

# Are Perceptions of Local Conditions Rooted in Reality? Evidence From Two Large-Scale Local Surveys

American Politics Research

1–16

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DOI: 10.1177/1532673X19885863

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## Abstract

In this research note, we test an assumption that is often made in the literature on local retrospective voting—that peoples' perceptions of local conditions are well-grounded in reality. To do so, we examine the relationship between objective measures of local conditions and aggregated survey measures of perceptions of those conditions. We focus on three different conditions that have been shown to influence vote choice and approval at the local level—the state of the local economy, the quality of local public schools, and levels of local crime—and find strong evidence that perceptions of these conditions reflect actual local conditions. This important and previously unreported finding helps bolster the connections some scholars have found between objective indicators and election outcomes at the local level, as those indicators are tied to mass perceptions of related local conditions, which are connected to evaluations of incumbents. Overall, our results indicate that local electorates are well-positioned to hold local officials responsible. Given the general conception of the local electorate as disengaged, the strength and consistency of our findings are somewhat unexpected.

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**Keywords**

local politics, elections, retrospective voting

Although the literature on retrospective voting has largely focused on national- and state-level politics (Atkeson & Partin, 1995; Cohen & King, 2006; Fiorina, 1981; Healy & Malhotra, 2013; Lewis-Beck & Stegmaier, 2000; Stein, 1990), the question of whether local electorates hold local political officials accountable for local conditions has started to attract serious attention, producing a body of research indicating that local conditions, such as the state of the local economy, taxes, schools, and crime, are connected to local election outcomes (Arnold & Carnes, 2012; Berry & Howell, 2007; Burnett & Kogan, 2016; Holbrook & Weinschenk, 2014b; Hopkins & Pettingill, 2018; Howell & Perry, 2004; Kaufmann, 2004; Lay & Tyburski, 2017; Oliver & Ha, 2007; Oliver, Ha, & Callen, 2012). Implicit in these studies of local elections is the important assumption that voters have some understanding of the state of local conditions; that local electorates can distinguish between good times and bad times. Although Howell and Perry (2004) note that “there are many areas in which city residents can reasonably evaluate local performance,” we actually know very little about whether perceptions of local conditions are connected to reality (p. 38).

The question of whether people make accurate assessments about political, social, and economic conditions has long been of interest to scholars (Duch, Palmer, & Anderson, 2000; Holbrook & Garand, 1996; Niemi, Bremer, & Heel, 1999), although there is disagreement about the extent to which perceptions match reality. Recently, Achen and Bartels (2016) have argued that voters are quite irrational and generally do not make well-informed retrospective assessments about political and economic conditions. Instead, according to Achen and Bartels (2016), most people make political evaluations on the basis of political and social identities rather than a sincere assessment of reality. Other scholars, too, have found evidence that the public’s perceptions of conditions are not always fully rooted in reality (Bartels, 2002; Duch et al., 2000; Gramlich, 2016; Shao & Goidel, 2016). To be fair, some studies are more optimistic about the capability of the public to connect their assessments of conditions to reality. For example, Niemi et al. (1999) show that “state economic perceptions are clearly grounded in economic reality, that is, in the actual conditions of the state” (p. 188). Both Franko (2017) and Xu and Garand (2010) find that perceptions of income inequality are connected to objective measures. In addition, Erikson and Wlezien (2012) and Lewis-Beck, Martini, and Kiewiet (2013) find strong relationships between objective economic indicators and aggregated survey measures of perceptions of the national economy.

