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## Local knowledge economies, mobility perceptions and support for right-wing populist parties: New survey evidence for the case of Germany

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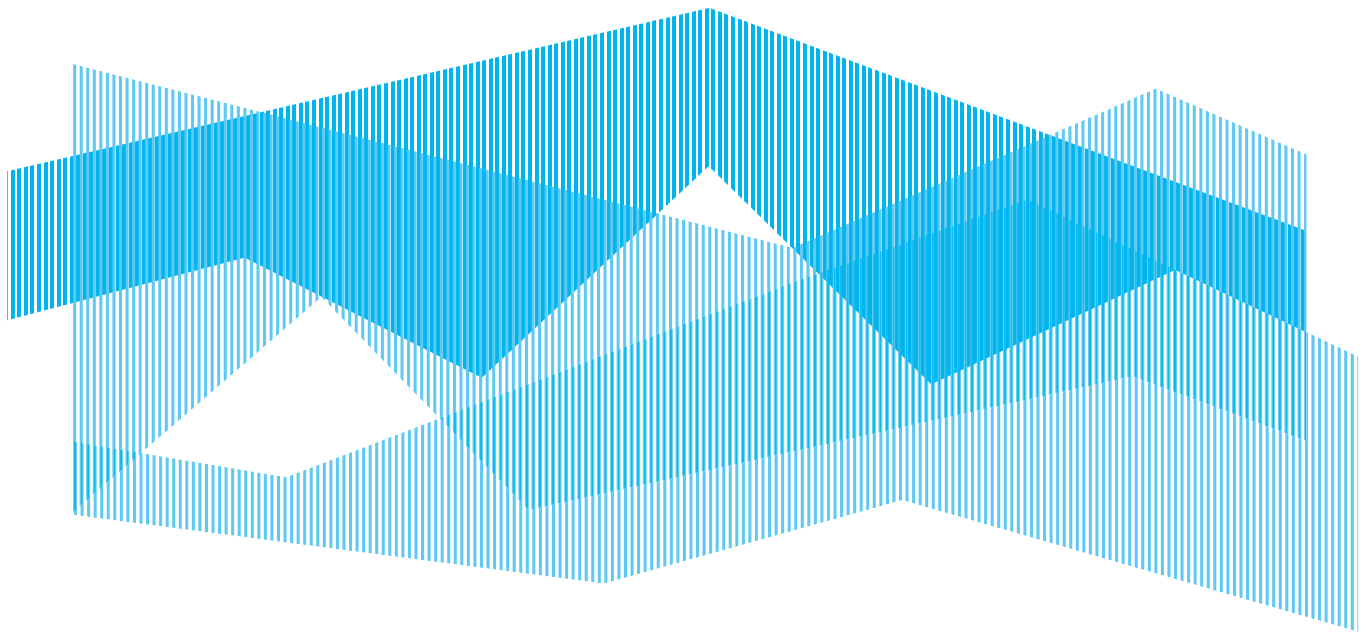
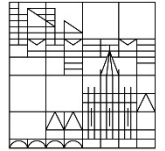
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# Local Knowledge Economies, Mobility Perceptions and Support for Right-Wing Populist Parties: New Survey Evidence for the Case of Germany

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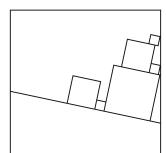
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## About the authors

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Marius R. Busemeyer is a Full Professor of Political Science with a focus on Comparative Political Economy at the University of Konstanz and Speaker of the Excellence Cluster "The Politics of Inequality". His research focuses on comparative political economy and welfare state research, education and social policy, public spending, theories of institutional change and, more recently, public opinion on the welfare state.

# **Local Knowledge Economies, Mobility Perceptions and Support for Right-Wing Parties: New Survey Evidence for the Case of Germany**

Kattalina M. Berriochoa and Marius R. Busemeyer

## **Abstract:**

The rise of knowledge economies is transforming labor markets with substantial socio-political implications. Recent literature suggests that these economies foster voters who, due to the current or potential experience of upward mobility, are less likely to support far-right parties. Using novel survey data for the case of Germany, we examine this assertion by analyzing the association between the local share of knowledge-based economic activity and individual mobility perceptions and vote choices. We find that individual mobility perceptions are – somewhat counterintuitively – more negative in thriving local knowledge economies (LKEs). We also examine how these local economic contexts and mobility perceptions explain vote choices, focusing on support for the Greens and the right-wing populist AfD, finding that electoral support for the Greens is strongly and positively associated with well-developed LKEs and less influenced by mobility perceptions, while the latter matters more in the case of support for the AfD. Yet, we also find that thriving LKEs can reinforce the impact of static mobility perceptions increasing support for the AfD. Our analysis shows that LKEs, while a sign of positive economic growth, can also lead to friction between individuals with different perceptions of mobility likely reflecting the winners and losers of technological and labor market changes at the local level.

**Keywords:** Political Preferences, Inequality, Knowledge Economy, Populism, Local Context

## **Introduction**

Scholarship in comparative political economy has long emphasized the importance of the structural transition from Fordist manufacturing to “knowledge economies” in shaping political and socio-economic outcomes (Hope & Martelli, 2019; Iversen & Soskice, 2015a; Iversen & Wren, 1998; Thelen, 2019), including cross-national differences in inequality (Pontusson, 2005; Huber & Stephens, 2014). The transition to the ‘knowledge economy’ has been ushered in by technological change and globalization which, at the broadest definitional level, has moved production away from manufacturing towards a reliance on intellectual capabilities and human capital investment, a focus on innovation and firm agility, and an increase in services-driven industries (Stevens, 1996; Powell & Snellman, 2004). Recent work emphasizes that the transition to the knowledge economy has significant implications for political geography as knowledge workers typically cluster in urban agglomerations (Florida, 2003; Glaeser & Saiz, 2003), thus contributing to the revitalization of geographical cleavages (most typically the urban-rural divide) in research on political attitudes and behavior (Rodden, 2019).

A seminal contribution in political economy is the work by Iversen and Soskice (2020) on the connection between emerging local knowledge economies across geography and the ‘aspirational voter’ as central force underpinning the legitimacy of capitalist democracy. According to Iversen and Soskice, aspirational voters directly experience the economic benefits of an expanding knowledge economy (or believe that their children will benefit), which results in more positive perceptions of intergenerational social mobility. As long as aspirational voters remain convinced of the existence of a positively self-reinforcing feedback loop between a thriving economy and democracy, they continue to support mainstream parties rather than populist alternatives and policies that foster the knowledge economy. However, if the promise of upward mobility is perceived as broken, voters may turn to (right-wing) populist parties instead, a conclusion further examined and corroborated in other studies (Ares & Ditmars, 2022; Engler & Weisstanner, 2021; Kurer, 2020).

In spite of significant recent advances, the existing work in this area has a number of shortcomings that our paper directly addresses. For one, in the framework developed by Iversen and Soskice (2020), the emergence of local knowledge economies is strongly tied to populated urban centers, thus reflecting and reinforcing the spatial urban-rural cleavage. However, other recent work in economic geography has found that knowledge-based industries may be distributed in complex ways across urban and rural places (Balland & Rigby, 2017; Kogler et al., 2017). This holds in particular for the focus of this paper, Germany, where strong small-

and medium-sized enterprises of the *Mittelstand* are also found in rural places of Southern Germany and where urban centers in the Ruhr area or in Eastern Germany are struggling with the transformation towards knowledge economies. The case of Germany is thus an intriguing object of study to examine the urban-rural cleavage which is less tightly correlated with the rise of (local) knowledge economies as in other countries, allowing for a more differentiated analysis of these dimensions.

Combining detailed and novel survey data covering the German resident population with administrative and socio-economic local-level data, we examine how and to what extent the distribution of knowledge economies at the local, *Kreis*-level is associated with variation in perceptions of social mobility and individual vote choices. Our findings only partially support the claims by Iversen and Soskice. Different from what may be expected, we find that strong local knowledge economies are systematically associated with growing concerns about limited upward social mobility. More in line with previous expectations, we also find that negative mobility perceptions are likely to fuel support for right-wing populism. Furthermore, the effect of mobility perceptions on vote choice is mediated by the local share of the knowledge economy, in particular with regard to support for right-wing populist parties. These findings suggest that while strong knowledge economies can promote local economic growth, they may also increase status competition and mobility unease at the local-level.

Our perspective in this paper complements recent scholarship that emphasizes the complex and widespread distribution of knowledge-based industries across geography (Balland et al., 2020). The results presented here resonate well with recent work on the role of status anxiety and perceptions of relative deprivation as drivers of populist voting (Burgoon et al., 2019; Gidron & Hall, 2020; Kurer, 2020). Our study also contributes to recent work on the importance of local economic trends and regional inequalities in explaining voting (Lee & Rogers, 2019; Rickard, 2020; Rodden, 2019), political polarization (Autor et al., 2020; Beramendi & Stegmueller, 2020), investment in public goods (Berriochoa, 2022), and support for populism (Hobolt, 2016; Rodrik, 2018).

Taken together, our findings help to better understand the empirically puzzling observation that support for right-wing populist parties (in the German case, the AfD) is not solely concentrated in poorer regions, but also enjoy electoral support in prosperous places. From a comparative perspective, our study of the German case holds important generalizable implications. In Germany, the strength and weakness of the local knowledge economy is less tightly correlated with the broader urban/rural cleavage compared to other countries such as the

United States, France or the United Kingdom (Lehmann et al., 2019). Hence, in examining the political implications of the knowledge economy across local contexts, our study moves beyond the urban-rural and industrial-agricultural dichotomies that dominate our current understanding of geographical cleavages and probes into the political implications of variegated economic activity across more fine-grained subnational contexts.

