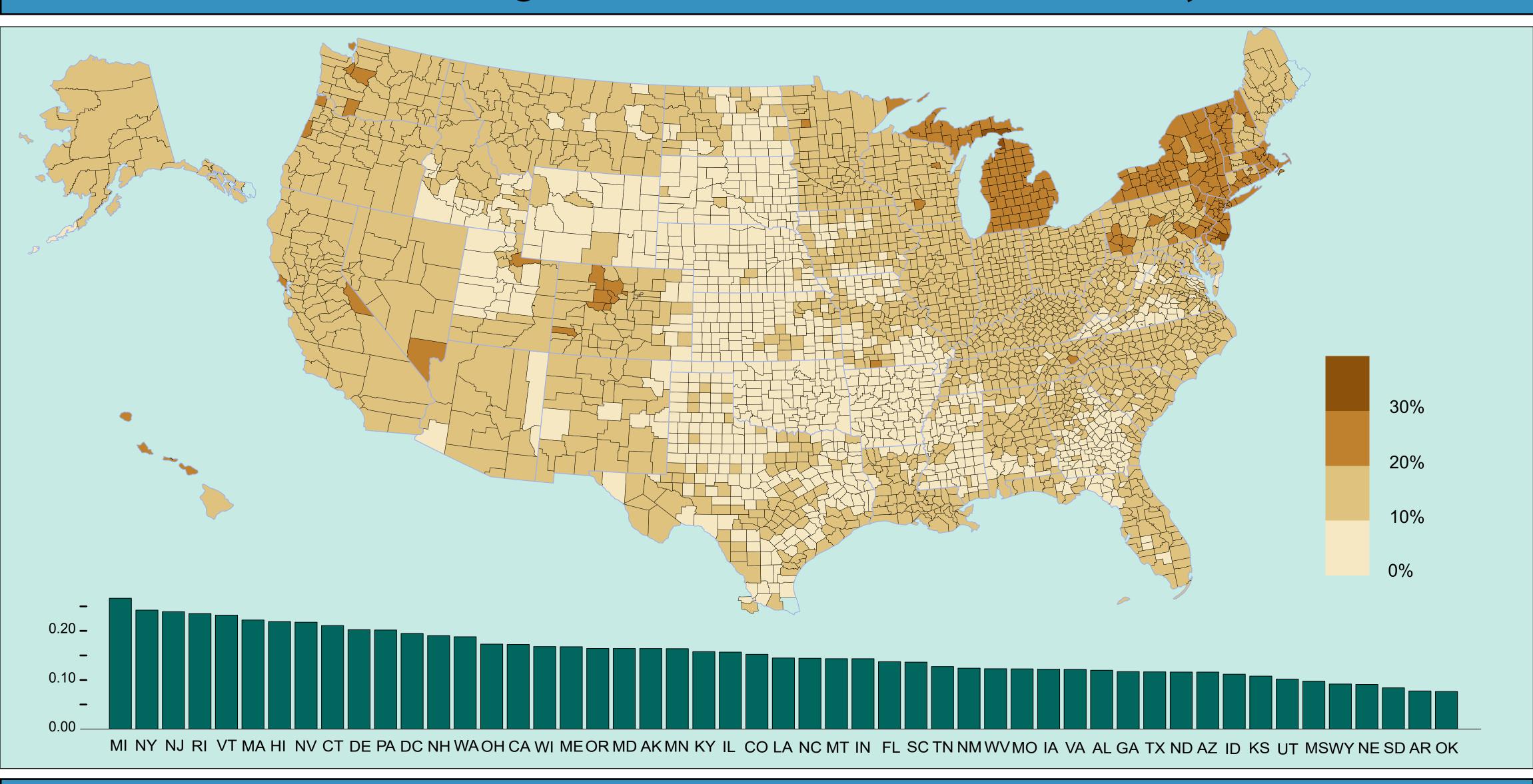
COVID-19: Low-Income Job Impacts

IST 719 Wiesner, Schramke, Chen

Job loss due to Covid-19 is the largest increase in unemployment since the great depression. We seek to understand the geographic (regional and state) and sector specific low-income (\$40,000 or less annual income) job loss.

Intended to assist policy makers at the national, state, and county levels develop strategies to provide assistance to most number of people or the greatest impacted populations. With the United States representing a broad spectrum of communities, a one-size fits all solution will not suffice and care must be taken to support the most vulnerable communities.