Although there is serious debate in the retrospective voting literature about whether voters know enough to hold politicians accountable even in high-salience elections (e.g., president and governor), we know virtually nothing about whether residents' perceptions of conditions in their city are well-grounded in reality. Indeed, most of the existing work on the link between perceptions and reality has focused on state and national conditions. When it comes to local politics, there are competing ideas about the capability of the public to make accurate assessments. On one hand, it is possible that because most people are fairly disconnected from local affairs (Hajnal & Lewis, 2003; Holbrook & Weinschenk, 2014a; Oliver, 1999), the public will be ill-informed about conditions in their city. Indeed, while people often have a difficult time staying informed about national politics (Delli Carpini & Keeter, 1996), they may encounter even more obstacles to gathering data on outcomes at the local level than they do at the national level (Bernhard & Freeder, 2018; Crowder-Meyer, Gadarian, & Trounstine, 2017). We know, for example, that local newspapers have been steadily declining over the past few decades, which makes it more difficult for people to get information about local affairs (Gao, Lee, & Murphy, 2019; Schulhofer-Wohl & Garrido, 2013). Interestingly, studies on perceptions about the fiscal health of local governments provide some insights into the link between perception and reality. Generally speaking, scholars have found little connection between self-reported (e.g., survey) and objective measures of local fiscal conditions, though we note that many these studies have focused on the perceptions of public officials rather than ordinary citizens (Aldag, Kim, & Warner, 2019; Maher & Deller, 2007, 2011, 2013).<sup>1</sup> On the other hand, there may be reason to be more optimistic about the quality of peoples' assessments at the local level. For instance, the local context is "closest" to people and, even though most people do not pay a great deal of attention to local affairs, they may have a sense of what is generally happening where they live. Indeed, there are numerous environmental signals (e.g., local television reports, discussions with friends or neighbors, and personal observations) that could provide people with a general sense of how things are going where they live. Interestingly, Haller and Norpoth (1997) find that even people with little exposure to news about the economy somehow manage "to get a glimpse of economic conditions" (p. 567).

In this article, we examine the extent to which perceptions of local conditions covary with objective measures of those conditions, using survey data from dozens of cities and across several years. We pay particular attention to indicators that have been connected to election outcomes in previous studies of local elections—economic performance (Holbrook & Weinschenk, 2014b; Hopkins & Pettingill, 2018), crime rates (Arnold & Carnes, 2012), and the

performance of local public schools (Berry & Howell, 2007; Lay & Tyburski, 2017). Relative to national- and state-level research, we have a fairly limited understanding of how people make decisions in the local context (Marshall, 2010), including how electorates interact with the local environment to produce local election outcomes. This is unfortunate because local elections make up the vast majority of elections in the United States (Anzia, 2014; Holman, 2015) and there is a tremendous amount of variation in the conditions that people experience in cities across the United States, certainly more variation than is encountered in state-level or national contexts. This variation represents an important opportunity to learn not just about local politics, but about public opinion and political behavior more broadly.

If perceptions are rooted in the realities of city conditions, we should see fairly strong relationships between perception-based measures of conditions and objective indicators of those conditions. Just to be clear, we do not expect that respondents know *exactly* what the local unemployment rate, crime rate, or graduation rate is in their city, only that when unemployment and crime rates are relatively high (low), or the high school graduation rate is low (high), they report relatively negative (positive) perceptions of conditions in those domains. In other words, our focus is on whether respondents generally understand when times are good and when times are bad.

## Data and Measures

To examine the link between perceptions of city conditions and objective measures, we need data sets that (a) measure perceptions of local conditions, (b) identify the city of residence for each respondent, and (c) have fairly large samples of people within each city.<sup>2</sup> We use two unique data sets for our analyses, both of which meet these criteria. The first data set is the Urban Mayoral Election Study<sup>3</sup> (UMES), a public opinion survey administered prior to 40 separate mayoral elections in 39 cities from 2007 to 2011. The cases (Atlanta, GA, 2009; Baltimore, MD, 2007; Boise, ID, 2007; Boston, MA, 2009; Charlotte, NC, 2007 and 2009; Cincinnati, OH, 2009; Cleveland, OH, 2009; Columbus, OH, 2007; Columbus, GA, 2010; Dallas, TX, 2011; Denver, CO, 2011; Detroit, MI, 2009; Durham, NC, 2007; Fort Wayne, IN, 2007; Fresno, CA, 2008; Garden Grove, CA, 2010; Greensboro, NC, 2007; Houston, TX, 2009; Indianapolis, IN, 2007; Jacksonville, FL, 2011; Laredo, TX, 2010; Mesa, AZ, 2008; Miami, FL, 2009; Philadelphia, PA, 2007; Pittsburgh, PA, 2007; Reno, NV, 2010; Riverside, CA, 2009; Sacramento, CA, 2008; Salt Lake City, UT, 2007; Santa Ana, CA, 2010; Seattle, WA, 2009; Shreveport, LA, 2010; Spokane, WA, 2007; St. Petersburg, FL, 2009; Tacoma, WA, 2009; Toledo OH, 2009; and Yonkers, NY, 2007) selected for

this study are drawn from among the 125 largest cities in the United States. Although other large cities held elections during the same time period, the cities selected for this study were chosen, in part, based on competitiveness and with the purpose of maximizing variance in demographic and candidate diversity. The average population size of cities in the UMES is 699,162 people. The overall sample size is 6,365 respondents, with an average of 159 respondents from each city. The survey was administered via telephone interviews utilizing separate random-digit-dialing samples from each city and included approximately 90 questions.<sup>4</sup> One of the advantages of the UMES design is the ability to capture and utilize considerable variation in the political, social, and economic contexts of cities. Indeed, the survey sample was designed to capture the range of experience in urban political life specifically to enhance the generalizability of the findings.

