Local Unemployment and Voting for President: Uncovering Causal Mechanisms

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Local Unemployment and Voting for President: Uncovering Causal Mechanisms

Taeyong Park[1] · **Andrew Reeves[2]**

Abstract

How does local unemployment influence presidential elections? Some argue that, for voters, the state of the local economy is an afterthought to that of the national economy. On the other hand, those who argue that local unemployment matters fall into two camps. Recent research finds that local unemployment is a reputation issue that benefits Democratic candidates because voters believe they are the party best equipped to deal with the issue. Alternatively, others have posited that the local economy provides voters with information for evaluating the governing party's job performance. This view holds that the incumbent party, Democrat or Republican, will be punished when local unemployment is high. In this article, we investigate these distinct mechanisms jointly. In an individual-level mediation analysis of the 2008, 2012, and 2016 presidential elections, we present evidence that both mechanisms are at work. Rising local unemployment bolsters support for Democratic presidential candidates, but, through its influence on views of the national economy, drives down support for the incumbent, Democrat or Republican.

Keywords Local unemployment · Presidential elections · Retrospective economic voting · Issue-ownership voting · Causal mediation analysis

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Introduction

Local jobs are an oft-evoked electoral currency of U.S. presidents. From President Carter trumpeting 450 new jobs created by a new steel plant in Perth Areboy, New Jersey in September of 1980[1] to President Obama touting the "nearly 400 jobs" resulting from construction of a solar energy center in Arcadia, Florida in October 2009,[2] presidents frequently campaign on local job creation in the communities they visit. Despite presidential rhetoric, existing studies tend to focus on the national economy. One dominant view is that citizens consider national economic conditions when voting for president and mostly disregard their personal or local economic situations. Presidential support rises when macroeconomic conditions are good and falls when they are bad (Erikson 1989; Fair 1978; Hibbs 1989; Lewis-Beck and Stegmaier 2000; Norpoth 1984; Tufte 1978). These findings from aggregate studies are replicated at the individual level. Voters who view national economic conditions better are more likely to vote for incumbent presidents (Fiorina 1981; Kiewiet 1983; Nadeau and Lewis-Beck 2001; Norpoth et al. 1991). Voters set aside their personal and local experiences and engage in "sociotropic" voting by weighing the plight of the broader economy most heavily in voting for president.[3]

While the conventional view is that citizens engage in national retrospective voting, we consider the role of local economic conditions. Surveys report sizable variation in Americans' views of the national economy. Individual voters evaluate national economic conditions differently even though the state of the national economy is constant. What explains such heterogeneous evaluations? In addition to factors like partisanship (e.g., Gerber and Huber 2010), we posit that a rational but time-constrained voter may rely on local experiences such as daily drives to work or conversations with family, friends, and co-workers, to provide low-cost information about the local economy such as joblessness, rates of home foreclosures, or rising costs of goods, which in turn shape national economic perceptions. As voters look for low-cost information to make decisions about the quality of incumbent performance (Popkin 1994), the local economy may provide guidance.

Though prior research considers the role that local jobs might play in providing information relevant to incumbent economic performance (Ansolabehere et al. 2014; Reeves and Gimpel 2012), this paper differs from existing studies in an important respect. In this paper, we consider the relationship between the local economy—focusing on jobs—and presidential voting in the context of a causal inference framework to uncover two sometimes countervailing mechanisms that determine the relationship. The first mechanism, which we refer to as mediated local economic voting, is that local economic conditions influence presidential voting through views of national economic conditions. When a community sees lower rates of joblessness, citizens in those places have a more positive view of the national

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[1] http://www.presidency.ucsb.edu/ws/index.php?pid=45010.

[2] http://www.presidency.ucsb.edu/ws/index.php?pid=86815.

[3] Indeed, this theoretical view of voter accountability underpins foundational views of presidents as seekers of the *national* good against local passions of members of congress (Kriner and Reeves 2015).

economy and the incumbent president benefits. Hence, views of the national economy mediate effects of the local economy. The second mechanism, which we refer to as local issue ownership, is that voters respond to worsening local economic conditions by voting for presidential candidates based on their party's reputation. Specifically, Democratic candidates—seen by voters as having a reputation for handling local economic turmoil—may benefit from local joblessness while Republicans are punished. Consequently, local joblessness may hurt Republican presidents through either mechanism. Meanwhile, Democratic presidents may have the effects offset as local economic joblessness causes voters to have a negative view of incumbent performance but favor the Democratic party because of its reputation of handling unemployment, which in part explains the frequent null findings of local economic factors on presidential voting.

Local Employment and Presidential Voting

Existing studies differ on both the nature and the extent to which voters hold presidents accountable for the local economy. Based on theories of economic voting, some have considered local economic conditions as an information source when evaluating the state of the economy in presidential voting. For those voters seeking low-cost information about the quality of incumbent performance (Popkin 1994), the local economy may be an information short-cut. Just as with national retrospective voting, local economic factors provide relevant information by which to judge the incumbent president or his party. In this framework, voters will punish incumbents for bad local conditions.

Despite this straightforward mechanism, the evidence for local economic voting is weak. While some early studies found evidence that local economic hardship was related to presidential voting (Gosnell and Colman 1940; Gosnell and Pearson 1941), more recent studies have found modest evidence or null effects.[4] In characterizing the literature on local economic voting, Eisenberg and Ketcham (2004) notes the "relative unimportance of county level economic conditions" (21) and confirm the lack of an effect of unemployment in their own study. A study of the 2008 presidential election finds that rising county-level unemployment over 2004 increased Obama's vote share by just one-tenth of 1% point (Hill et al. (2010), 42). In an analysis of presidential elections from 1988 to 2000, Kim et al. (2003) finds that local unemployment matters in only 1992, which they attribute to the strong third party showing of Ross Perot.[5] Though presidents rarely miss a chance to discuss the new jobs brought to a community from a new research institute or energy initiative, the

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[4] See Cho and Gimpel (2009) for a notable exception with respect to presidential voting and Rogers (2014) with respect to MSA-level unemployment and approval of President Obama.

