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**Abstract**

Support for right-wing populist parties is characterised by considerable regional heterogeneity and especially concentrated in regions that have experienced economic decline. It remains unclear, however, whether the spatial externalities of local decline, including homelessness and crime, boost support for populist parties, even among those not directly affected by such decline. In this paper, we contribute to filling this gap in two ways. First, we gather novel data on a particularly visible form of local decline, high-street vacancies, that comprise 83,000 premises in England and Wales. Second, we investigate the influence of local decline on support for the right-wing populist UK Independence Party (UKIP) between 2009 and 2019. We find a significant positive association between high-street vacancy rates and UKIP support. These results enhance our understanding of how changes in the lived environment shape political preferences and behaviour, particularly in relation to right-wing populism.

**Keywords:** Local Economic Conditions, Populism, High-street Vacancies, Spatial Externalities

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# 1 Introduction

Support for right-wing populist parties in many advanced industrialised democracies exhibits marked regional heterogeneity, with these parties being especially successful in regions where manufacturing traditionally accounted for a large share of local economic activity (Bisbee et al., 2020; Broz et al., 2021; Ejrnæs et al., 2024; Guriev and Papaioannou, 2022; Rodrik, 2021) that may have since experienced rapid economic transformation producing (perceived) decline (Becker et al., 2017; Rodríguez-Pose, 2018). The literature has devoted a great deal of attention to import competition (Autor et al., 2020; Baccini and Weymouth, 2021; Choi et al., 2024; Colantone and Stanig, 2018a,b; Dippel et al., 2022), trade wars (Fetzer and Schwarz, 2021), automation and digitilisation (Anelli et al., 2021; Gallego and Kurer, 2022; Milner, 2021), and austerity (Baccini and Sattler, 2024; Fetzer, 2019; Hübscher et al., 2023; Wiedemann, 2024) as explanatory factors for this spatial heterogeneity in populist support.

Aside from the geographic clustering of individuals with relatively high exposure to these risks, the literature has posited another mechanism through which adverse local economic shocks boost support for populists, namely the spatial externalities they engender. Examples include: increases in crime (Bray et al., 2022; Che et al., 2018; Facchetti, 2024; Fetzer, 2023) and homelessness (Fetzer et al., 2023), worse marriage-market prospects for young men (Autor et al., 2019), higher prevalence of mental distress and physical ailments, and increases in drug abuse and overdose-related mortality (Adda and Fawaz, 2020; Berman and Hovland, 2024; Colantone et al., 2019; Pierce and Schott, 2020). Overall, the literature has produced robust evidence of a reduced-form causal link between regional exposure to local economic shocks and populist support, on the one hand, and local economic shocks

and negative spatial externalities, on the other. Yet, little direct evidence still exists on the link between the local decline induced by these externalities and populists' electoral success.

In this paper, we contribute towards filling this gap by examining the link between (perceived) local (economic) decline – as captured by a highly visible type of spatial externality, namely, high-street vacancies in England – and support for the right-wing populist United Kingdom Independence Party (UKIP).[1] By virtue of their visibility, high-street vacancies are a particularly good proxy for local economic decline, which individuals are therefore likely to use to update their beliefs about local economic activity. Other indicators, such as unemployment rates at the local authority level, are noisier signals of local economic activity, harder to perceive, and thus less likely to shape attitudes and political behaviour.

Although this paper's central contribution is empirical, our analysis examines the theoretical claim that more high-street vacancies bolster UKIP's electoral prospects. The literature contains a number of mechanisms underpinning this reduced-form expectation. For instance, Cremaschi et al. (2023) argue, in line with earlier work (Dancygier, 2010), that public service deprivation leads to fears about resource competition with immigrants and thus helps the far right. Local decline could then be construed as a visible sign of public service deprivation. An alternative, albeit complementary, mechanism is that (longer-term) local decline signals to people that mainstream parties do not care about the region (McKay, 2019; McKay et al., 2023), leading them to turn to right-wing challengers instead. Here we do not take stance on whether these mechanisms are the correct ones and/or to what extent they are

[1] In late 2018, *Reform UK* was founded, which has, since then, displaced UKIP as the most important right-wing populist party. Given that our data extend only to 2019 (see Section 2), we focus solely on UKIP.

at work – also because data limitations prevent us from examining mechanisms. That said, the above, though by no means a comprehensive survey of all plausible mechanisms,[2] suffices to buttress the plausibility of our reduced-form theoretical expectation.

Empirically, we test this theoretical expectation by combining unique data on high-street vacancies by the Local Data Company (LDC) with survey data from the *Understanding Society* Survey. Crucially, this allows us to improve on previous studies on the effect of local decline on populist support, most notably that by Arzheimer et al. (2024), in one key respect: these studies use survey items related to local decline to measure the latter. While useful for cross-country analysis, this carries the risk that results are driven by misperceptions or misreporting of decline. In addition, these survey items usually fail to distinguish between distinct dimensions of decline (e.g. employment opportunities, deterioration of lived environment, composition of local population). By using an objectively measurable, specific, and highly visible component of decline – high-street vacancies – we can circumvent that problem. Our analysis reveals a robust positive relationship between high-street vacancy rates and UKIP support. Higher vacancy rates are consistently associated with greater UKIP support, even when controlling for various individual and regional characteristics.

Our findings speak to several strands of the political economy literature on both populism and regional inequalities – of which we wish to highlight two. First, our analysis adds to a substantial body of work on the drivers of support for Brexit,[3]

[2]See e.g.: Gest et al. 2018; Green et al. 2024; Lee et al. 2018; McCann 2020; McNeil et al. 2023; Patana 2022; Schraff 2019; Schraff and Pontusson 2023.

[3]See: Adler and Ansell 2020; Alabrese et al. 2024; Ballard-Rosa et al. 2021; Becker et al. 2017; Carella and Ford 2020; Carreras et al. 2019; Davenport and Levell 2022; Foos and Bischof 2022;

particularly because UKIP's ascendance prior to 2016 was an important reason why the Brexit referendum was called in the first place (Bale, 2022). Second, our study reinforces the importance of spatial externalities, especially tangible changes in the lived environment, for perceptions,[4] preferences[5], and political behaviour (e.g. voting decisions).

The remainder of the paper is structured as follows. In Section 2, we provide an overview of the data on which we rely in our analysis, which we present in Section 3. In Section 4, we summarise our findings and reflect on their broader relevance.

# 2 Data and context

This section introduces both the LDC's retail premises data on high-street vacancies and the *Understanding Society Survey* data (University of Essex, Institute for Social and Economic Research, 2023), which we employ to operationalise our independent and dependent variables, respectively.

## 2.1 High-street vacancies

To operationalise our independent variable, local decline, we draw on data by the LDC, which provides detailed information on commercial premises in UK high streets. The data sample purchased for this study encompasses 197 towns, located in 93 different local authorities, in England and Wales over the period from 2009

Green and Pahontu 2024; Green and Shorrocks 2023; Green et al. 2022; Lee et al. 2018; McNeil and Haberstroh 2023; McNeil et al. 2023; Murphy and Devine 2020; Sobolewska and Ford 2020.

[4] Alabrese et al. (2024, sec. 4) discuss how these externalities can provide fertile ground for anti-immigration rhetoric to take root.