## **Literature**

Within the comparative political economy literature, there is a long tradition of studying the causes and consequences of inequality (Iversen & Soskice, 2001, 2020; Kenworthy & Pontusson, 2005; Lupu & Pontusson, 2011; O’Grady, 2019; Busemeyer, 2012). One aspect of interest is how inequality is shaped by differential skill investment within and across welfare states (Busemeyer & Trampusch, 2011; Estevez-Abe et al., 2001; Hall & Soskice, 2001; Iversen & Stephens, 2008). Scholars in this tradition have become particularly interested in understanding the implications of the rise of the knowledge economy, a sector reliant on the intellectual development of workers and accelerated industries that depend on technological and services-oriented skills. The rise of knowledge economies further amplifies stratification of labor markets, increasing education and skill differences (Iversen & Soskice, 2015b; Thelen, 2019), cleavages between labor market insiders and outsiders (Rueda, 2005) as well as skill gaps across segments of the workforce (Scandurra & Calero, 2020; Solga, 2014). An additional strand of the literature has pointed to the growing and central role of the educational cleavage in the partisan politics of the knowledge economy (Attewell, 2022; Ford & Jennings, 2020; Schäfer, 2022; Stubager, 2010). The changes that accompany the rise of knowledge economies often go along with the emergence of relatively disadvantaged workforce ‘outsiders’ (Rueda, 2005) and differences in economic gains (Kriesi, 2008; Kriesi et al., 2006).

A second, related strand of scholarship studies how labor market stratification intersect with geographical inequalities within countries (Rickard, 2020). Inequality across geography is increasingly considered essential to understand the emergence of political cleavages (Ford & Jennings, 2020; Rickard, 2020; Rodden, 2010). At the subnational level, political polarization has been studied across cities and towns, cosmopolitan and provincial areas, and historically liberal and conservative states (Ansolabehere et al., 2006; Jennings & Stoker, 2016, 2019). Closely related, the political implications of geographical inequalities have also

been approached through the lens of the urban-rural divide (e.g., Brooks, 2020; Cramer, 2016; Kelly & Lobao, 2019; Koeppen et al., 2021; Rodden, 2019). Similarly, interregional inequalities explain political discontent (McCann, 2020) and decreasing public trust in institutions (Lipps & Schraff, 2021). Moving toward lower-level subnational units such as counties and neighborhoods, an emerging literature probes into local context as an important determinant of redistributive preferences (Sands & Kadt, 2020), political participation (Szewczyk & Crowder-Meyer, 2022) and perceptions of inequality (Johnston & Newman, 2016; Newman, 2015; Newman et al., 2018).

A particularly vibrant line of research concerns the rise of populism and how it links to geographical inequalities as a way to explain divisions in political preferences (Chou et al., 2022). Findings suggest that nationalist backlash, authoritarian values, and sentiments of protectionism gain a stronger foothold in places that have experienced trade shocks (Ballard-Rosa et al., 2022), exposure to global trade (Autor et al., 2020), declining social conditions (Broz et al., 2021), manufacturing layoffs (Baccini & Weymouth, 2021), and are in closer proximity to manufacturing closures due to competition from imports (Bisbee et al., 2020). Local contexts have been examined in relation to support for populist parties such as the AfD in Germany (Schwander & Manow, 2017), electoral support for the radical right in Finland (Patana, 2020), and the 2016 election of Donald Trump in the United States (Ogorzalek et al., 2020). Schwander & Manow (2017) do not find that that economic decline holds bearing for populist voting, but rather, places carry traditions of “radical right ideas,” likely related to distinct local political cultures.

Our paper can draw on contributions from these vibrant, but hitherto somewhat disconnected fields of research. Scholarship in comparative political economy has substantially examined the political causes and consequence of the transition from the service to the knowledge economy, but has tended to focus on the national level for aggregate trends on the one hand, or on the individual level on the other, when it comes to measuring preferences and perceptions. What is missing is a more thorough analysis of the impact of the local and regional context. Vice versa, the growing literature in economic and political geography has emphasized the importance of place as determinant of political preferences, but paid relatively little attention to the role of local knowledge economies as a driver of preferences. In this paper, we examine how the localized diffusion of knowledge economies shapes political preferences and support for populist parties, potentially mediated by differing perceptions of social mobility and inequality. Drawing from political and economic geography, we move beyond static



examinations of winners and losers in changing economies towards an understanding of how local shifts towards new economic models shape beliefs, perceptions, and support for populist parties.

## **Theory**

The term ‘knowledge economy’ captures a broad conception of socio-economic change (Powell & Snellman, 2004). From a general perspective, the knowledge economy describes a large-scale socio-economic transformation of economies in advanced democracies, related to the emergence of new modes of production in which human capital becomes the central production factor. In a narrower sense, the term knowledge economy refers to the emergence and expansion of knowledge-intensive economic sectors such as information and communication technology (ICT), consulting or education services. However, the social, political, and economic implications of the expansion of these parts of the economy go much beyond the sectors that formally fall under a narrow conception of the knowledge economy. Thus, in a broader sense, the transformation towards the knowledge economy also signals the advent of a new phase of capitalism.

According to Iversen & Soskice (2020), the emergence of local knowledge economies (LKEs) should result in positive political implications. That is, strong LKEs are associated with a larger share of “aspirational voters” who are directly experiencing (or believe they or their children will experience) the benefits of economic growth in the form of upward social mobility. “Aspirational voters” are in a sense the backbone of democratic capitalism, electorally supporting mainstream political parties which (are supposed to) deliver economic growth and express generally positive attitudes about capitalism. Problems start to emerge when the social elevator breaks down, i.e. when aspirational middle-class voters realize that prospects of upward social mobility are increasingly limited and potentially face real or perceived downward mobility. In these cases, as recent research confirms, individuals turn towards populist parties of the left and the right (Burgoon et al., 2019; Kurer, 2020).

Put simply, the literature suggests that individual perceptions of upward social mobility should be more positive in strong LKEs and – as a consequence – support for right-wing populist parties should be lowest in these contexts. However, as briefly mentioned in the introduction above, the pattern of electoral support for the AfD as the dominant right-wing populist party is more complex than this: It is also (relatively) strong in the economically

thriving South, and there is significant variation in support across local contexts. This empirical puzzle invites reflecting upon the political implications of LKEs in terms of (1) social mobility perceptions and (2) vote choices.

*(1) Perceptions of intergenerational social mobility:* As LKEs diffuse across localities, they reshuffle the distribution of resources across geographical boundaries. While there are good reasons to assume that strong LKEs are associated with more positive mobility perceptions, we posit that LKEs can also fuel perceptions of lower social mobility if they lead to the concentration of highly skilled and educated workers in particular places. If a large share of the population is well-qualified and works in high-paying employment, economic competition over labor market opportunities or scarce resources such as housing is also likely to increase. Additionally, competition for high-paying jobs might intensify if there are more highly qualified people that can apply for these jobs. For those who do not manage to keep up (even if they might be relatively well educated), this could encourage feelings of displacement and of being left behind. Hence, strong LKEs can actually be associated with more negative perceptions of upward social mobility (Hypothesis 1a), potentially varying in line with individual educational background. Thus, those in the lower half of the skills distribution should be more likely to express negative views on social mobility (Hypothesis 1b)

*(2) Vote choice:* Recent work has pointed to the growing and central role of the educational cleavage in the partisan politics of the knowledge economy (Gethin et al., 2022; Häusermann et al., 2022). This work also shows that the educational cleavage is strongly aligned with the second dimension of partisan competition, i.e. conflicts about social and cultural values (Oesch & Rennwald, 2018). Green and right-wing populist parties are the most exposed representatives of electoral constituencies at the opposite ends of this second dimension of party competition, in particular in the case of Germany where both the Green Party and the AfD have significantly gained electoral support in the past decade.<sup>1</sup>

We first hypothesize that individual mobility perceptions are significantly related to vote choice, above and beyond potential other confounding factors (Hypothesis 2). Ex ante, the most plausible expectation is that positive mobility experiences should be positively associated with support for the Greens as the party representing the professed winners of the transition towards the knowledge economy, whereas negative perceptions should be associated with higher

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<sup>1</sup> Mostly for reasons of space, we do not analyze vote choice for all political parties, but focus on support for green and right-wing populist parties for the following reasons. In the robustness section, we also examine vote choices for other parties.

support for the AfD. Second, we expect local economic contexts to have a direct effect on vote choices above and beyond individual variables (Hypothesis 3a). Again, strong LKEs should be associated with higher levels of support for the Greens and lower levels of support for the AfD. Third and lastly, the local context is also likely to mediate the association between mobility perceptions and vote choices (cross-level interaction effect, Hypothesis 3b). In line with the idea posited above that strong LKEs could also raise status anxiety, we should see a variegated effect of perceptions of mobility on vote choice depending on local contexts. A strong LKE could then have deleterious effects as individuals see others pulling ahead while feeling left behind. For those who feel stuck in the social elevator in strong LKEs, this could lead to support of populist parties. These pessimistic perceptions of mobility in strong LKEs should be influential in explaining vote choice, specifically, leading to increased support for the AfD. This would explain the puzzling electoral success of the AfD *across* Germany, rather than solely in struggling places.

