

Dissemination Report

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Power Outage Longevity during Natural Disasters in Relation to Income

Background

During September of 2018 the East Coast was hit with Hurricane Florence with Wilmington, NC being in the direct path of it. Wilmington is a very diverse community when speaking in terms of income with a large gap between the high and the poor according to the U.S. Census. Our UNCW senior capstone class has partnered with Support the Port to assist in research on community actions during the hurricane. There have been speculations that the higher incomes receive their power on first. This paper will discuss the power outages in New Hanover County as a whole and then we will take a look into the zip codes of New Hanover County. Based on the zip codes there will be a border around it and information based on the average income within that zip code. We then will look at the duration of power outage in the specific zip codes and include that in with the information of income. We compared the zip code's average income to find there was no solid correlation of higher income zip codes retrieving power quicker. Finally, we have included the map that we can view all the information and see if there is any correlation between the income and the duration of power outage in each zip code of New Hanover County.

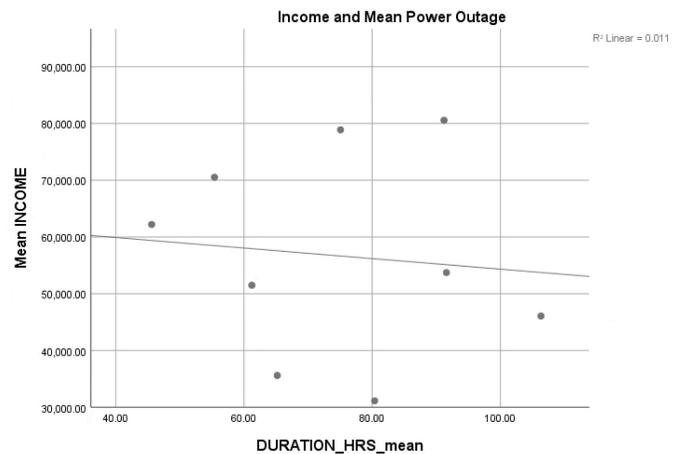
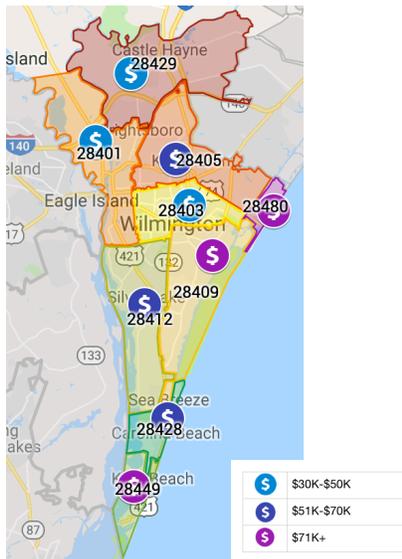
Methods

My research question is "Were lower income communities without power longer than higher income communities?" We received information from the North Carolina Department of Public Safety on the zip code level that gives us the duration hours for

each reported outage. Power outage is measured by the power outage in duration hours of being out and the income is measured by the average income of the 9 zip codes in New Hanover County. Our limitations to using information provided by a secondary source is that the dataset they collected which was missing zip code 28411.

Results

The results were concluded from a descriptive analysis along with a scatter plot chart of the duration hours mean on the X axis and the average Income per zip code was the Y axis. The scatter plot chart showed that there was no solid correlation between income and the duration of the power outages. There was standard deviation of 19.6 for each zip code. From viewing the charts and the data analysis there is no solid correlation between income and when power was restored.



Discussion/Implications

There was a large gap between the minimum and maximum of each zip code and was one standard deviation away from the mean for each zip code. Which means that there is a variety of duration hours within each zip code. As a class we held a conversation with Steven Still the director of Emergency Operation Center, EOC. In this

discussion he mentioned that there were areas of top priorities to restore power such as the EOC, 911 Control Center, and hospitals but there is no zip code that receives power quicker than others based on income.

References

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Household

Income#data-map/county-subdivision

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