[5] The definition of what is local is, of course, subjective. Our focus is county-level though others have found evidence of state economic context and presidential voting (Abrams and Butkiewicz 1995; Ansolabehere et al. 2014; Ebeid and Rodden 2006).

evidence of voting in response to local unemployment is limited and characterized by null results.[6]

   We hypothesize that the effects of the local economy on presidential voting may be mediated by subjective views of the national economy and refer to this perspective as *mediated local economic voting*. If local economic conditions are poor, individuals are more likely to view the national economy as suffering and sanction the incumbent as a result. A number of studies have considered how local economic conditions shape views of the national economy, a central driver of presidential voting. For example, Reeves and Gimpel (2012) illustrates the considerable variability in local economic conditions and then demonstrates that local unemployment, gas prices, and home foreclosure rates are associated with evaluations of the national economy.[7] Relatedly, Ansolabehere et al. (2014) finds that higher reported national unemployment rates are associated with voters whose neighbors or friends suffer from unemployment. While there is modest empirical evidence of a relationship between local economic factors and presidential voting, other studies have found strong links between objective local economic factors and evaluations of the national economy. These studies raise the possibility that any effect of the local economy may be mediated by perceptions toward the national economy. When the local joblessness rises, voters' perceptions of the national economy worsen and, lacking a proper estimation strategy, the true effect of the local economy may be difficult to discern.[8]

   A second perspective is *local issue-ownership voting*.[9] In this perspective, when the local economy falters, citizens increase their support of the Democratic candidate, because, in the case of the U.S., the Democratic party is seen as advantaged in addressing issues of local economic turmoil. Several studies have found that Democrats succeed under worsening economic conditions—especially unemployment. For example, Brunk and Gough (1983) finds that President Carter, running as the Democratic incumbent, performed better in states with higher unemployment in the 1980 election, and Wright (2012) shows that county-level unemployment and the Democratic vote for president move together in the presidential elections from 1996 to 2008.[10] Relatedly, an analysis of Canadian elections finds that whether the incumbent's party is perceived to own the economic issue is a strong predictor of electoral

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[6] Though we focus here on unemployment, others have found evidence that voters hold presidents accountable for factors such as local income growth, local federal spending, local loan defaults, changes in wages, or local relief spending in response to natural disasters (Gasper and Reeves 2011; Healy and Lenz 2017; Kriner and Reeves 2012).

[7] Though see Books and Prysby (1999) and Rogers (2014).

[8] Though we do not consider it here, others have examined the determinants of perceptions of the local economy itself. See Rogers (2016, 2014).

[9] For an overview of this perspective see Bélanger and Nadeau (2014), Bélanger and Nadeau (2015), Martinsson (2009), Wright (2012), and Petrocik (1996).

[10] Previous research on presidential approval found a similar pattern. Swank (1993) shows that the approval rate for Democratic presidents benefits from rising unemployment whilst their Republican counterparts are hurt by rising unemployment. Carlsen (2000) presents the same evidence. See also Powell and Whitten (1993) and Martinsson (2009) that discuss issue-ownership effects associated with economic voting in the cross-national and Swedish contexts, respectively.

results (Bélanger and Nadeau 2015). In a similar vein, voters view Democrats (and parties of the left generally) as dealing better with the issue of unemployment while they view Republicans (and parties of the right) as more able to handle rising prices for consumer goods (Alesina et al. 1997).[11]

While standard accounts of economic voting argue that voters reward incumbents for superior economic outcomes, local issue-ownership voting posits that voters view local economic strife—at least those associate with joblessness—as being "owned" by the Democratic party. Accordingly, when there is local economic strife, voters may prefer Democratic politicians over Republicans regardless of incumbency.[12]

To summarize, while the most common view may be that there is no relationship between local employment and presidential voting, we hypothesize two distinct explanations for how these phenomena are related. First, *mediated local economic voting* suggests that local job conditions can influence voting insofar as it drives perceptions of the national economy. Second, *local issue ownership* argues that voters view Democrats as owning the issue of local employment and therefore are moved to vote for Democratic presidential nominees at higher rates when their local communities are suffering.

In this paper, we seek to reconcile these seemingly disparate findings. To examine these two mechanisms at once, we consider the question in a causal inference framework using causal mediation analysis, which allows us to detect the direct effect of local unemployment as well as the indirect effect mediated through views of the national economy. We exploit a potential outcomes framework to decompose the total effect of local unemployment on presidential voting into the indirect mediation effect and the direct effect, which are not entirely separable without using counterfactuals. Specifically, we examine (1) whether there is a significant effect of local unemployment driven by individual views of the national economy, and (2) once the effect driven by individual views of the national economy is isolated, whether the rest of the total effect, which is the direct effect, is conditioned by partisan reputations for unemployment. In an analysis of the 2008, 2012, and 2016 elections, we utilize large individual-level datasets on presidential voting to uncover the two voting mechanisms.

We find support for both mediated local economic voting and local issue-ownership voting. Local job conditions move voters to hold the incumbent accountable through perceptions of the national economy. Once that mechanism is accounted for, we find that voters are more likely to support Democratic candidates in the face of local joblessness. Because these effects often counterbalance each other, it also helps explain frequent null findings about the total effect of the local economy on presidential voting.

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[11] Though related to issue ownership, an alternative explanation is that voters engage in policy oriented-economic voting (Kiewiet 1981), where voters have preferences for particular policies and vote for the party the believe to be more likely to enact that policy. The two are related since a party's reputation is likely influenced by the policies they propose.

[12] We posit the health of the local economy as a single indicator for voters, an assumption which we justify later in the paper by examining other local economic factors such as gas prices and median household income.