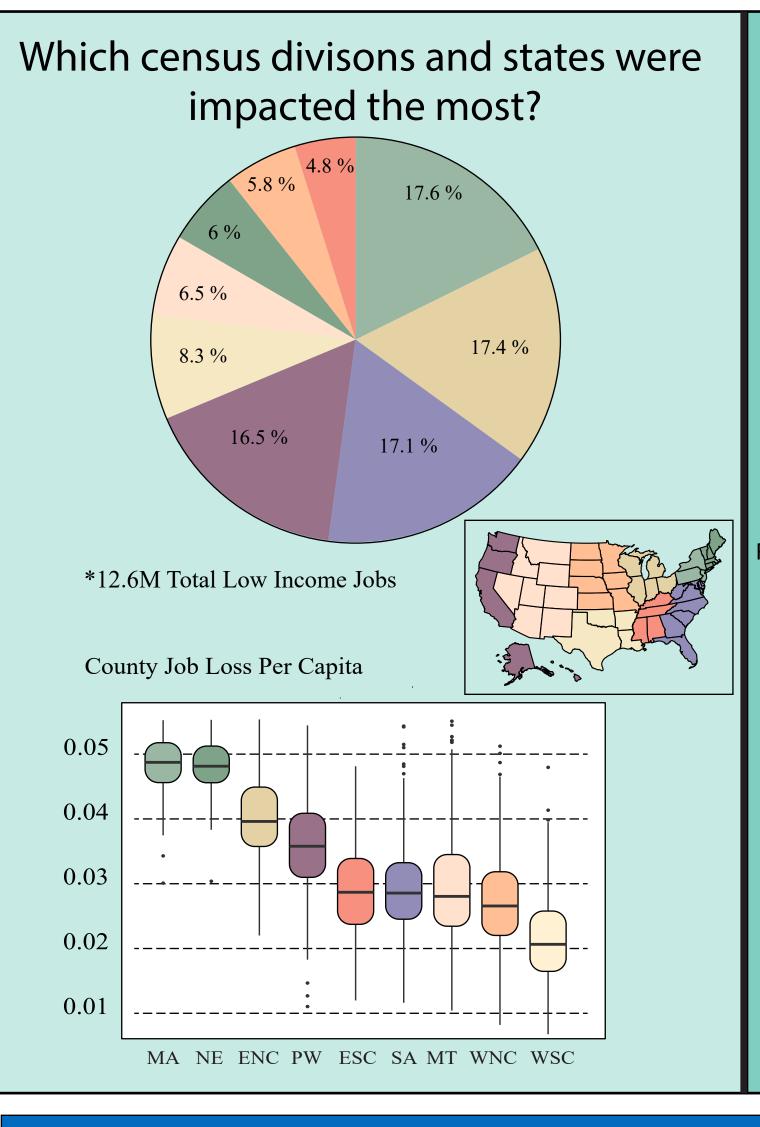
Percentage of Low Income Jobs Lost Per County

