Introduction

Local governments in the United States are creatures of the states. The power and authority they possess are determined by the state constitution, statutes, court rulings, and practices. Traditionally, local governments may exercise only those powers expressly granted by the state under Dillon’s Rule, which derived from two court decisions issued by Judge John F. Dillon of Iowa in 1868 (Richardson, 2011; Richardson et al., 2003). In effect, state governments can place whatever restrictions they choose on their local governments, if such restrictions do not violate the state’s constitution (Krane et al., 2001; Sonenshein & Hogen-Esch, 2006). Practically, states often place constraints on local governments regarding the types of activities or things that can be taxed, pass preemptions and restrictive laws, and withhold promised funding (Denison et al., 2006; Mullins & Pagano, 2005; Swanson & Barrilleaux, 2020).

The strongest argument for more local authority lies in the recognition that the preferences of residents are heterogeneous across localities. To be able to respond to the preferences of their residents, local governments desire at least some degree of local autonomy. Home rule is a legal device through which states have provided more local autonomy. Throughout the twentieth century, local governments obtained some degree of local autonomy through home rule. Home rule, in general, is defined as “the ability of a local government to act and make policy in all areas that have not been designated to be of statewide interest through general law, state constitutional provisions, or initiatives and referenda” (Krane et al., 2001, p. 2). It gives municipalities more discretion in making policies and solving problems to improve local public services.

Among 40 home rule states, 8 states do not apply home rule to a certain size of small municipalities (Russell &
Bostrom, 2016). Municipalities differ in size, governing structure, amenities, tax base, citizen ideology, and many other dimensions (Bell & Jayne, 2009; Siegel & Waxman, 2001). With these many differences, it is reasonable to expect that the effect of home rule would not be the same across all municipalities. The flexibility provided by home rule may be critical for small municipalities which have been particularly struggling to maintain services level because of declining population and inadequate management limit the ability to obtain and manage resources (Hall, 2008; Mohr et al., 2010; Simonsen et al., 2001).

More previous studies have examined large municipalities only. This study contributes to the local autonomy debate by focusing on the effect of home rule on small municipalities through exploring the effects of a constitutional home rule on local revenues. The empirical evidence presented concerns Illinois home rule, which gives municipalities more discretion in making a wide range of policies that the state has not addressed, including the power to adjust tax rates and establish new taxes (Banovetz, 2002; Krane et al., 2001). This article attempts to provide causal evidence by conducting a fuzzy regression discontinuity (RD) design that compares Illinois home rule municipalities with non-home rule municipalities around the population threshold for automatically adopting home rule. This method provides causal evidence by addressing endogeneity bias that might stem from unobservable confounders and selection biases that may affect which municipalities choose home rule. Given that the COVID-19 pandemic has deepened fiscal stress for local governments across countries (de Jong & Ho, 2021; Wu & Lin, 2020), the causal evidence of this study may have implications for small local governments beyond the U.S. in suffering fiscal stress.

In particular, this article estimates the effects of Illinois home rule on the level of own-source revenues, revenue stability, and revenue structure, respectively. The results of the RD estimation show that home rule significantly and largely increases own-source revenues and significantly diversifies revenue structure for small municipalities. The preferred specification suggests that the adoption of home rule increases total own-source revenues by about 100% and diversifies the local revenue structure by about 20%. Furthermore, those increased revenues are largely due to local sales taxes and other taxes; property taxes and nontax revenues do not experience a significant change. Meanwhile, home rule has little influence on revenue volatility, implying that small municipalities do not stabilize revenues through home rule.

The remainder of this article is organized as follows: the first section reviews the literature on home rule and links that with local revenue. The second section introduces the characteristics of small municipalities and elaborates on how the smallness of the municipality influences home rule implementation. Next, the institutional setting for Illinois home rule, the methodology, and data are introduced. The next section reports the empirical findings. Lastly, this article ends with a discussion of the research findings and policy implications.

**Home rule and local revenue**

**Home rule as the expansion of local autonomy**

By passing ordinances regarding local affairs, home rule municipalities have more discretion and flexibility in the operations of local governments and in making policies (Krane et al., 2001). Local officials in a home rule municipality can manage local affairs freely from the state legislature’s oversight, as long as the ordinance fits the scope of transferred power and is not preempted by state law (Richardson et al., 2003; Sonenshein & Hogen-Esch, 2006). For instance, the Council of Downers Grove, Illinois, proposed a tax ordinance after it obtained its home rule status. After allowing citizens enough time to submit an opposing petition, the Council adopted such an ordinance when no opposing petition was submitted (Diamond & Krafthefer, 2014).