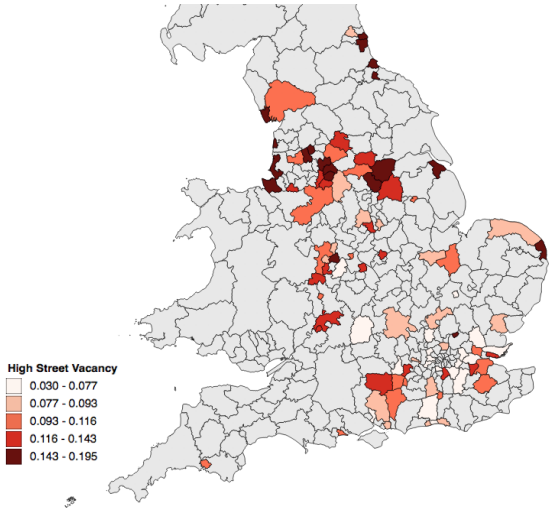
[5] See also Ansell and Cansunar 2022; Bolet 2021; Rueda and Stegmueller 2016, 2019.

to 2019, covering approximately 83,000 physical premises. Our sampling approach was two-pronged: half of the locations were sampled randomly; the other half targeted towns within local authorities that had a high number of respondents from the *Understanding Society* household panel survey. The rationale behind this sampling strategy was to approximate a representative sample as closely as possible and ensure the external validity of our findings, while heeding our budget constraints, given the relatively high costs of acquiring data from the LDC. We discuss the implications for the power of our analysis in Section 3.3.

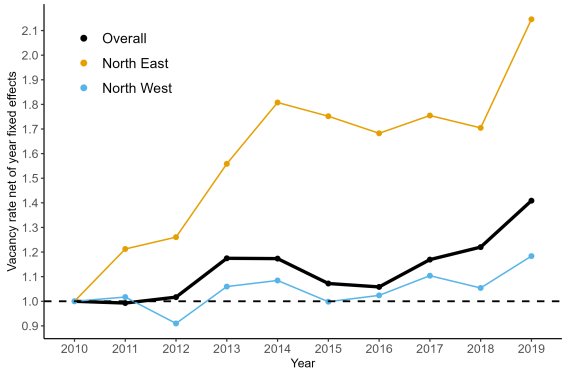
Updated quarterly since the financial year 2009/2010, the premise-level panel data include indicators of retail vacancies along high streets, which serve as our proxy for local (economic) decline. Specifically, our independent variable is the vacancy rate at the high-street level – the share of physical premises that are coded as vacant. Because our dependent variable (Section 2.2) is only available at the local authority level, we compute the average vacancy rate across all towns on which we have data in a given local authority.

Figure 1a visualises the geographic distribution of high-street vacancies by local authority. Despite our limited sample, we observe considerable regional variation in vacancy rates across England and Wales, with high-street vacancies being especially clustered in the North East of England. There, many local authorities have average high-street vacancy rates that exceed 10%. Figure 1b illustrates how high-street vacancies evolve over time after netting out year-specific dummies. The yellow line shows that regions in the North East saw their vacancy rates rise by more than 80% from 2010 to 2014, and, after a very moderate decline until 2018, vacancy rates increased to twice the rate observed in 2010. Regions in the North West, by contrast, experienced relatively little change in their high-street vacancy rates relative to 2010.

Figure 1: Geographic distribution and time series of high-street vacancies




(a) Cross-sectional geographic distribution of high-street vacancies




(b) Time series of residualised vacancy rate, 2010 – 2019

**Note**: The left panel visualises the geographic distribution of high-street vacancies by local authority in England and Wales, averaged over time. The right panel illustrates the time series of the vacancy rate after netting out year-specific dummies, with the coefficient estimates indexed to 2010. The intercept (i.e., the value for 2009) is omitted. The overall residualised vacancy rate increases after 2012, declines somewhat from 2014 to 2016, and then increases markedly from 2016 to 2019.

Turning from cross-sectional to temporal variation (see also A1) in high-street vacancies, as shown in Figure 1b, brings home that, even after partialling out year fixed effects, the vacancy rate exhibits substantial variation, especially in regions located in the North East of England.

## 2.2 Understanding Society

We follow the UK-focused literature (Bolet, 2021; Fetzer, 2019, 2023) in operationalising our dependent variable(s), mainly (self-reported) support for UKIP, via the the *Understanding Society* survey, also known as the UK Household Longitudinal Study.

The latter is a high-quality, nationally representative[6] annual household panel survey that was first fielded in 2009. It contains survey items on a wide range of social, economic, and health-related variables and tracks roughly 40,000 UK households (and over 100,000 individuals). The survey's longitudinal nature allows us to track within-respondent variation with respect to a host of social, economic, and political attitudes (see also Section 3.1). Indeed, the large number and considerable geographic spread of respondents also allows us to estimate rather demanding fixed-effects specifications (see Section 3.1). After merging this dataset with the LDC data, we are left with 64579 (see Table A1) respondents for which all of our variables – independent, dependent, and controls – have no missing values.

# 3 Empirical analysis

In this section, we discuss our estimation strategy (Section 3.1), present the main results (Section 3.2), and dwell on the limitations of our analysis (Section 3.3).

## 3.1 Estimation strategy

To test our key theoretical hypothesis – that local decline, as captured by high-street vacancies, boosts support for right-wing populists, here UKIP – we leverage the longitudinal nature of the *Understanding Society* survey. Specifically, by using individual fixed effects, we rely only on within-respondent variation in support for UKIP over time, implying that our identifying variation comes solely from individuals who switched to or from UKIP during the period of our study. While this allows us to net out all time-invariant, individual-level (un)observable confounders, we add

[6]It uses stratified clustered sampling, with high-ethnic-minority areas being over-samples to allow for detailed analyses of these groups' social, economic, and political attitudes.

regional-by-quarter fixed effects to control for confounders that vary not only by regions, but also within-regions by quarter. As a result, we can rule out that our results are driven by region-specific seasonal (quarterly) trends in vacancy rates. To assess the main "effect"[7] of vacancy rates on UKIP support, we therefore estimate specifications of the following form:

$$\text{UKIP}_{i,w,t} = \beta \text{VacancyRate}_{j(i),t} + \gamma \mathbf{X}^{T}_{i,w,t} + \lambda_{jt} + \mu_i + \epsilon_{j,t} \tag{1}$$

In equation 1, $\text{UKIP}_{i,w,t}$ denotes a dummy variable, indicating whether individual $i$ supports UKIP at time $t$ (in a given year-quarter and survey wave $w$), while $\text{VacancyRate}_{j(i),t}$ refers to the share of vacant high-street retail premises in region $j(i)$ that a respondent $i$ is living near at time $t$. $\mathbf{X}$ represents a vector of individual-level and time-varying control variables. $\lambda_{j,t}$ and $\mu_i$ denote region-by-quarter and respondent fixed effects, respectively. Finally, $\epsilon_{jt}$ denotes the error term, which we cluster at the local-authority-wave level, to account for potential correlations of the error terms within each region and quarter. This approach is justified because unobserved shocks or region-specific factors affecting UKIP support are likely to be correlated within regions over time (e.g., regional economic policies or events affecting the entire region).

Our theoretical parameter of interest is $\beta$, which, as discussed above, we expect to be positive. Conditional on the vector of covariates and including separate intercepts for respondents and region-quarters, we expect an increase in the vacancy rate, on average, to increase the probability that an individual switches from not supporting to supporting UKIP.

To assess our second hypothesis, which relates to heterogeneity in the main

[7] Quotation marks are used to indicate that causal effects are not implied; the term is used solely for readability's sake.

"effect" by (un)employment, we include an interaction term between the vacancy rate and an unemployment dummy, resulting in specifications of the form:

$$\text{UKIP}_{it} = \beta \text{VacancyRate}_{jt} \times \text{Unemployment}_{it} + \gamma \mathbf{X}_{it}^{T} + \lambda_{jt} + \mu_i + \epsilon_{jt} \tag{2}$$

The definitions of the variables in equation 2 are entirely analogous to those in equation 2. The only difference is that our parameter of interest, $\beta$, now represents the average difference in the marginal "effect" of a unit-increase in vacancy rates between unemployed and employed respondents, respectively.[8] Given that we expect unemployed individuals to be more likely to respond to local decline by turning to UKIP than employed ones, we expect $\beta$ to be positive.