## Data

For the empirical analysis, we use the first wave of the *Inequality Barometer* survey, conducted in Germany in 2020, hosted and financed by the Cluster of Excellence “The Politics of Inequality” at the University of Konstanz. This representative survey collects data on policy preferences and subjective perceptions and normative evaluations of inequality and social mobility in Germany. For this paper, we rely on the core module of the survey that measures perceptions of inequality and mobility, redistributive preferences, and vote choice/party preferences. Using zip code matching, we merge respondents to data at their local context, which we define at the district (*Kreis*) level.

In Germany, the *Landkreis*, or county, is a broader measure of the local context than neighborhoods but a lower aggregation than NUTS-2 regions. This aggregation level captures the local labor markets as the smallest possible spatial reference and has been used to observe trade shocks at the local level on political preferences in other studies using the German case (e.g., Dippel et al., 2015, 2022). In total, there are 334 *Landkreise* and 67 urban districts (*kreisfreie Städte*) included in this local-level dataset. As of 2020, the average area in km<sup>2</sup> was 891.79 with an average population of 207,369 inhabitants. Data for the *Landkreis* level is provided by the Regional Indicators dataset (INKAR) of the Federal Institute for Research on

Building, Urban Affairs and Spatial Development.<sup>2</sup> INKAR offers nationwide comparable data on local-level labor markets, education, social benefits, demography, income, economy, housing, public finances, transport and the environment, including data that can be used to measure the local extent of the ‘knowledge economy’ (see below for details). Relevant variables from this dataset are available from 2009 to 2019. Since our survey data is measured at one point in time only (2020), we use the INKAR data to calculate long-term (five year) averages of the context variables from 2015-2019.

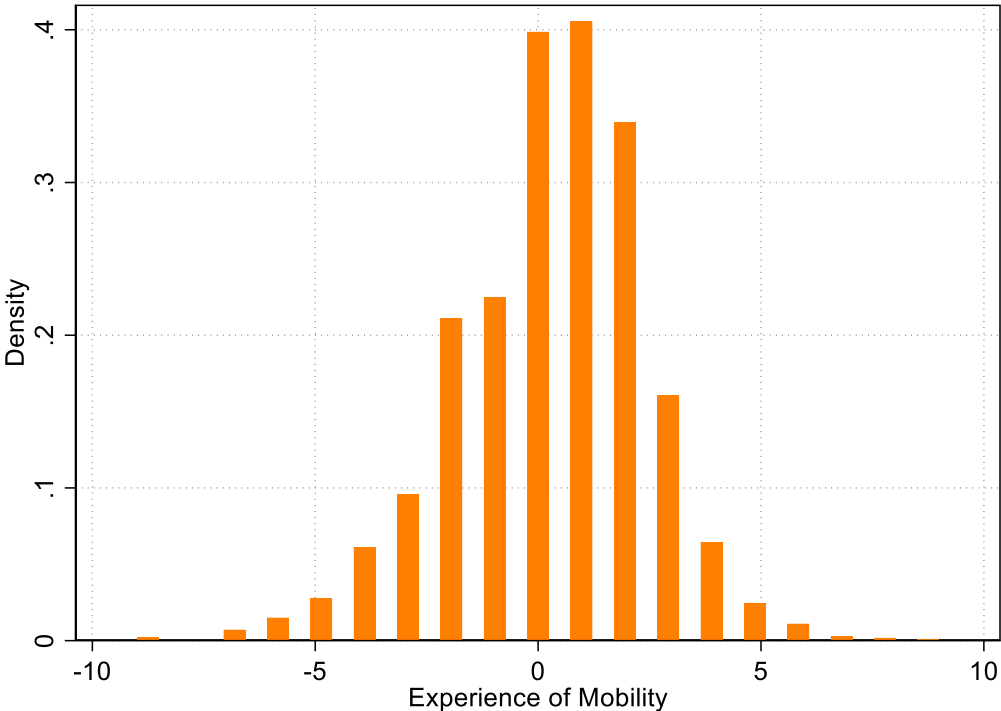
We are primarily interested in the effect of local knowledge economies on two main outcomes: 1) individual perceptions of social mobility and 2) individual vote choices. To measure mobility perceptions, respondents are first asked to locate both themselves and their parents (when they were at the same age as the respondent currently is) in a visualization of incomes along a 10-step ladder.<sup>3</sup> We then calculate the difference between these two measures to derive a measure of subjective (perceived) intergenerational mobility. Figure 1 presents some descriptive statistics on this and the other dependent variables. The figures show that the distribution of mobility perceptions is slightly right-ward skewed, meaning that on average, subjective mobility perceptions tend to be more positive (the average score is 0.38 on a scale from -9 to 9). Even though a large share of respondents does not perceive any difference in mobility between themselves and their parents, the figure also shows that there is a broad distribution of perceptions around the mean, indicating that there are both positive and negative mobility perceptions.

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<sup>2</sup> Online-Atlas des Bundesinstituts für Bau-, Stadt- und Raumforschung veranschaulicht die Lebensbedingungen in Deutschland. <https://www.inkar.de/>

<sup>3</sup> Original wording of this survey items is included in the Appendix.

Figure 1: Distribution of Individual Perceptions of Social Mobility



For individual vote choice, we are primarily interested in support for right-wing populist parties as well as progressive, green-liberal parties. In the German case, we operationalize the former as support for the AfD (*Alternative für Deutschland*). Respondents are asked about the party that would receive their vote if a federal election was to take place the following Sunday. Right-wing support is measured as AfD=1 and other=0 (including respondents who do not name a particular party). The AfD is marked by euro-skepticism, conservatism, nationalism and increasingly far-right ideals (Arzheimer & Berning, 2019). Support for green-liberal parties is measured similarly and indicates a preference for the party “Bündnis 90/Die Grünen.” Descriptive statistics of these dependent variables are outlined in Table 1 in the appendix. It is important to note that respondents who do not express any particular party preference or who respond by saying that they do not vote are coded as 0, i.e. still valid cases and not missing. This implies that the share of respondents indicating support for a particular party is significantly below the actual vote share in elections. In the robustness section, we explore whether an alternative operationalization of this variable (i.e. excluding undecided respondents as missing) changes the results.

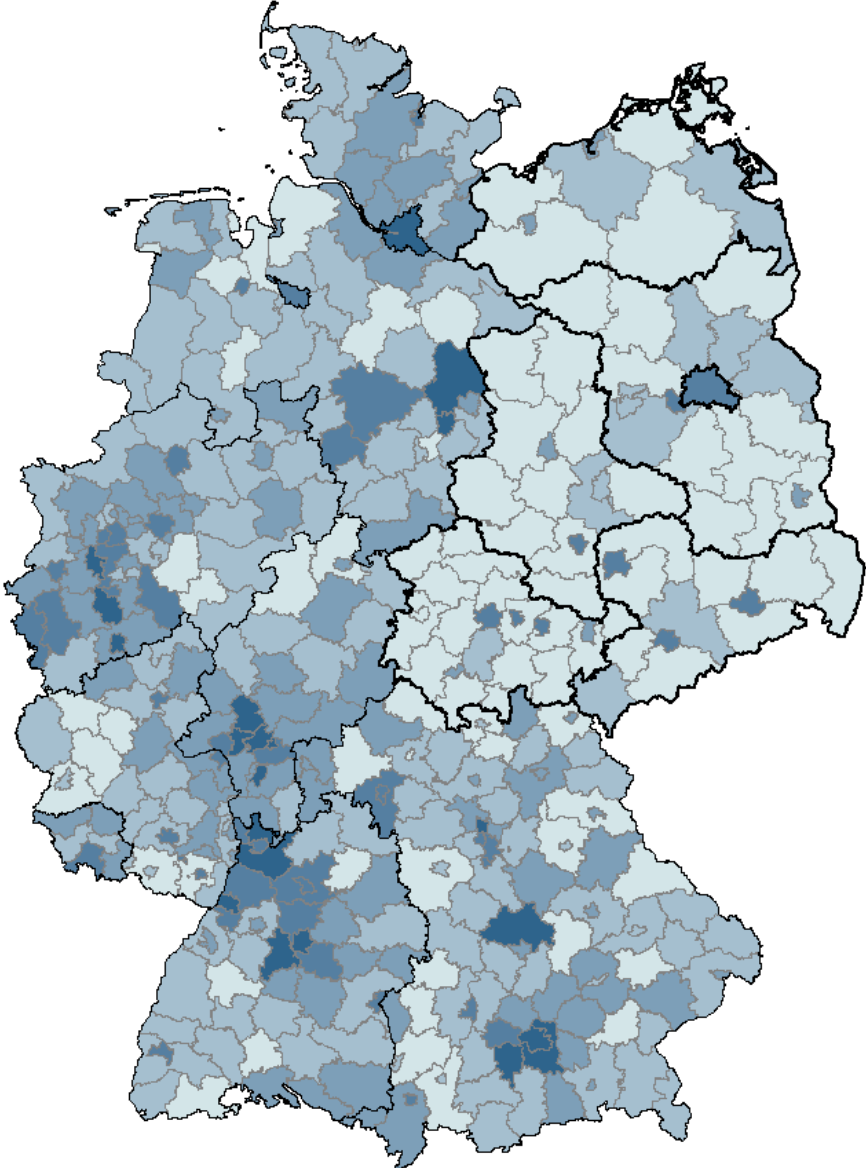
For our analysis, we rely on the following independent variables to capture the local context. The first measure of the local context is clearly and directly related to the notion of local knowledge economies, whereas the latter captures related, but distinct aspects of local

