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Impact of Covid-19 on probability of being employed in restaurant industry

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Research question:

How big is an impact of rising Covid-19 infection rate in the local market on probability of staying employed in the restaurant industry?

Review of the literature:

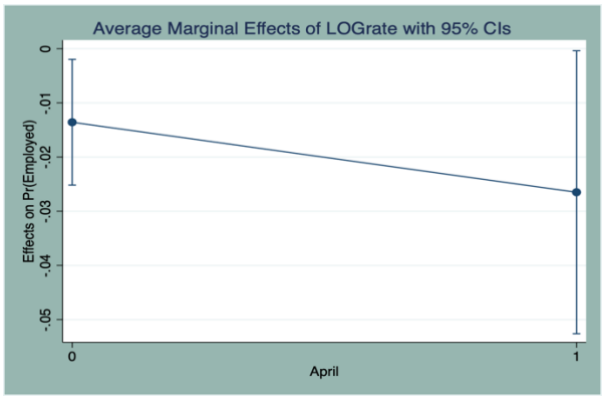
1. Yang, Hongbo and Xiang (2020) found that 1% increase in daily cases of COVID-19 results in 0.0556% decrease in daily restaurant demand. Effect was smaller for fast-food restaurants compared to full-service establishments (April 2020 results)

2.Accroding to Nhamo, Dube and Chikodzi (2020) discovered that by end of March 2020, 70% restaurants laid off their employees and reduced the number of working hours for the rest in USA.

3. Cho, Lee and Winters (2020) noted significant decrease in employment in restaurant industry around March and April of 2020.

$$\Pr(Y=1 \mid X)=\Phi(\beta_1 X_1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4)$$

- Y is dependent variable that explains employment with values: 0 = unemployed and 1= employed
- Independent (binary) variables include: X_1- Covid-19 infection rate; X_2- Age 16-24; X_3- Married; X_4- April



Change in significance of COVID-19 infection rate on prob. of employment; April= 0: February 2021, April= 1- April 2020

Results

Covid-19 Infection rate still has a significant effect on probability of being employed in restaurant industry in February of 2021. However, the effect is twice as small compared to the significance of April 2020 when the worldwide lockdown started.

VARIABLES April	Employed February 2021
Covid-19 Infection rate (LOG)	-0.0699** (0.0346)
Female	0.00819 (0.0624)
Black	-0.0906 (0.0972)
Married	0.200** (0.0848)
Age 16 to 24	0.203*** (0.0758)
Constant	0.780*** (0.134)
April	-0.961*** (0.139)
Observations	2147

Probit Results for February 2021 with April control variable

CONCLUSIONS

Covid-19 infection rate has significant effect on probability of staying employed in restaurants industry in February 2021. It had even bigger effect in April 2020 when most countries introduced a lockdown. Young adults in ages of 16 to 24 as well as individuals that are married seem to be more likely to stay employed in the industry. Results show a decrease in the significance of covid-19 infection rate on probability of employment, indicating that some of the strategies imposed by restaurants, helped to reduce the effect. The most common ones are offering delivery and serving take out only.