## 3.2 Results

In this section, we present the empirical findings of our study. We begin by examining the main effect of high-street vacancy rates on UKIP support and probing its robustness.

Table 1 presents the results of estimating increasingly demanding versions of equation 1. Model (1) includes only the vacancy rate and region-by-quarter fixed effects, revealing a significant positive association between vacancy rate and UKIP support (coefficient: 0.174, $p < 0.01$). In Model (2), we add respondent fixed effects, which increases the coefficient to 0.197 ($p < 0.01$), indicating that the result is robust to relying only on within-individual variation in UKIP support, that is, focusing on those switching to/from UKIP. In models (3) to (6), a host of (time-varying) co-

[8] Taking the partial derivative with respect to vacancy rate and recalling the "unemployment" is a dummy variable, we can write: $\beta = \mathbb{E}\left(\frac{\partial UKIP_{it}}{\partial VacancyRate_{jt}} \,\middle|\, Unemployment = 1, \mathbf{X}_{it}, \lambda_{jt}, \mu_i\right) - \mathbb{E}\left(\frac{\partial UKIP_{it}}{\partial VacancyRate_{jt}} \,\middle|\, Unemployment = 0, \mathbf{X}_{it}, \lambda_{jt}, \mu_i\right)$.

variates are included (age, a dummy for receiving any welfare benefit, occupation, and subjective assessments of one's financial situation). The size and statistical significance of the coefficient estimate for vacancy rate remains stable across all these specifications, with a one-percentage point increase in vacancy rates being, on average, associated with an increase in the probability of supporting UKIP by around 0.20 percentage points.

Table 1: Association between the UKIP support and vacancy rates

| Model: | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| *Variables* | | | | | | |
| Vacancy rate | 0.174*** | 0.197*** | 0.201*** | 0.201*** | 0.202*** | 0.195*** |
| | (0.040) | (0.070) | (0.070) | (0.070) | (0.070) | (0.070) |
| Region-by-quarter FE | x | x | x | x | x | x |
| Respondent FE | | x | x | x | x | x |
| Age | | | x | x | x | x |
| Receiving any benefit | | | | x | x | x |
| Any health condition | | | | | x | x |
| Occupation | | | | | | x |
| Subj. financial situation | | | | | | x |
| *Fit statistics and other information* | | | | | | |
| Mean of DV | 0.053 | 0.053 | 0.053 | 0.053 | 0.053 | 0.053 |
| Observations | 64,650 | 64,650 | 64,647 | 64,647 | 64,647 | 64,579 |
| $R^2$ | 0.022 | 0.550 | 0.551 | 0.551 | 0.551 | 0.551 |

*Clustered (Code-wave) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

**Note**: This table reports the results of the association between high-street vacancy rates and support for UKIP, using various model specifications. Model (1) includes only the vacancy rate and region-by-quarter fixed effects, while subsequent models add respondent fixed effects and various individual-level covariates. Across all models, there is a significant positive association between vacancy rates and UKIP support, with a one-percentage point increase in vacancy rates being associated with an approximately 0.20 percentage point increase in the probability of supporting UKIP. The robustness of these results is supported by clustered standard errors at the region-wave level.

To assess the robustness of the association between vacancy rates and UKIP support, we conduct five robustness checks. First, as shown in Table A2, we exclude those employed in the retail sector from the sample. Those are the workers who are directly and adversely affected by high-street vacancies and for whom material self-interest motivations are likely more important than for unaffected individuals.

Showing that our results are robust to excluding retail workers increases our confidence that the populist-boosting effect of local decline is distinct from the heightened risk of job loss. Second, we operationalise our dependent variable differently, namely we account differently for the fact that in waves one to three of the *Understanding Society* survey UKIP supporters were not separately coded.[9] Table A3 shows that the results remain substantively unchanged. Third, Figure A3 shows that our results are not sensitive to sequentially dropping observations from one local authority (region) at a time. Fourth, Figures A4, A5, and A6 help address concerns about power by examining the robustness of the coefficient estimates to randomly dropping between 10% to 50% of local authorities. The fact that the coefficient estimate on vacancy rate is above zero for the vast majority of specifications and increases the higher the variation in vacancy rate (net of region-by-quarter fixed effects) increases our confidence that a higher-powered study would also find a positive association between vacancy rate and UKIP support. Fifth, Figure A7 relies on randomisation inference to assess the significance of our estimates and shows that, even using this alternative approach to inference, our estimates are statistically significant.

While observational data place limits on what we can say about the mechanisms driving our main result, Tables A4 and A5 suggest that local decline has benefitted UKIP, primarily by helping it attract previously Conservative supporters.[10] Specifically, a one-percentage point increase in high-street vacancies is, on average, associated with a 0.165 percentage point decrease in the probability of supporting the

[9] See Fetzer (2019, Online Appendix, p. 15-27) for a more detailed explanation.

[10] If correct, local decline might have contributed to the Conservatives' programmatic and rhetorical accommodation of UKIP. This is because, as Abou-Chadi and Stoetzer (2020) argue, mainstream parties tend to pursue accommodation to whatever party they lose voters to.

Conservatives. Following the call by Guiso et al. (2024) to take into account turnout in analyses of populist success, we examine the association between high-street vacancies and individuals' inclination to vote in Table A6 and find no evidence of a robust correlation.

Table 2: Heterogeneity Analysis: Interaction with Retail Sector Employment

| Dependent Variables: | Worried about job | Subj. financial situation | Material deprivation |
|---|---|---|---|
| Model: | (1) | (2) | (3) |
| *Variables* | | | |
| Vacancy rate | -0.437 | -0.119 | 0.810 |
| | (0.667) | (0.372) | (1.681) |
| (Used to) work(s) in retail | 0.585 | -1.047 | -1.320 |
| | (892.426) | (839.373) | (3,135.125) |
| Vacancy rate × (Used to) work(s) in retail | 1.688 | 0.517 | 1.840 |
| | (1.347) | (0.853) | (3.997) |
| Respondent FE | x | x | x |
| Region-by-quarter FE | x | x | x |
| *Fit statistics* | | | |
| Mean of DV | 1.847 | 2.128 | 6.849 |
| Observations | 15,093 | 26,340 | 10,390 |
| $R^2$ | 0.640 | 0.695 | 0.904 |

*Clustered (Code-wave) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

**Note**: This table examines heterogeneity – between those who at some point worked or still work in the retail sector and those for whom this is not the case – in the association between high-street vacancy rates and three dependent variables: concern about job security, subjective financial situation, and material deprivation. The interaction terms are not statistically significant, indicating that our main findings are not driven by individuals directly affected by increasing high-street vacancies.

This conclusion is further supported by Table 2, which examines whether the association between vacancy rates and three attitudinal dependent variables – concern about job security, subjective financial situation, and (perceived) material deprivation – is significantly stronger for those who currently work or used to work in the retail sector. The coefficient estimates for interaction term are not statistically significant, which is also true for those on vacancy rates. In the Appendix (4), we show that the UKIP-boosting association of high-street vacancies is stronger for the unemployed than the employed. Overall, this suggests that our main result is *not* driven by those who are directly and adversely affected by increases in high-street

vacancies. Among those indirectly affected, those with few personal opportunities (i.e. the unemployed) seem to respond especially strongly to local economic decline.

## 3.3 Limitations

While the above analysis bears out our central theoretical hypotheses, it is subject to (at least) three limitations. First and foremost, the statistical power of our analysis is limited by us having data on high-street vacancies only in some local authorities (Section 2). Our analysis is thus tilted against finding any robust correlations, i.e. against rejecting the null hypothesis of no effect. The large number of respondents in the *Understanding Society* survey allays power concerns to some extent because it provides us with considerable within-respondent variation to estimate the effects of high-street vacancies on UKIP support. The fact that we nevertheless find a significant association between local decline and UKIP support suggests that a higher-powered analysis – one that includes data on high-street vacancies in all local authorities – would likely yield substantively similar results, especially because our sampling approach aimed at ensuring representativeness, given the constraints entailed by power and budget considerations.