The second data set we use is the Knight Foundation's Soul of the Community Study. In each year from 2008 to 2010, the Knight Foundation conducted surveys in each of 26 Knight Foundation cities. The 26 cities are as follows: Detroit, MI; Philadelphia, PA; Miami, FL; St. Paul, MN; San Jose, CA; Palm Beach, FL; Charlotte, NC; Bradenton, FL; Akron, OH; Gary, IN; Long Beach, CA; Boulder, CO; Columbia, SC; Wichita, KS; Lexington, KY; Tallahassee, FL; Columbus, GA; Fort Wayne, IN; Duluth, MN; Macon, GA; Biloxi, MS; Grand Forks, ND; Myrtle Beach, SC; State College, PA; Milledgeville, GA; and Aberdeen, SD. The average population size of cities in the Knight Study is 382,021 people. The surveys were administered by Gallup and a randomly identified adult 18 years of age or older completed a 15-min telephone interview. In each of the 3 years, the survey instrument was nearly identical, which means that we have a very large sample when we pool the three survey years. In each year, there are at least 400 interviews in each of the 26 cities. Thus, across the 3 years, we have between 1,200 and 3,670 respondents per city. In total, there are over 47,000 respondents when we combine the surveys.

## **Measuring Perceptions of City Conditions**

To measure perceptions of city conditions, we use the individual-level survey data to generate aggregate-level measures (e.g., proportion of people in each city saying that crime is serious). In the UMES, we make use of three different questions that were included in the survey. For perceptions of the local economy, we use the following question: "Would you say that over the past year economic conditions in your city have gotten better, stayed about the same, or gotten worse?" Our aggregate-level measure based on this question is simply the proportion of people in each city who said the economy had

gotten worse. To measure perceptions of crime, respondents were asked "Overall, how would you describe the problem of crime in your city? Is it very serious, somewhat serious, not very serious, or not serious at all?" Here, the aggregate measure is the proportion of people in each city who said that crime is a very or somewhat serious problem. Finally, to assess perceptions about local public schools, we use an item that asks "Overall, how would you rate the quality of education students receive in kindergarten through grade twelve in your city's public schools? Would you rate it as very good, somewhat good, somewhat poor, or very poor?" Our aggregate measure is the proportion of people in each city who reported that the local schools are somewhat or very poor.

We use a similar set of questions in the Knight Foundation survey. To assess perceptions about the economy, we use a question that asked "On the same rating scale, where 5 means very good and 1 means very bad, how would you rate economic conditions in (local geography) today?" We measure perceptions of crime by using a question that asks "On a five-point rating scale, where 5 means extremely low and 1 means extremely high, how would you rate the level of crime in your community?" Finally, to measure perceptions about public schools, we make use of the following question: "On a five-point rating scale, where 5 means very good and 1 means very bad, how would you rate the following in (local geography)? The overall quality of public schools in your community." For each question, our aggregate measure is simply the proportion of people in each city who answered with a response of "1" or "2."