Home rule takes various forms and contains different scopes of power among states. It can be categorized into two types. The first type of home rule usually granted powers from their charter; therefore, such home rule states required a municipality should exercise those powers explicitly granted in the charter. Some scholars view the charter home rule as a constitutional contract between the citizens and local managers over government operation. They argue that citizens benefit from home rule through increased government responsiveness and efficiency and lower policy uncertainty (Maser, 1985, 1998; McDonald & Gabrini, 2014).

This study focuses on the other type of home rule. That is, home rule is granted directly by the state constitution. It does not depend on the home rule charter adoption, which gives home rule units substantial self-governance power. Many scholars see home rule as the shift of decision-making power from the state to local governments, which increases the local autonomy (Chen, 2022; Turnbull & Geon, 2006; Wood, 2011). Decentralization is believed to reflect local preferences because local governments are closer to the people and have less information asymmetry (Oates, 1972; Tiebout, 1956). Also, the competition in a decentralized system provides local managers with stronger fiscal incentives and reelection incentives for promoting political accountability (Bardhan, 2002; Jin et al., 2005). In sum, the literature generally expects that home rule helps municipalities to provide service more efficiently and better meet residents’ demands (Chen, 2022).

**Home rule and local revenue**

One responsibility of local government is to raise revenue to pay for services demanded by residents. Although
Chen

Concern about home rule is that municipalities may abuse their power to levy taxes, the traditional idea of decentralization holds that the competition among local governments constrains municipalities’ tendency to be revenue-maximizing (Epple & Zelenitz, 1981; Oates, 1985). A few empirical studies have looked at the impacts of home rule on local revenues in large municipalities. Most of them find either an insignificant or a negative effect of home rule on the level of local revenues (Dye & McGuire, 1997; Hendrick, 2002; Wood, 2011).

More fiscal autonomy does not only mean more power in policy-making but also means more responsibility. An “ideal” local revenue not only needs to be adequate to meet local needs or be fair to taxpayers, but it also should be stable and predictable over time (Bird, 1993; Gramlich, 1993). If a government becomes fiscally unstable, it must either increase the taxes or reduce the service provision, both of which may lead the residents to vote with their feet (Epple & Zelenitz, 1981; McDonald, 2015; Tiebout, 1956). Home rule could stabilize local revenues by expanding the range of tax base options available to municipalities. For example, home rule municipalities could establish new taxes to cover revenue shortfall instead of managing public funds or transfers from the state (Hendrick & Crawford, 2014). Hence, a responsible home rule municipality would stabilize its local revenue.

Recently, studies have found evidence that the local autonomy and fiscal policy space brought by home rule tends to enhance local financial stability and fiscal health. Hendrick and Crawford (2014) focus on municipalities in the Chicago metropolitan region and find those home rule municipalities tend to have lower volatility in government operational spending. Consistently, Shoag et al. (2019) compare home rule municipalities to non-home-rule municipalities in addressing the extreme loss of revenues and find that municipalities with home rule status experience smaller declines in own-source revenue caused by the bankruptcy of big-box retail chains. McDonald (2015) also finds evidence in Florida counties that the status of charter home rule is associated with better local fiscal health. These studies focus on large municipalities, and how their findings might be applied to smaller municipalities that are different from large municipalities still need more examination (Bell & Jayne, 2009).

Most research has adopted a panel or cross-section analysis that cannot offer proper counterfactuals to home rule municipalities and may fail to address the endogeneity problem. Home rule, as a constitutional contract, has been shown to reflect local governmental political, demographic, and economic characteristics (Maser, 1985, 1998; McDonald & Gabrini, 2014). While previous studies attempt to account for those influences by controlling observable variables, the adoption of home rule may be associated with those and other unobserved variables. In addition, many previous home rule studies look at states where municipalities could adopt home rule through a referendum. The empirical results may be biased by self-selection into home rule in response to revenue shortfalls.

Home rule in small municipalities
To date, most studies have focused on large municipalities when examining the effects of home rule. Small municipalities face challenges different from those of large municipalities by the very fact of their size. Maintaining revenue sufficiency and balancing the budget are often more challenging for small municipalities. The economy of small municipalities highly relies on place-specific resource advantages, such as the development of a few industries, land, and minerals. That makes small municipalities more vulnerable to economic downturns or revenue shortfalls compared with large municipalities (Carroll & Johnson, 2010; Yan, 2011). Consequently, small municipalities tend to strictly follow balanced budget requirements due to the uncertainty of future revenues and strict auditing by the state (Dougherty et al., 2003).

Small scale means that the small municipalities lack a strong, diverse economic base, resulting in a shortage of fiscal resources (Siegel & Waxman, 2001). That lack of fiscal resources further becomes a barrier for small municipalities to access outside resources such as federal grants, municipal bonds, intermunicipal cooperation, and outsourcing contracts (Hall, 2008; Mohr et al., 2010; Simonsen et al., 2001). As a result, small municipalities are more dependent on their own-source revenues to supply public services (Buettner & Wildasin, 2006). Therefore, home rule small municipalities may be motivated to raise own-source revenues relative to large municipalities.