contexts. The first variable measures the *local knowledge economy* (LKE) as the share of full time employees that work in knowledge-intensive companies as defined by and in the INKAR dataset.<sup>4</sup> This variable captures the average share of employment in the knowledge-intense sector in the local economy for the prior five years and includes jobs which are human capital-intensive and non-routinizable, such as positions in research, finance, and engineering. In 2019, the average share of knowledge intensive industries made up approximately 11.06 percent (ranging from 3.4-29.6 percent) of local (*Kreis*) labor markets. Figure 2 illustrates the spatial dispersion of the knowledge economy across Germany. The figure shows a significant variation in the extent of LKEs across districts. As expected, urban agglomerations (Munich, Stuttgart, Berlin, Hamburg, Frankfurt) are often also LKEs, but the figure also highlights that rural parts of Germany, in particular in the South, are LKEs as well. It also shows that Eastern Germany, which is generally economically weaker than Western Germany, has a significant number of LKEs as regional clusters. Figure 2b shows the change in LKEs over a ten-year period. *Landkreise* in red experienced the largest gains in knowledge based employment, while the blue denotes areas that saw declines over the past decade.

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<sup>4</sup> Knowledge-intensive company-related services according to WZ 2008: Departments 62 (provision of information technology services), 63 (information services), 64 (finance services), 66 (activities related to finance and insurance services), 69 (legal and tax advice, auditing), 70 (administration and management of companies and operations; management consulting), 71 (architecture and engineering offices, technical, physical and chemical research), 72 (research and development), 73 (advertising and market research), 74 (other freelance, scientific and technical activities). They are characterized by human capital-intensive and non-standardizable products and services, which is why employee skills are decisive. In the last few years, a large number of jobs have been created in this area, which is why the employment structures are shifting in favor of higher qualifications. (INKAR, 2021)

Figure 2a. Spatial Distribution of Knowledge Economies across German *Kreise* (2013-2019)

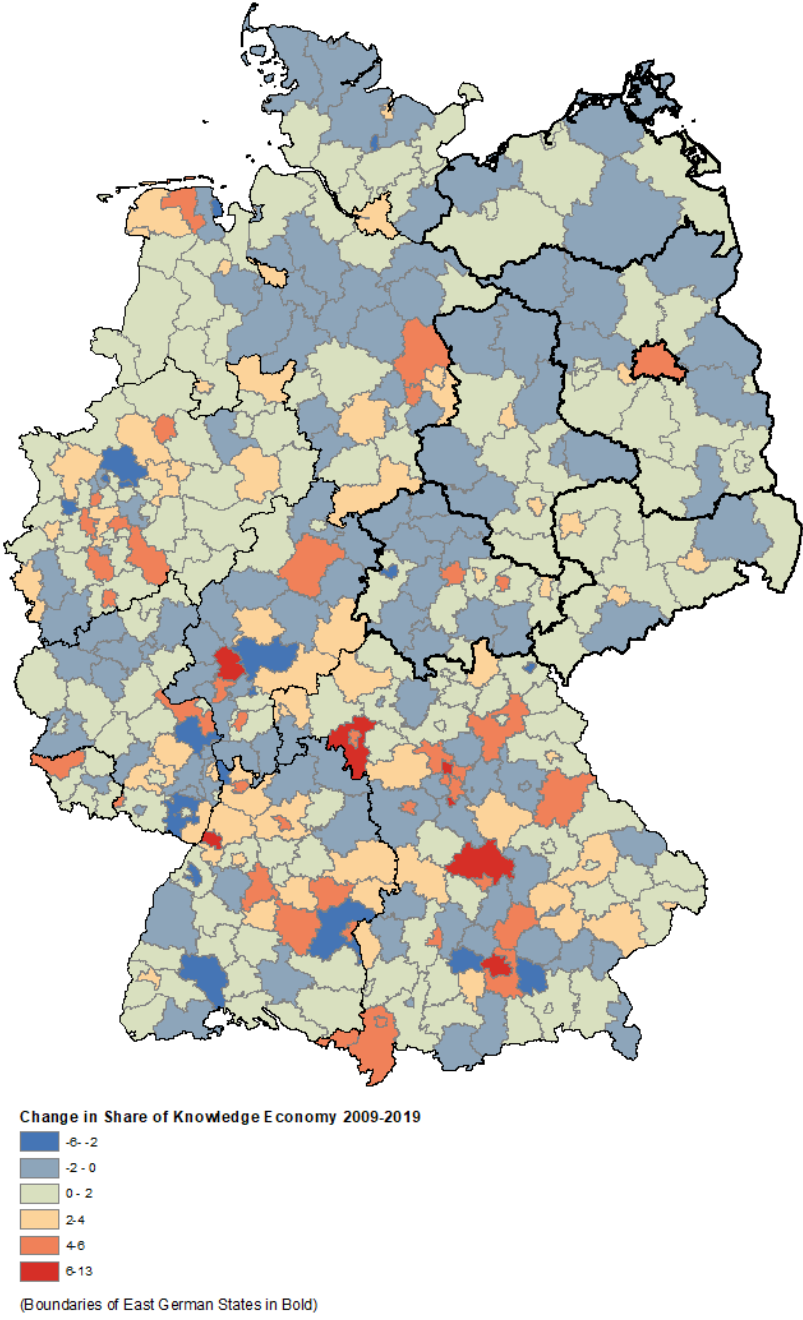


Employment Share in Knowledge-Intensive Industries 2015-2019

- 2.55 - 5.42
- 5.43 - 7.78
- 7.79 - 11.2
- 11.3 - 17.6
- 17.7 - 29.1

(Boundaries of East German States in Bold)

Figure 2b. Change in Share of Knowledge Economies across German Kreise (2009-2019)





As a second, alternative measure (and to probe the robustness of our findings), we construct a factor variable that measures the general strength of the local economy. For the factor analysis, we use the 5-year averages of a number of *Kreis* level economic variables: the share of education and job migrants, the share of employees in manufacturing, creative, knowledge, and craftwork industries, the share of employees with vocational education and academic credentials, the rate of unemployment, and the household median income. A factor analysis reveals one underlying general factor (Eigenvalue = 4.05), which is in turn correlated strongly with our simple indicator for the knowledge economy ( $r = 0.95$ ). Thus, to a significant extent, the economic strength of the local knowledge economy (in the narrow sense) is related to the overall strength of the local economy, effectively documenting the importance of knowledge-intensive sectors in driving economic growth and innovation even in a country such as Germany, in which employment in traditional sectors (manufacturing, crafts, construction) remains important as well.

As controls, we include a battery of individual-level and contextual variables. At the individual level, we control for income (as a 10-point scale variable ranging from lower to higher income), age (as a continuous variable), gender (as a categorical variable: 0=male, 1=female, 2=non-binary) and political orientation (as a 10-point scale moving from left to right). The education control is a 3-point scale moving from individuals with a basic or no school certifications via middling school degree to individuals with higher education including Abitur (certificate of general qualification for university entrance) and similar degrees. We also include binary variables for being from East Germany (1=East German) and migration status (1=migration background). This latter variable indicates that an individual was not born in Germany or that one of their parents was not born Germany. At the *Kreis* level, we control for *regional potential*, or ‘connectability’ to other places.<sup>5</sup> This variable is a measure of the potential for spatial interactions. It is measured as the sum of the community population (in thousands) weighted by area within the radius of 100 kilometers. A larger value reflects the population that can be reached within a shorter distance around the vicinity of a place. This measure captures the distance required to connect people, industries, and economies. To control for overall economic prosperity, we also include the Median Household Income. Table 2 in the appendix provides the descriptive statistics for the key independent and control variables.

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<sup>5</sup> Official Definition: “Summe der mit der Fläche und Entfernung gewichteten Gemeindebevölkerung in 1.000 im Umkreis von 100 km Luftliniendistanz” (Sum of the community population weighted with area and distance in 1,000 within a 100 km straight line distance).

For the empirical analysis, we estimate random intercept, multilevel models that account for clustering of individual survey respondents in local districts. These models enable us to more accurately estimate the relationship between variables at different aggregation levels, in this case, local contextual variables on individual level variables. These models rely on random effects to estimate the between group effect, or the effect between local contexts. In our estimations of the relationship between the knowledge economy and perceptions of mobility and concerns about inequality, we estimate linear mixed effects models with robust standard errors. For the models of vote choice (a binary outcome), we estimate mixed effects logistic regression models.

