China and India may gain in transnational R&D from this crisis

Gert Bruche

WITH some delay, the internationalization of business R&D is following the globalization of production.

Starting on a small scale during the 1970s and 1980s, the emergence of globally distributed R&D networks of multinational enterprises (MNEs) accelerated rapidly in the 1990s.

Until the end of the 1990s, the geography of (business) innovation was largely congruent with the triad of developed world regions: North America, Europe and Japan.

Then, around the turn of the century, two interrelated strategies led to the "iron cage of the triad" starting to open: a R&D FDI shift to the two main emerging economies of China and India, and the upward move of Indian and Chinese vendors and contract research organizations (CROs) from providing routine services to knowledge process and R&D offshoring.

By around 2001, the number of MNE R&D centers had only gradually grown to under 100 in each of the two countries from the days of Texas Instruments' early engagement in India in the mid-1980s and Motorola's pioneering R&D investments in China in the early 1990s.

The subsequent upsurge in MNE R&D centers in China and India calls to mind a take-off situation.

In a rather sudden shift, the number of MNE R&D centers in China rose more than tenfold to around 1,100 (representing 920 MNEs) by the end of 2008 and to 780 (670 MNEs) in India.

Causes of change

Why has there been such a sudden shift to China and India? There are a number of clearly discernible factors.

Toward the end of the 1990s, China had established itself as a global lead market and world manufacturing center in a number of high and medium tech industries.

While this implied a growing need for local asset exploiting R&D, greater competitive intensity also required increasingly new product development for the local market.

Compared to the primarily market and customer oriented R&D investments in China, the bulk of R&D offshoring to India is so far mainly asset seeking, designed to take advantage of India's large and growing low-cost intellectual infrastructure.

In India, especially US-based MNEs profited even more than in China from the large diaspora of highly qualified non-resident Indians in leading positions, and from return migration.

While after 2000 China and India have become the most favored R&D destinations of MNEs outside of the triad (with the exception of Israel, which does however not offer a sizable market), they are in competition with other emerging economies like Russia, Eastern Europe and Brazil for R&D FDI and R&D outsourcing contracts.

Although their combination of comparative advantages like market size, the large low-cost talent pool, English communication skills (India), very large highly qualified diasporas and reasonably developed R&D ecosystems is a difficult match for competing emerging markets, escalating wage cost and attrition of qualified R&D personnel recently seemed to endanger this position.

Seize the chance

The financial crisis can in this context be seen as a windfall helping to constrain escalating costs and providing the time and space for a restructuring and further advancement of the talent pools in both countries.

It remains to be seen how far the financial crisis will trigger changes in the ongoing R&D relocation plans of MNEs.

Strong companies that closely track their innovation drive, such as, for example, Bosch or Siemens in Germany, or Cisco and Microsoft in the US, as well as companies in less affected industries, eg, pharmaceuticals, may seize the chance to further enhance R&D efficiency and profit from a relaxation in the talent markets in China and India.

They may also prepare for even stronger positions after the crisis when China and India may still be the fastest growing markets in the world economy.

(The author is professor of international management at the Berlin School of Economics and Law. The views expressed are his own. The full version of this article can be found on the Website of the Vale Columbia Center on Sustainable International Investment.)

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Toxic stress warps kids' brains for life

Jack P. Shonkoff

WHAT if political leaders around the world could improve school achievement and job readiness, reduce crime, and extend healthy life expectancy — but the results would not be seen until after they left public office?

Would they have the political courage to act now in the best long-term interest of their people?

Thanks to a remarkable convergence of new scientific knowledge about the developing brain, the human genome, and the effects of early experiences on later learning, behavior, and health, these are not hypothetical questions.

Scientists can now credibly say that the early childhood years — from birth to age five — lay the foundation for later economic productivity, responsible citizenship, and a lifetime of sound physical and mental health.

Deep poverty, abuse, neglect, and exposure to violence in early childhood can all lead to toxic stress.

In contrast to normal or tolerable stress, which can build resilience and properly calibrate a child's stress-response system, toxic stress is caused by extreme, prolonged adversity in the absence of a supportive network of adults to help the child adapt.

When it occurs, toxic stress can actually damage the architecture of the developing brain, leading to disrupted circuits and a weakened foundation for future learning and health.

The lasting, neurobiological effect on young children who experience toxic stress leads to a far greater likelihood of anti-social behavior, lower achievement in school and at work, and poor physical and mental health — all of which society addresses at great cost.

Deep poverty is but one risk factor for toxic stress and its long-term consequences. The greatest harm comes from the cumulative burden of multiple risk factors, including neglect, abuse, parental substance abuse or mental illness, and exposure to violence.