With fewer fiscal resources, it becomes difficult to attract outside managerial professionals necessary to promote innovative policy-making and conduct financial management. In small municipalities, professional staffs are frequently small or even nonexistent. In some cases, the only paid professional could be either the municipality manager or the planner. Even if small municipalities are willing to attract professionals without considering fiscal resources, they are less attractive to young professionals due to the lack of “growth-facilitating amenities.” Although older professionals may see small municipalities as a nice place to raise their families, they, however, may not be as entrepreneurial as the younger population (Erickcek & McKinney, 2006). Because of the lack of professionals and resources, small municipalities’ idea of financial management may be a simple task of controlling expenditures (Gargan, 1981). They lack the critical mass of resources to allocate to sophisticated problem analysis or strategic planning activities. With the abovementioned characteristics for small municipalities, concerns of adopting home rule in small municipalities should be whether anyone can use their autonomy to improve fiscal performance activities such as stabilizing the budget. Overall, this leads to hypotheses about the role of home rule in shaping the revenues of small municipalities:

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H1: Small municipalities are likely to increase their own-source revenues with home rule power.

H2: Small municipalities are likely to diversify their revenue sources with home rule power.

H3: Small municipalities are likely to stabilize their revenues with home rule power.

Research context, design, and data

Illinois home rule setting

As a Dillon’s rule state, cities, towns, counties, and other types of municipalities in Illinois are the “creature of the state.” They, thus, can only exercise powers explicitly granted to them by the state. Municipalities, however, especially those located in the Chicago metropolitan area and Cook County, had been striving to gain more local autonomy. Their efforts finally succeeded when voters approved the Illinois Constitutional Amendments in 1970 and 1995 provided Illinois municipalities with an optional home rule system (Banovetz, 2002). It is viewed as “one of most liberal found in any state constitution” and “the most advanced system as far as a flexible governing system” (Krane et al., 2001).

Illinois Home rule municipalities possess powers so long as they are not prohibited by state or federal law. The broad scope of that home rule power extends to local discretion in making fiscal policy. While non-home rule municipalities neither adjust tax rates nor establish new taxes unless authorized by state legislation, home rule municipalities are not only capable of changing tax rates within a specific range but also are given wide discretion to design new revenues, including revenues not authorized in the statutes. Moreover, home rule municipalities can change tax rates of their will, whereas their non-home rule counterparts need approvals from the state legislature to use that power. In addition, home rule municipalities are free from tax and expenditure limitations which cap the size and tax rates of property tax for local governments, giving home rule units room for managing their most important revenue source (Banovetz, 2002; Wandling, 2001).

To prevent home rule units from abusing their power of levying taxes, Illinois put 14 subsections of the Illinois Constitution and these allow the state (through the legislature) to limit home rule municipalities’ ability to tax and to limit other powers. For example, the state prohibited municipalities from taxing income earnings unless authorized by the state. Also, the General Assembly imposed a referendum requirement on the levy of the real estate transfer tax by home rule units.

There are two ways for cities, villages, incorporated towns, and counties to adopt home rule in Illinois. First, a municipality with more than 25,000 residents can adopt home rule through a referendum. Home rule municipalities have identical powers no matter how they adopt home rule. Up to 2012, 204 municipalities, out of 1,200 municipalities, had adopted home rule in Illinois.

Empirical strategy

This study conducts a fuzzy RD design with the threshold coming from the home rule population rule in 2002, 2007, 2010, and 2012. RD design is an identification strategy in observational studies. It can address the problems of the previous estimations of home rule effects and identify a causal effect rather than a correlation. In this design, treatment is assigned based on whether candidates’ value for a numeric running variable falls above or below a certain threshold or cutoff. For example, Illinois’s assignment to home rule status is determined by a municipality’s population. I use the municipality’s population as the running variable and the 25,000-population threshold of home rule adoption in Illinois as the cutoff. By focusing on the municipalities near the 25,000-population threshold, this study conducts causal inference by taking advantage of an exogenously assigned home rule at the cutoff (Imbens & Lemieux, 2008). Since this article focuses on local revenues, the result of the RD design can be interpreted as the local average treatment effect of home rule status on local finance.

I employ a fuzzy RD design to estimate the causal effects of home rule. This is because there are two ways to become a home rule municipality, making the probability of adopting home rule partially depends on the population and has a relevant discontinuity at the home rule population threshold. This institutional setup fits the mechanism of the fuzzy RD that treatment is not fully determined by whether the running variable crosses the cutoff (Lee & Lemieux, 2010). As shown in Figure 1, the probability of a municipality being a home rule unit jumps dramatically at the population cutoff of 25,000. To conduct the fuzzy RD, I create a binary variable indicating whether a municipality is above the 25,000-population cutoff as the instrument for municipalities’ actual home rule status.

