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Local variations in the labour market impact of COVID-19

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Starting at 12.30 PM

ESCoE ECONOMIC MEASUREMENT WEBINARS

Local variations in the labour market impact of COVID-19

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ESCoE Economic Measurement Webinars

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Research question

- What is the impact of pre-pandemic health of local labour markets on the ability of U and V to match during the Covid Crisis?
  - "Inefficient" labour market
    - High mismatch between U and V
    - Sustained higher separation rate, with high flow towards U or workers moving jobs filling in new created V
- Local labour markets
  - Regional divide
  - Rural-Urban divide

Motivation

- Understanding the nature of UK spatial disparities
- Levelling up white paper, executive summary, p.1 (Feb 2022) "... geographical inequality [...] is such a striking feature of the UK"
  - London and the South East
  - Coastal areas and urban towns
  - Often larger disparities within areas than between them
  - Disparities largely reflect the concentration of high skilled workers (Overman and Xu (2022))
  - Persistent but smaller disparities than 20 years ago

Contributions

- What geographical variation dominates in the difficulty to match V and U pre pandemic in local labour markets (α_a)?
  - Novel use of Adzuna data to characterises the efficiency of local labour markets
- Impact of it on the severity of the initial Covid shock and lasting effect of the crisis?
  - Using QLFS recall variables to allow for local changes