The Local Economy's Effect on Voting in a Potential Outcomes Framework

In this section we develop a model to assess different pathways through which the local economy affects voting for president. This model allows us to consider the effects of mediated local economic voting and local issue ownership in one unified framework. Panel (a) in Fig. 1 graphically illustrates our model where the total effect of local economic conditions on vote choice is decomposed into two separate causal pathways. One is a pathway through which the local economy influences electoral results through individual perceptions of the national economy. As in Reeves and Gimpel (2012), we hypothesize that perceptions of the national economy are influenced by local factors, but we extend this argument by examining the extent to which the linkage between the local economy and perceptions of the national economy leads to voting for president, a question not addressed in that study. We also consider a direct pathway reflecting local issue-ownership voting. We hypothesize that once the effect working through perceptions of the national economy is isolated, the remaining effect is conditioned by the incumbent party's issue ownership.[13]

Based on these hypotheses, we derive testable predictions about the effect of local unemployment. First, local economic voting mediated via perceptions of the national economy predicts that rising local unemployment hurts the incumbent party, Democrat or Republican. The negative signs associated with the top causal pathways in Panel (b) in Fig. 1 indicate this prediction. That is, regardless of which party is in office, the predicted effect of rising local unemployment on voting for the incumbent, driven by subjective evaluations of the national economy, is negative.[14] As we describe in the next section, we control of partisanship and a host of other covariates in order to control for partisan and demographic influences.[15]

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[13] It would be ideal to specify the issue-ownership voting mechanism as a causal pathway via individual beliefs about which party is better at dealing with local economic turmoil. However, testing such a mechanism is not possible due to limited data on individual beliefs about distinct partisan reputations available in nationally representative surveys.

[14] More specifically, rising local unemployment (↑) makes subjective evaluations negative (↓), and negative evaluations (↓) decrease support for the incumbent (↓). Thus, the overall effect is predicted to be negative.

[15] One might argue that the predicted effect should differ for the Democratic and Republican parties. Two possible scenarios come to our mind. First is that the effect of local unemployment on subjective evaluations of the national economy may be conditioned by the incumbent's party. Though subjective economic evaluations are largely driven by individual party attachments (Enns et al. 2012; Evans and Pickup 2010; Gerber and Huber 2010), we are less concerned about this scenario because our prediction considers average effects rather than variability in individual voters. Furthermore, we are interested in how much voters respond to changes in local unemployment, once their partisan preferences are accounted for. We expect that this residual effect is not conditioned by the party in office. Indeed, this expectation is supported by our analysis result showing that the effect of rising local unemployment on sociotropic evaluations is negative and its size is more or less consistent across the 2008-2016 elections. The second possible scenario is that the effect of sociotropic evaluations on vote choice may be conditioned by the incumbent's party (Kinder and Kiewiet 1981). However, negative (positive) evaluations are found to be associated with punishing (rewarding) incumbents in previous research, and these relationships appear to not be conditioned by the incumbent's party (Godbout and Bélanger 2007; Gomez and Wilson 2001). While there is evidence for conditioning effects of an open-seat race (Godbout and

Our second testable prediction is concerned with local issue-ownership voting. This type of voting predicts that the effect of job loss is positive under Democratic presidents and negative under Republican presidents. The direct pathway reflects this type of voting, where the effect working through subjective evaluations of the national economy remains fixed. This prediction is represented by the positive and negative signs associated with the bottom pathways in Panel (b) in Fig. 1.

Finally, our model permits adjudication of the previous null-effects finding by generating testable predictions for the total effect. The total effect of rising unemployment on presidential voting is the sum of the two effects working through the mediated local economic voting mechanism and through the issue-ownership voting mechanism. Therefore, the total effect is predicted to be negative under Republican presidents for which the negative effects driven by the two different mechanisms reinforce each other. On the other hand, the total effect can be negative, positive, or null under Democratic presidents depending on the relative size of the two mechanisms working in countervailing ways.

To test these predictions, we conduct a mediation analysis that makes it possible to analyze the indirect mediation effect and the direct effect in one unified statistical framework. The traditional linear structural equation modeling approach to a mediation analysis (e.g. Baron and Kenny 1986) is not directly applicable to nonlinear models with a discrete dependent variable (Imai et al. 2010a, 2011). This is a critical limitation for our analysis because the nature of our dependent variable, vote choice, is binary. In contrast, the potential outcomes approach to causal mediation analysis specifies a general estimation algorithm that can be applied to nonlinear models. Moreover, this approach provides clear identification assumptions required to separate the indirect effect and the direct effect. For these reasons, we build on recent methodological developments of the causal mediation analysis based on the potential outcomes framework (Imai et al. 2010a, b, 2011).
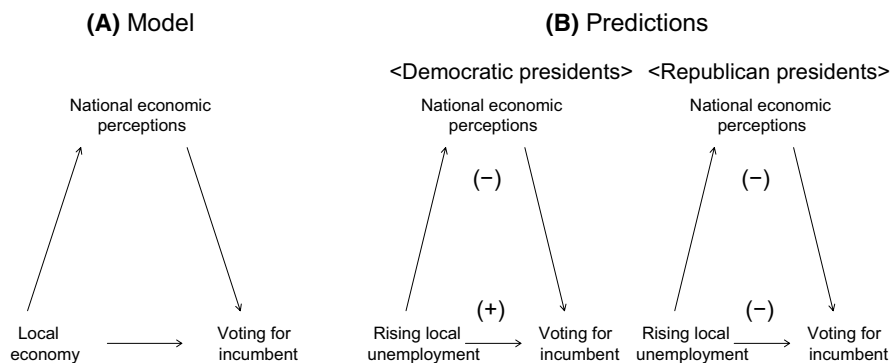
The rationale for introducing the potential outcomes framework to a causal mediation analysis is to utilize counterfactual potential values. Specifically, for example, the direct effect should be an effect *not intervened by* subjective evaluations of the national economy. To estimate this effect, given the powers of omnipotence, we would hold subjective evaluations constant by turning off the indirect channel and make only objective local job conditions change. Yet, without such powers in reality, it is not possible to change local job conditions while holding subjective evaluations constant because as local job conditions move, subjective evaluations also move. The potential outcomes framework exploiting counterfactuals provides a solution. It allows us to estimate what would happen to presidential voting if (1) subjective economic evaluations changed with holding local job conditions constant or (2) if a local job condition changed with holding subjective evaluations constant.[16] Case (1)