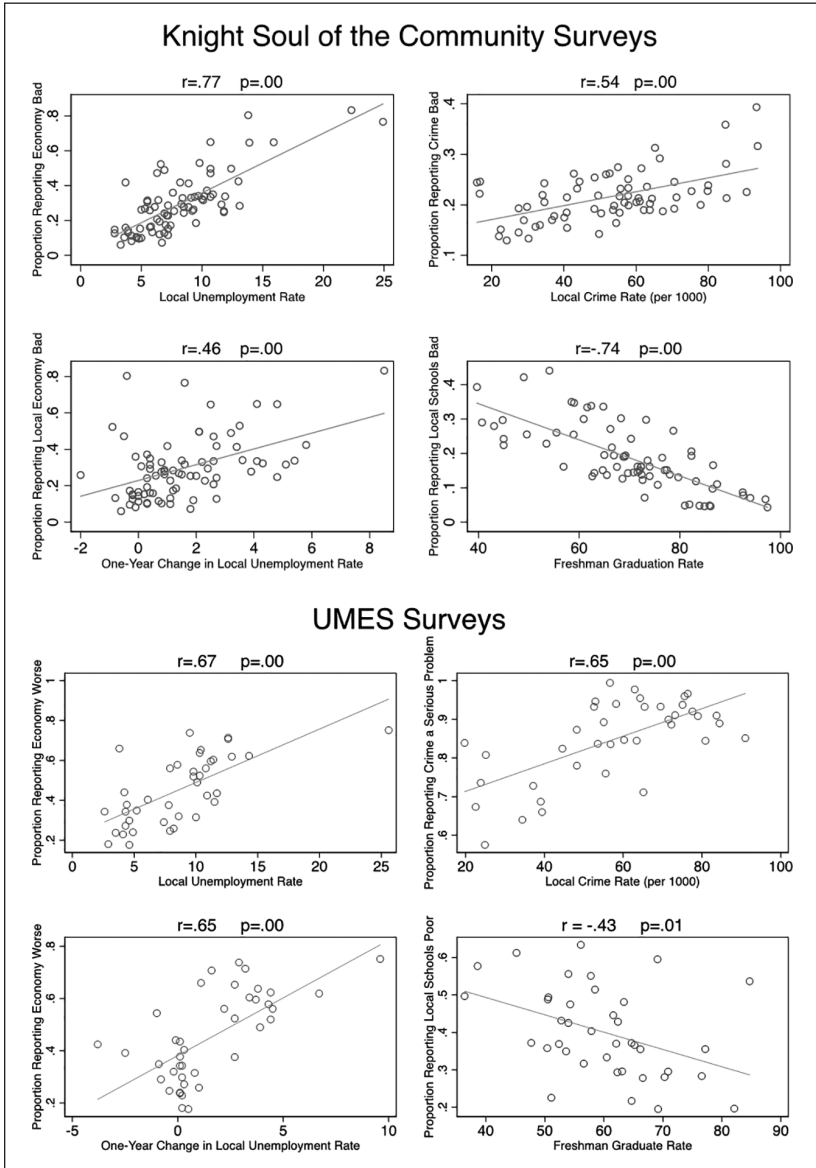
## **Objective Measures of City Conditions**

As we are interested in the link between perceptions and reality, we also need measures of objective conditions for each dimension described above. As objective measures of the state of a city's economy, we make use of two indicators: the unemployment rate in the city in the month preceding the survey and the change in the unemployment rate over the last year. We calculated the change measure using data on the unemployment rate in the month preceding the survey and then data on the unemployment rate 12 months before that. For example, if respondents in a city were surveyed in November of 2007, the change in unemployment would be based on the change between October 2007 (the month immediately before the survey) to October 2006 (1 year before that). Thus, if unemployment was 5% in October 2006 and 7% in October 2007, the change value would be +2 percentage points. Measuring the state of the local economy in these ways is consistent with much of the local retrospective economic voting literature, and similar measures have

been used in numerous recent studies (see, for example, Arnold & Carnes, 2012; Holbrook & Weinschenk, 2014b). We gathered data on city unemployment from the Bureau of Labor Statistics.<sup>5</sup> As an objective measure of crime, we calculated the crime rate for each city using data from the FBI's Uniform Crime Reports. Thus, we summed the number of violent and property crimes for each city and divided the total number of crimes by the city's population. For the sake of simplicity, we express the crime rate in each city as the amount of crime per 1,000 people. Measures of a city's crime rate have been used in numerous previous studies on retrospective voting (see, for example, Arnold & Carnes, 2012; Hopkins & Pettingill, 2018). To assess how local public schools are doing, we use one of the few measures that provides relatively comparable results across cities—the average freshman graduation rate—which is calculated by dividing the number of graduates with regular diplomas by the size of the incoming freshman class 4 years earlier and expressed as a percentage.<sup>6</sup> This measure is available from the Local Education Agency (School District) Universe Survey Dropout and Completion Data from the National Center for Education Statistics.<sup>7</sup>

## **Results and Analysis**

We begin by turning to Figure 1, which provides a look at the relationship between the objective indicators of city conditions and aggregated perceptions of those conditions, separately for the Knight Foundation (top group) and UMES (bottom group) surveys. The vertical axes in the scatterplots represent the proportion of respondents who reported a negative perception of local conditions (e.g., proportion reporting that crime is a somewhat serious or very serious problem in the UMES data or proportion answering with the two lowest values on each of the 5-point scales in the Knight data),<sup>8</sup> and the horizontal axes represent the objective measure of the relevant condition. Several important findings emerge from Figure 1. First, in broad terms, across all measures and both surveys, in aggregate, local perceptions of the economy, crime, and public schools track with objective measures of outcomes in those areas. In cities with high crime rates, respondents tend to report negative evaluations of local crime levels; in cities with relatively high unemployment, or with relatively large increases in unemployment, respondents are more likely to provide negative evaluations of the economy; and in cities with relatively low graduation rates, respondents provide negative evaluations of public schools.<sup>9</sup> This important and previously unreported finding helps bolster the connections some scholars have found between objective indicators and election outcomes at the local level (Arnold & Carnes, 2012; Berry & Howell, 2007; Burnett & Kogan, 2016; Holbrook & Weinschenk,



