Geography-Only Wage Component: Construction and Triple-Difference Results

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1 Construction of the Geography Index

1. **Sample.** Use the precovid user panel and keep all observations with half-year identifier $yh < yh(2020, 1)$ (the entire pre-COVID window).

2. **Partial out firm, title, and time effects.** Estimate

$$\log w_{it} = \alpha_{f(i)} + \theta_{k(i)} + \tau_t + u_{it}$$

   with `reghdfe` absorbing firm (α), title (θ), and half-year (τ) fixed effects, and store the residuals $\hat{u}_{it}$.

3. **Extract geography-only wages.** Run `reghdfe resid_step1, absorb(w_geo_pre_twostep=msa_id)`; this stores the predicted geography component $\hat{\gamma}_m$ for each MSA.

4. **Freeze and merge.** Use the estimated $\hat{\gamma}_m$ to assign a time-invariant geography-only log wage, $w_{it}^{\text{geo}} = \hat{\gamma}_{m(i)}$, consistent with the log wage scale, dropping MSAs without pre-period support.

2 Triple-Difference Specification

Using the enriched panel, estimate the standard Remote × Post × Startup specification with w_{it}^{geo} (the geography-only log wage) as the outcome. Every regression absorbs user-by-firm and half-year fixed effects and clusters standard errors at the user level. The instrumental-variables specification instruments Remote × Post and Remote × Post × Startup with the usual teleworkability shifters.

3 Results

Table 1: OLS Triple-Difference Estimates (w_{it}^{geo})

	Coef. (s.e.)
Remote × Post	0.000 08 (0.00012)
Remote × Post × Startup	−0.000 23 (0.00019)
Post × Startup	0.000 28 (0.00016)
Pre-period mean	0.00002
Observations	224,621

Table 2: IV Triple-Difference Estimates (w_{it}^{geo})

	Coef. (s.e.)
Remote × Post	0.000 36 (0.00103)
Remote × Post × Startup	−0.001 38 (0.00121)
Post × Startup	0.001 20 (0.00086)
Pre-period mean	0.00002
Observations	224,621
Kleibergen–Paap rk Wald F	122.99