(A) Model   **(B)** Predictions

<Democratic presidents> <Republican presidents>

National economic   National economic   National economic
perceptions   perceptions   perceptions

                                              (−)   (−)

                                              (+)   (−)

Local   Voting for   Rising local   Voting for   Rising local   Voting for
economy   incumbent   unemployment incumbent unemployment incumbent

Fig. 1 The voting mechanism model and predicted effects of rising local unemployment on voting for the incumbent party. **a** Model: the total effect of local economic conditions is decomposed into two causal pathways. The top causal pathway reflects mediated local economic voting by which the local economy shapes individual perceptions of the national economy which in turn influence presidential voting. The bottom direct pathway between the local economy and vote choice represents alternative mechanisms not intervened by perceptions of the national economy. **b** Predictions: regardless of which party is in office, the predicted effect of rising local unemployment on voting for the incumbent, driven by national economic perceptions, is negative. In contrast, the predicted effect of rising local unemployment operating through the bottom direct pathway is positive when Democrats hold the presidency and negative when Republican presidents are in office, which reflects issue-ownership voting

is associated with the indirect effect since it separates the indirect channel from the direct channel by extracting the effect only driven by subjective evaluations. Case (2) is associated with the direct effect, in that it switches off the indirect channel.

Data and Methods

We now turn to our test for the predictions derived in the previous section. We aim to test three relationships:

1. A mediated effect of local unemployment through perceptions of the national economy that is negative for both Republican and Democratic incumbents.
2. A direct effect local unemployment that is negative for Republicans.
3. A direct effect local unemployment that is positive for Democrats.

Our analysis relies on the 2008, 2012, and 2016 surveys from the Cooperative Congressional Election Study (CCES) administered by YouGov/Polimetrix. Our analysis uses the full, nationally representative, stratified sample of 23,585, 37,909, and 40,838 respondents in the 2008, 2012, and 2016 surveys, respectively. These datasets identify the county of residence for each respondent so that we can include a measure of local unemployment for each respondent. Our analysis covers about

2400 counties.[17] The CCES's large sample size with coverage of many locales with varying local economic circumstances provides an ideal context in which to test our hypotheses.

Our dependent variable is whether the respondent reported voting for the incumbent (or his party) or the challenger. Votes for Republican nominee John McCain in 2008, for incumbent President Barack Obama in 2012, and for Democratic nominee Hillary Clinton in 2016 are coded as supporting the incumbent. The dependent variable takes 1 for a pro-incumbent vote, and 0 otherwise.

The key dynamic that we are interested in is the effect of local unemployment on voting behavior. We obtain county-level unemployment statistics from the Local Area Unemployment Statistics (LAUS) provided by the Bureau of Labor Statistics Website[18] and match it to the CCES respondents using their county-level identifiers. Since our mediating variable is measured by a CCES survey item asking subjective evaluations of the nation's economy *over the past year*, we focus on the annual change in unemployment over the year preceding the presidential election contest. In so doing, our measurement of local unemployment is compatible with the data generating process of the mediating variable. Furthermore, since the level of unemployment is shaped by many structural factors that are embedded in each county and are relatively persistent, credit or blame for the annual change is more plausibly related to the policies of the current government (Becher and Donnelly 2013).[19]

There is substantial variation in annual changes in county-level unemployment as Fig. 2 depicts. Though local economies on average were plunging into a recession in 2008, there existed a great deal of variation. For instance, while job losses between 2007 and 2008 were particularly severe in some counties such as Chambers County, Alabama and Elkhart County, Indiana (a greater than 3% points increase), there are other counties in which the unemployment rate declined despite the nationwide economic turmoil. Such counties include Maury County, Tennessee and Wyoming County, West Virginia (a greater than 1% points decrease).

Similarly, in 2012 local economies were recovering overall, but economic recovery was slow in some regions and fast in others. A significant number of counties suffered job losses in spite of the nationwide trend of economic recovery. For example, residents in counties like Harlan and Letcher in Kentucky suffered job losses between 2011 and 2012 (an about 3% points increase). In contrast, the job conditions in Clarke County in Nevada and Macon County in Alabama improved substantially during the same period of time (a greater than 2% points decrease). Similar variation exists in 2016. For example, the unemployment rate in Campbell County, Wyoming and Lea County, New Mexico increased by greater than 3% points between 2015 and 2016 while it declined by about 2 to 3% points in Atlantic County, New Jersey and Yuma County, Arizona. Given this substantial variation in our key explanatory

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[17] The 2008 dataset contains 2335 counties, and the 2012 dataset contains 2497 counties. The 2016 dataset includes 2473 counties.

[18] http://www.bls.gov/lau/.

[19] As discussed below, we check for the robustness of the estimated effect of the annual change in unemployment.

variable, it is meaningful to examine whether and how such variation explains presidential voting.

The mediating variable is subjective economic evaluations of the national economy. We use a CCES survey item that measures respondents' retrospective evaluations. This variable is a five-point scale ordered categorical variable. The survey question is worded "Would you say that over the past year the nation's economy has...?" Response options are coded as (1) "gotten much better"; (2) "gotten better"; (3) "stayed about the same"; (4) "gotten worse"; (5) "gotten much worse."

Though we focus on changes in local unemployment as our treatment variable, we also control for other local economic factors. We use the level of unemployment, gasoline prices, home foreclosure rates, and median household income for the 2008 and 2012 analysis. Because the 2016 data for gasoline prices and home foreclosure rates are not available to us, we only include the level of unemployment and median household income for the 2016 analysis. We provide details about these variables in the online appendix (See A1). We employ several alternative models to assess if our analysis results are robust to including those alternative economic measures. These different models do not draw different substantive conclusions regarding the effect of our treatment variable. Further details about these models and estimation results are presented in the online appendix (See A4).