**Figure I.** Relationship between local conditions and perceptions of local conditions in U.S. cities.

Note. UMES = Urban Mayoral Election Study.



**Table 1.** Perceptions of Local Conditions: Knight Soul of the Community.

	Economy very bad b/SE	Crime extremely high b/SE	Schools very bad b/SE
Unemployment rate	0.02232*** 0.00275	—	—
ΔUnemployment	—	0.03140*** 0.00791	—
Crime rate	—	—	0.00064* 0.00026
Freshman graduation	—	—	— -0.00334** 0.00109
General satisfaction	-0.902*** 0.082	-1.163*** 0.089	-0.247*** 0.044
Constant	0.746*** 0.068	1.046*** 0.064	0.355*** 0.040
F-ratio (year effects)	1.23	4.61*	0.49
Adjusted R <sup>2</sup>	.86	.77	.50
N	78	78	69
			72

\*p < .05. \*\*p < .01. \*\*\*p < .001.

2014b; Hopkins & Pettingill, 2018; Lay & Tyburski, 2017) as those indicators are tied to mass perceptions of related local conditions.

While the results in Figure 1 point to consistent patterns across the two surveys, there are a couple differences that warrant mentioning. The most substantial differences are found with the freshman graduation rate, which has a noticeably stronger relationship to evaluations in the Knight Foundation data than in the UMES data, and for crime rate, which is more strongly related to perceptions in the UMES data. These differences aside, though, the general pattern in both data sets is that local perceptions track with objective conditions.

In Tables 1 and 2, we examine the relationship between objective conditions and aggregated perceptions of those conditions in the context of OLS regression models, which we use because the aggregated perception measures are continuous. The basic idea is to regress each of the aggregated perception measures on the relevant objective measure. If perceptions are rooted in reality, we should find that the objective measures have statistically significant effects on the perception measures. In the models, we also include dummy variables measuring the year the survey was collected to capture any differences in context

**Table 2.** Perceptions of Local Conditions: UMES Data.

	Economy worse <i>b/SE</i>		Crime serious <i>b/SE</i>	Schools poor <i>b/SE</i>
Unemployment rate	0.0128*	—	—	—
	0.00575	—	—	—
$\Delta$ Unemployment	—	0.0103	—	—
	—	0.011	—	—
Crime rate	—	—	0.00299***	—
	—	—	0.000665	—
Freshman graduation	—	—	—	-0.00864*
	—	—	—	0.00415
General satisfaction	-0.239*	-0.356**	-0.312**	-1.250***
	0.121	0.112	0.0888	0.305
Constant	0.394***	0.522***	0.885***	2.174***
	0.0943	0.0749	0.0763	0.246
<i>F</i> -ratio (year effects)	11.43***	9.93***	0.77	1.78
Adjusted <i>R</i> <sup>2</sup>	.74	.71	.54	.51
<i>N</i>	40	40	39	39

Note. UMES = Urban Mayoral Election Study.

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

across time (e.g., worse overall economy in 2008 than in 2010), as well as an aggregate measure of the general level of satisfaction in the city, to guard against the possibility that perceptions of specific conditions could be influenced by positive or negative developments in other domains, or reflect respondents' generalized support or opposition to local incumbents. For the UMES survey, we measure generalized support using the question "On the whole, are you very satisfied, somewhat satisfied, somewhat dissatisfied, or very dissatisfied with the way things are going in your city?" For each UMES city, we calculated the proportion of people answering "somewhat" or "extremely" satisfied. For the Knight Foundation survey, we measure satisfaction using the question "Taking everything into account, how satisfied are you with (local geography) as a place to live? Please use a five-point scale, where 5 means you are extremely satisfied and 1 means you are not at all satisfied. You may use any of the numbers 1, 2, 3, 4, or 5 for your rating." Here, we calculated the proportion of respondents in each city who provided a rating of 4 or 5. Importantly, controlling for overall satisfaction makes our tests for the other variables conservative. Although we are looking at differences just in three policy areas, there could be a halo effect that would cause satisfaction to trend

similarly across all issues—if this is occurring, our general satisfaction measure should capture it.