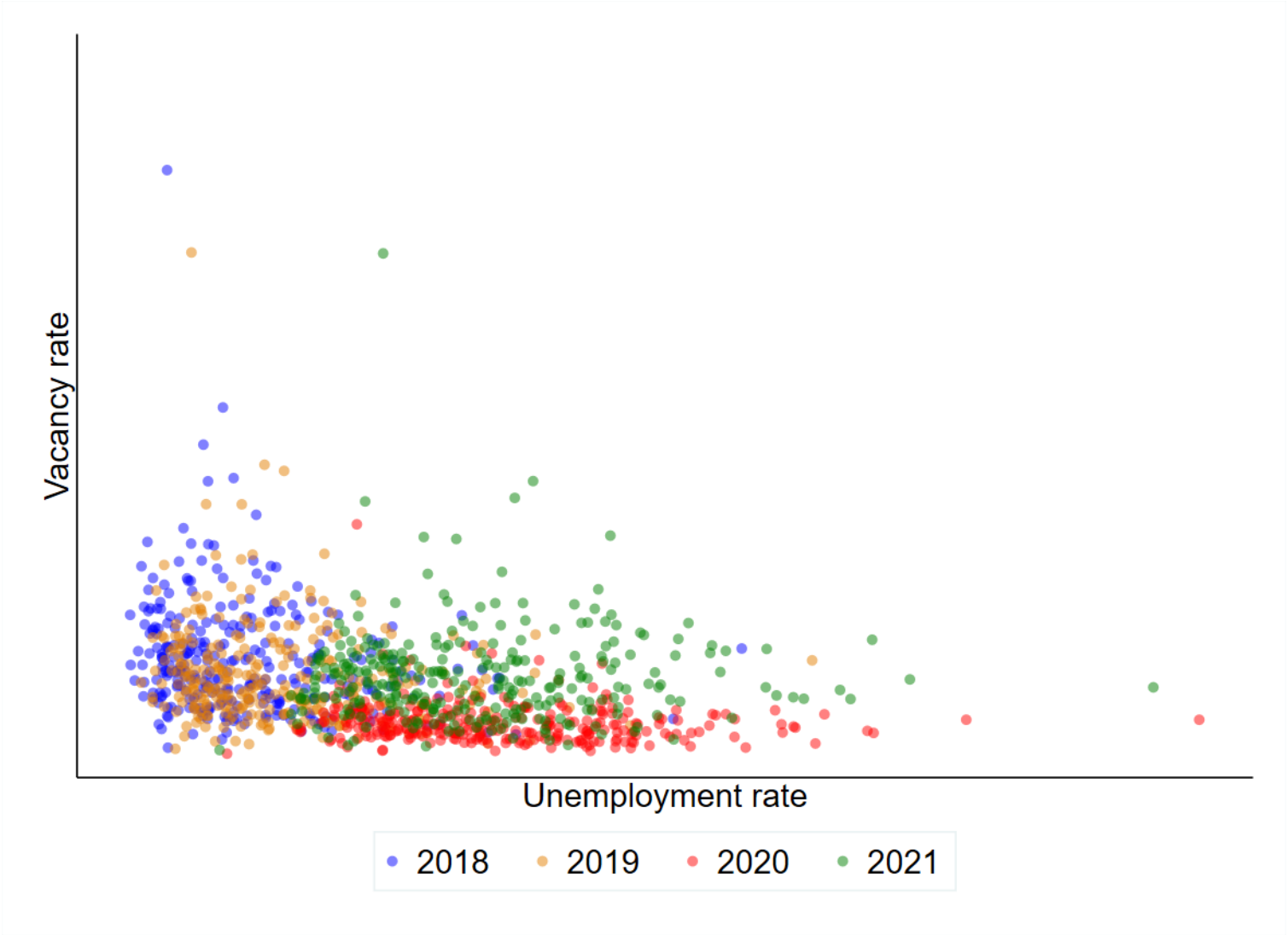
Literature

- Early in the pandemic: highest increase in U in areas with highest U prepandemic or more reliant on shutdown industries during lockdown (McCurdy (2020), Houston, (2020))
- Local sectoral differences also in V (Cockett and Wilson (2021))
  - V down in office work, hospitality, leisure, tourism and aviation.
- Using online job board Reed.co.uk: small increase in the number of adverts posted with the lifting of local restrictions (Rudy 2021)
- WFH: change in the geography of service jobs (De Fraja et al (2021))
- Estimation of a spatial Beveridge curve focusing on UK regions: Wall and Zoega (2002)