## **Results**

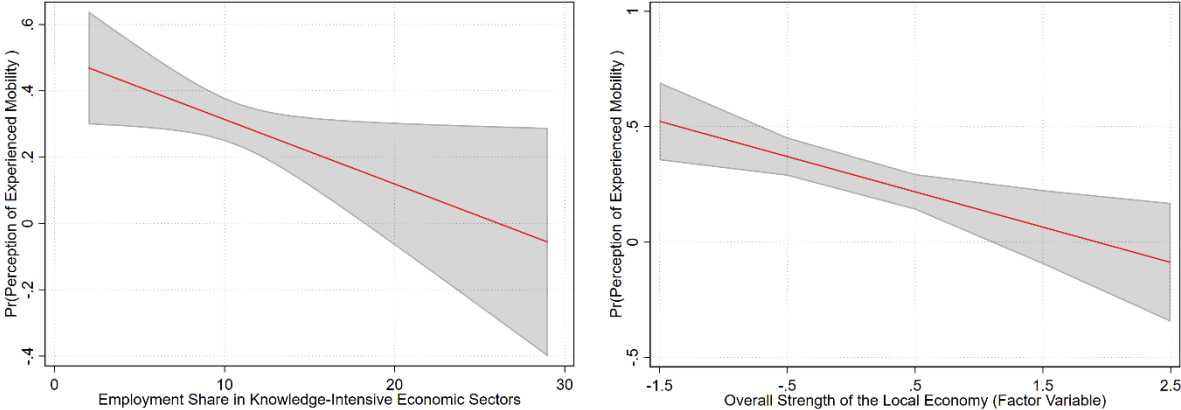
In this section, we empirically examine the association between the development of the local knowledge economy and perceptions of individual social mobility and voting preferences. The first estimations of models include the independent variable that captures the share of the local economy in knowledge intensive industries followed by models that include the variable which captures the local economy as a factor analysis variable.

### *LKEs and mobility perceptions*

As a first step, we examine how the local level share of the knowledge economy shapes perceptions of mobility. Above we discussed different theoretical expectations on this issue: On the one hand, a thriving local knowledge economy could boost individuals' perceptions of upward social mobility, on the other hand it might contribute to growing worries about status competition. The findings clearly provide evidence in favor of the latter: We find that a higher share of employment in knowledge-intensive economic sectors is associated with significantly more negative individual perceptions of intergenerational social mobility (see Figure 3A for a graphical representation). Local contexts with a larger share of the employees in the knowledge economy are associated with more negative individual perceptions of social mobility. This finding is further supported when we use the factor variable measuring the overall strength of the local economy instead of the employment share in knowledge-intensive sectors (Figure 3B). Table 3 in the appendix includes the detailed regression results, confirming Hypothesis 1a.

To further probe the mechanism behind the association between LKE and mobility perceptions, we perform a sub-sample analysis, distinguishing between individuals with a university education background and those without a university degree. We use this variable to analyze a heterogeneous effect among individuals that have different education backgrounds. Including the share of the knowledge economy in the models (Table 4) yields the same negative results for both education categories, but is only significant at the 10 percent level for those with no university degree. Using the factor variable measuring the overall strength of the local economy (Table 5) yields different findings across education groups. The effect of the local economy factors is significant (at the one percent level) in the model among individuals with no university education, giving some empirical support to the notion that concerns about status competition are particularly felt by those in the lower half of the skills distribution (Hypothesis 1b). That is, living in a strong LKE and reliant on highly-educated individuals, reduces perceptions of mobility most among individuals without university educations.

Figure 3. Average Marginal Effects of Knowledge Economy on Perceptions of Social Mobility (95 percent confidence intervals)



Panel A. Continuous LKE Variable

Panel B. Local Economy Factor Variable

Taken together, these two findings imply that strong LKEs have ambiguous implications: On the one hand, LKEs can in theory, significantly improve local economic conditions and prospects for upward social mobility in the long term, but on the other, individuals living in thriving LKEs appear to become more pessimistic about their own intergenerational social mobility experiences as they find themselves in situations of status

competition with others. In the next step, we analyze to what extent these perceptions and attitudes are related to vote choices and whether the local context mediates this association.

### *LKEs and vote choice*

The second part of the analysis examines the associations between mobility perceptions, local contexts, and vote choices. This part of the analysis proceeds in three steps: First, we analyze to what extent mobility perceptions are related to vote choice (micro-level association). Second, we probe whether local contexts have a direct effect on vote choice above and beyond micro-level variables (random intercept models). Lastly, we study to what extent local contexts mediate the micro-level association between mobility perceptions and vote choice (cross-level interaction effect).

To start off, we study to what extent mobility perceptions are related to vote choice on the individual level. As can be seen in Table 6 in the appendix, mobility perceptions are associated with support for the AfD in a statistically significant manner. As expected (Hypothesis 2), individuals with more positive mobility perceptions are less likely to vote for the AfD. The perception of positive mobility decreases the odds of voting for the AfD by 5% (significant at the 10 percent level). The effects for the Greens are less clear-cut. In the case of the Greens, there is no statistically significant association between mobility perceptions and vote choice, although the other markers of upward social mobility – being highly educated and having a high income – are strongly and positive associated with support for the Greens.

Table 6 also includes findings on the direct association between the local context and vote choice (Hypothesis 3a). Here the picture is reversed in the sense that the local context matters more for support for the Greens, whereas it matters less for AfD support. A well-developed local knowledge economy is strongly and positively related to electoral support for the Greens. Living in a local context with a larger share of the knowledge economy increases the odds of voting for the Greens by 2% (significant at the 10 percent level). Regarding AfD support, the analysis does not show any strong direct contextual effects, but as will be seen in the next step of the analysis, there are strong mediating effects.

In this next step, as a reminder, we hypothesize that while negative or static mobility experiences may translate into support for populist right-wing parties, this effect should be mediated by living in a local context with an increasing share of knowledge based industries (Hypothesis 3b). In order to ease the interpretation of the interaction effects between individual

and contextual variables, we have transformed the continuous variable on mobility perceptions from above into a discrete variable with three categories: negative mobility perceptions ( $<0$ ), no change (also used as reference category in the regression models), and positive mobility perceptions ( $>0$ ) (see Figure 1 for the distribution). The continuous variable measuring the LKE context is displayed on the x axis. As above, we look at the employment share in knowledge-intensive industries in Panel A and the overall strength of the local economy in Panel B.

We first study the case of support for the AfD (Figure 4 and Table 7 in the appendix). Figure 4 displays evidence in support of a strong interaction effect between LKEs and the impact of perceptions on vote choice. The effects are particularly pronounced for those in the middling category, i.e. those who feel that the social elevator is not moving upwards anymore. For this group of individuals, living in a well-developed LKE significantly increases their chances of voting for the AfD. In contrast, there are no strong context effects neither for those with clearly positive or clearly negative mobility perceptions. The latter may sound puzzling at first, but keep in mind that negative mobility perceptions are by themselves a strong predictor for AfD support, independent of the local context. Therefore, the local context matters in particular for those in the middle who are stuck rather than moving upward or downward. For this group of individuals, living in a well-developing LKE is likely to be associated with more visible and tangible forms of inequality as they can observe the knowledge workers pulling ahead while they feel stuck. Hence our findings suggest that in this constellation, they are more likely to turn to right-wing populist parties, possibly out of protest.

More concretely, the models yield the following effect size estimates: Compared to no change in social mobility, experiencing negative mobility in a local context with an increasing share of the knowledge economy reduces the odds of voting for the AfD by 8% (significant at the 1 percent level), when compared to individuals who perceive no social mobility. Similarly, experiencing positive social mobility in a local context with an increasing share of the knowledge economy also decreases the odds of voting for the AfD by 8% (significant at the 1 percent level), compared to those who perceive static mobility. Most puzzling, experiencing negative social mobility in a local context with an increasing share of the knowledge economy also decreases the odds of voting for the AfD by 9% (significant at the 1 percent level), compared to those who perceive static mobility.

Likewise, the effect of the local economy factor is similarly decisive in explaining variation in vote choice for the AfD. Figure 5 and Table 8 in the appendix outline these results. The models yield the following effect size estimates for the effect of the local economy variable

(which is highly correlated to the knowledge economy variable). For individuals who perceive no social mobility, living in a context with a higher value of the local economy factor increases the odds of voting for the AfD by 56 % (significant at the 1 percent level). Compared to no change in social mobility, experiencing negative mobility in a local context with an increasing value of local economy factor reduces the odds of voting for the AfD by 40% (significant at the 1 percent level), when compared to individuals who perceive no social mobility. Experiencing positive social mobility in a local context with an increasing value of the local economy factor variable also decreases the odds of voting for the AfD by 46% (significant at the 1 percent level), compared to those who perceive static mobility.

In contrast to these findings, the local context does not seem to have a mediating effect on the association between mobility perceptions and support for the Greens (although keep in mind that the local context has a direct effect on average support for the Greens) (see Figure 5 and Table 8). How could these differences in the role of local contexts between Greens and the AfD be explained? Our tentative and partly speculative explanation is that the electoral constituency of Green parties is more homogenous in terms of socio-economic characteristics than the constituency of the AfD. Because of this, the Green vote is less influenced by mobility perceptions as the majority of Green supporters have experienced positive mobility. Hence, the contextual mediation effect is also less pronounced, but the direct impact of LKEs on vote choice is stronger as Green supporters also tend to cluster in urban and suburban regions, i.e. the drivers of the knowledge economy. In contrast, within the more heterogeneous supporting constituency of the AfD, differences in mobility perceptions matter more and are also more sensitive to context conditions.