Specifically, the estimation of the first stage regression is as follows:

\[ HR_{it} = \alpha + \beta_1 (Above25000_{it}) + \beta_2 (P_{it}) + \beta_3 (Above25000_{it} \times P_{it}) + g(P) + Z_{it} + \epsilon_{it}, \]

where Above25,000_{it} is a binary variable that equals 1 if a municipality has more than 25,000 residents; \( P_{it} \) is the running variable that assigns the treatment, \( HR_{it} \) is a binary variable equals 1 if the municipality \( i \) is a home rule unit in year \( t \) and 0. Functional form \( g(P) \) is a linear polynomial for controlling the unobserved differences between home
rule municipalities and their non-home rule counterparts. The second stage produces the estimated causal effect of home rule on outcome variables as follows:

\[
Y_{it} = \alpha + \beta_1 (HR_{it}) + \beta_2 (P_{it}) + \beta_3 (HR_{it} \times P_{it}) + g(P) + Z_{it} + \delta + \epsilon_{it},
\]

where \(Y_{it}\) is the outcome variables for municipality \(i\) in year \(t\), \(\delta\) represents the year fixed effect, and \(\epsilon\) is the error term. The coefficient \(\beta_i\) is the policy variable of interest, showing the estimated local average treatment effects of home rule. \(Z_{it}\) is a vector of fiscal and demographic characteristics, which is to improve precision. In the RD design, the choice of bandwidth is critical for generating precise estimates. Smaller bandwidths are less biased by limiting the analysis to observations that lie within the close vicinity of the discontinuity but are less precise, vice versa (Imbens & Lemieux, 2008). Following Shao et al. (2019), this study uses three different population bandwidths: 7,500, 11,634, and 15,000, to ensure the robustness of the results. The bandwidth of 11,634 is a data-driven bandwidth calculated by using the method proposed by Calonico et al. (2020).

Validity of the RD design

The primary concern in this context is that a municipality can manipulate its home rule status by precisely controlling the population or holding referendums strategically in order to fall on the desired side of the population threshold (Eggers et al., 2018). To address the manipulation problem, I have adopted two solutions. First, I focus on census years to make sure that the reported population is out of the municipalities’ control. The 2002, 2007, and 2010 Census of Governments, and the 2010 U.S. Census as the years of population count for the adoption of home rule. Second, I use the maximum population before 2002 to replace the population in 2002. This can tackle the threats to the validity of the fuzzy instrument caused by the changing in local demography.

After making these two adjustments, I conduct a McCrary’s density test, which examines the distribution of treatments on the running variable to check the randomness of the treatment (McCrary, 2008), to formally test the validity of the RD design. I expect the distribution of home rule is smooth around the population threshold. Figure A1 shows no manipulation of the treatment since it appears to be smooth around the threshold, suggesting municipalities do not precisely manipulate their home rule adoption. Furthermore, a balance test of the background variables is conducted to further test the validity of the RD design. As shown in Table A2, the background variables are balanced across home rule and non-home rule municipalities except for the managerial form and racial diversity. To address the potential effects of these variables, I have controlled them in the model, following Eggers et al. (2018).

Data and measure for outcomes

As stated earlier, this article focuses on Illinois’s small municipalities with a population ranging from 15,000 to 40,000 in 2002, 2007, 2010, and 2012. There were 188 municipalities that fell under this range during the sample period. Illinois home rule data come from the Illinois Secretary of State, which reports the year and the way home rule units adopted home rule. I collect government finance data from the Annual Financial Dataset of the State of Illinois Comptroller. Demographic data such as race and median household income come from the 5-year American Community Survey (ACS) estimate (2009–2017). The 2007 data is filled by extrapolation and interpolation. The 2002 demographic data is from census data. I collect government form data come from the Illinois City/County Management Association, which lists those local governments that take a managerial government form. Ideology data come from Tausanovitch and Warshaw’s (2013) county-level presidential election results. I construct the racial diversity index following Jimenez (2014).

This study has three tests of outcomes of interest: local own-source revenues, revenue structure, and revenue stability. Local own-source revenues reflect the independence of a local government’s fiscal choices. I first focus on total own-source revenues; then, I examine the differential impact of home rule on each revenue source. In particular, this study follows Carroll and Johnson (2010) which divides the total own-source revenue into four categories—property taxes, general sales taxes, other taxes, and other non-tax revenues. Other taxes refer to taxes imposed on selected goods and services, such as utility tax and alcohol tax. Non-tax revenues include miscellaneous revenues and charges. The second outcome is revenue structure which reflects the
amalgamation of local fiscal policy for raising revenues to fund government operations (Bartle et al., 2011). I use a reserved Herfindahl-Hirschman index (HHI) to measure the extent to which home rule diversifies revenue structures.3

The final outcome variable of interest is revenue stability for which I use revenue volatility as the measure. Specifically, total revenue volatility is calculated as the absolute deviation of the residuals divided by the predicted values, following Carroll and Stater (2009). This measure of total revenue volatility can account for the variation in size among municipalities and the time trend. The greater the values of this variable, the greater total revenue volatility is. Table 1 shows the summary statistics of the variables.

