



# Covid Effects on Retail Trade and Hospitality

Daniel Pruski



BUREAU OF BUSINESS RESEARCH

College of Business

## Motivation

Two industries that were said to be most impacted by COVID-19 were hospitality and retail trade. I wanted to see if the size of these two industries would have any relation to the total unemployment and are faced and see if restrictions on these industries had a relationship as well.

## Research Question

Does a more significant retail trade or hospitality industry result in larger employment loss from COVID, and do longer durations of restrictions have the same effect?

## Data

I used the Quarterly Census of Employment and Wages employment statistics from the Bureau of Labor Statistics and COVID restriction duration statistic for the Kaiser Family Foundation.

## Model

I took the employment change for 353 different Metropolitan Statistical Areas from March 2020 to June 2020. I ran a regression for the effect of the percentage of Hospitality and Trade for that MSA. I also included the duration of non-essential businesses and restaurants for the area's state, using it as regulatory variables.  
 $\Delta$  in employment =  $B_0 + B_1 * (\% \text{ in Hospitality}) + B_2 * (\% \text{ in Retail Trade}) + B_3 * (\text{Days essential business closed}) + B_4 * (\text{Days Restaurants were closed})$ .

## Results

Regression Statistics	
Multiple R	0.304
R Square	0.093
Adjusted R Square	0.082
Standard Error	0.055
Observations	353

	Coefficients	Standard Error	t Stat	P-value
Intercept	0.00380494	0.022	0.175	0.861
Hospitality %	-0.370	0.079	-4.671	0.000
Trade %	0.114	0.135	0.842	0.401
Non-Essential Limits	-0.0003	0.000	-1.175	0.241
Restaurant Limits	-0.0004	0.000	-2.355	0.019

## Finding and Discussion

There was a significant relationship between the strength of Hospitality and found that for each percentage point higher a Metro area's employment is focused in the industry, the unemployment from covid would increase by .37%.

While not significant, I did find a positive relationship with the strength of Retail Trade. This was unexpected and may be attributed to stores being deemed essential by states and communities. The durations of the restrictions were minimal and only significant for Restaurants Limits.

There are many other factors, such as other industries and population demographics, that could go into unemployment numbers that my model does not include.

## Contact Information

Daniel Pruski  
dpruski2@unl.edu  
469-343-7373