Figure 4. Average Marginal Effects of Increasing Share of Local Knowledge Economy/Factor Variable on Voting for the AfD by Social Mobility Categories (95 percent confidence intervals)

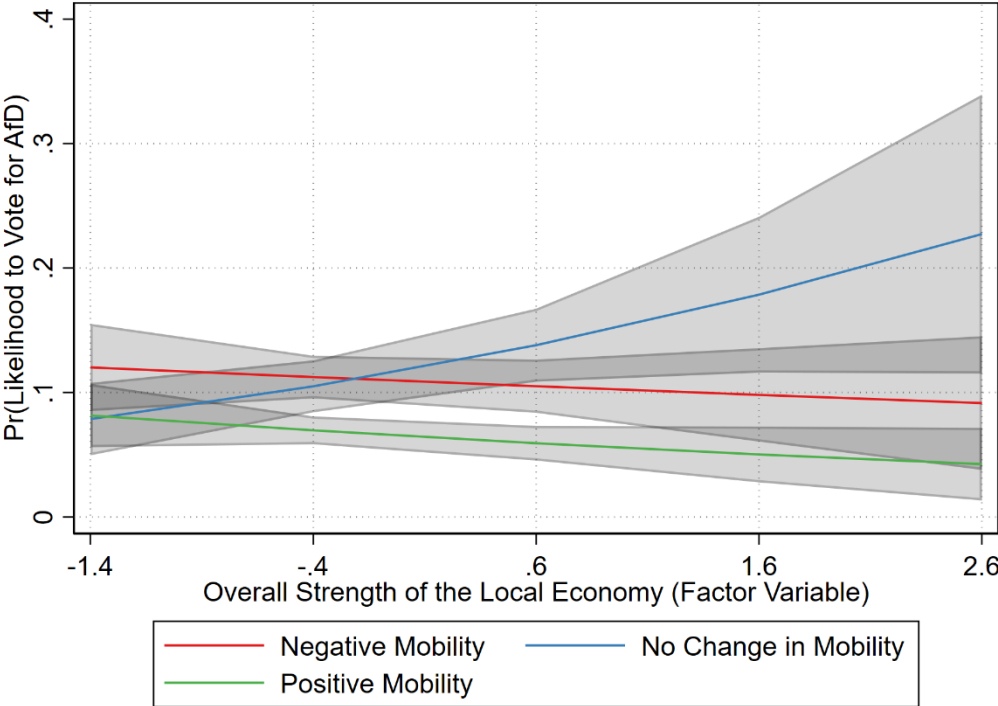
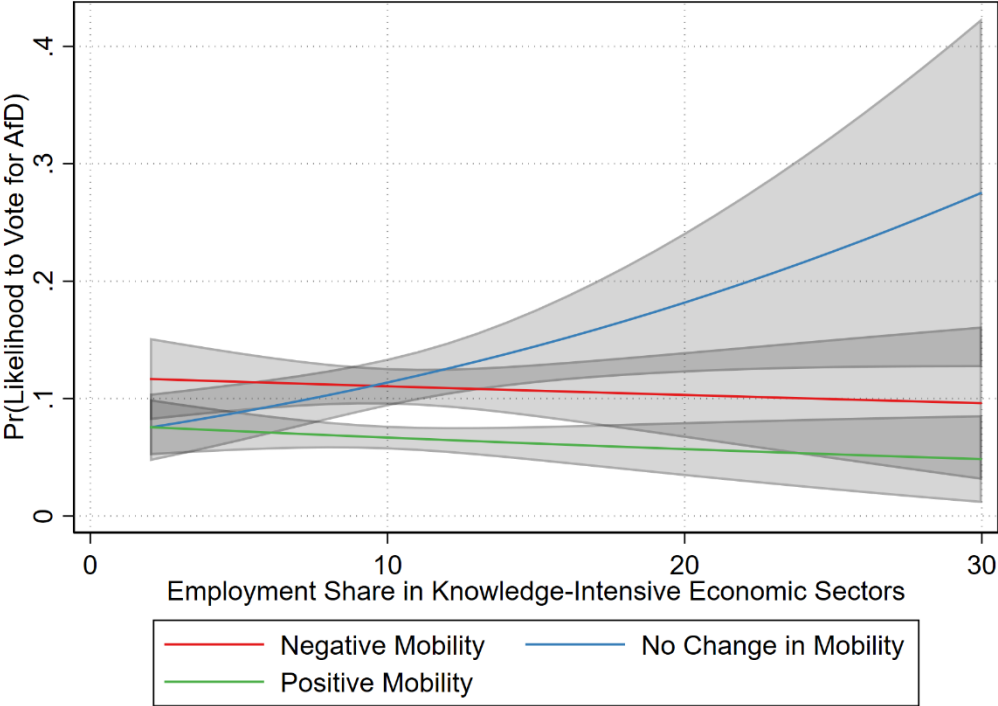
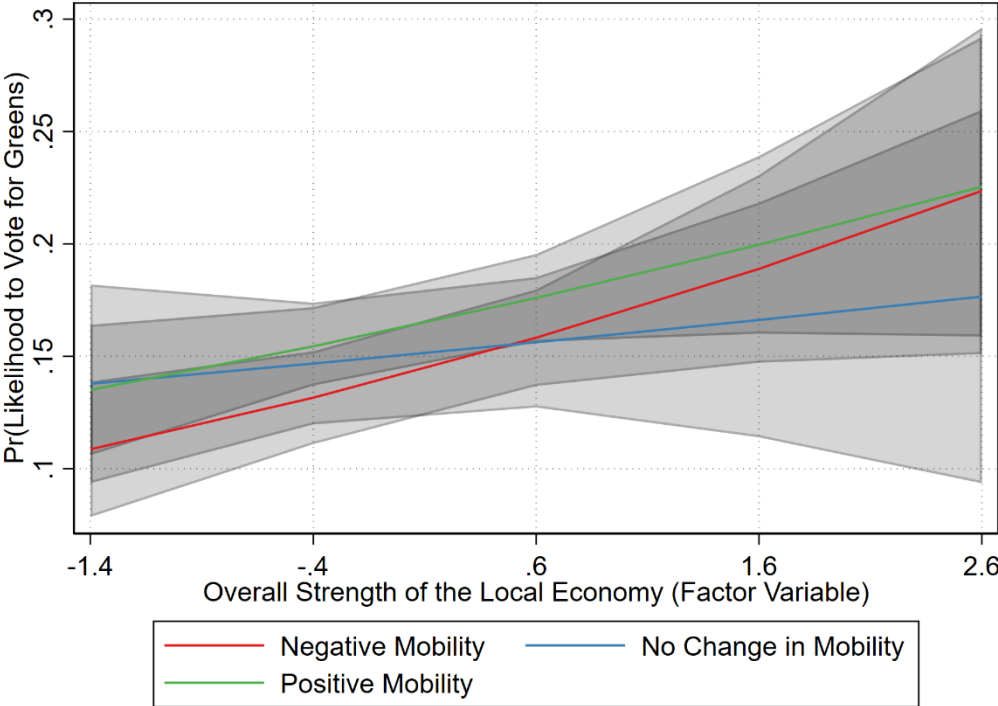
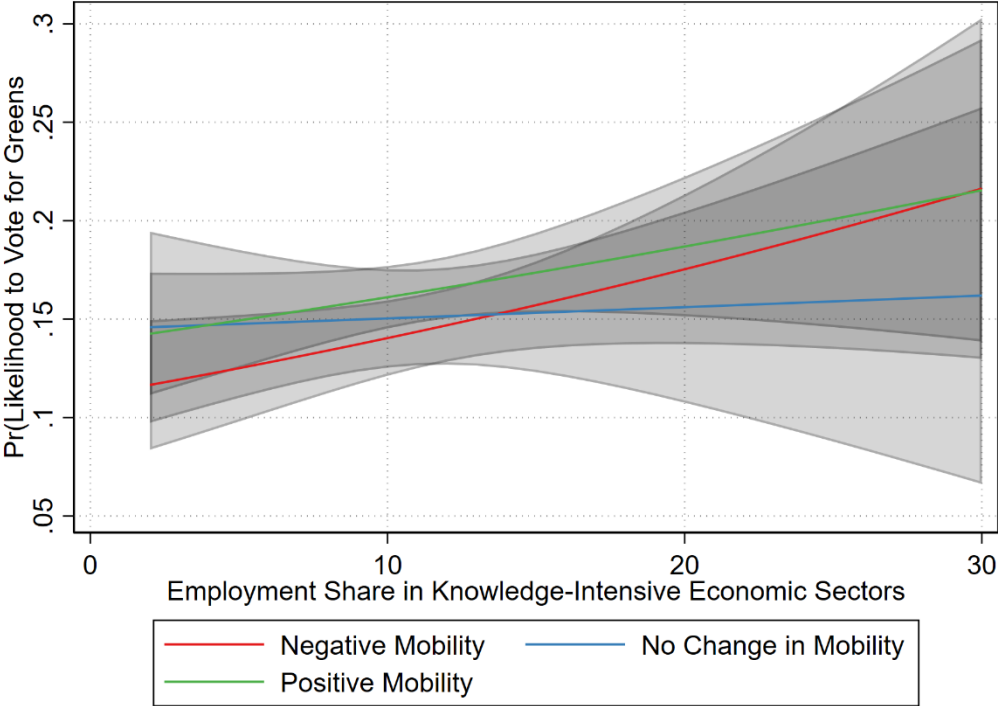


Figure 5. Average Marginal Effects of Local Knowledge Economy/Factor Variable on Voting for the Greens by Social Mobility Categories (95 percent confidence intervals)





## Robustness Checks

As a robustness check of the models for vote choice, we run all estimations including the share of party votes in the 2017 federal election at the local (*Kreis*) level for each respective party.<sup>6</sup> Specific to German far-right parties, Schwander & Manow (2017) find that the electoral success of the AfD is strongly correlated to success of far-right parties in prior elections, attributing this to a tradition of voting culture. We include this variable in the model that interact the knowledge and local economy with the categories of social mobility for the AfD as well as the share of local voters in the previous election. Table 9 and 10 in the appendix outline these full regression results. While these variables indeed significantly explain vote choice, our findings remain unchanged.