Table 1. Summary Statistics.

| Variable                                | (1)  | (2)  | (3)  | (4)  | (5)  |
|-----------------------------------------|------|------|------|------|------|
|                                         | M    | SD   | Minimum | Maximum |
| Home rule status                        | 0.471| 0.50 | 0.13    | 1     |
| Revenue diversification (HHI index)     | 0.78 | 0.13 | 0.39    | 0.99  |
| Total own-source revenue (log)          | 16.62| 0.77 | 12.00   | 19.17 |
| Property tax (log)                      | 15.02| 2.23 | 0       | 17.18 |
| Local sales tax (log)                   | 4.914| 6.84 | 0       | 17.03 |
| Other taxes (log)                       | 10.65| 5.60 | 0       | 16.47 |
| Nontax revenues (log)                   | 16.15| 0.78 | 12.00   | 19.14 |
| Total revenue volatility (log)          | 16.5 | 0.83 | 12.00   | 19.17 |
| Population                              | 20,593| 8010 | 10,023   | 39,858 |
| Government managerial form              | 0.50 | 0.50 | 0       | 1     |
| Total debt (log)                        | 16.36| 1.68 | 0       | 19.25 |
| Race diversification                    | 0.35 | 0.20 | 0.02    | 0.90  |
| Median household income (log)           | 10.98| 0.39 | 9.67    | 12.25 |
| Ideology                                | 0.57 | 0.12 | 0.23    | 0.76  |

Note. This article uses three samples: municipalities with population ranged from 17,500 to 32,500, 13,366 to 36,634, and 10,000 to 40,000. Those three samples include 87, 119, and 187 municipalities, respectively. Government managerial form is a binary variable which equals one when a municipality hires a professional manager or administrator. Race diversification also measured based on HHI index that includes White, Black, Hispanic, Asian and Pacific Islander, and American Indian. Ideology represents the share of residents vote for the Democracy Party candidate in the presidential elections.

Results

Before reporting the formal RD estimation, Figure 2 presents the graphic evidence for the differences in means of the outcomes of interest between municipalities with and without home rule status in a narrow margin. Specifically, Figure 2a and b show the total own-source revenue and revenue diversification by the population for municipalities with a population from 10,000 to 40,000. With 25,000 as the cutoff, municipalities on the left constitute controls, while municipalities on the right are “treated” by home rule. As Figure 2a shows, a discontinuity in total own-source revenue is near the population threshold. Figure 2b shows a similar result for revenue diversification. Those figures provide suggestive evidence that adopting home rule matters for the total own-source revenue and revenue diversification for Illinois municipalities. On the other hand, Figure 2c shows no significant discontinuity in revenue volatility between home rule and non-home rule municipalities, implying that home rule has little effect on revenue stability.

Table 2 reports the primary results of the model. Collectively, these results indicate that Illinois municipalities with home rule experience a significantly higher level of total own-source general revenues and revenue diversification, but it has no statistically significant effect on revenue stability. Since the results are similar across bandwidths, the discussion focuses on those results estimated with the smallest bandwidth. Table A1 in the appendix displays the estimated first-stage coefficients, which is the effect of passing the population threshold on actual home rule status. The coefficients are positive and statistically significant, suggesting a strong correlation between them. These results support the validity of the instrument.

I begin the discussion of our estimation results with total own-source revenue, reported in panel A. Columns 1 to 3 present the effects of home rule on total own-source revenue for different bandwidths with a linear polynomial. The coefficients in the first column indicate that the adoption of home rule increases local own-source revenues by 100% for Illinois small municipalities. Given that previous studies have shown that the effects of home rule are trivial for large municipalities (Hendrick, 2002; Wood, 2011), this finding suggests that the impacts of home rule are not the same across all municipalities. Other columns show that this significant effect of home rule on local own-source revenue is consistent, varying different choices of bandwidths.

Panel B reports the results for revenue diversification. In particular, the results indicate that home rule municipalities experience a 22-percentage-point significant increase in
revenue diversification. This result suggests that home rule makes small municipalities less dependent on property taxes and relies more on each revenue source. The result is robust varying bandwidths. While this finding of positive impact is consistent with previous studies (Hendrick, 2002), the magnitude of that is larger than expected.

Lastly, Panel C presents the estimated results of the impact of home rule on revenue volatility. Surprisingly, home rule has little impact on revenue volatility. The insignificant results remain similar with different settings of bandwidth or polynomial. This finding casts doubts on the positive relationship between revenue diversification and revenue stability which previous studies indicate.