The second limitation relates to causal identification. While the *Understanding Society* allows us, for reasons set out above, to estimate fairly demanding fixed-effects specifications – specifications that leverage only within-respondent and region-quarter variation – these specifications only yield unbiased estimates of the true causal effect under the assumption that all (un)observable confounders, except for those included in the control vector, are time-invariant or vary linearly within regions and across quarters. Since this assumption may be violated, our estimates might not reflect the true causal effect, highlighting the need for design-based or quasi-experimental approaches, like the use of instrumental variables, in future re-

search.

The third limitation concerns our inability to examine the mechanism(s) of our reduced-form finding rigorously. This is partly due to the *Understanding Society* survey containing relatively few germane items on preferences for redistribution, place-based attitudes or evaluations of the local and national economies. It would, for example, be helpful to analyse whether local decline affects individuals' perceptions of the national economy (Ansolabehere et al., 2014; Larsen et al., 2019).

# 4 Conclusion

This paper's principal contributions are that (i) we gathered novel data on a highly visible and well-defined type of spatial externality and indicator of local decline, namely high-street vacancies, and (ii) demonstrated that local decline is robustly and positively associated with support for UKIP. In doing so, we improve on the existing literature. The latter relies almost exclusively on self-reported measures of local decline that usually fail to distinguish between distinct dimensions of decline (Section 1). Using this proxy for local decline, we find a robust relationship between high-street vacancy rates and support for UKIP, indicating that local economic distress significantly influences populist sentiment. This relationship is robust across various model specifications and remains strong even when accounting for individual-level heterogeneity and additional socio-economic controls.

Our analysis also opens new avenues for future research. For one, there is room for tighter causal identification, i.e. for future work to re-examine our reduced-form findings by means of more credible empirical designs. Explicitly analysing the mechanisms that drive individuals' responses to local decline – in terms of both attitudes and political behaviour – is another potentially valuable direction for

subsequent analyses.

Finally, the preceding findings have broader implications – not only for understanding how visible changes in the lived environment shape support for right-wing populist parties – but also for the sequencing of strategies aimed at countering populism. Our findings suggest that stymieing far-right populists might require that "levelling-up" measures with longer-term returns – including investments to improve the skill base of the workforce and infrastructure in declining regions (Bartik, 2020; Gold and Lehr, 2024; Lee, 2024) – are complemented with shorter-term measures aimed at addressing particularly visible and easy-to-perceive spatial externalities, such as high-street vacancies.

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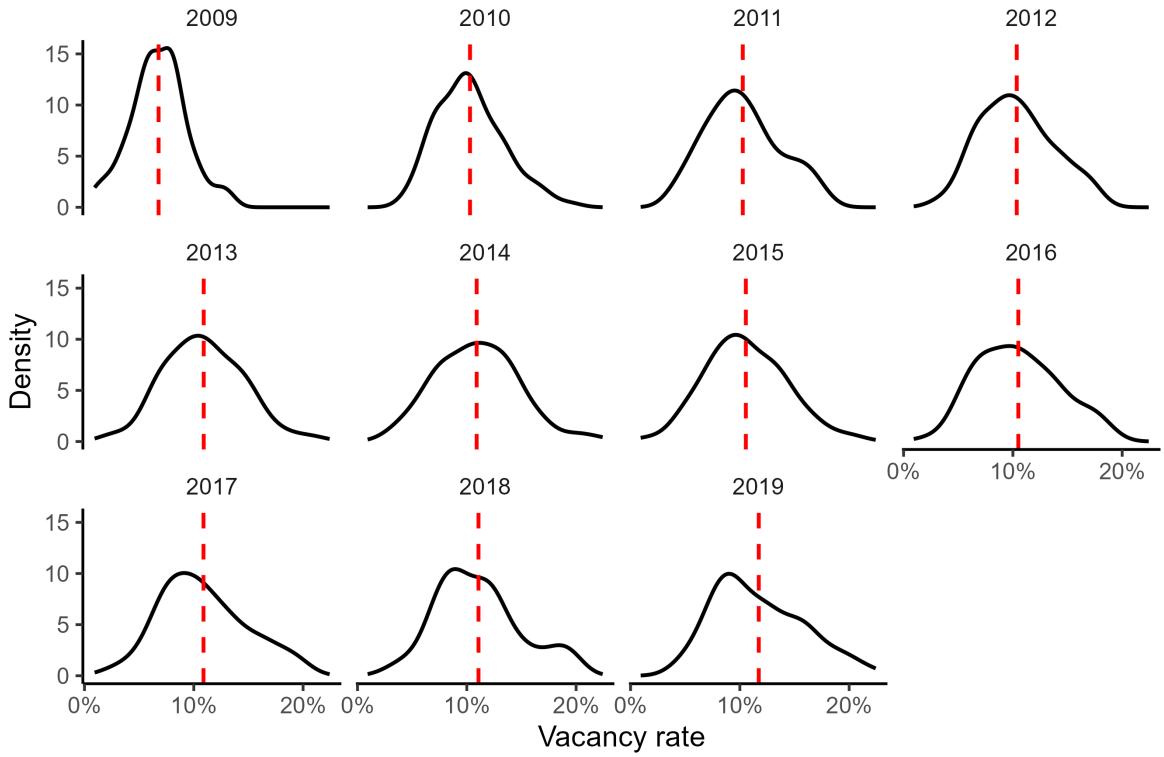
# "Appendix for online publication"