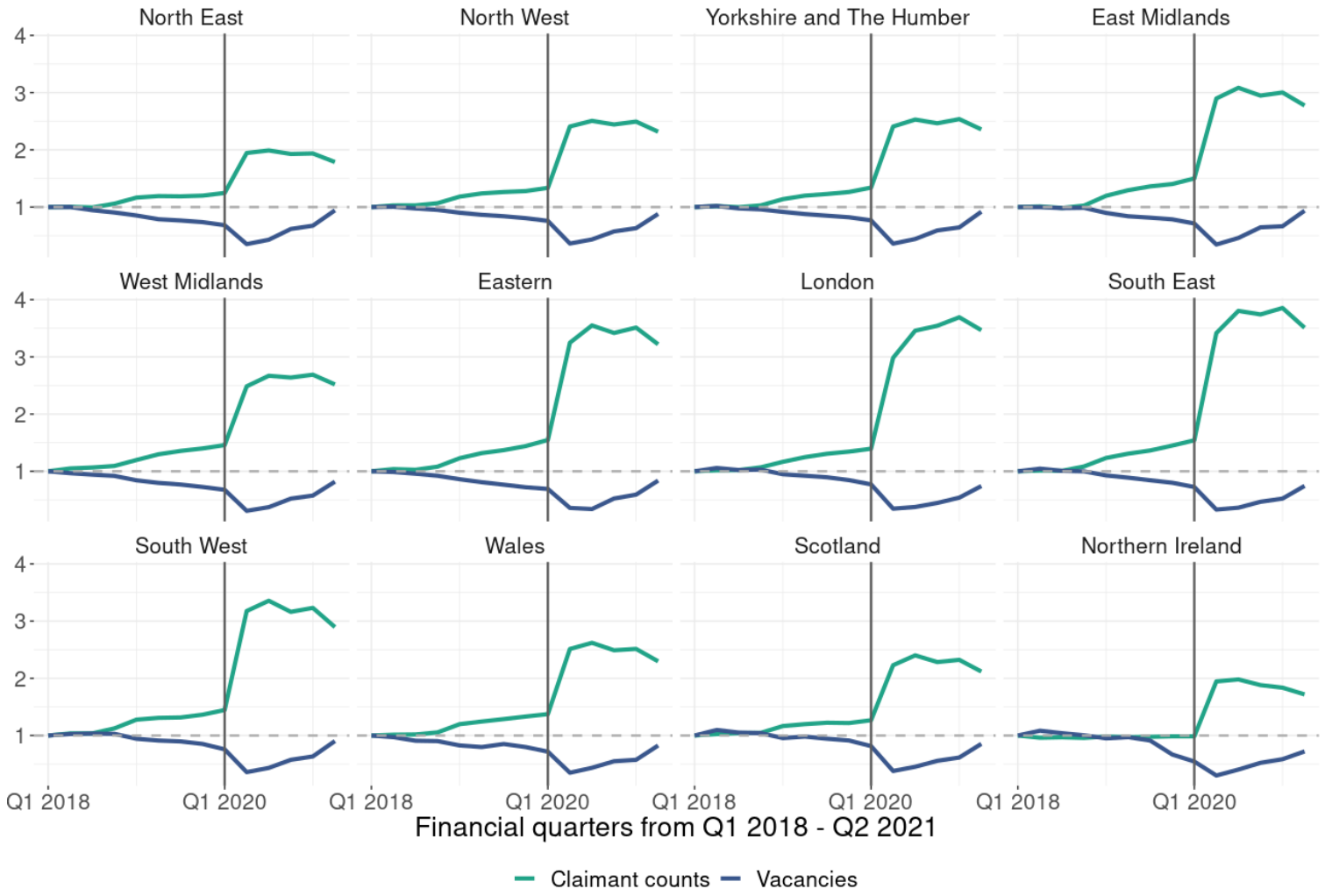
Measures I

- Local labour markets: LADs, grouped where within a single TTWA.
- U: Claimant counts from NOMIS.
- V: weekly Adzuna vacancies from 2018 onwards.
- L: Active population = payrolled employee + claimant counts.
  - Quarterly data to match the LFS.