Using the data described above, we aim to estimate two quantities: (1) the indirect mediation effect—what would happen to presidential voting if subjective economic evaluations changed with holding local job conditions constant—to test the predictions derived from mediated local economic voting; (2) the direct effect—what would happen to voting if an local job condition changed with holding subjective evaluations constant—to test the predictions derived from local issue-ownership voting. As discussed earlier, neither of these two quantities is observable because subjective evaluations and objective job conditions move together and they are not entirely separable. We rely on the potential outcomes framework using counterfactual values to estimate these unobservable effects.

In order to identify these effects, two assumptions are required.[20] First, local unemployment is independent of potential outcomes for vote choice and subjective evaluations of the economy after controlling for pretreatment covariates. Since we employ *objective* local unemployment rates as the treatment variable, we are less concerned about the possibility that people's subjective economic evaluations or vote choice affect objective local unemployment that has already been determined. Indeed, several studies of economic voting argue that employing objective economic conditions can be a solution for the problem of endogenous economic perceptions (van der Brug et al. 2007; van der Eijk et al. 2007).

The second assumption is that a subjective economic evaluation is independent of potential outcomes for vote choice given the observed pretreatment covariates and the observed values for local unemployment. This assumption may be a cause for concern, in that county-level local unemployment could be correlated

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[20] For further details about the required assumptions, refer to the sequential ignorability assumption proposed by Imai et al. (2010b).
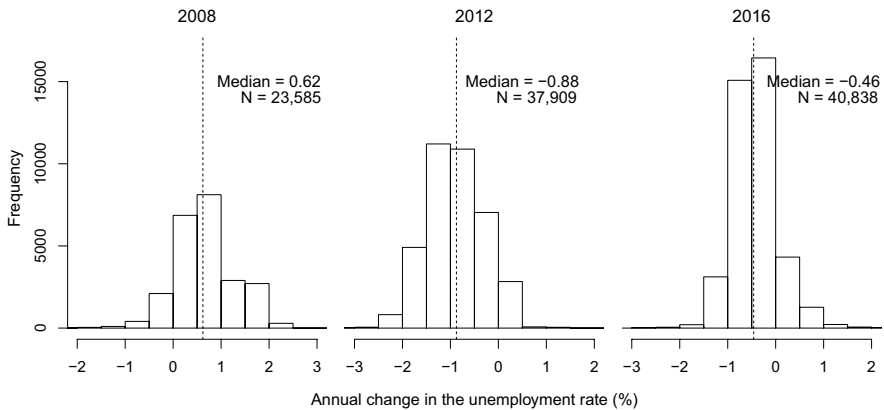
Fig. 2 Distribution of election year change in the annual average unemployment rate at the county level. Each data point corresponds to a local job condition associated with an individual survey respondent. The dotted vertical line indicates the median value of annual changes in the unemployment rate. Local economies on average were plunging into a recession in 2008 and recovering in 2012 and 2016. Still, there is substantial variation in annual changes in unemployment across the country

with individual-level characteristics.[21] We employ several individual-level variables measuring demographic, socioeconomic, and political characteristics as pretreatment covariates to minimize contamination from individual-level effects. Additionally, we conduct a sensitivity analysis to evaluate how much our results would be influenced by a possible violation of the assumptions.[22]

The estimation procedure consists of two steps. The first step fits two regression models. To begin with, we fit the model for the mediating variable–retrospective evaluations. The right-hand side of this model includes the treatment variable–changes in local unemployment, alternative local economic measures, and pretreatment covariates. We also fit the model for the outcome variable–vote choice, in which the right-hand side variables include the same variables as the first model's and additionally the mediating variable. The pretreatment covariates used in each of these two models are demographic characteristics (age, gender, race), socio-economic characteristics (income, educational attainment, employment status, home-ownership) and political beliefs (party identification, ideology, and political interest). Thereafter, the second step computes the mediation effect and the direct effect

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[21] The U.S. has a long history of systemic residential segregation by race and income (Gordon 2014; Massey and Denton 1987; Williams and Collins 2001). Furthermore, political factors such as partisanship and ideology could confound the causality between economic evaluations and vote choice (Anderson et al. 2004; Evans and Andersen 2006; Evans and Pickup 2010; Gerber and Huber 2010; Wlezien et al. 1997).

[22] Detailed descriptions of the pretreatment covariates and the sensitivity analysis results are in the online appendix (See A2 and A5).

using simulated potential values that are generated from the two regression models. Detailed explanations of this estimation procedure are in the online appendix.[23]

Results

We consider how an increase in local unemployment affects voting for the incumbent through views of the national economy (the average mediation effect (*AME*)), as well as directly through other mechanisms (the average direct effect (*ADE*)), as well as those two effects added together (the average treatment effect (*ATE*)). In Fig. 3, each point is an estimated effect of a 1% point increase in the annual average unemployment rate on the likelihood of voting for the incumbent party. Each horizontal line indicates uncertainty about the estimated effect at the traditional 95% level. The left panel depicts estimated effects on voting for John McCain in the 2008 presidential election. The middle panel illustrates estimated effects on voting for Barack Obama in 2012. Lastly, the right panel represents the estimated effects on voting for Hillary Clinton in 2016.[24]

The estimated *AME* is negative and statistically distinguishable from zero in every election. The point estimate corresponding to the *AME* in the top row of the left panel indicates that a 1% point increase in unemployment within a county decreases the likelihood of voting for the incumbent party by about 0.22 of a percent in 2008 *by making voters think the national economy is getting worse*. The point estimate of the *AME* in 2012 is about 0.36 of a percent, and that in 2016 is about 0.67 of a percent. Note that these effects are estimated controlling for partisanship and other personal level characteristics. This finding is consistent with our hypothesis that the indirect effect is negative for both Republican and Democratic incumbents. In other words, this finding demonstrates that mediated local economic voting is at work in the presidential elections.[25]

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[23] See A3. Also, see the general estimation algorithms for the mediation analysis that can be found in Imai et al. (2010a, Appendix D). Furthermore, see Becher and Donnelly (2013, pp. 971–974) that applies the causal mediation analysis based on the potential outcomes framework to the study of economic voting.