**Dissect specific revenue source change**

After finding the positive impact of home rule on total own-source revenues and revenue diversification, this section further explores the mechanism behind this finding by examining how the adoption of home rule affects small municipalities’ each revenue source. Following Carroll and Johnson (2010), the own-source general revenues are categorized into four groups: property taxes, general sales taxes, other taxes, and nontax revenues. Those four groups of revenues are examined separately using the same technique as above. Table 3 reports those results. Among the four groups of local own-source revenues, only local sales taxes and other taxes experienced a statistically significant increase. In particular, home rule increases local sale taxes by about 2,500%; in the meantime, it also increases other taxes by about 1,000%. The findings confirm the expectation that local governments tend to diversify their revenue sources by relying more on revenues other than property taxes with a higher level of local autonomy. But the increased amount of those two revenue sources is so large that home rule municipalities double their total own-source revenues. On the other hand, property taxes and nontax revenues do not significantly differ between home rule and
non-home rule municipalities. The finding that property taxes remain similar regardless of the home rule status is consistent with previous studies (Dye & McGuire, 1997).

**Robustness check**

To check the robustness of our results, I conduct two robustness checks. First, I adopt two additional measures of revenue volatility to further investigate the revenue volatility and control for the possibility of essential variations in revenues. The first one is the Underlying Volatility (UV) Index, proposed by Rakow (2016). The UV index decomposes aggregated volatility into the volatility of individual revenues and weights with the importance of each revenue for the government—the share of each revenue. The second one is the year-over-year measure, which uses the difference between the observed value for a single year and the expected value (Seegert, 2015). Appendix Table A3 shows these results, which support the previous finding that home rule has little effect on revenue volatility.

I also conduct robustness checks for the model specification. The model includes a functional form to control the unobserved differences between home rule and non-home rule municipalities. Gelman and Imbens (2018) suggest using estimators based on local linear or quadratic polynomials to minimize bias. I examine the functional form by replacing the linear polynomial with a quadratic polynomial, following their suggestion. Appendix Tables A4 and A5 show the results. Overall, the results of robustness checks are similar to those in the main model and suggest that the findings are robust to functional form choices.

**Discussion and conclusion**

The intention of home rule is to preserve a great extent of local self-governance, based on the idea of allowing it to be done by the people at the lowest level of government. Opponents of small municipalities’ home rule argue that states can address local issues more efficiently since they possess more expertise and can produce greater uniformity of governance and regulation (Richardson et al., 2003). Nevertheless, in an era of prevailing fiscal stresses and pressure on spending at the state level (Bifulco et al., 2012; Bowman & Kearney, 2012; Mullins & Pagano, 2005), home rule offers small municipalities another method of maintaining effective governance.

Table 2. The Effect of Home Rule on Own Source Revenue and Revenue Diversification.

| Population bandwidth | 7,500 | 11,634 | 15,000 |
|---------------------|-------|--------|--------|
| Panel A. Total own source revenue | | | |
| Home rule status | 0.850* | 0.510 | 1.338** | 0.589 | 1.576*** | 0.503 |
| Managerial form | 0.233** | 0.119 | 0.244** | 0.103 | 0.245** | 0.089 |
| Ideology | 1.955*** | 0.470 | 1.790*** | 0.451 | 1.982*** | 0.345 |
| Debt | 0.118** | 0.047 | 0.098** | 0.042 | 0.101*** | 0.036 |
| Race diversification | 0.859** | 0.399 | 0.672** | 0.320 | 0.460** | 0.224 |
| Median income | 0.457*** | 0.173 | 0.306* | 0.157 | 0.287** | 0.133 |
| Panel B. Revenue diversification | | | |
| Home rule status | 0.222* | 0.118 | 0.202** | 0.102 | 0.211** | 0.085 |
| Managerial form | 0.035 | 0.024 | 0.046** | 0.019 | 0.044*** | 0.017 |
| Ideology | 0.104 | 0.108 | 0.079 | 0.075 | 0.105* | 0.062 |
| Debt | 0.007 | 0.008 | 0.005 | 0.006 | 0.005 | 0.006 |
| Race diversification | 0.098 | 0.075 | 0.073 | 0.054 | 0.082** | 0.041 |
| Median income | −0.033 | 0.037 | −0.068** | 0.033 | −0.069** | 0.028 |
| Panel C. Revenue volatility | | | |
| Home rule status | −0.194 | 0.617 | 0.334 | 0.600 | 0.594 | 0.607 |
| Managerial form | 0.011 | 0.163 | 0.031 | 0.131 | 0.076 | 0.115 |
| Ideology | −0.603 | 0.701 | −0.963* | 0.520 | −1.396*** | 0.427 |
| Debt | 0.032 | 0.030 | 0.023 | 0.027 | 0.025 | 0.031 |
| Race diversification | −0.167 | 0.461 | −0.330 | 0.348 | −0.116 | 0.320 |
| Median income | −0.211 | 0.191 | −0.330* | 0.180 | −0.231 | 0.153 |
| Observations | 302 | 483 | 680 |

Note. Years fixed effect is included but not shown. Total own-source revenue takes the log form. Robust standard errors, clustered at the municipality level, are in parentheses.