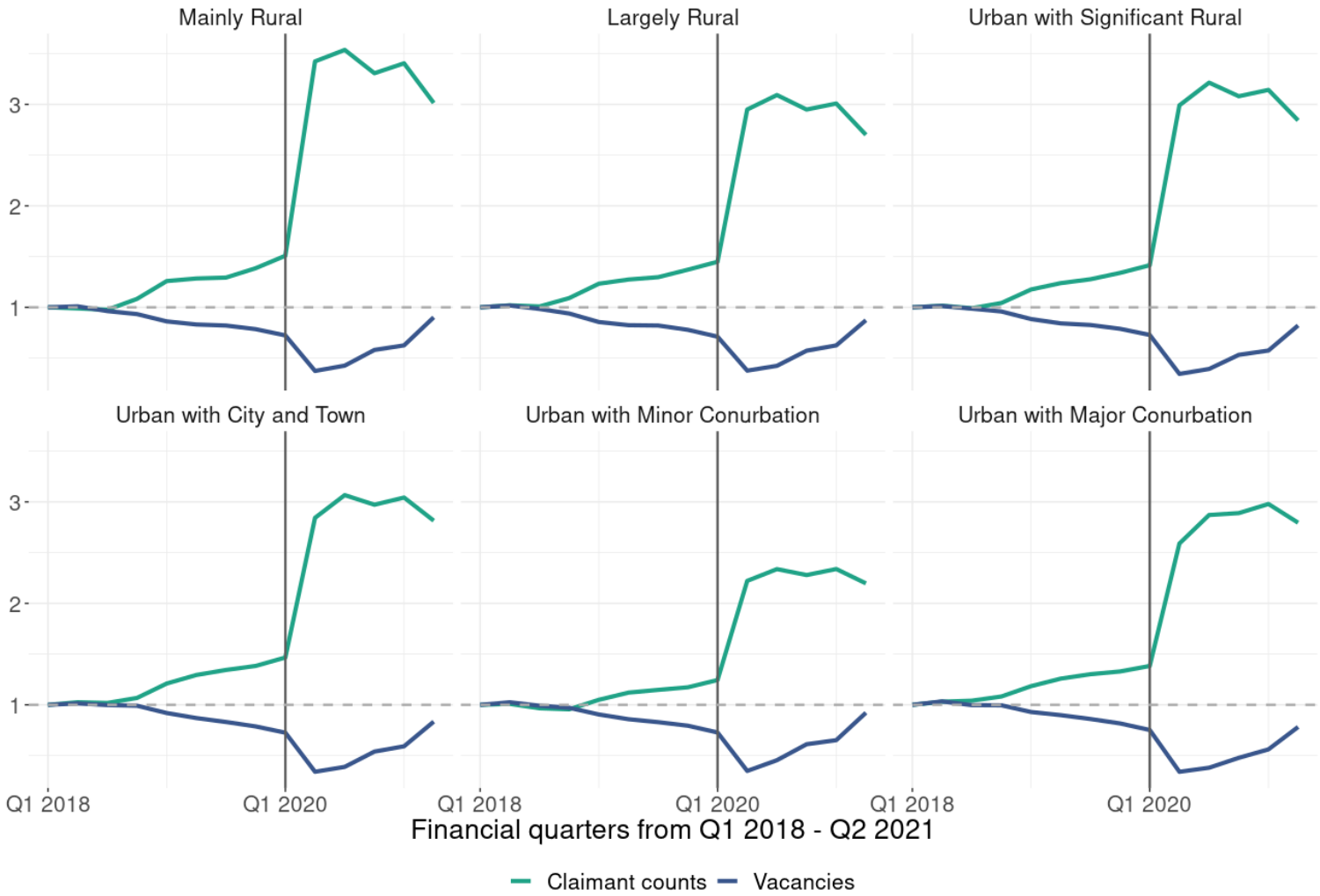
Descriptives statistics: U and V



Descriptives statistics: U and V



Descriptives statistics: U and V, England only



Measures II: pre-pandemic difficulties of matching V to U: α_a

- Local Beveridge curve

$$M_a = A_a U_a^{\gamma} V_a^{1-\gamma}$$

- In equilibrium and dividing by active population

$$m_a = s_a = A_a u_a^{\gamma} v_a^{1-\gamma}$$

- Estimated as, with constant s_a

$$\ln(u_{at}) = \alpha_a + \beta \ln(v_{at}) + \epsilon_{at} \tag{1}$$

$$\alpha_a = \frac{\ln(s_a/A_a)}{\gamma} \approx \ln(v_a) + \ln(u_a), \beta \approx 0.5 \tag{2}$$

- High α_a compatible with high inequality in labour market access in a dynamic market.

Estimated α_a using AJ 2018-2019

	Mainly Rural	Largely Rural	Urban, sig. rural	Urban, city/ town	Urban, minor conurb.	Urban, major conurb	Missing	All
East Mids	-0.516	-0.490	-0.316	0.464	0.796			0.091
East	-0.366	-0.120	0.249	0.835				0.270
North East		0.185	0.114	0.527		0.684		0.467
North West	-0.726	-0.811	0.307	0.525		0.959		0.666
Scotland							-0.231	-0.231
South East	-0.367	-0.098	-0.002	0.439		1.143		0.722
South West	-0.378	-0.077	-0.137	0.450				0.076
Wales							0.024	0.024
West Mids	-0.443	-0.283	-0.414	0.995		0.706		0.565
Yorks & Humb	-0.491	-0.632	0.098	0.540	0.680	0.637		0.437
All	-0.441	-0.174	0.037	0.620	0.723	1.004	-0.143	0.413

Table: Pre-pandemic measure of labour market deviations from Beveridge curve

Data for econometric analysis

- 2 LFS quarters: AJ 2020 and 2021
- Employment one year earlier available
- Multinomial Logit: effect of α_a
  - On individual probability to be employed, U or inactive
  - Given change in MT
  - Given individual characteristics and employment history

April-June 2020 vs April-June 2021: lasting Covid effect?

	Males		Females	
	Unemp	Inac	Unemp	Inac
Controlling for 2018-19 area fixed effect, α_a				
year 2021	-0.445**	-0.531***	0.0628	-0.290***
	(0.148)	(0.0973)	(0.164)	(0.0782)
$\Delta v_{at}/u_{at}$	0.0681	0.123	0.00291	0.0622
	(0.105)	(0.0680)	(0.104)	(0.0529)
α_a	0.0341	-0.0412	0.254	0.0987*
	(0.0845)	(0.0486)	(0.130)	(0.0406)
$\alpha_a \times$ year 2021	0.333**	0.124	-0.0617	-0.00970
	(0.107)	(0.0715)	(0.109)	(0.0651)
Observations	28730		32788	

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Estimated probabilities 2021