[24] See online appendix A4 that includes six tables presenting the regression estimates from the models of retrospective evaluations and the models of vote choice. Tables 1–3 in the appendix demonstrate that an increase in county-level unemployment leads to negative retrospective evaluations of the national economy in the 2008, 2012, and 2016 elections. This finding is robust to several alternative model specifications. Tables 4–6 show that as people see the economy more negatively (positively), they tend to become less (more) likely to vote for the incumbent party. This finding is robust to several alternative model specifications. From these regression estimates, we may make a preliminary inference that rising local unemployment forms negative individual retrospective evaluations of the national economy which in turn decrease support for the incumbent party. In the main text, beyond this preliminary inference, we present the estimates of *AME*, *ADE*, and *ATE* as illustrated by Fig. 3. By doing so, we provide specific effect sizes. Furthermore, we make an inference for the direct causal pathway that the preliminary inference does not address.

[25] We conduct a sensitivity analysis to assess how much the estimated *AME* would be influenced by a possible violation of the ignorability assumptions. See Fig. 1 in the online appendix A5. To summarize, our sensitivity analysis demonstrates that the estimated *AME* is robust to a fairly large degree of violation of the assumptions.

To clarify the magnitude of the size of the *AME*, suppose a county suffers a 1% point increase in unemployment between 2011 and 2012. The estimated *AME* for 2012 means that a 1% point increase in unemployment would decrease the likelihood of voting for Obama by about 0.36%. This penalty is exerted through individual level perceptions of the national economy. This effect translates into about 0.72% countywide vote swing from Obama to Romney.[26] In the same vein, a 1% point increase in unemployment would decrease the likelihood of voting for Hillary Clinton in 2016 by about 0.67%, which translates into about 1.34% countywide vote swing from Clinton to Trump. To help put this magnitude in context, consider that Kriner and Reeves (2012) finds that increasing federal spending in a county by 80% results in swing of 1.1% toward the incumbent.

On the other hand, we also find a substantively large direct effect that is unmediated by retrospective evaluations of the national economy. The point estimate corresponding to the *ADE* in the left panel shows that a 1% point increase in unemployment within a county decreases the likelihood of voting for McCain by about 0.9% in 2008 *through the direct causal pathway*. By contrast, the point estimates of the *ADE* in the middle and right panels are positive, indicating that a 1% point increase in unemployment within a county increases the likelihood of voting for Obama by about 0.8% in 2012 and about 1% in 2016 *through the direct causal pathway*. This finding is consistent with our hypothesis that the direct effect is negative for Republicans and it is positive for Democrats, which provides evidence for the presence of local issue-ownership voting.

For intuitive interpretations of the *ADE*, again consider a county that suffered a 1% point increase in unemployment between 2011 and 2012. The estimated *ADE* for 2012, that is 0.8%, mean 1.6% vote swing from Romney to Obama in that county. In 2016, the same one point increase in county unemployment would increase the probability of voting for Hillary Clinton by 1%, which translates into swing of 2% from Trump to Clinton. In contrast, the negative estimated *ADE* in 2008 reveals that a 1% point increase in unemployment between 2007 and 2008 would result in 1.8% countywide vote swing from McCain to Obama.

Finally, consider the total effect of changes in local unemployment (*ATE*) which is the sum of the *AME* and *ADE*. According to the point estimates corresponding to the *ATE* in the bottom row in Fig. 3, a 1% point increase in local unemployment decreases the likelihood of voting for McCain by about 1.1% in 2008, which is a statistically reliable effect. On the contrary, the same amount increase does not exert a statistically reliable effect in 2012 or 2016. The total effect of a 1.1% decrease in 2008 translates into about 2.2% vote swing from McCain to Obama. In 2008, McCain is running for a third consecutive Republican term in the White House, and in 2012 and 2016, Democratic President Barack Obama is the incumbent president.

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[26] If Obama's share goes down by 0.36%, then Romney's share goes up by that amount resulting in a swing of 0.72%. As the *AME* is calculated by taking the average over individual respondents' predicted vote choice, the *AME* indicates the difference between expected vote shares of the incumbent party (Becher and Donnelly 2013, p. 973). Therefore, a 1% point increase in unemployment decreases individual respondents' predicted voting for Obama, which translates into decreasing the expected vote share of Obama.
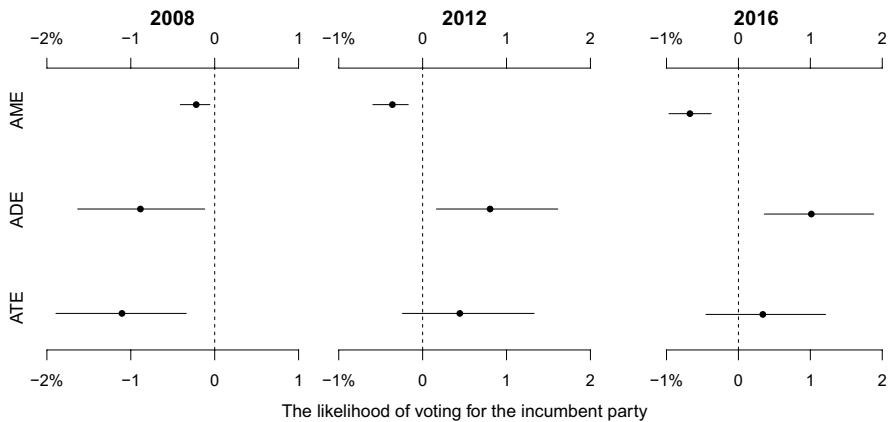
Fig. 3 Effect of increases in the county-level unemployment rate on individual vote choice for the incumbent party, 2008, 2012, and 2016. The estimated average mediation effect (*AME*), average direct effect (*ADE*), and average total effect (*ATE*) are presented. These effects are generated by a 1% point increase in the annual average of county-level unemployment rate over the year preceding the election. The *AME* reflects the voting mechanism that voters' evaluations of the national economy intermediate between a change in unemployment and vote choice. The *ADE* reflects all other alternative mechanisms. The *ATE* is the sum of the *AME* and *ADE*. Each point is the estimate, and each horizontal line is equivalent to a 95% confidence interval representing uncertainty about the estimated effect

