadvantage between advanced and developing economies.

"The digital divide is indeed a very stubborn phenomenon," **Bruno Lanvin**, Executive Director of the INSEAD European Competitiveness Initiative (IECI) and the report's co-editor, told INSEAD Knowledge. "We don't see it so much in

infrastructure and equipment - there the gap is diminishing rather than broadening; emerging countries are investing more and getting more out of their infrastructure. What is increasing is the [divide in countries'] ability to translate ICT into genuine content into something that makes sense for businesses, especially the small and medium-sized enterprises which are prevalent in emerging countries and which enables them to create jobs and improve their standard of living."

### 'Magic threshold'

For the first time, Finland has ranked at the top of the GITR's Networked Readiness Index (NRI) which assesses 144 countries based on their:

- ICT infrastructure; cost of access and the presence of skills to ensure optimal use
- Business' and government's efforts to increase the use of ICT
- Business and innovation environment, including the political and regulatory network
- Broader economic and social impacts accruing from ICT

Singapore remained 2<sup>nd</sup> overall followed by Sweden (3<sup>rd</sup>) and Netherlands (4<sup>th</sup>).

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The remaining top 10 places went (in order) to Norway, Switzerland, the United Kingdom, Denmark, the United States and Taiwan (China).

Brazil, China, India and Russia (the BRIC nations) which in recent years have been charging ahead in their ability to translate ICT into economic and social impact appear to have hit a wall, stagnating at around the number 50 mark, notes Lanvin suggesting there is a magic “threshold” beyond which return on investment increases significantly. “This analysis shows matching investment in ICT with investment in skills and innovation can help economies cross this threshold.”

Coming in number nine, the United States received its worst ranking since the GITR’s first release in 2001 index when it topped the list. Report authors note this fall is not a sign the nation is losing its innovative capacity - the country still retains the strengths which contributed to making it the world’s innovation powerhouse for decades – but reflects a change in the index methodology and composition as well as the rapid advances made by other economies.

Also noticeable is the deep divide that exists within regions. Foremost is Asia, home to some of the most digitised and innovative economies and the least connected. Unlike Europe, in Asia governments typically lead the digital effort.

### **Big Data’s Even Bigger Impact**

*Mining this mound of information could uncover ways of putting people back to work.*

Unemployment is hitting crisis levels. Latest figures show 200 million people globally are now looking for work and another 1.5 billion are only marginally employed. With the economic crisis and huge sovereign debt restricting government spending and traditional methods such as retraining and deregulation having limited impact, the situation is urgent.

The solution according to Mikael Hagström and Ian Manocha from the SAS Institute Inc, lies in the immense volume of untouched information gathering dust in databases around the world.

“Huge untapped opportunities exist in big data, but most commercial organisations in most sectors just don’t know how to handle, identify and exploit these opportunities,” Hagström and Manocha say in their study [The Big Opportunity for Inclusive Growth](#) included in the 2013 Global Information Technology Report.

Leading corporations such as Google and Wal-Mart have had the ability to analyse and extract relevant

information from their massive databases for some time but at enormous cost. Now a significant decline in the price of technology is giving regular companies the opportunity to unlock this hidden information. All they need is the know-how.

### **Exponential Job Growth**

Information technology analysts, Gartner Inc estimate that by 2015, big data will directly create 4.4 million IT jobs globally and, with the multiplier effect, each of these jobs will create employment for three more people outside the IT industry.

Moreover, Hagström and Manocha say research indicates companies injecting big data and analytics into their operations show productivity rates and profitability between five and six percent higher than their peers. A recent Centre for Economics and Business Research study identified 216 billion pounds worth of potential benefits to the U.K. alone through gains in efficiency, innovation and creation driven by unlocking insights into big data.

Its benefits can be reaped across sectors from retail, utilities and airlines to manufacturing and health care. Already companies are using it to recalculate risk portfolios, analyse stock movements, understand customers, detect fraudulent behaviour and detect new social trends.

“This could be the tip of the iceberg,” say Hagström and Manocha. “The overall impact may be far more difficult to quantify because big data could be a game-changer with long-term effects that go way beyond improving the efficiency or creativity of how we do things today – in other words, big data could change the very nature of economic activity itself.”

### **European investment crucial**

The gap that exists in Europe, between the most advanced Nordic nations and the Southern and Eastern countries, is “alarming” despite the many efforts to create an internal digital market and improve the digital connectivity of converging countries. Low investment in telecommunications is putting at risk not only future consumer benefits but also the region’s overall competitiveness, McKinsey & Company noted in their paper [Re-establishing the European Union’s Competitiveness with the Next Wave of Investment in Telecommunications](#), included in the GITR. “Only bolder regulatory reform can release the scale of modernising investment in telecommunications that Europe needs today if it is to re-establish its competitiveness and enable future economic growth and consumer benefits.” Government can create incentives for investment with policies to reduce the number of operators; allow more pricing flexibility; restrict wholesale access and give operators more

spectrum in which to operate.

Elsewhere, huge disparities exist in the Middle East where Israel and some GCC countries have sharply improved their performance looking to make ICT a key national industry, while many North Africa and Levantine nations, particularly those undergoing social and political transition have fallen or stagnated. Progress in improving digital connectivity is also slow in Africa and Latin America.

### Job creation

Digitalisation added 6 million jobs and US\$193 billion to the global economy in 2011, says **Bahjat El-Darwiche**, partner at Booz & Company, a sponsor of the report, noting however that positive impacts were not felt across the board.

“[Digitalisation] creates and destroys jobs,” he adds. “Policy-makers wishing to accentuate the positive impact of digitalisation need to understand these different effects if they wish to act as digital market makers in their economies.”

**The report’s authors** says the GITR can provide policy-makers and companies with a useful tool for designing national strategies for increased networked readiness and for benchmarking their country’s performance.

The Global Information Technology Report uses a combination of data from publicly available sources and the results of the Executive Opinion Survey of more than 15,000 executives conducted by the WEF and partners.

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