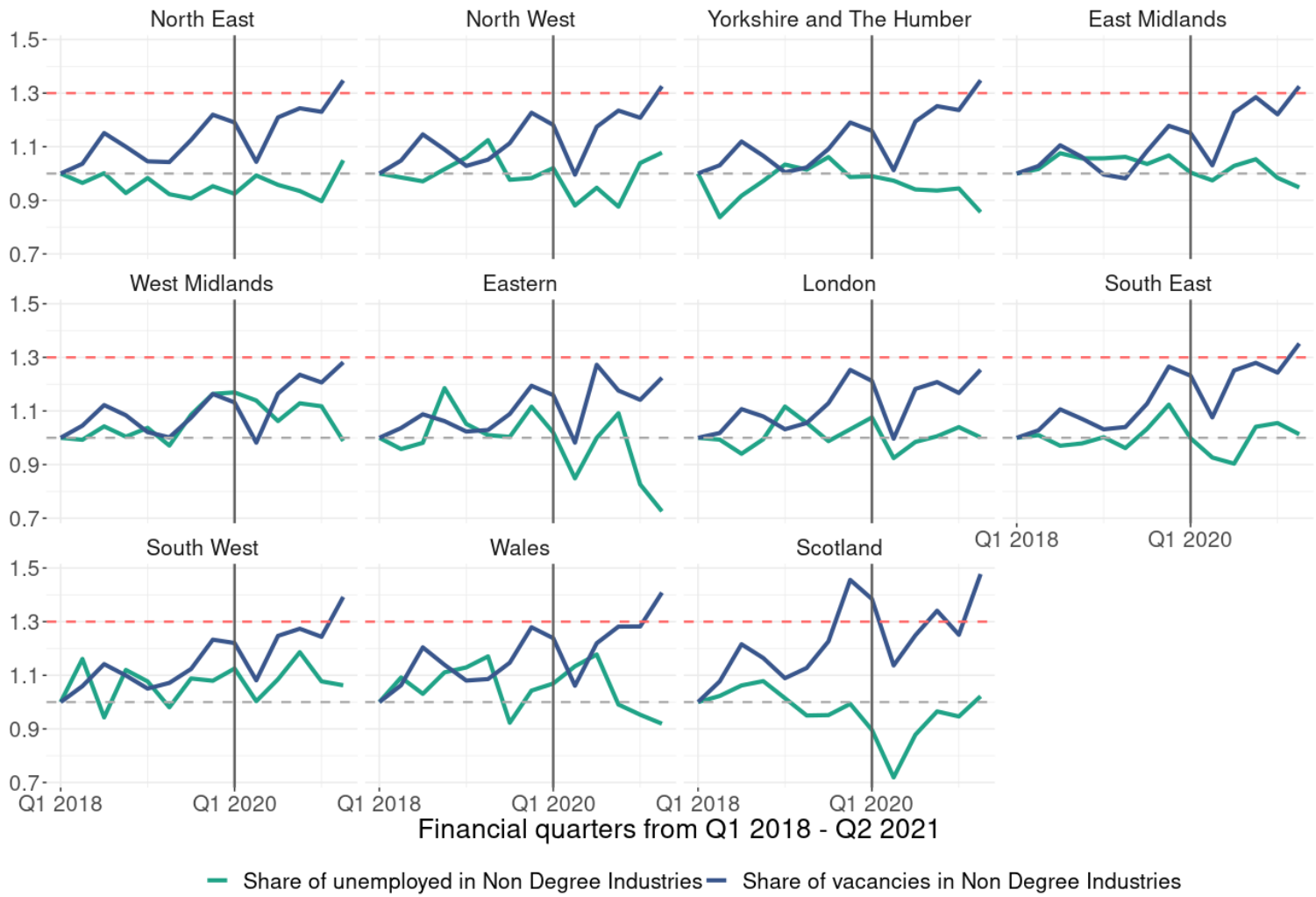
	Males			Females		
	Emp	Unemp	Inac	Emp	Unemp	Inac
Controlling for 2018-19 area fixed effect, α_a						
percentile 10	0.843	0.022	0.134	0.757	0.024	0.219
percentile 50	0.836	0.028	0.136	0.751	0.027	0.223
percentile 90	0.825	0.038	0.137	0.742	0.031	0.227

Table: Estimated probabilities of employment, employment, unemployment or inactivity at the 10th, 50th and 90th percentiles of α_a.