## Conclusions

Scholarship in comparative politics and political economy has long sought to explain how increasing inequality and changing economic trends are reshaping political preferences and behavior. More recently, subjective perceptions of social status and mobility have been discussed as potential drivers of support or populist parties (Gidron & Hall, 2020; Kurer, 2020). Increasingly, the question of how economic contexts shape political behavior has been studied with greater attention to the importance of the local level (Adler & Ansell, 2020; Chou et al., 2022; Hays et al., 2019) and the reemerging cleavage between urban and rural places of residence in particular (Bang & Marsh, 2018; Iversen & Soskice, 2020; Mutz, 2018). In this paper, we focus on the overlooked role of local knowledge economies as drivers of perceptions and political behavior using novel survey data for the case of Germany.

Our analysis yields several important findings of relevance for the broader discussion about the political effects of locally emerging, knowledge-based economic activity. First, the emergence and growth of local knowledge economies have ambivalent implications. On the one hand, strong LKEs generally imply local economic growth. On the other hand, well-developed LKEs are actually negatively related to individual perceptions of intergenerational social mobility. We explain this somewhat counterintuitive finding as increasing concerns about relative status competition. In local contexts, where a large share of the population is highly educated and qualified, individual experiences of upward social mobility could be

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<sup>6</sup> Official Definition: Anteil der Zweitstimmen in %; proportion of the second votes (INKAR, 2021).

stifled. In fact, these individuals might be expressing a sensitive to relative status compared to those around them in a local economy that is highly competitive, reliant on intellectual capital and highly non-standardized skills. As local contexts transition to knowledge economies, opportunities for upwards comparison increase and thereby decrease individual self-placement and perceived mobility (Condon & Wichowsky, 2020). In a local economy that is highly competitive, reliant on intellectual capital and highly non-standardized skills, individuals are likely comparing upwards, which results in a perception of not doing as well as others around them.

Our second core finding is that mobility perceptions are systematically related to vote choice. Focusing on green and right-wing populist parties, we find that negative mobility perceptions are related to support for the AfD and that local contexts can significantly mediate this micro-level association. In particular, for those stuck in the middle (with neutral mobility perceptions), the local context has a strong influence. In this case, strong LKEs actually increase electoral support for the AfD which could be due to the fact that individuals perceiving themselves to be stuck in the social elevator are more concerned about their own social mobility as they see others pulling ahead. For the Greens, the local context has a more direct effect as strong LKEs are positively related to average levels of support for this party. We tentatively explain this finding by pointing to the more homogenous composition of the Green electorate (in terms of class background) and the higher degree of geographical concentration in urban areas.

Across perceptions of mobility in local knowledge economies, the finding that static mobility, more so than perceptions of negative mobility, increases support for the AfD is somewhat surprising. However, recent scholarship suggests that the inclusion of the middle-class in the knowledge economy is essential for social and political stabilization during this industrial transition towards a higher reliance on intellectual capital (Antonelli, 2019). The strong association between a perception of static mobility and voting for the AfD could reflect this claim. If we consider these mobility categories as markers of class or income groups, we could think of the static mobility group as the 'old' middle-class who have not yet been fully incorporated into the knowledge economy regime (Oesch, 2013). In contrast, those who perceive negative mobility could belong to a lower income group, but due to the strong protection of the German welfare state, do not turn towards far-right parties. It is the middle-group that is the most susceptible in potentially supporting far-right parties because of their

current precarious position in the transition towards knowledge economies (Kurer & Staalduinen, 2022).

Taken together, our findings highlight the complex political implications of local knowledge economies. Recent research has examined the (overall positive) economic implications related to emerging knowledge economies (e.g., Yarrow, 2022; Berkes & Gaetani, 2023) as well as the political consequences, namely increasing class conflict and spatial divides (e.g., Häusermann et al., 2022; Pinggera, 2023). Building off these studies, our analysis shows that knowledge economies are also associated with more negative perceptions of social mobility. These findings speak to the sociological work that has examined the (mixed) relationship between increasing income inequality and social status anxiety and seeking (Layte & Whelan, 2014; Paskov et al., 2017). Our results also suggest that in contexts where “aspirational voters” are not the majority and concerns about upward mobility are increasing, support for (right-wing) populist parties is likely to increase. Emerging local knowledge economies themselves can become a source of friction when they are associated with increasing inequalities between the winners and losers of technological change at the local level. Overall, this localized approach to the knowledge economy provides insights into how economic transitions—as opposed to loss or gain of certain industries—can also lead to perceptions of low mobility with potentially negative political implications.

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## Appendix

### A. Survey Question for Social Mobility (Original Text and Translation)

Stellen Sie sich eine Leiter vor, die anzeigt wo Menschen in Deutschland stehen. Auf der untersten Stufe stehen die 10% der Menschen mit dem geringsten Einkommen, auf der obersten Stufe stehen die 10% der Menschen mit dem höchsten Einkommen.

- a. Auf welcher Stufe sehen Sie sich zum gegenwärtigen Zeitpunkt?
- b. Auf welcher Stufe standen Ihre Eltern als sie in dem Alter waren, in dem Sie jetzt sind?

Imagine a ladder that shows where people stand in Germany. The 10% of people with the lowest income are on the lowest level, and the 10% of people with the highest income are on the top level.

- a. At what stage do you see yourself at the present time?
- b. At what stage were your parents when they were the age you are now?

### B. Survey Question for Inequality (Original Text and Translation)

Die Einkommens-unterschiede in unserer Gesellschaft sind zu groß (1= Stimme überhaupt nicht zu, 7= Stimme voll und ganz zu)

The income differences in our society are too big (1 = totally disagree, 7 = totally agree)

### C. Descriptive Statistics of Dependent Variables

Table 1. Descriptive Statistics of Dependent Variables  
(4283 observations excluding missing)

	Average	S.D.	Minimum	Maximum
Experience of Mobility	0.29	2.22	-9	9
Vote for AfD	0.09	0.28	0	1
Vote for Green	0.16	0.36	0	1

#### D. Descriptive Statistics of Independent and Control Variables

Table 2. Descriptive Statistics of Independent, Control, and Interaction Variables  
(4283 observations excluding missing)

	Average	S.D.	Min	Max
Knowledge Economy Share	10.8	5.7	2.6	29
Local Economy (Factor Analysis)	0.00	0.97	-1.38	2.80
Income	5.47	2.76	1	10
Age	49.6	16.7	18	91
Gender	0.47	0.5	0	2
Education	2.27	0.6	1	3
Left-Right	4.73	1.86	0	10
East German	0.16	0.37	0	1
Migrant Background	0.14	0.34	0	1
Regional Potential	54.9	38.4	4.94	176.2
Median HH Income (Monthly)	3215.89	471.67	2204.40	4755.40

## E. Multilevel Models Results

Table 3. Multilevel Random Intercept Models of Knowledge Economy on Individual Perception of Mobility

	(1)	(2)	(3)	(4)
Knowledge Economy	-0.01 (0.01)	-0.02** (0.01)		
Local Economy Factor			-0.03 (0.04)	-0.15*** (0.05)
Income		0.30*** (0.01)		0.30*** (0.01)
Age		0.01*** (0.00)		0.01*** (0.00)
Gender		-0.10 (0.06)		-0.10* (0.06)
Education		0.22*** (0.06)		0.22*** (0.06)
Left-Right		-0.05** (0.02)		-0.05** (0.02)
East German		0.05 (0.13)		0.15 (0.13)
Migrant Background		0.13 (0.10)		0.14 (0.10)
Regional Potential		0.00 (0.00)		0.00 (0.00)
Median Household Income		0.00 (0.00)		0.00 (0.00)
Constant	0.36*** (0.08)	-2.41*** (0.43)	0.30*** (0.04)	-2.95*** (0.49)
Landkreis: var(_cons)	0.04*** (0.02)	0.02*** (0.02)	0.03*** (0.02)	0.00 (0.02)
var(Residual)	4.90*** (0.15)	4.13*** (0.14)	4.90*** (0.15)	4.14*** (0.14)
Observations	4214	4214	4214	4214

Robust standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 4. Multilevel Random Intercept Models of Knowledge Economy (As Share of Local Economy) on Individual Perception of Mobility by Education Level

	(1) No University	(2) No University	(3) University	(4) University
Knowledge Economy	-0.01 (0.01)	-0.02* (0.01)	-0.01 (0.01)	-0.02 (0.01)
Income		0.29*** (0.02)		0.31*** (0.02)
Age		0.02*** (0.00)		0.00 (0.00)
Gender		-0.03 (0.08)		-0.30*** (0.10)
Education		0.21 (0.13)		0.00 (.)
Left-Right		-0.05** (0.02)		-0.06** (0.03)
East German		0.12 (0.15)		-0.03 (0.19)
Migrant Background		0.10 (0.13)		0.21 (0.16)
Regional Potential		0.00 (0.00)		0.00 (0.00)
Median Household Income		0.00 (0.00)		0.00 (0.00)
Constant	0.12 (0.09)	-2.67*** (0.52)	0.93*** (0.12)	-1.02 (0.68)
Landkreis: var(_cons)	0.02*** (0.02)	0.01 (0.03)	0.08*** (0.05)	0.07*** (0.06)
var(Residual)	4.86*** (0.18)	4.21*** (0.18)	4.59*** (0.21)	3.89*** (0.17)
Observations	2718	2718	1496	1496