In Table 1, each of the objective indicators has a statistically significant effect ( $p < .05$ ) on the corresponding perception measure from the Knight data set. Overall, the models fit the data fairly well, with the adjusted  $R^2$  values ranging from .50 to .86. Table 2 shows the results from the UMES models, and here we find that objective conditions have a statistically significant effect ( $p < .05$ ) on perceptions in three of the four models. The only place where we do not find a statistically significant effect is in the model that uses change in unemployment to predict economic perceptions. Once again, the models fit the data quite well—the adjusted  $R^2$  values range from .51 to .74. Overall, the results presented in Tables 1 and 2 indicate that perceptions about city conditions are well-grounded in reality. In seven of the eight models, we find that objective measures have a statistically significant effect on perceptions. Thus, there is fairly consistent evidence that peoples' perceptions about local conditions are connected to what is actually occurring where they live.

## Conclusion

In this article, we examined an assumption that is implicit in the literature on local retrospective voting—that peoples' evaluations of local conditions are rooted in the realities of those conditions. Although there is fairly convincing evidence that local conditions are connected to the political fate of local leaders, there has been little research on how people form their impressions about local conditions. Given that people integrate assessments about local conditions into their voting decisions in local elections (Berry & Howell, 2007; Holbrook & Weinschenk, 2014b; Hopkins & Pettingill, 2018; Howell & Perry, 2004; Kaufmann, 2004; Lay & Tyburski, 2017; Oliver & Ha, 2007; Oliver et al., 2012), it is important to understand whether their perceptions of conditions are actually connected to reality. In addition, as national politics become more and more gridlocked, it becomes increasingly important that voters understand what is happening in the states and cities where they live (Bernhard & Freeder, 2018). Indeed, in states pushing pro-local governance agendas, it matters a lot whether voters are competent to understand the consequences and are positioned to hold politicians accountable. Overall, we found fairly strong relationships between objective measures of conditions and aggregated survey measures of perceptions of those conditions. This is important evidence for the growing body of research that has used objective indicators of local conditions in the context of local politics, as it connects those indicators to local electorates.

Our findings are also important because they challenge the idea put forward by scholars like Achen and Bartels (2016) that since most people are disconnected from politics or form perceptions based on partisan preferences, they are unlikely to form accurate assessments about political conditions. Given the general conception of the local electorate as disengaged, the strength and consistency of our findings are somewhat unexpected. Most likely, the connection between perceptions and conditions at the local level is aided by the weaker role of partisanship in local politics. We find that people actually do a fairly good job of distinguishing between good times and bad times. In short, local electorates may be more sophisticated than previously thought. Thus, our results support the idea that local electorates are well-positioned to hold local officials responsible for local conditions. This is an important step forward in our knowledge about local politics.

A number of ideas for future research emerge from our findings. First, we encourage extensions of this article. Although we found similar results across two independent data sets, it would be worthwhile to conduct similar analyses using different data sources, where available. Second, it would be valuable to examine the link between perception and reality for other local conditions. We focused on the local economy, crime, and schools given the importance of these factors in the local retrospective voting literature, but there are certainly other conditions worth studying (e.g., environmental quality, infrastructure, and health care). Our data sets did not contain a large number of perception-based measures of local conditions, but we encourage additional data collection on the measurement of local perceptions. This would significantly enhance our understanding of how people react to local conditions. Finally, while we focused on the connection between objective measures and perceptions in the context of cities, it could be interesting to examine whether similar findings emerge in other types of local governments (e.g., county governments and school boards). The framework developed here could certainly be extended to other contexts.

### **Declaration of Conflicting Interests**

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

### **Funding**

The author(s) received no financial support for the research, authorship, and/or publication of this article.