Our individual-level causal mediation analysis allows us to answer questions we have been unable to answer. Previous research on local unemployment and voting is characterized by disparate findings. Some studies find no significant effects, others support retrospective voting, and still others support issue-ownership voting (Abrams and Butkiewicz 1995; Brunk and Gough 1983; Eisenberg and Ketcham 2004; Hill et al. 2010; Kim et al. 2003; Wright 2012). Our analysis provides an explanation that reconciles these divergent findings. In 2008, rising local unemployment hurt McCain through both the direct and indirect causal pathways. In other words, the negative effect of rising unemployment working through mediated economic voting, or retrospective voting, was reinforced by the negative effect of issue-ownership voting. In 2012 and 2016, on the contrary, the direct effect and the indirect effect cancelled each other. That is, the negative effect of rising unemployment working through mediated economic voting was offset by the countervailing force of issue-ownership voting. As a result, local unemployment appears to have no effect on the election outcome in terms of the total effect in 2012 and 2016. However, this does not mean that voters did not hold the president accountable for local jobs because the mechanism of mediated economic voting was still at work. Even if Democrats could benefit electorally from rising unemployment due to those voters who translate rising local unemployment into voting for the incumbent Democratic party, they still have incentive to bring unemployment under control to attract another type of voters who credit the incumbent government for keeping unemployment low through their views of the national economy.

Based on these findings, we argue that local unemployment is a multifaceted issue characterized by both mediated economic voting and issue-ownership voting.[27] This argument complements Wright (2012, pp. 699)'s aggregate-level analysis leading to the conclusion that "unemployment is a partisan issue for voters, not a valence issue." In line with Wright's finding, rather than punish whomever presides over a faltering local economy, our individual-level evidence shows that voters turn to Democratic presidential candidates. The estimated total effect is also consistent with Wright in that the negative total effect of local job losses is pronounced when the Republican party is in office. Yet we have uncovered that two components of the total effect were at work in the most recent presidential elections. This result deepens our understanding of presidential accountability for local jobs.

Exploring Mechanisms

Alternative Measures of the Local Economy

Although our models control for other local economic characteristics, we have focused on the mediated and direct effects of local unemployment. While unemployment is one of the most influential economic indicators, other factors such as gas prices and changes in income could also influence presidential voting. By examining the influence of these indicators, it provides insight into the mechanisms behind local issue ownership and how voters view the local economy on the whole. On the one hand, voters could process the local economy as a single indicator. Whether it be joblessness, failing infrastructure, rising prices, or lower wages, voters may translate all of these phenomena into a single attitude about the precariousness of the state of the local economy. In this formulation, any local economic malady should activate preferences for Democratic presidential candidates. Alternatively, voters may distinguish between different local economic indicators and pick candidates based on their preferred solution in line with policy oriented economic voting (Kiewiet 1981). For example, if gas prices go up, voters may prefer Republicans while unemployment would lead them to favor Democrats. Additionally, we can explore whether other local economic indicators are as influential on presidential voting through perceptions of the national economy. To implement this analysis, we estimate the *AME* and *ADE* for two additional measures of the local economy—median household income and gas prices.

Figure 4 presents the *AME*, *ADE*, and *ATE* generated by a thousand dollar decrease in the county-level median household income over the year preceding the election (Panel a) and those effects generated by a ten cent increase in the county-level average gas prices between August and October in the election year (Panel

(A) Effect of Decreasing Median Household Income

(B) Effect of Increasing Gas Prices
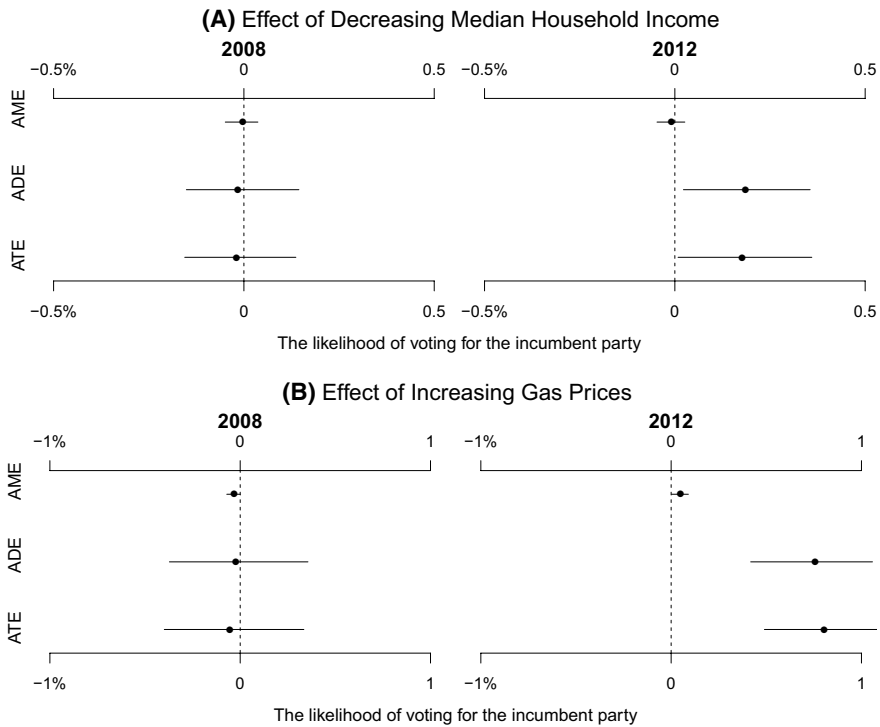
Fig. 4 Effect of decreases in the county-level median household income and effect of increases in the county-level gas prices on individual vote choice for the incumbent party, 2008 and 2012. The estimated average mediation effect (*AME*), average direct effect (*ADE*), and average total effect (*ATE*) are presented. **a** represents effects generated by a thousand dollar decrease in the county-level median household income over the year preceding the election. **b** represents effects generated by a ten cent increase in the county-level gas prices over the year preceding the election. Each point is the estimate, and each horizontal line is equivalent to a 95% confidence interval representing uncertainty about the estimated effect

b).[28] We find that neither local-level income nor gas prices shows a statistically and substantively reliable *AME*. This suggests that, unlike local unemployment, neither gas prices nor changes in local household income affect presidential voting through perceptions of the national economy. Perhaps unsurprisingly, they fail to leave an imprint in the same way that local unemployment does.