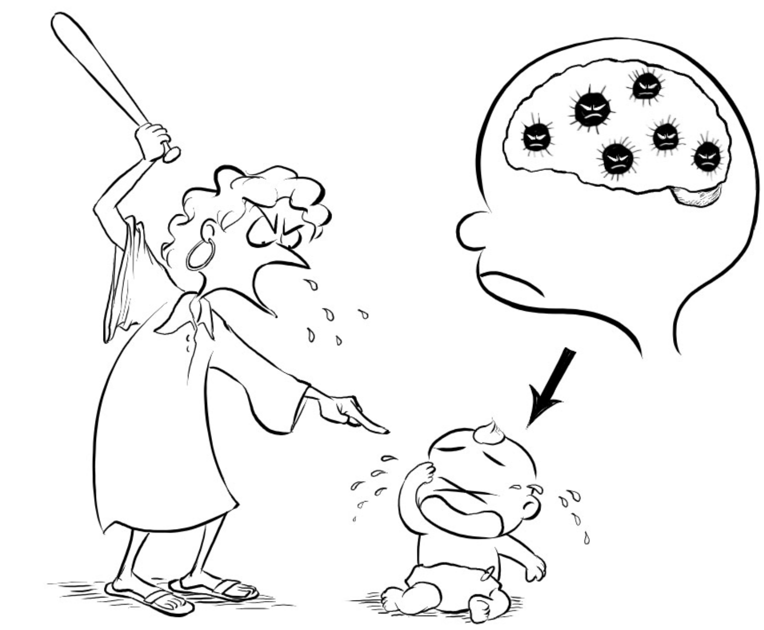

Illustration by Zhou Tao/Shanghai Daily

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Prolonged activation of the body's stress system during early development can damage the formation of the neural connections that comprise our brain architecture and set our stress-response system at a hair-trigger level.

We can thus comprehend why children born into such circumstances have more problems in school, are more likely to commit crimes, and are more prone to heart disease, diabetes, and a host of other illnesses later in life.

By addressing the circumstances that can produce toxic stress, local, national, and global leaders would improve not only the life prospects of their youngest citizens, but also outcomes for their societies.

Science points to three things that we can do to level the playing field:

1. Make basic medical services and early care and education available to all young children;
2. Provide greater financial support and rich learning experiences for young children living in poverty; and
3. Offer specialized services for young children experiencing toxic stress from difficult life circumstances.

The negative consequences of poverty and other forms of adversity are not inevitable. The gap between what we know and what we do is growing and increasingly unconscionable.

(The author is professor of child health and development and director of the Center on the Developing Child at Harvard University.

China's economy shows good signs

NONE of the recent economic numbers in China are shockingly good, but in many cases they either have exceeded expectations, or are better than in the preceding months.

While January and February remained generally weak, March data showed signs of growth, fueling talk of "green shoots" and a "V-shaped" recovery.

In the first quarter, China's GDP expanded 6.1 percent year-on-year, according to the National Bureau of Statistics (NBS). That was 0.7 percent lower than the 6.8 percent growth in the fourth quarter, and 4.5 percent less than the first quarter of 2008.

But recent data indicate the economy strengthened in March. One of the key numbers is the 28.6 percent year-on-year rise in fixed-asset investment in March, up from 26.5 percent in January and February, and from 23 percent in the fourth quarter last year.

Bank lending is robust, following a government move in late 2008 to raise limits on lending. Bank lending reached US$277 billion in March, setting a single-month record, and US$673 billion in the first quarter of the year.

Exports fell 17.1 percent in March compared with the previous March, but even that figure was an improvement from the 21.6 percent fall in January and February combined.

Other indicators, including total residential property sales and retail sales, are also showing signs of improvement. "Retail sales have been holding up well in general," writes Paul French, manager of Access Asia, a Shanghai-based market research company that specializes in retail analysis.

According to Access Asia, several factors are supporting retail: the fact that few Chinese consumers are burdened by debt, the limited number of white-collar lay-offs and in particular, the solid income growth during the past decade.

China's US$586 billion stimulus package, much of which is being poured into infrastructure, has drawn praise from both analysts and the business community.

Not everyone thinks that the curve is going up so definitively.

On April 7, Louis Kuijs, senior economist at the World Bank, said: "I personally think it's too early to start to see a sustained, rapid recovery in China very subdued ... We think that China needs more consumption-oriented fiscal measures, and we think China has room to move in that direction."

Stephen Green, head of China Research at Standard Chartered Bank, said: "(China's) Industries like transportation and equipment manufacturing are the main beneficiaries of government investment, whereas SMEs are on a footing that is still quite worrisome."

At some point, exports will have to pick up and the country will need to wean itself from the government's fiscal and monetary stimulus measures.