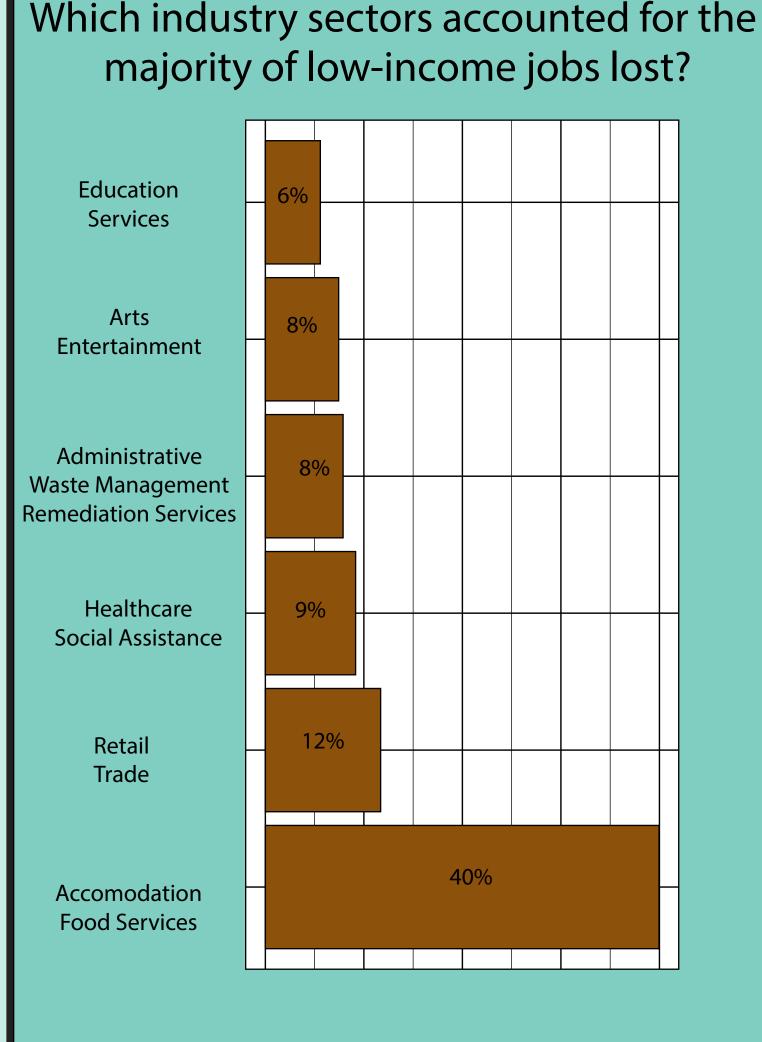


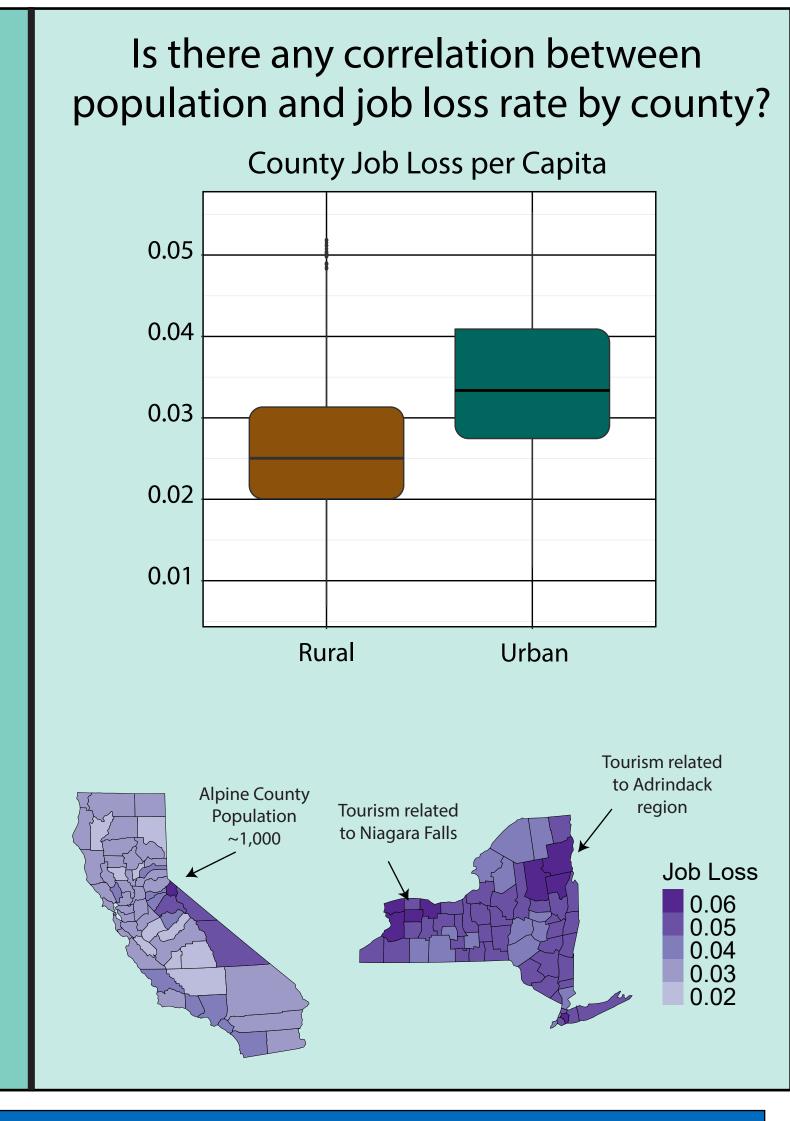
Job Loss by Division

Industry Job Loss

Rural - Urban Job







Data

The job loss data set contained 72,737 rows and 30 variables. The county resident population estimate data set contained 656,678 rows and 80 variables. The job loss data was summarized by county and combined with county resident population estimate data summarized by all age groups in 2018. Census division information were added to the dataset using the *usmap R* package.

Insight

Job loss due to Covid-19 did not impact all regions or industries within the US equally. ~80% of job loss was concentrated among 5 sectors. Our research demonstrates that the majority of urban counties, and Northeastern and New England counties were hit hardest by job loss. Although urban counties were hit harder, there are examples within many states of rural areas showing the largest job loss per capita as regions dependent on tourism were disproportionately affected.

Packages used: tidyr, ggplot2, ggpubr, usmap, RColorBrewer