Robust standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 5. Multilevel Random Intercept Models of Local Economy Factor on Individual Perception of Mobility by Education Level

	(1) No University	(2) No University	(3) University	(4) University
Local Economy (Factor)	-0.07 (0.05)	-0.16*** (0.06)	-0.08 (0.06)	-0.12 (0.09)
Income		0.28*** (0.02)		0.31*** (0.02)
Age		0.02*** (0.00)		0.00 (0.00)
Gender		-0.04 (0.08)		-0.30*** (0.10)
Education		0.21 (0.13)		0.00 (.)
Left-Right		-0.05** (0.02)		-0.06** (0.03)
East German		0.21 (0.16)		0.04 (0.21)
Migrant Background		0.10 (0.13)		0.21 (0.16)
Regional Potential		0.00 (0.00)		0.00 (0.00)
Median Household Income		0.00 (0.00)		0.00 (0.00)
Constant	0.02 (0.04)	-3.20*** (0.58)	0.80*** (0.06)	-1.42* (0.80)
Landkreis: var( cons)	0.02*** (0.02)	0.00 (0.00)	0.08*** (0.05)	0.07*** (0.06)
var(Residual)	0.02*** (0.02)	0.00 (0.00)	0.08*** (0.05)	0.07*** (0.06)
Observations	2718	2718	1496	1496

Robust standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 6. Multilevel Logistic Regression Models of Knowledge Economy on Individual Vote Choice (Mobility Perception and Knowledge Economy)

	(1) AfD	(2) AfD	(3) Green	(4) Green
Experience of Mobility	0.95* (0.03)		1.00 (0.02)	
Knowledge Economy		1.01 (0.02)		1.02* (0.01)
Income	0.88*** (0.02)	0.87*** (0.02)	1.05*** (0.02)	1.05*** (0.02)
Age	0.99*** (0.00)	0.99*** (0.00)	0.99*** (0.00)	0.99*** (0.00)
Gender	0.58*** (0.07)	0.58*** (0.07)	1.07 (0.10)	1.08 (0.10)
Education	0.77** (0.09)	0.76** (0.08)	1.53*** (0.12)	1.53*** (0.12)
Left-Right	2.03*** (0.08)	2.03*** (0.08)	0.72*** (0.02)	0.72*** (0.02)
East German	1.49* (0.34)	1.44 (0.35)	0.72** (0.12)	0.65** (0.11)
Migrant Background	0.57*** (0.12)	0.57*** (0.12)	0.87 (0.11)	0.88 (0.11)
Regional Potential	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)	1.00 (0.00)
Median Household Income	1.00 (0.00)	1.00 (0.00)	1.00*** (0.00)	1.00 (0.00)
Constant	0.02*** (0.01)	0.02*** (0.01)	0.31*** (0.09)	0.25*** (0.07)
Landkreis: var(_cons)	1.19* (0.12)	1.18* (0.12)	1.00 (0.00)	1.00 (0.00)
Observations	4214	4214	4214	4214

Exponentiated Coefficients; Standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 7. Multilevel Logistic Regression Models of Knowledge Economy on Individual Vote Choice (Interact Mobility Differences with Knowledge Economy)

	(1) AfD	(2) Green
Negative Mobility	2.00** (0.70)	0.75 (0.22)
Positive Mobility	1.75 (0.60)	0.80 (0.21)
Knowledge Economy	1.08*** (0.03)	1.00 (0.02)
Negative Mobility # Knowledge Economy	0.92*** (0.03)	1.02 (0.02)
Positive Mobility # Knowledge Economy	0.91*** (0.03)	1.01 (0.02)
Income	0.88*** (0.02)	1.05*** (0.02)
Age	0.99*** (0.00)	0.99*** (0.00)
Gender	0.58*** (0.08)	1.08 (0.10)
Education	0.79** (0.09)	1.53*** (0.12)
Left-Right	2.04*** (0.08)	0.72*** (0.02)
East German	1.46 (0.35)	0.65** (0.11)
Migrant Background	0.57*** (0.12)	0.88 (0.11)
Regional Potential	1.00 (0.00)	1.00 (0.00)
Median Household Income	1.00 (0.00)	1.00 (0.00)
Constant	0.01*** (0.01)	0.17*** (0.10)
Landkreis: var(_cons)	1.15 (0.12)	1.00 (0.00)
Observations	4214	4214

Baseline for Interaction is No Change in Mobility; Exponentiated Coefficients; Standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



Table 8. Multilevel Logistic Regression Models of Local Economy Factor on Individual Vote Choice (Interact Mobility Differences with Local Economy Factor)

	(1) AfD	(2) Green
Negative Mobility	0.82 (0.13)	0.97 (0.13)
Positive Mobility	0.64*** (0.11)	0.94 (0.12)
Local Economy Factor	1.50** (0.24)	1.08 (0.13)
Negative Mobility # Local Economy	0.60*** (0.10)	1.16 (0.15)
Positive Mobility # Local Economy	0.54*** (0.09)	1.09 (0.13)
Income	0.88*** (0.02)	1.06*** (0.02)
Age	0.99*** (0.00)	0.99*** (0.00)
Gender	0.58*** (0.08)	1.08 (0.10)
Education	0.79** (0.09)	1.52*** (0.12)
Left-Right	2.04*** (0.08)	0.72*** (0.02)
East German	1.54 (0.42)	0.58*** (0.11)
Migrant Background	0.57*** (0.12)	0.88 (0.11)
Regional Potential	1.00 (0.00)	1.00 (0.00)
Median Household Income	1.00 (0.00)	1.00 (0.00)
Constant	0.02*** (0.03)	0.28** (0.18)
Landkreis: var(_cons)	1.16 (0.12)	1.00 (0.00)
Observations	4214	4214

Baseline for Interaction is No Change in Mobility; Exponentiated Coefficients; Standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

## Robustness Models Including 2017 Vote Share for Each Party at Landkreis Level

Table 9. Multilevel Logistic Regression Models of Knowledge Economy on Individual Vote Choice (Interact Mobility Differences with Knowledge Economy)

	(1) AfD	(2) Green
Negative Mobility	1.96* (0.69)	0.75 (0.22)
Positive Mobility	1.73 (0.60)	0.80 (0.21)
Knowledge Economy	1.08*** (0.03)	0.98 (0.02)
Negative Mobility # Knowledge Economy	0.92*** (0.03)	1.02 (0.02)
Positive Mobility # Knowledge Economy	0.91*** (0.03)	1.02 (0.02)
Income	0.88*** (0.02)	1.06*** (0.02)
Age	0.99*** (0.00)	0.99*** (0.00)
Gender	0.57*** (0.07)	1.09 (0.10)
Education	0.79** (0.09)	1.50*** (0.12)
Left-Right	2.03*** (0.08)	0.73*** (0.02)
East German	0.90 (0.30)	0.82 (0.15)
Migrant Background	0.57*** (0.12)	0.87 (0.11)
Regional Potential	1.00 (0.00)	1.00 (0.00)
Median Household Income	1.00 (0.00)	1.00 (0.00)
Share of Party Votes in 2017	1.04** (0.02)	1.08*** (0.02)
Constant	0.01*** (0.01)	0.16*** (0.09)
Landkreis: var(_cons)	1.15 (0.12)	1.00 (0.00)
Observations	4214	4214

Baseline for Interaction is No Change in Mobility; Exponentiated Coefficients; Standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

Table 10. Multilevel Logistic Regression Models of Knowledge Economy on Individual Vote Choice (Interact Mobility Differences with Local Economy Factor)

	(1) AfD	(2) Green
Negative Mobility	0.82 (0.13)	0.98 (0.13)
Positive Mobility	0.64*** (0.11)	0.96 (0.12)
Local Economy Factor	1.58*** (0.26)	0.86 (0.11)
Negative Mobility # Local Economy	0.61*** (0.10)	1.16 (0.15)
Positive Mobility # Local Economy	0.54*** (0.09)	1.10 (0.13)
Income	0.87*** (0.02)	1.06*** (0.02)
Age	0.99*** (0.00)	0.99*** (0.00)
Gender	0.57*** (0.07)	1.09 (0.10)
Education	0.79** (0.09)	1.50*** (0.12)
Left-Right	2.04*** (0.08)	0.73*** (0.02)
East German	0.94 (0.34)	0.84 (0.18)
Migrant Background	0.57*** (0.12)	0.87 (0.11)
Regional Potential	1.00 (0.00)	1.00 (0.00)
Median Household Income	1.00 (0.00)	1.00 (0.00)
Share of Party Votes in 2017	1.04** (0.02)	1.08*** (0.02)
Constant	0.02*** (0.02)	0.12*** (0.08)
Landkreis: var(_cons)	1.17 (0.12)	1.00 (0.00)
Observations	4214	4214

Baseline for Interaction is No Change in Mobility; Exponentiated Coefficients; Standard errors in parentheses; \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$