

Are Extreme Events Roadblocks to Growth?

By **Erwann Michel-Kerjan** - September 9, 2011

The past 18 months have illustrated our fragility to large-scale natural disasters at both extremes of the economic spectrum.

On the one hand, there is Haiti: the poorest country in the Americas with a GDP per capita (nominal) of about \$650. The total GDP of the country is at about \$6 billion, which ranks it the 134th economy in the world according to the World Bank. The country suffers from old and often poorly designed infrastructure (when it exists at all), lack of sanitation systems, fragile government leadership. The unemployment rate is massive and corruption is chronic.

This combination makes entrepreneurship and economic growth only a dream to most. Indeed, in OECD countries it takes an average of 16 days to open a business and 5 percent of the average income per capita to do it. In Haiti it takes more than 100 days and costs proportionally 40 times more (or about 200 percent of the average income per capita).

So when a 7.0 magnitude earthquake hit Haiti on January 12, 2010 and destroyed a substantial portion of Port-au-Prince, the losses were truly devastating. Nearly 300,000 were killed directly or indirectly (diseases like cholera spread in the aftermath of the disaster). This constitutes about 3 percent of the population -- think of Switzerland losing 235,000 of its people, the United States losing over 9 million, or 40 million deaths in China.

When the tragedy occurred, it received worldwide media coverage. The international community demonstrated depth empathy for the people for Haiti. Donors (from single individuals to countries and international organizations) pledged billions of dollars of aid. Many NGOs have done a splendid job at saving lives and improving living conditions on the ground. Several of these key actors were part of the World Economic Forum's Young Global Leaders (YGL) community.

Since the tragedy, the challenge has been for Haiti to re-start and maybe use this extreme event as an opportunity for building the foundations of a brighter future. Experience in other poor countries teaches us, however, that these catastrophes are often poverty traps. Routinely hit by disasters, emerging efforts to rebuild the country and sustain true value-creating businesses quickly fades. While we have seen positive actions taking place in Haiti since last year, progress should be measured not in years, but probably over a decade of work.

On the other end of the spectrum, there is Japan. This is one of the richest countries in the world with a GDP per capita (nominal) of about \$43,000. The national GDP is over \$5 trillion: Japan ranks 3rd in world economies, right after the United States and now, China. The country has a long experience with earthquakes and by many standards might be the most prepared one for such disasters. Until earlier this year the 1995 Kobe earthquake was considered to be the most devastating earthquake in recent history in terms of economic losses -- \$100 billion.

But on March 11, 2011, a massive 9.0 earthquake dissipated energy more than 100 times that of the 1995 quake. While the quake's epicenter was located several hundred miles east of Japan, the destruction and flooded areas resulting from the 10-story-high tsunami were truly large-scale, as most of us have seen on TV and some of us from the ground. And, as if a massive earthquake and major tsunami were not enough, the quake also triggered the Fukushima nuclear crisis. Three reactors at the Fukushima Daiichi nuclear power plant suffered meltdowns after the earthquake and resulting tsunami which swamped the plant. It destroyed the cooling systems that kept the three operating reactors from overheating, leading to the worst nuclear accident since Chernobyl.

It will take months to have precise estimates of the total direct (destruction) and indirect economic losses (nuclear threats, emergency relief, business interruption, stock decline, loss to tourism). According to my calculations, "3/11", as it is now called, might become the first trillion-dollar disaster in our history, or come close to it.

No question that this event will limit economic growth and Japanese competitiveness in the short-term. The media have now left and the longer term growth path will be determined by the rebuilding strategy that the (new) government and businesses in Japan, along with investment groups outside of the country, will draw and implement in the coming months. A lot has to be done.

These are some of the lessons from a decade of disaster management and innovation in catastrophe financing I've tried to contribute to. The next decade, unfortunately, promises to be even more devastating because of increased population and concentration of assets in many hazard prone areas around the globe. Future disasters promise also to have much more ripple effect through a complex net of business, social and political inter-dependencies.

In recent years, more top government officials, senior management from multi-national corporations and international organizations have started to put these issues on their work agenda. The World Economic Forum has done so too through the "[Global Risks Report](#)" released every year in Davos since 2006 and by more recently launching the [Risk Response Network](#) with several of its partners, including our team at Wharton.

These issues will also be discussed at the 2011 Summer Davos, which starts next week in Dalian, China with 1,500 leaders attending. More have realized that extreme events can occur overnight and be serious impediments to sustainable growth. In our competitive world, only the most catastrophe-resilient countries and businesses will stay on top. Now, you are warned!

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