*p < .1. **p < .05. ***p < .01.
The problems facing small municipalities may also arrive because of the high costs local governments tend to face (Bell & Jayne, 2009). For example, costs are high because of the inability of small jurisdictions to exploit scale economies in public service provision and the concentration of high-need individuals. Small municipalities are more likely to attract outside managerial professionals with sufficient fiscal and managerial capacities and enhance managerial capacity. Then, small municipalities are likely to deliver services: by providing services self-financed, applying for grants from the higher level of governments, financing capital projects from the municipal bond market, and entering into outsourcing agreements with private contractors (Mohr et al., 2010; Simonsen et al., 2001), leading to address problems effectively.

An increase in own-source revenues also means relying less on aid from the higher level of governments. Small municipalities can tailor service provisions according to the local needs, alleviating the constraints of the higher level of governments on local spending. Moreover, given that fiscal transfers from the federal and state governments have been declining due to their own fiscal difficulties (Mullins & Pagano, 2005) and the increasing conflicts between state and local governments (Bowman & Kearney, 2012; Swanson & Barrilleaux, 2020), such increases of own-source revenues filling these deficits are crucial for small municipalities.

This article also notes the differential impact of home rule on various revenue sources. That is, home rule has little impact on property taxes and nontax revenues, but it enormously increases the collection of other taxes, especially local sales taxes. While the finding of home rule’s trivial effects on property taxes is consistent with previous studies (Dye & McGuire, 1997), the enormous increases in local sales taxes and other taxes caused by home rule not only make small municipalities less dependent on property taxes but also diversifies revenue structures.

### Table 3. The Effect of Home Rule on Specific Revenue Sources.

| Source of Revenue | Panel A. Property taxes | Panel B. Local sales taxes | Panel C. Other taxes | Panel C. Nontax revenues |
|-------------------|-------------------------|----------------------------|---------------------|-------------------------|
|                   | (1) Coefficient | (2) SE | (3) Coefficient | (4) SE | (5) Coefficient | (6) SE | (1) Coefficient | (2) SE | (3) Coefficient | (4) SE | (5) Coefficient | (6) SE |
| Population bandwidth | 7.500 | 11.634 | 15.000 |
| Panel A. Property taxes | 1.756 | 1.749 | −2.096 | 2.382 | −0.898 | 1.779 |
| Home rule status | 0.090 | 0.400 | 0.411 | 0.299 | 0.390 | 0.213 |
| Managerial form | 2.820 | 1.252 | 2.742 | 1.417 | 2.243 | 1.087 |
| Ideology | 0.521 | 0.280 | 0.456 | 0.188 | 0.393 | 0.144 |
| Debt | 0.055 | 1.333 | −0.757 | 1.241 | −0.239 | 0.832 |
| Median income | −0.335 | 0.694 | −0.819 | 0.562 | −0.492 | 0.392 |
| Panel B. Local sales taxes | 25.152 | 9.597 | 35.071 | 10.144 | 34.595 | 8.542 |
| Home rule status | 2.097 | 1.665 | 1.778 | 1.608 | 1.932 | 1.326 |
| Managerial form | 7.118 | 10.562 | −2.603 | 8.267 | 2.792 | 5.971 |
| Ideology | 0.171 | 0.453 | 0.159 | 0.397 | 0.027 | 0.333 |
| Race diversification | −1.586 | 6.452 | 1.576 | 5.317 | 0.739 | 3.876 |
| Median income | 0.554 | 1.920 | −0.077 | 2.022 | −0.657 | 1.627 |
| Panel C. Other taxes | 7.824 | 4.888 | 9.008 | 4.632 | 9.960 | 3.764 |
| Home rule status | 2.545 | 1.027 | 2.106 | 0.869 | 1.957 | 0.725 |
| Managerial form | 1.110 | 5.617 | 1.874 | 3.830 | 1.393 | 2.929 |
| Ideology | 0.023 | 0.204 | 0.008 | 0.165 | 0.102 | 0.155 |
| Debt | 1.481 | 4.184 | 2.501 | 2.847 | 1.276 | 2.077 |
| Race diversification | 0.231 | 1.238 | 0.406 | 1.276 | 0.050 | 0.980 |
| Median income | 0.635 | 0.535 | 0.133 | 0.523 | 0.483 | 0.464 |
| Panel C. Nontax revenues | 0.302 | 0.115 | 0.351 | 0.121 | 0.373 | 0.098 |
| Home rule status | −0.255 | 0.469 | 0.130 | 0.342 | 0.159 | 0.281 |
| Managerial form | 0.165 | 0.053 | 0.140 | 0.051 | 0.137 | 0.041 |
| Ideology | 0.664 | 0.471 | 0.119 | 0.355 | −0.048 | 0.242 |
| Debt | 0.277 | 0.142 | 0.050 | 0.162 | 0.055 | 0.141 |
| Race diversification | 302 | 483 | 680 |
| Observations | Note: Years fixed effect is included but not shown. All outcome variables take the log form. Robust standard errors, clustered at the municipality level, are in parentheses. **p < .01. ***p < .001.
That revenue diversification, however, does not bring revenue stabilization to small municipalities. Previous studies usually argue that a diversified revenue structure helps local governments to keep revenues stable (Carroll, 2009; Krane et al., 2004). However, the empirical results show a large increase in revenue diversification but a statistically insignificant change in revenue stability after adopting home rule, implying that revenue diversification does not necessarily stabilize local revenues. Some recent studies show similar findings. Yan (2011) finds that revenue diversification significantly decreases the revenue stability of a local government that has a stable economic base. Afonso (2013) notes a negative impact of the usage of local option sales taxes on revenue stability.