Once we account for the effect mediated by national economic evaluations, the *ADE*s are substantively in line with our hypothesis regarding local issue-ownership voting. In 2008, the *ADE*s tend to be negative though neither income nor gas prices reaches statistical reliability. The 2012 analysis produces positive *ADE*s, which is a finding consistent with the local unemployment case. That is, voters tend to reward Democrats for worsening local economic conditions that may be judged by increasing joblessness, declining income, or rising gas prices, once their retrospective

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[28] We only considered the 2008 and 2012 cases for which all the local economic measures were available to us.

voting mechanism is controlled for. This suggests that voters utilize local economic indicators bluntly without much differentiation between types of policy outcomes.

Individual Level Characteristics

We also consider whether mechanisms might vary by individual-level characteristics, including personal employment status and political expertise. The extent to which individual voters are concerned about local joblessness that could lead to voting for the Democratic party may depend on personal job security. Those people lacking job security will be more concerned about diminishing jobs in their communities, and thus the issue-ownership mechanism, or *ADE*, is likely to be most acute among the unemployed or part-time workers. Moreover, political expertise might play in conditioning the mechanisms. Given that economic voting and issue voting require some level of political expertise (Delli Carpini and Keeter 1996; Gomez and Wilson 2001; Goren 1997; Krause 1997), both *AME* and *ADE* may be most pronounced among politically sophisticated voters.

Our findings with respect to differences among effects by individual level covariates are marked by null effects. We find no statistically meaningful conditioning role of political expertise. With respect to employment status, we find a conditioning role in 2012 but not in 2008 or 2016.[29] While there is limited evidence that individual characteristics (e.g., employment) may activate sensitivity to local economic conditions in particular elections (e.g., 2012), it seems that local joblessness creates generalized political dissatisfaction among voters. This could be because local economic strife is easy observable in the course of a voters day-to-day life and requires very little political sophistication to comprehend. And whether an individual is employed or not, high unemployment in a community may mean suffering housing markets and generalized suffering beyond those unable to find a job.

Conclusion

This article reconciles disparate perspectives on the relationship between local joblessness and presidential voting. We have demonstrated that mediated local economic voting and local issue-ownership voting were at work in a reinforcing

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[29] In 2012, we compare full-time workers ($N = 13,118$) and unemployed and part-time workers ($N = 6532$) from the 2012 analysis. The analysis considers only economically active respondents, excluding retired people, students, people with disabilities, and homemakers. The magnitude of the estimated *ADE* reveals that a 1% point increase in the county-level unemployment rate increases these people's likelihood of voting for Obama by about 2.5%, holding the effect driven by national economic evaluations constant. This translates into about 5% vote swing from Romney to Obama. The estimated *ADE* associated with full-time workers is practically zero. The difference in the estimated *ADE* between these two different types of employment status is statistically reliable at the 95% level. While we find that part-time and unemployed voters' likelihood of supporting the Republican incumbent is more negative than that for full-time employed voters in 2008, the difference does not reach statistical significance. In the 2016 analysis, the difference between the two different types of employment status is not statistically distinguishable from zero.

way in 2008 and in a countervailing way in 2012 and 2016. Increases in local unemployment decreased the probability of voting for the incumbent party by way of influencing perceptions of the national economy in each election. Through an alternative mechanism, increases in local unemployment were associated with decreased support for McCain in 2008, increased support for Obama in 2012, and increased support for Clinton in 2016. These findings imply that local unemployment influences voting through numerous pathways. Voters translate rising local unemployment into sanctions against the incumbent regardless of party. Yet voters also consider the parties' reputations for handling unemployment when making a voting decision.

By jointly taking into account these two mechanisms, we better understand the relationship between the local economy and presidential accountability. Consistent with previous research, local unemployment was not influential in the 2012 and 2016 elections in terms of the total effect. However, we find that underneath the total effect, both mediated economic voting and issue-ownership voting were influential yet countervailing forces. Thus, it is incorrect to conclude that voters do not hold presidents accountable for local jobs simply based on the total effect or aggregate-level evidence. While Democratic presidential candidates benefit from rising local unemployment as the issue-ownership voting mechanism suggests, the presence of mediated local economic voting explains why Democrats still work to bring unemployment under control.

There is still much to investigate. Though we provide evidence from the three most recent presidential elections, it would be beneficial to extend our analysis back in time. One limitation, though, is that it is often difficult or impossible to obtain local geographic information about nationally representative survey respondents. In addition, future research should consider the influence of the local economy for other office holders such as governors or members of Congress. Finally, it is worth investigating how the relationships we have examined vary across countries. Building on previous findings that parties of the left tend to benefit from rising or high unemployment across advanced industrial democracies (Carlsen 2000; Martinsson 2009; Powell and Whitten 1993), it will be fruitful to explore how these findings of issue-ownership voting can be reconciled with the conventional retrospective economic voting theory beyond the U.S. context. Indeed, Becher and Donnelly's (2013) analysis employing national surveys from 18 countries between 1979 and 2001 finds a positive direct effect of rising unemployment on the vote share of the party of the incumbent chief executive, which is unmediated by voters' national economic perceptions. Our theory predicts that the positive direct effect estimated by Becher and Donnelly will be most acute among incumbent parties of the left, which is a testable prediction in future research.

Though we flesh out some of the mechanisms behind the effects of the local economy, the question of microfoundations merits further attention. Further research should examine the origin and nature of the preferences toward and perceptions of local economic performance. How do objective measures of local economies relate to subjective evaluations of the economic success of communities? Do voters have preferences over different economic policies in response to different challenges? While our research suggests no, more research should be done.

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