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18 November 2021

Disaster Response and Economic Instability in Haiti (Presenting: 12/2/21)

United Nations Secretary-General Kofi Annan argued in 2005 that "A world of interdependence cannot be safe or just unless people everywhere are freed from want and fear and are able to live in dignity… the rights of the poor are as fundamental as those of the rich, and a broad understanding of them is as important to the security of the developed world as it is to that of the developing world" (3). Since the year 2010, citizens across Haiti have indeed been trapped in a world of fear. On January 12th 2010, a magnitude 7.0 earthquake struck the Republic of Haiti, with an epicenter located approximately 25 km south and west of the capital city of Port-au-Prince (4). Not only did it take the lives of 200,000 and cost almost $11 billion in reparations (close to 100% of the nation's gross domestic product), but the natural disaster resulted in the displacement and economic devastation of thousands (5).

In addition to physically measuring earthquakes in Haiti, data scientists have been able to measure population dispersion and mobility through innovative techniques: phone usage. Using mobile operator geospatial data and the data science method of clustering, Flowminder, in collaboration with Digicel Haiti, have been able to track population density and mobility after the 2021 earthquake in Haiti (1). Through aggregated sampling and calculating the number of subscribers who made or received a call per cell tower cluster, data scientists essentially were able to track citizens and make logical decisions in order to direct response efforts (1).

Two specific studies in relation to phone clustering are relevant, the first focusing on immediate details, and the second delving into more long-term realizations. Results from the first study show a clear trend: geographical illustrations show the redistribution of Digicel Haiti subscribers from the centre of Les Cayes and Camp Perrin to other locations across the Nation (1). As the article conveys, these results could be caused partially by residents leaving, but also partly by visitors not coming into the city center as much as before (1). In a fragile nation like Haiti, a sharp decrease in citizen influx, tourism, and economic flow can cause serious long-term damage.

In relation to the second article, the peer reviewed journal begins by addressing one of the main problems at hand in Haiti - rapid urbanisation with the absence of economic growth has led to increasing socioeconomic challenges (2). After the major earthquakes in 2010 and 2021, population displacement occurred rapidly across the country. With almost 6 million Haitians living in urban areas, as the article explained, cities now host over 0.5 million more inhabitants than rural areas (2). The rapid, unplanned urbanisation in Haiti has generated a series of urban mobility challenges which have contributed to job market fragmentation and a decrease in quality of life (2).

Data on population and job distributions, and on home-work commuting patterns in major urban centres of Haiti is scarce, with the last census not being taken until 2003 (2). The data scientists, using satellite imagery, saw the center of Port-au-Prince searching up to 60,000 people per square kilometer during the evening, a contrast of at least 5,000-10,000 people from before (2). Another neighborhood amongst many others, Canaan, saw densities of between 10,000 and 15,000 people during the sampled time period, a significantly larger quantity prior than the earthquakes (2). Through paragraphs of carefully sampled and analyzed data, the trend of Haitian cities is clear: when tragedy strikes and the economic situation worsens, people are forced to flee to cities where job opportunities are more likely.

Works Cited

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