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## Notes

1. There do not appear to be statistical relationships between practitioners' perceptions of fiscal stress and empirical measures of fiscal stress (see, for example, Maher & Deller, 2007, 2011, 2013).
2. In a typical public opinion survey, which usually contains 1,000 to 2,000 respondents, there would only be a small number of people per city. In addition, most available public opinion surveys do not contain measures capturing perceptions of local conditions *and* a variable identifying each respondent's city of residence.
3. This study was supported with funding from (University of Wisconsin-Milwaukee Research Growth Initiative, Study #101X074) and the National Science Foundation (Study #0921343).
4. The target population is the citizen voting-age population. Because there is a slight tendency to overrepresent the non-Hispanic White population, post-stratification weights are used to bring the composition of the local samples into line with existing census estimates of local racial composition, based on the adult citizen population.
5. More specifically, we use data from the Local Area Unemployment Statistics data set.
6. We opt not to use test scores because they are often not directly comparable across different cities.
7. There is considerable variation in the averaged freshman graduation rate across cities. In some places, the rate is in the low 40s (e.g., Gary, IN, and Detroit, MI) and in other places the rate is as high as 98% (e.g., State College, PA). In a few cases, due to missing data, the averaged freshman graduation rate (AFGR) from the most proximate year was substituted for the missing information.
8. We use the proportions rather than mean values because the survey items are from ordinal scales. Similar results are obtained if the ordinal measures of perceptions are treated as continuous (e.g., if we use the mean values) and substituted for the proportion measures.
9. Interestingly, the correlations we find between the local unemployment rate and perceptions about the local economy are fairly similar to the correlations that have been reported for objective national economic indicators and aggregate perceptions about the national economy. For example, Lewis-Beck, Martini, and Kiewiet (2013) report that the correlation between GDP change and the percent of people rating the national economy as worse in the American National Election Study (ANES) is  $r = -.77$  (using data from 1968 to 2008). Similarly, Erikson and Wlezien (2012) report that perceived business conditions (a survey-based item from University of Michigan's Index of Consumer Sentiment) correlate with an objective measure of cumulative income growth at  $r = .82$  (using data from 1956 to 2008).

## References

- Achen, C. H., & Bartels, L. M. (2016). *Democracy for realists*. Princeton, NJ: Princeton University Press.

- Aldag, A., Kim, Y., & Warner, M. (2019). Austerity urbanism or pragmatic municipalism? Local government responses to fiscal stress in New York state. *Environment and Planning A: Economy and Space*, *51*, 1287-1305.
- Anzia, S. F. (2014). *Timing and Turnout: How Off-Cycle Elections Favor Organized Groups*. Chicago, US: The University of Chicago Press.
- Arnold, R., & Carnes, D. N. (2012). Holding mayors accountable: New York's executives from Koch to Bloomberg. *American Journal of Political Science*, *56*, 949-963.
- Atkeson, L. R., & Partin, R. W. (1995). Economic and referendum voting: A comparison of gubernatorial and senatorial elections. *American Political Science Review*, *89*, 99-107.
- Bartels, L. (2002). Beyond the running tally: Partisan bias in political perceptions. *Political Behavior*, *24*, 117-150.
- Bernhard, R., & Freeder, S. (2018). The more you know: Voter heuristics and the information search. *Political Behavior*. Advance online publication. doi:10.1007/s11109-018-9512-2
- Berry, C. R., & Howell, W. G. (2007). Accountability and local elections: Rethinking retrospective voting. *Journal of Politics*, *69*, 844-858.
- Burnett, C. M., & Kogan, V. (2016). The politics of potholes: Service quality and retrospective voting in local elections. *Journal of Politics*, *79*, 302-314.
- Cohen, J. E., & King, J. D. (2006). The state economy, the national economy, and gubernatorial popularity. In J. E. Cohen (Ed.), *Public opinion in state politics* (pp. 102-120). Stanford, CA: Stanford University Press.
- Crowder-Meyer, M., Gadarian, S. K., & Trounstine, J. (2017). Voting is hard, information helps. *Urban Affairs Review*. Advance online publication. doi:10.1177/1078087419831074
- Delli Carpini, M. X., & Keeter, S. (1996). *What Americans know about politics and why it matters*. New Haven, CT: Yale University Press.
- Duch, R., Palmer, H., & Anderson, R. (2000). Heterogeneity in perceptions of national conditions. *American Journal of Political Science*, *44*, 635-652.
- Erikson, R., & Wlezien, C. (2012). The objective and subjective economy and the presidential vote. *PS: Political Science & Politics*, *45*, 620-624.
- Fiorina, M. P. (1981). *Retrospective voting in American national elections*. New Haven, CT: Yale University Press.
- Franko, W. (2017). Understanding public perceptions of growing economic inequality. *State Politics & Policy Quarterly*, *17*, 319-348.
- Gao, P., Lee, C., & Murphy, D. (2019). Financing dies in the darkness? The impact of newspaper closures on public finance. *Journal of Financial Economics*. Advance online publication. doi:10.1016/j.jfineco.2019.06.003
- Gramlich, J. (2016). *Voters' perceptions of crime continue to conflict with reality*. Pew Research Center. Retrieved from <https://www.pewresearch.org/fact-tank/2016/11/16/voters-perceptions-of-crime-continue-to-conflict-with-reality/>