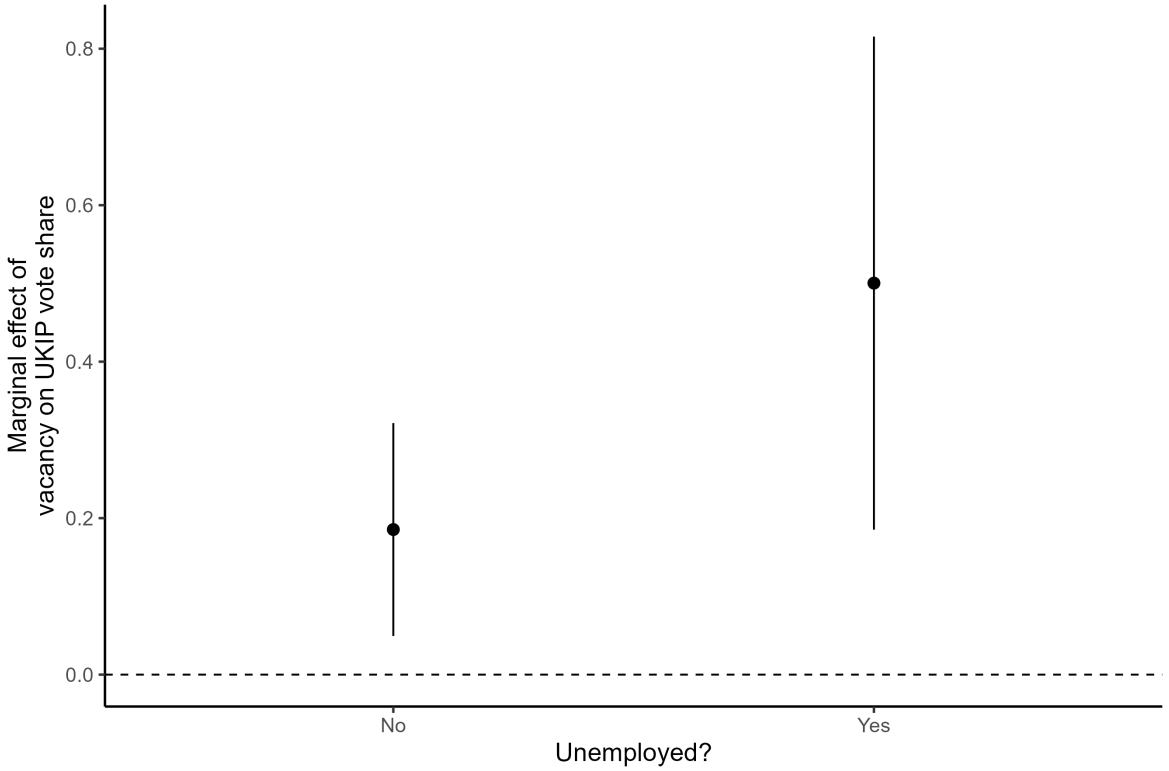
## Figures

Figure A1: Histograms of vacancy rates by year




**Note**: This figure presents kernel density plots of high-street vacancy rates by year. Each plot shows the distribution of vacancy rates across local authorities for a given year, with red dashed lines indicating the respective mean values. This visualisation allows for the examination of the temporal variation in vacancy rates, highlighting trends and changes over the study period from 2009 to 2019. The data reflect a notable increase in vacancies following the financial crisis and sustained high levels during the austerity years. The figure underscores the persistent and widespread nature of high-street vacancies across different time points in the dataset.

Figure A2: Marginal effect of vacancy by unemployment status




**Note**: This figure depicts the marginal effect of high-street vacancy rates on UKIP support, differentiated by unemployment status. We control for: age, an outright homeownership dummy, a dummy for chronic health conditions, as well as age and region-by-quarter fixed effects. The results show that the effect of high-street vacancies on UKIP support is significantly stronger for unemployed respondents, highlighting the heightened sensitivity of economically vulnerable groups to local economic distress.

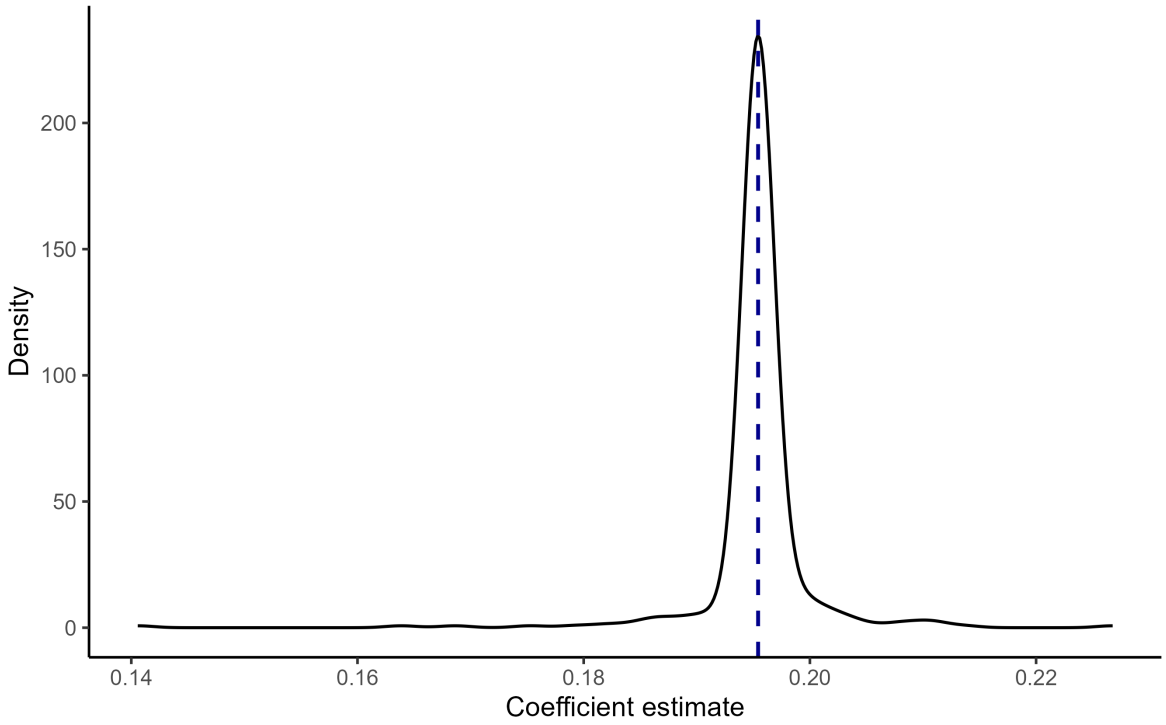



Figure A3: Distribution of coefficient estimates for vacancy rate from leave-one-out exercise

**Note**: This figure shows the kernel density of the coefficient estimates from estimating the regression in Table 1, column (6) when sequentially dropping one local authority (region) at a time. The dark blue vertical line captures the coefficient estimate obtained when estimating the regression based on the full sample. The range of estimates extend from roughly 0.14 to 0.23, while the distribution indicates that the vast majority of estimates are close to our full-sample estimate. Crucially, the range does not include zero. This indicates that your main result is not driven by respondents in any one particular local authority.

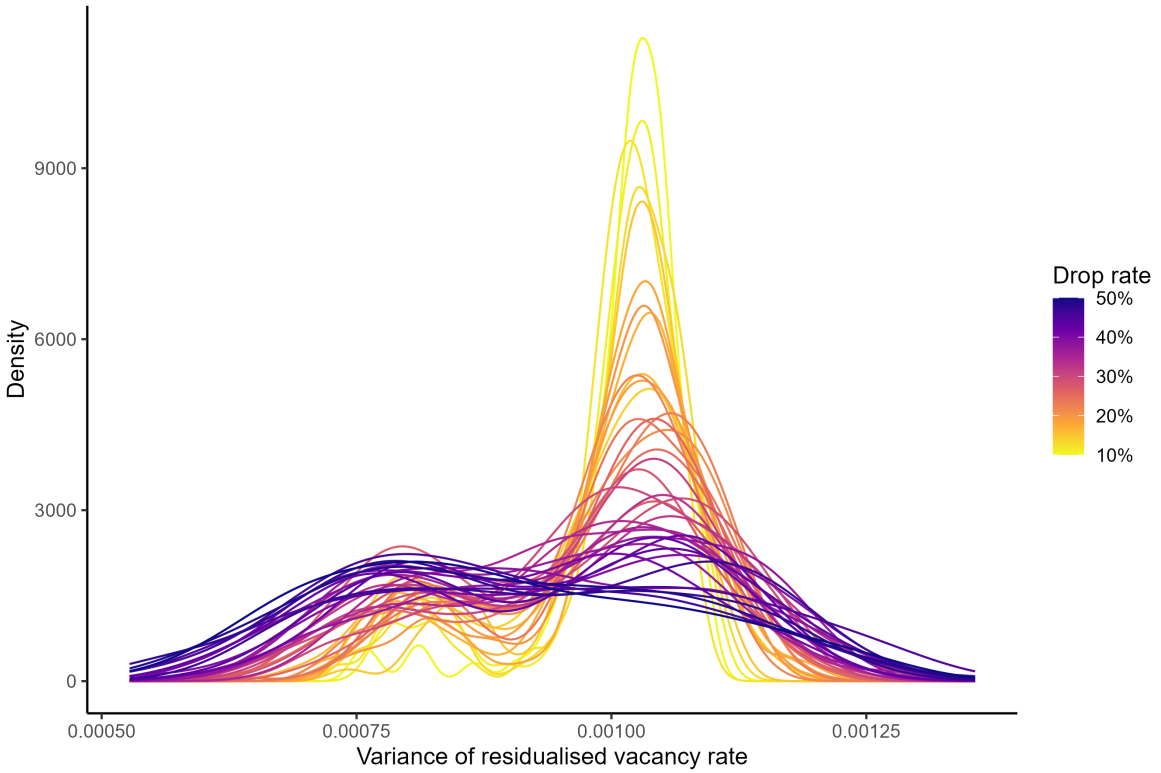



Figure A4: Distribution of variance of residualised vacancy rate by drop rate

**Note**: This figure plots the kernel density of the variance of the vacancy rate after region-by-quarter fixed effects have been partialled out. This is essentially the variation we rely on to predict UKIP support. The colour coding indicates that we compute the variance of the residualised vacancy rate based on different samples. That is, we randomly drop x% (where x varies from 10% to 50%) of local authorities and do so 100 times for each drop rate. We can see that, when we drop a low share of local authorities, the variance residualised vacancy rate is tightly concentrated around roughly 0.001, while higher drop rates result in the kernel density being squished down, the range of values becoming slightly greater, and the density of lower values increasing. That is, as we drop more local authorities, we should expect the coefficient estimate on vacancy rate to vary more since we the variation in the latter becomes less stable.

