



## Can Demography be a Key Lever for Recovery after Natural Disasters?

by Francesca Sperotti

**Natural disasters have been prominent in human existence throughout the centuries but in recent times, the scale of intensity and scopes of these events have significantly increased.** As reported in the last *Annual Disaster Statistical Review*, despite a slight decrease in 2012 in the total number of natural disasters compared to the average observed from 2002 to 2011 (537 versus 394), these events still represent a global challenge for the high number of victims and economic damages they cause. In fact, according to the same source, in 2012, 124.5 million people became victims worldwide and economic damages were about \$ 157 billion.

It is widely acknowledged that the scale of intensity and scope of natural disasters have expanded as a consequence of **population growth** and **higher rates of urbanization**. Which conjointly with the **higher production and consumption patterns** have altered **environment and climate variables**.

In 2013, the total world population was estimated to be 7,162 billion people, which majority of was living in the less developed regions (5,909 billion people), and in particular in the Asia and the Pacific (3,785 billion people) (UNFPA, *The State of World Population*, 2013). The world population is projected to increase by almost one billion people within the next twelve years. It is projected to be reaching 8.1 billion in 2025, to further increase to 9.6 billion in 2050 and 10.9 billion by 2100. Considering the annual rate of population change, which is particularly high in the Sub-Saharan Africa (2.6%) and Asia and the Pacific (1.9%). While it is sub minimal in the more developed regions (0.3%) – **the growth is expected to be particularly significant in the under developed countries** of the world. These figures are indeed projected to double in size from 898 million inhabitants in 2013 to 1.8 billion in 2050 and to 2.9 billion in 2100 (UNFPA, *World Population Prospects: The 2012 Revision, Key Findings and Advance Tables*, Working Paper No. ESA/P/WP.227, 2013).

**This demographic growth is of particular concern if urbanization trends are also taken into consideration.** In fact, the urban areas of the world are expected to absorb all the population growth expected over the next forty years while at the same time drawing in some of the rural population. More precisely, the urban population is projected to increase by 1.4 billion in Asia, by 0.9 billion in Africa, by 0.2 billion in Latin America and the Caribbean (UNFA, *World Urbanization Prospects: The 2011 Revision*, Working Paper No. ESA/P/224, 2012). In other words, **the urban phenomenon will concentrate on the developing countries**. Therefore, as a consequence of increasing production, consumption, energy, and living patterns, the future of human activity will globally increase the production of greenhouse gases. Particularly in the developing countries, which will result in the altering of the environment, climate variables, and a higher intensity and frequency of extreme events. **It is not a coincidence that the geographical area mostly affected by natural**

**disasters in 2012 has the highest percentage of global disaster victims – namely Asia – is also the one having the largest share of the world population with increasing population growth rates and urbanization trends.** In addition to this, Asia is in the region of the country that has **weak environmental legislations**, and specializes in capital-intensive dirty goods. That further contributes to the causes of climate change and result in the occurrence of natural disasters.

The dramatic point is that the limits of growth and its effects however are observed globally on the economies and populations. As made public by the economist Nicholas Stern in his [review](#) and more recently by President Barack Obama, who proclaimed the “Emancipation from Fossil Fuels”, climate change, by treating the future food and water supply and causing weather events, represents the greatest challenge facing populations, economies and nations. This has been also highlighted by the [European Union](#), which stated that «natural hazards and impacts of climate change [...] hamper contributions to overall objectives of the Europe 2020 Strategy of smart, sustainable and inclusive growth».

It is in this framework that the demography plays a crucial role for the future. **It is not just one of the main causes of natural events but also one of the most affected elements.** Natural disasters, indeed do not just cause **deaths**, but also increases migration from affected areas to other regions of the world: two phenomena that have the potential of significantly **changing the composition of the national populations – and therefore workforce – and thus the scenarios where industries will operate.** In fact, part of the literature has already highlighted that **the recovery of an affected area hit by a natural disaster is strongly connected with the composition of its population (and workforce).** However, the experiences might suggest that this is true when the **population is respondent, in terms of numbers, age, and skills to those sectors driving the recovery.**

This is the case for **New Orleans**, who was especially hit hard by **Hurricane Katrina**. After which the population started to decline - the population living in this Parish decreased from 484,674 people (April 2000) to about 230,172 (July 2006). Corresponding to about half of the total population (GREATER NEW ORLEANS COMMUNITY DATA CENTER, *Facts for Features: Hurricane Katrina Impact*, 2013) – and lost its portion of African Americans residents. However, since the hurricane, the city of New Orleans was able to regain population at a faster rate than initially predicted by attracting new immigrants, who were mainly Latinos. Latinos have played a crucial role for the **construction sector**. This is time drove the recovery of the city’s economy based on tourism and educational services. Today, most of the jobs are in fact concentrated in trade, transportation and utilities; education and health services; leisure and hospitality. Considering this and the low unemployment rate of the city recently observed (4.5%, which is 2.2% lower that the national average of 6.7%) (U.S. DEPARTMENT OF LABOR, BUREAU OF LABOR STATISTIC, [Economy at a Glance](#)), it can be affirmed that the economy of the city is doing well. Which in turn, is triggering the population growth in the area. In despite of the hurricane and the percentage loss registered around 2005, **New Orleans today remains one the 10 fastest-growing areas in the U.S.**

This is opposite in the case of the Tohoku **region**, that was hit by the **Great East Japanese Earthquake**. This natural disaster further accelerated the aging phenomenon and the decline of the population (by 259 thousand people). Concerns of a decrease in economic growth then became more alarming. Newly created sectors by the local and nationally economy, left the remaining population with the difficulties of finding employment. The Tohoku region indeed was one of the most important Japanese centres for suppliers of materials and parts of the manufacturing industry, agricultural and fishery. The direct damage suffered by the manufacturing enterprises and the radiation pollution that affected lands and seas, caused a sharp fall in these sectors business performance and employment. Fishery and agriculture, in particular are disappearing as a

consequence of the radiation's effects. Nowadays **manufacturing industries** are recovering by offering job opportunities in areas such as seafood processing, and in the construction industry, such as civil engineering work. The **imbalance** continues between the needs of those offering jobs and those of job seekers. The general impression is that this region is losing its previous traditional economic activity as well as its workforce.

Human capital can determine the pace of reconstruction more than physical capital. However, to make this happen, a **populations' size, age structure and skills composition need to be respondent to those sectors that are likely to regain their vitality quickly after a natural disaster**. Therefore, **the demographic composition of the workforce is an important factor to be taken into consideration before natural disasters occur because it can play a key role for recovery**. This is valid if we were to also consider that **certain determinants always occur** in the event of natural disasters and resulting in **some changes already being predictable**. For instance, certain sectors are always greatly affected, such as tourism, hospitality, retail trade, fishery and agriculture activities. In the short-term, major employment opportunities always arise in the construction sector. The new employment opportunities that emerge during the rebuilding phase are not always suited to the skills of those who have been displaced. On the account of demography, it should always be considered and included in the prevention system before the occurrence of natural disasters.

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