Measuring the state of Cities

Not everything that counts can be counted.

Cities are the home of prosperity, yet they are complex by nature - they are melting pots of culture and ideas and for those tasked with the responsibility of governing them, it is no easy feat to gather information that truly represents their status and allows them to measure progress against peer cities. Designing and enacting policies that will fairly affect all residents relies on the reporting of accurate information, but with so many aspects of society to indicate a city’s health, where do you begin to measure and evaluate? Our partner, the Global Urban Observatory (GUO) team at UN HABITAT, brought this problem to us seeking volunteer analytics help.

The Global Urban Observatory (GUO) team at UN HABITAT is responsible for the data collection and dissemination of information for the State of World Cities Report. They measure and report on numerous indicators by city, such as income inequality, poverty rates, clean water access, healthcare access, school enrollments, women in the workforce, etc., to evaluate a city and its population. These reports are used to compute the City Prosperity Index in the State of World Cities Report for 100 cities globally helping to provide an innovative approach to urban environments and assisting decision makers to design clear policy interventions that are based on facts.

GUO was interested in adding a new KPI for reporting on city health; they needed to define a measure of human vulnerability that could be added to an existing City Prosperity Index. Human vulnerability for the purposes of this project effort focused on the following:

- The degree to which a population can absorb an event or series of events with minimal physical, mental, and emotional harm. Event(s) in this context include both shocks (sudden and often unpredictable) and stresses (continuous, cumulative, and often predictable).

- World Health Organization data on life expectancy can be used to calibrate a model to estimate a human vulnerability index.

After extensive analysis for generating how human vulnerability would be literally defined, our volunteers researched, modeled, and developed a city-based Human Vulnerability Index (HVI) that could be added as a new dimension to the City Prosperity Index. They determined that the HVI could be divided into three primary components: susceptibility, lack of coping capacity, and lack of adaptability capacity with each comprised of many subcomponents.

Result of the Project

The three primary components are important because they help to give insight into how a population would use its own resources to manage emergencies (in short-term and long-term), how they would be affected by harm/damage of a potential hazard and how they would adapt to this change in environment. Furthermore, this information helps a city compare itself against other cities, and identify areas where additional resources would have the greatest impact in reducing the vulnerability of their citizens. The PBA volunteers then finalized and published their model in Microsoft Excel and populated it with selected data fields provided by the Humanitarian Data Exchange (HDX). The model will help enable the Global Urban Observatory (GUO) team at UN HABITAT to accurately calculate a city-based Human-Vulnerability Index for use in their current and future City Prosperity Index publications.