- Hajnal, Z., & Lewis, P. (2003). Municipal institutions and voter turnout in local elections. *Urban Affairs Review*, *38*, 645-668.
- Haller, H. B., & Norpoth, H. (1997). Reality bites: News exposure and economic opinion. *Public Opinion Quarterly*, *61*, 555-575.
- Healy, A., & Malhotra, N. (2013). Retrospective voting reconsidered. *Annual Review of Political Science*, *16*, 285-306.
- Holbrook, T. M., & Garand, J. C. (1996). Homo economus? Economic information and economic voting. *Political Research Quarterly*, *49*, 351-375.
- Holbrook, T. M., & Weinschenk, A. C. (2014a). Campaigns, mobilization, and turnout in mayoral elections. *Political Research Quarterly*, *67*, 42-55.
- Holbrook, T. M., & Weinschenk, A. C. (2014b). Money, candidates, and mayoral elections. *Electoral Studies*, *35*, 292-302.
- Holman, M. R. (2015). *Women in politics in the American city*. Philadelphia, PA: Temple University Press.
- Hopkins, D. J., & Pettingill, L. M. (2018). Retrospective voting in big-city US mayoral elections. *Political Science Research and Methods*, *6*, 697-714.
- Howell, S., & Perry, H. (2004). Black mayors/White mayors: Explaining their approval. *Public Opinion Quarterly*, *68*, 32-56.
- Kaufmann, K. (2004). *The urban voter: Group conflict and mayoral voting behavior in American cities*. Ann Arbor: University of Michigan Press.
- Lay, J. C., & Tyburski, M. (2017). The buck stops with the education mayor: Mayoral control and local test scores in mayoral elections. *Politics & Policy*, *45*, 964-1002.
- Lewis-Beck, M. S., Martini, N. F., & Kiewiet, D. R. (2013). The nature of economic perceptions in mass publics. *Electoral Studies*, *32*, 524-228.
- Lewis-Beck, M. S., & Stegmaier, M. (2000). Economic determinants of electoral outcomes. *Annual Review of Political Science*, *3*, 183-219.
- Maher, C., & Deller, S. (2007). Municipal responses to fiscal stress. *International Journal of Public Administration*, *30*, 1549-1572.
- Maher, C., & Deller, S. (2011). Measuring municipal fiscal condition: Do objective measures of fiscal health relate to subjective measures? *Journal of Public Budgeting, Accounting & Financial Management*, *23*, 455-478.
- Maher, C., & Deller, S. (2013). Assessing the relationship between objective and subjective measures of fiscal condition using government-wide statements. *Public Budgeting & Finance*, *33*, 115-136.
- Marschall, M. J. (2010). Local elections. In J. E. Leighley (Ed.), *The Oxford handbook of American elections and political behavior* (pp. 471-492). Oxford, UK: Oxford University Press.
- Niemi, R., Bremer, J., & Heel, M. (1999). Determinants of state economic perceptions. *Political Behavior*, *21*, 175-193.
- Oliver, J. E. (1999). The effects of metropolitan segregation on local civic participation. *American Journal of Political Science*, *43*, 186-212.
- Oliver, J. E., & Ha, S. E. (2007). Vote choice in suburban elections. *American Political Science Review*, *101*, 393-408.

- Oliver, J. E., Ha, S. E., & Callen, Z. (2012). *Local elections and the politics of small-scale democracy*. Princeton, NJ: Princeton University Press.
- Schulhofer-Wohl, S., & Garrido, M. (2013). Do newspapers matter? Short-run and long-run evidence from the closure of The Cincinnati Post. *Journal of Media Economics*, 26, 60-81.
- Shao, W., & Goidel, K. (2016). Seeing is believing? An examination of perceptions of local weather conditions and climate change among residents in the U.S. Gulf Coast. *Risk Analysis*, 36, 2136-2157.
- Stein, R. M. (1990). Economic voting for governor and U.S. senator: The electoral consequences of federalism. *The Journal of Politics*, 52, 29-53.
- Xu, P., & Garand, J. (2010). Economic context and Americans' perceptions of income inequality. *Social Science Quarterly*, 91, 1220-1241.

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