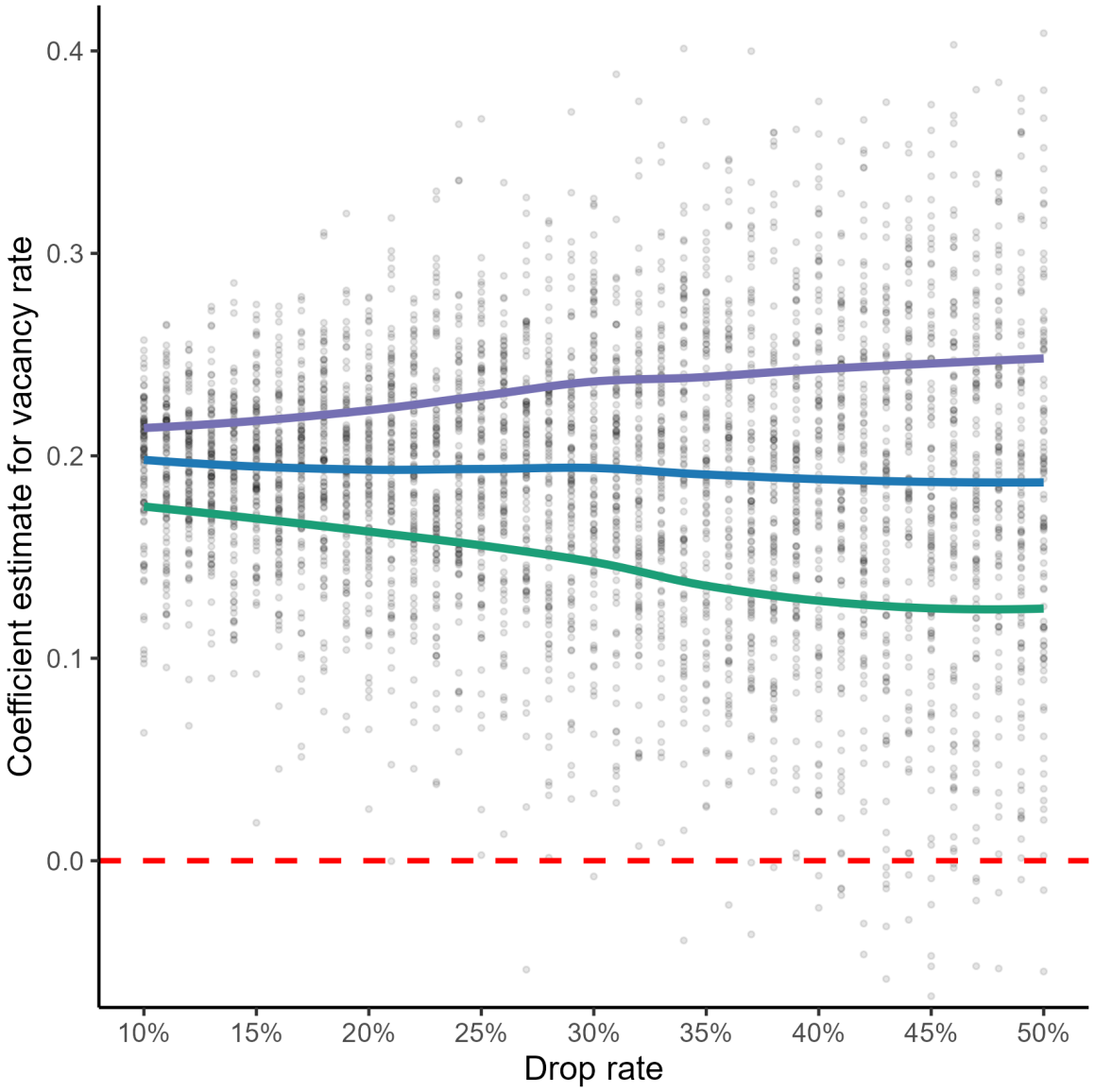



Figure A5: Coefficient estimate by drop rate

**Note**: This figure plots the coefficient estimate on vacancy rate obtained from estimating the specification in Table 1, column (6) while randomly dropping x% of local authorities 100 times (see Figure A4), which is captured by the x-axis. For each drop rate, we then compute the 25th, 50th (median), and 75th percentile of the distribution of 100 point estimates. The purple line represents the loess fit through the estimates at the 75th percentile for each drop rate, where the blue and green lines, respectively, refer to the median and 25th percentile. We can see that, while the median and 75th percentile estimates are very similar across drop rates, the estimates at the 25th percentile decline as the drop rate increases (green line), though they remain well above zero. Generally, we can see that, consistent with Figure A4, the spread of the distribution of point estimates increases as we omit a greater share of local authorities. The fact that, bar for a few outliers in the left tail of the distribution of estimates, the coefficient estimates remain above zero as we drop local authorities raises our confidence that a higher-powered study would also find a positive association. Note, finally, that we drop a handful of negative outliers for better visualisation.