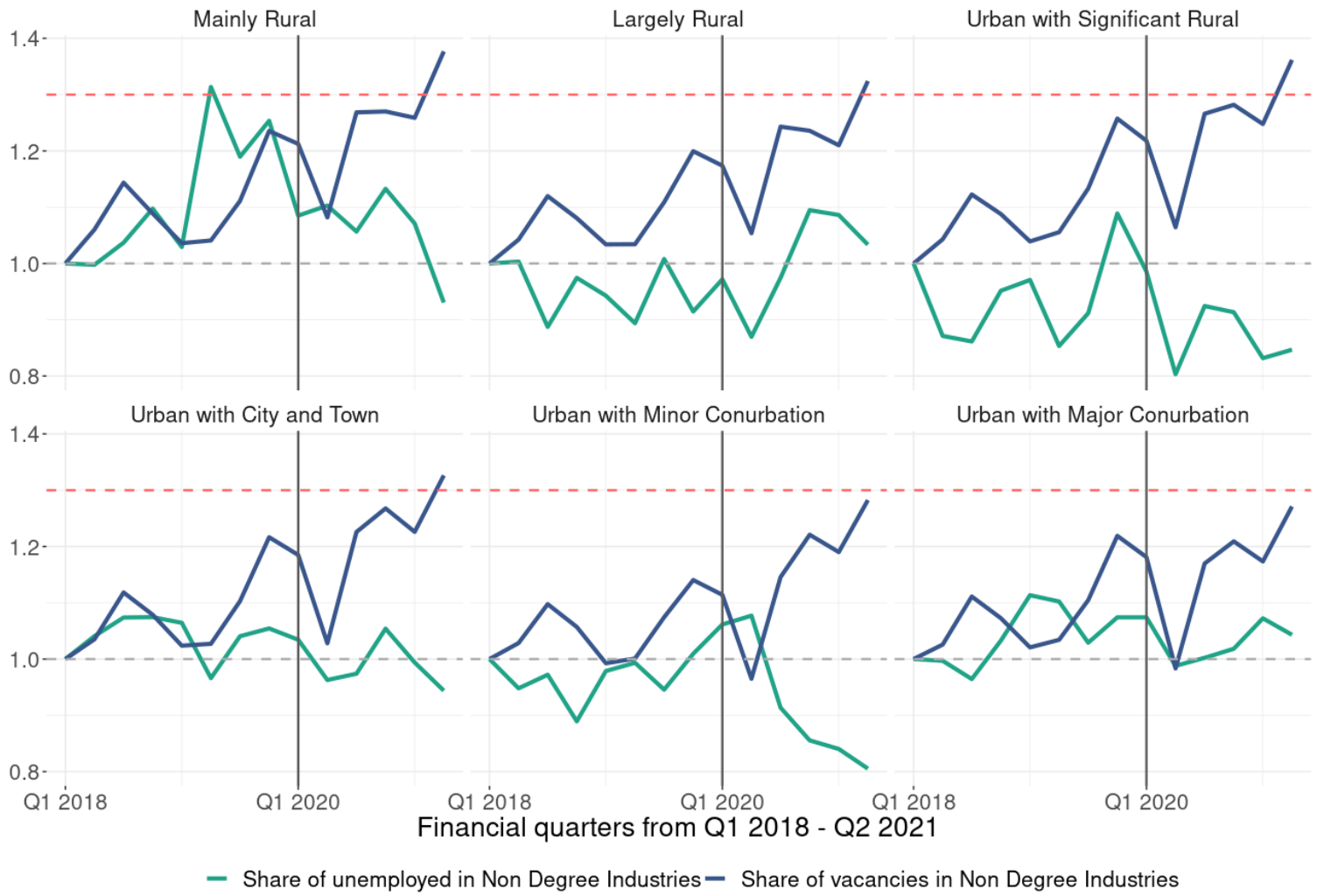
Local skill mismatch: measurement

- Experimental!
- V: sectors of Adzuna categories converted to 2-digit SIC07 codes
- U: previous employment 2-digit SIC07 of LFS ILO-unemployed
- Degree industries: where more than 50% of degree holding workers
  - Share of V and U in type of industries in grouped LADs
  - Average across regions and area type

Change in skill mismatch: Regional divide



Change in skill mismatch: Urban-rural divide



Conclusion

- Employment recovery harder for men in areas where more difficult matching of U and V pre-pandemic.
- No local variation for women in AJ 2021 compared to AJ 2020.
  - more likely to be inactive both in 2020 and 2021 in areas with high α_a.
- Smaller decrease in industry skill mismatch in London and Urban with Major Conurbation. Not strongly the case though for the North East.

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