Illinois home rule helps their small municipalities become less dependent on property taxes. However, the increase in local sales tax also moves municipalities toward a more volatile tax base because sales taxes are susceptible to economic downturns (Carroll & Johnson, 2010; Yan, 2011). This higher reliance on those tax bases offsets the theoretical benefits of stabilizing local revenues through revenue diversification. Hence, local governments have to balance between additional revenues and stable revenues carefully. Furthermore, the increases in local sales taxes are often feasible in local governments that have concentrations of brick and mortar retail establishments (Afonso, 2013), while the taxation of remote sales has only recently become widespread. This observation implies that adopting home rule is likely to increase fiscal disparities among small local governments in Illinois.

Those findings not only challenge the previous expectation that home rule would not increase local taxes in small municipalities but also cast doubts on the belief that revenue diversification increases the stability of local governments’ own-source revenue. Given the finding that home rule does not increase local revenues in large municipalities (Hendrick, 2002; Wood, 2011), our findings imply that state policymakers should be aware of the uneven impacts of devolution policies such as home rule. For those eight states which do not apply home rule to some small municipalities, state policymakers should consider home rule as a solution for addressing small municipalities’ fiscal insufficient. State policymakers in the other home rule states have to note the potential consequences of the differential influence of home rule.

An obvious caveat of this article is the generalizability of the findings. The findings of this article are based on the RD design which focuses on municipalities with populations ranged from 15,000 to 40,000. They cannot be generalized to municipalities far away from that range. Additionally, because states vary their setting of home rule, the effects of Illinois home rule might not apply to all other states, especially for states with widely different home rule settings. Illinois has fiscal distress at the state level (Bifulco et al., 2012), such as unfunded pensions. The findings of this article may apply to other states with fiscal distress. Finally, home rule is a multifaceted institution; it includes many areas of local affairs, such as revising zoning regulations. Disentangling the effects of other aspects of home rule is a challenge for future research.

Acknowledgements
The author would like to thank the two anonymous reviewers and the editor for valuable comments on earlier drafts of this paper.

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.

Notes
1. A small municipality is often defined as having less than 50,000 inhabitants in studies in the U.S (Bell & Jayne, 2009).
2. The main specification does not include the municipality fixed effect because only 13 municipalities changed their home rule status during the sample period, and only those observations will contribute to the coefficients when using the fixed effect.
3. The HHI index is a widely used measure of revenue diversification, which provides a consistent definition and findings for revenue diversification (Carroll & Johnson, 2010). To capture the nature of small size municipalities in Illinois, the calculation of HHI also follows Carroll and Johnson’s (2010) method that divides the total own-source revenues into property taxes, general sales taxes, other taxes, and other non-tax revenues. Hence, the HHI index is calculated as:

   \[ HHI_{it} = \frac{1 - \sum_{j=1}^{4} R_{ij}^2}{1 - \left(\frac{1}{4}\right)} \]

   where \( R_{ij} \) is the shares of revenue \( i \).
4. Hence, this UV index “explicitly measures the amount of structural volatility contained within the revenue structure” (Rakow, 2016, p. 126).

   \[ UV_{it} = \sum_{j=1}^{4} v_j r_{ij} \]

   where \( r \) refers to the share of each type of revenue, and \( v \) refers to the volatility for that specific type of revenue in each municipality. Subscript \( i \) and \( t \) refer to each municipality and year, respectively; and, subscript / refers to each type of revenue.

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