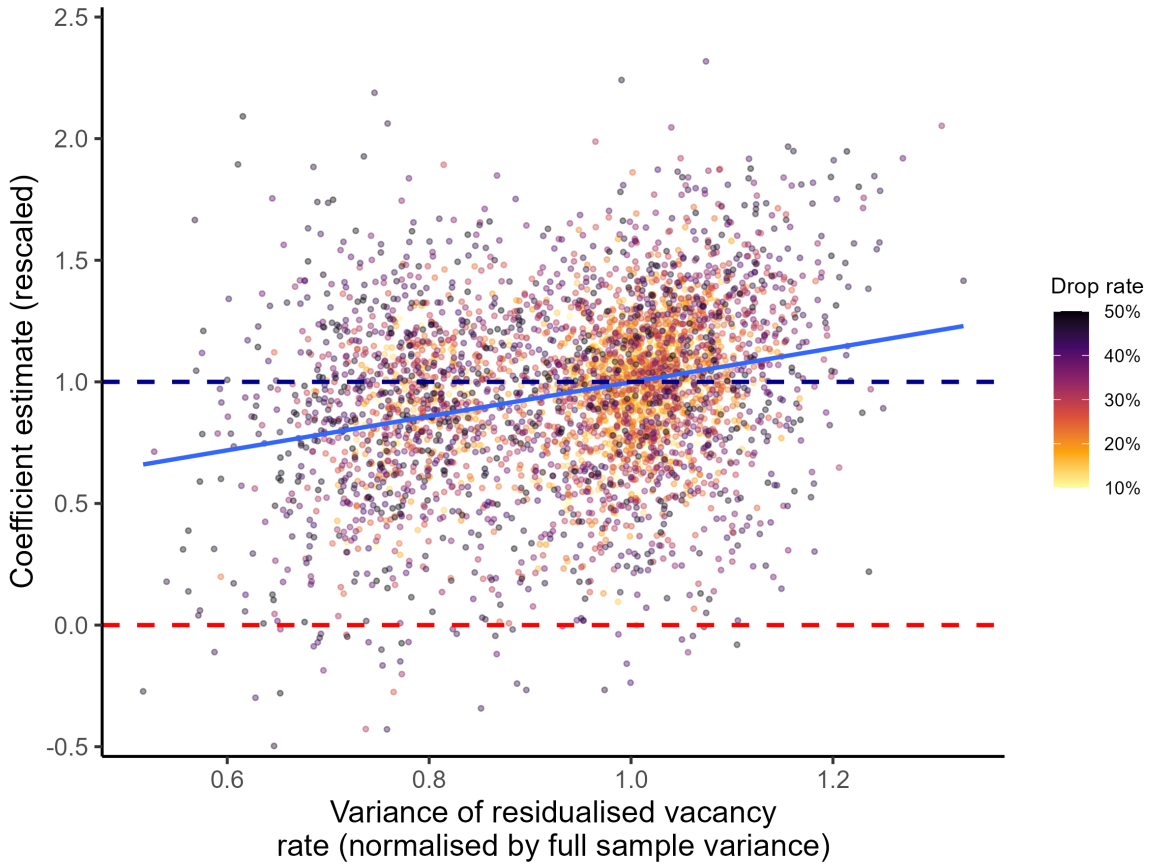



Figure A6: Coefficient estimate on vacancy rate against variance of residualised vacancy rate

**Note**: This figure plots the coefficient estimate on vacancy rate (divided by the coefficient estimate in Table 1, column (6)) against the variance of the residualised vacancy rate (divided by the full sample variance of the vacancy rate), where we partial out region-by-quarter fixed effects. The colour coding of the points indicates the sample used for estimation, with x% of local authorities being dropped randomly 100 times. The dark blue line represents the full-sample coefficient estimate on vacancy rate, while the lighter blue line visualised the fitted linear regression line through all point. Note, we drop a handful of negative outliers for better visualisation. We can see that, as the residualised variation in vacancy rate increases, the coefficient estimates increase on average and vice versa. This increases our confidence that a higher-powered study would also find a positive association between vacancy rate and UKIP support.

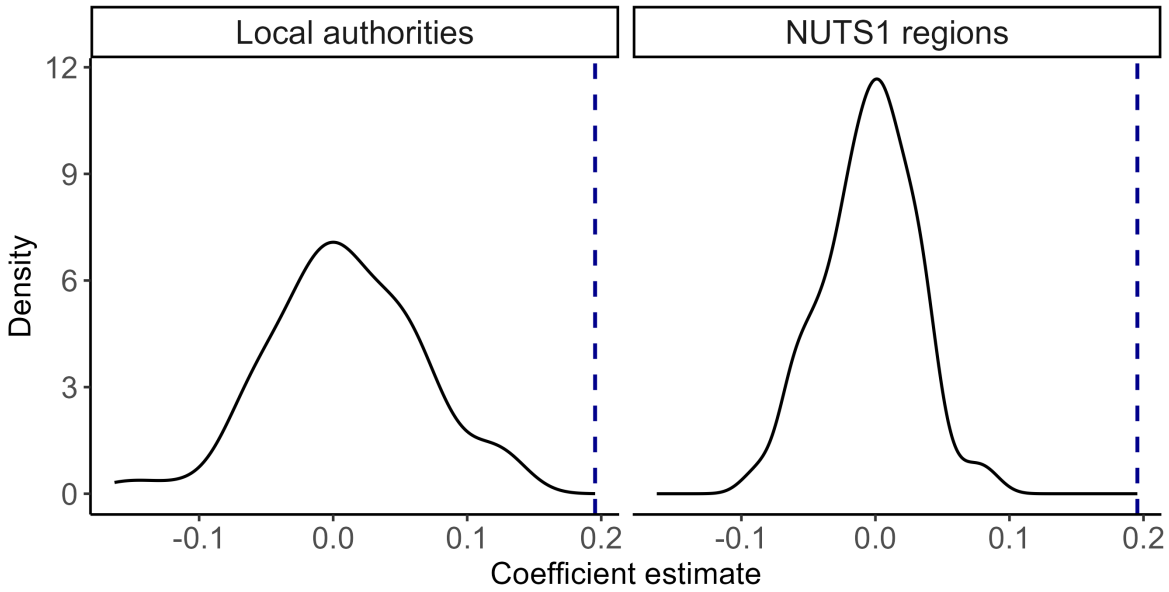



Figure A7: Randomisation inference by two different geographic units

**Note**: The two panels show the kernel densities of the coefficient estimate on vacancy rate (from the specification in Table 1, column (6)) when permuting vacancy rates withing either local authorities (left panel) or NUTS1 regions (right panel). Following the logic of randomisation inference, these kernel densities represent "null" distributions, i.e. the distribution of coefficient estimates we would expect if there was no systematic difference between treated and control units. The vertical dashed blue line indicates that our coefficient estimate is a clear outlier, relative to the two null distributions. This increases our confidence that our main result is robust.

# Tables

Table A1: Summary statistics

| | Mean | Median | SD | Min | P25 | P75 | Max | N |
|---|---|---|---|---|---|---|---|---|
| UKIP support (binary) | 0.05 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 1.00 | 64579 |
| Age | 47.45 | 47.00 | 18.01 | 16.00 | 33.00 | 61.00 | 102.00 | 64579 |
| Received any welfare benefit (binary) | 0.38 | 0.00 | 0.48 | 0.00 | 0.00 | 1.00 | 1.00 | 64579 |
| Any health condition (binary) | 0.05 | 0.00 | 0.22 | 0.00 | 0.00 | 0.00 | 1.00 | 64579 |
| Subjective financial situation | 2.25 | 2.00 | 1.06 | 1.00 | 1.00 | 3.00 | 5.00 | 64579 |

**Note**: This table provides summary statistics for the key variables used in the analysis, including UKIP support, age, welfare benefit receipt, health condition, and subjective financial situation. The data encompasses 64,579 observations.

Table A2: Robustness Check: Excluding individuals that ever reported as working in retail

| Model: | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| *Variables* | | | | | | |
| Vacancy rate | 0.176*** | 0.202* | 0.215* | 0.215* | 0.215* | 0.215* |
| | (0.050) | (0.115) | (0.115) | (0.115) | (0.115) | (0.115) |
| Region-by-quarter FE | x | x | x | x | x | x |
| Respondent FE | | x | x | x | x | x |
| Age | | | x | x | x | x |
| Receiving any benefit | | | | | x | x |
| Any health condition | | | | | | x |
| Subjective financial situation | | | | | | x |
| *Fit statistics and other information* | | | | | | |
| Mean of DV | 0.047 | 0.047 | 0.047 | 0.047 | 0.047 | 0.047 |
| Observations | 21,407 | 21,407 | 21,406 | 21,406 | 21,406 | 21,395 |
| $R^2$ | 0.029 | 0.551 | 0.554 | 0.554 | 0.554 | 0.554 |

*Clustered (Code-wave) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

**Note**: This table presents results from a robustness exercises, where we exclude individuals employed in the retail sector from the sample. The association between high-street vacancy rates and UKIP support remains significant and positive, suggesting that the main results are not driven by retail workers, i.e. those who are most likely to be directly and adversely affected by high-street vacancies.

