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The impact of remote workers on unemployment during the COVID pandemic

Nasir Ahmad
Cleveland State University

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The impact of remote workers on unemployment during the COVID pandemic

<p>Research Question:</p> <ul style="list-style-type: none"> • What is the impact of remote workers on the probability of being unemployed? 	<p>Model: $UE_{it} = \alpha_0 + \gamma_1 Remotework_i + \gamma_2 Race_i + \gamma_3 Gender_i + \gamma_4 Educ_i + \gamma_4 Age_i + u_i$</p> <ul style="list-style-type: none"> • The traditional standard of unemployment (UE) is first used then an unemployment measure based on inability to work to due to COVID-19 • UE equals 1 if individual is unemployed, UE equals 0 if otherwise • $Race$, $Gender$, $Education$, and Age are control variables that may affect an individual's probability of becoming unemployed • $Remotework$ is the variable of interest while u is the random error term 																																																																																																																																				
<p>Literature Review:</p> <ul style="list-style-type: none"> • Brynjolfsson & Horton found that between February and March of 2020, over one third of the labor force switched to remote work resulting in about half of American workers now working from home • Fairlie, Couch, & Xu find that unemployment rates rose faster for Latin-Americans than for Blacks or Whites in April 2020 • Gezici's regressions conclude that Black and Hispanic women still experience a significantly higher probability of losing their jobs, even when employed in industries with highly teleworkable jobs 	<div style="display: flex; justify-content: space-between;"> <div style="width: 48%;"> <p>Average Marginal Effects May19 Number of obs = 46,343</p> <p>Model VCE : OIM Expression : Pr(unemployed), predict() dy/dx w.r.t. : remotework black asian hispanic other_race female associates bachelors PhD</p> <table border="1"> <thead> <tr> <th></th> <th colspan="3">Delta-method</th> </tr> <tr> <th></th> <th>dy/dx</th> <th>Std. 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The <i>unemployed</i> dependent variable for Mav19 and Mav20 (two top graphs) were taken from the survey and numbered 39,332 and 39,490 individuals, respectively. The two years are nearly equal due to the fact that more people reported being retired from work in May19 and then more experienced workers reported being unemployed in May20. The <i>covidunemploy</i> dependent variable is used in May20 with 14,051 individuals reported being unable to work due to the COVID-19 pandemic. White people are used as the reference category for race and individuals with a high school diploma of less are used as for education. Average effect is described with standard error and significance noted.</p> </div> </div>		Delta-method				dy/dx	Std. Err.	Sig.	remotework	-0.048	0.004	***	black	0.023	0.002	***	asian	-0.005	0.004		hispanic	-0.003	0.002		other_race	0.016	0.005	***	female	0.002	0.002		associates	-0.004	0.003		bachelors	-0.006	0.002	***	PhD	-0.014	0.008	*		Delta-method				dy/dx	Std. Err.	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Results: The marginal effects results show remote workers to have a decreased probability of being unemployed by 4.8 percentage points in May19, however, they have an even lower likelihood of being unemployed at 22.6 percentage points one year later. When we use *covidunemploy*, the probability of remote workers being unemployed decreases by 30 percentage points! Still yet, there are winners and losers during the pandemic. We observe African-Americans in May20 to have an increased probability of being unemployed by 2.8 percentage points – compared to Whites. But when *covidunemploy* is taken into account, we see their probability of being unemployed is increased by only 1.6 percentage points. We also observe Hispanics to have insignificant results in May19 which means they did not experience any negative impact. However, in May20 we see Hispanics have an increased likelihood of being unemployed by 2.2 percentage points – compared to Whites which is in line with existing research. We encourage future research to examine the COVID-19 pandemic's impact on various socioeconomic classes in hopes of better understanding the triggers of unemployment.