Table A3: Robustness Check: Alternative Dependent Variable (Support for Other Populist Parties)

| Model: | (1) | (2) | (3) | (4) | (5) | (6) |
|---|---|---|---|---|---|---|
| *Variables* | | | | | | |
| Vacancy rate | 0.088** | 0.142* | 0.144* | 0.144* | 0.145* | 0.142* |
| | (0.044) | (0.079) | (0.079) | (0.079) | (0.079) | (0.079) |
| Region-by-quarter FE | x | x | x | x | x | x |
| Respondent FE | | x | x | x | x | x |
| Age | | | x | x | x | x |
| Receiving any benefit | | | | x | x | x |
| Any health condition | | | | | x | x |
| Occupation | | | | | | x |
| Subjective financial situation | | | | | | x |
| *Fit statistics and other information* | | | | | | |
| Mean of DV | 0.051 | 0.051 | 0.051 | 0.051 | 0.051 | 0.051 |
| Observations | 35,899 | 35,899 | 35,898 | 35,898 | 35,898 | 35,858 |
| $R^2$ | 0.021 | 0.735 | 0.736 | 0.736 | 0.736 | 0.736 |

*Clustered (Code-wave) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

**Note**: This table probes the robustness of the main findings to using an alternative dependent variable, capturing support for other populist parties. The significant positive association between vacancy rates and populist support remains robust across different specifications, buttressing our main finding.

Table A4: Association between vacancy rates and Labour support

| Dependent Variable: | Labour party | | | | | |
|---|---|---|---|---|---|---|
| Model: | (1) | (2) | (3) | (4) | (5) | (6) |
| *Variables* | | | | | | |
| Vacancy rate | 0.053 | 0.049 | 0.043 | 0.043 | 0.043 | 0.040 |
| | (0.132) | (0.094) | (0.094) | (0.094) | (0.094) | (0.094) |
| Region-by-quarter FE | x | x | x | x | x | x |
| Respondent FE | | x | x | x | x | x |
| Age | | | x | x | x | x |
| Receiving any benefit | | | | x | x | x |
| Any health condition | | | | | x | x |
| Occupation | | | | | | x |
| Subjective financial situation | | | | | | x |
| *Fit statistics and other information* | | | | | | |
| Mean of DV | 0.385 | 0.385 | 0.385 | 0.385 | 0.385 | 0.385 |
| Observations | 64,650 | 64,650 | 64,647 | 64,647 | 64,647 | 64,579 |
| $R^2$ | 0.046 | 0.756 | 0.757 | 0.757 | 0.757 | 0.757 |

*Clustered (Code-wave) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

**Note**: This table examines the association between high-street vacancy rates and support for the Labour party. The results show no significant association, suggesting that high-street vacancies have not significantly impacted Labour support during the period of our study.

Table A5: Association between vacancy rates and Conservative support

| Dependent Variable: | Conservative party | | | | | |
|---|---|---|---|---|---|---|
| Model: | (1) | (2) | (3) | (4) | (5) | (6) |
| *Variables* | | | | | | |
| Vacancy rate | 0.014 | -0.164** | -0.164** | -0.164** | -0.165** | -0.165** |
| | (0.108) | (0.080) | (0.081) | (0.081) | (0.081) | (0.081) |
| Region-by-quarter FE | x | x | x | x | x | x |
| Respondent FE | | x | x | x | x | x |
| Age | | | x | x | x | x |
| Receiving any benefit | | | | x | x | x |
| Any health condition | | | | | x | x |
| Occupation | | | | | | x |
| Subjective financial situation | | | | | | x |
| *Fit statistics and other information* | | | | | | |
| Mean of DV | 0.257 | 0.258 | 0.258 | 0.258 | 0.258 | 0.258 |
| Observations | 64,650 | 64,650 | 64,647 | 64,647 | 64,647 | 64,579 |
| $R^2$ | 0.041 | 0.786 | 0.786 | 0.786 | 0.786 | 0.787 |

*Clustered (Code-wave) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

**Note**: This table investigates the association between high-street vacancy rates and support for the Conservative party. The findings indicate a significant negative association, implying that higher vacancy rates are associated with a decline in support for the Conservatives. This suggests that UKIP might have gained support from former Conservative supporters.

Table A6: Association between vacancy rates and voting intention

| Dependent Variable: | Voting intention (dummy) | | | | | |
|---|---|---|---|---|---|---|
| Model: | (1) | (2) | (3) | (4) | (5) | (6) |
| *Variables* | | | | | | |
| Vacancy rate | -0.272 | 0.281 | 0.230 | 0.229 | 0.234 | 0.230 |
| | (0.179) | (0.285) | (0.284) | (0.283) | (0.283) | (0.288) |
| Region-by-quarter FE | x | x | x | x | x | x |
| Respondent FE | | x | x | x | x | x |
| Age | | | x | x | x | x |
| Receiving any benefit | | | | x | x | x |
| Any health condition | | | | | x | x |
| Occupation | | | | | | x |
| Subjective financial situation | | | | | | x |
| *Fit statistics and other information* | | | | | | |
| Mean of DV | 0.733 | 0.733 | 0.733 | 0.733 | 0.733 | 0.733 |
| Observations | 21,313 | 21,313 | 21,313 | 21,313 | 21,313 | 21,286 |
| $R^2$ | 0.020 | 0.840 | 0.842 | 0.842 | 0.842 | 0.842 |

*Clustered (Code-wave) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

**Note**: This table explores the association between high-street vacancy rates and individuals' voting intention. The results do not show a significant association, indicating that high-street vacancies do not significantly affect whether individuals intend to vote.

Table A7: Interaction with Unemployment Status

| Model: | (1) | (2) | (3) | (4) |
|---|---|---|---|---|
| *Variables* | | | | |
| Vacancy rate | 0.181*** | 0.185*** | 0.185*** | 0.185*** |
| | (0.069) | (0.069) | (0.069) | (0.069) |
| Unemployment dummy | -0.029* | -0.029* | -0.029* | -0.029* |
| | (0.015) | (0.015) | (0.015) | (0.015) |
| Vacancy rate × Unemployment dummy | 0.317** | 0.315** | 0.315** | 0.315** |
| | (0.143) | (0.144) | (0.144) | (0.144) |
| Respondent FE | x | x | x | x |
| Region-by-quarter FE | x | x | x | x |
| Age | | x | x | x |
| Owns home outright | | | x | x |
| Any health condition | | | | x |
| *Fit statistics* | | | | |
| Mean of DV | 0.053 | 0.053 | 0.053 | 0.053 |
| Observations | 64,646 | 64,646 | 64,646 | 64,646 |
| $R^2$ | 0.550 | 0.551 | 0.551 | 0.551 |

*Clustered (Code-wave) standard-errors in parentheses*
*Signif. Codes: ***: 0.01, **: 0.05, *: 0.1*

**Note**: This table presents the results of the interaction between high-street vacancy rates and unemployment status on UKIP support. The table includes four models, each adding more control variables: age, outright homeownership status, and a dummy for any health condition. Across all models, the interaction term between vacancy rates and the unemployment dummy is positive and significant, indicating that the effect of high-street vacancies on UKIP support is stronger for unemployed individuals compared to employed individuals. The coefficient for vacancy rates is consistently positive and significant, while the unemployment dummy alone shows a negative but weaker association. The results suggest that local economic distress, captured by high-street vacancies, has a more pronounced impact on politically vulnerable groups such as the unemployed. The standard errors are clustered at the region-wave level, and the models include respondent and region-by-quarter fixed effects to account for individual and regional variations over time.

## Treatment effect heterogeneity

Table A7 supports this hypothesis, showing that the interaction between the vacancy rate and unemployment status is significantly positive (coefficient: 0.317, $p < 0.05$). This finding aligns with our theoretical expectation that local economic distress has a more pronounced impact on those already facing economic hardships.

(Figure A2)

This is further illustrated in Figure A2, where the marginal effect of vacancy rates on UKIP vote share is significantly higher for unemployed respondents compared to those who are employed. This highlights the heightened sensitivity of economically vulnerable groups to local economic distress.