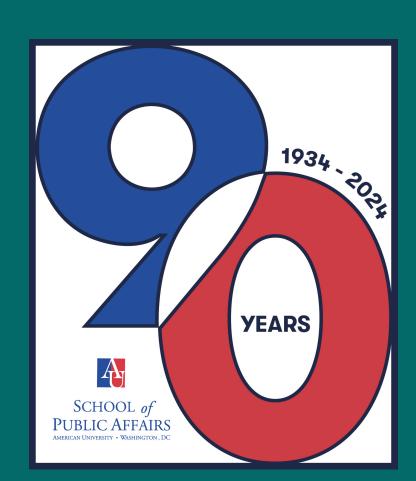
# Municipal Governance and Voter Turnout: Analyzing the Impacts of City Managers Noah Ochital<sup>1</sup>



<sup>1</sup> American University, no9857a@american.edu



#### Introduction

Municipal elections in the United States have consistently garnered less turnout than federal elections (Morlan 1984; Bullock III 1990; Alford and Lee 1968). This trend is particularly confusing given that municipalities oversee a variety of services, such as sanitation, public safety, zoning, and utilities, which arguably have more daily impact than federal or state legislation. While researchers have proposed many factors why this is the case, this analysis narrows the focus to examine one factor: the presence or lack of a city manager.

City managers are appointed officials with wide-reaching powers and responsibilities, such as discretion over the budget, policy, and administration of a municipality. In cities with managers, elected officials have less responsibility and policy-setting power, while in cities without managers, elected officials are required to step up to the plate and govern effectively. Given this power dichotomy, it would be reasonable to assume that municipal managers would have a chilling effect on turnout, because many of the important decisions made by the municipality will be unchanged no matter who is in office (Alford and Lee 1968; Hajnal and Lewis 2003). If this relationship is true, it provides a simple and effective way to increase voter turnout where it has waned the most. The goal of this analysis is to establish the veracity of this relationship, estimate the impact of city managers, and update existing literature on the subject.

The earliest research on the subject, documents a clear negative association between city managers and turnout using data from as early as 1935 to estimate correlations. (Alford and Lee 1968; Karnig and Walter 1983). More recent research has leveraged more advanced techniques and original data collection to include many more factors such as election concurrency, facets of mayoral power (budget, veto, term limits, etc.), and control for demographic factors (Wood 2002; Hajnal and Lewis 2003; Caren 2007). However, these new studies still suffer from lack of data, with small sample sizes (Wood 2002; Caren 2007) or data from only a single state (Hajnal and Lewis 2003) reducing interpretations of the results.

# Methods

Making up for prior limitations, I've leveraged a new municipal electoral database from Benedictis-Kessner and colleagues (Benedictis-Kessner et al. 2023), combining it with census data (Bureau 2022) and some original data collection to create a data set with turnout rate, government type, incumbent presence, margin of victory, demographic factors, concurrency factors, and election type. Timing constraints forced me to choose a random sample of 150 from 1000 cities, which after processing resulted in 396 elections in 90 incorporated municipalities which was used to estimate the following regression model:

However, in addition to accounting for all these factors, I also performed propensity score matching using the MatchIt and Cobalt packages with the above covariates (D. Ho et al. 2024), to clarify the coefficients in the analysis as demonstrated by prior research(D. E. Ho et al. 2007). After testing all forms of the procedure the best performing, as per the author's recommendation (Greifer 2024b), was the optimal matching algorithm that minimized the sum of differences of propensity score pairs, and a logistic regression for estimating propensity scores, resulting in 97 pairs of 194 observations

$$egin{aligned} & rgmin \sum_{i=1}^{\min(C,T)} |P_{Ci} - P_{Ti}| \ & P( ext{Has a Manager}_i = 1 \mid X_{1i}, \dots, X_{10i}) = rac{1}{1 + e^{-(eta_0 + eta_1 X_{1i} + \dots + eta_{10} X_{10i}) + \epsilon_i}} \end{aligned}$$

The results of the procedure are summarized on the right:

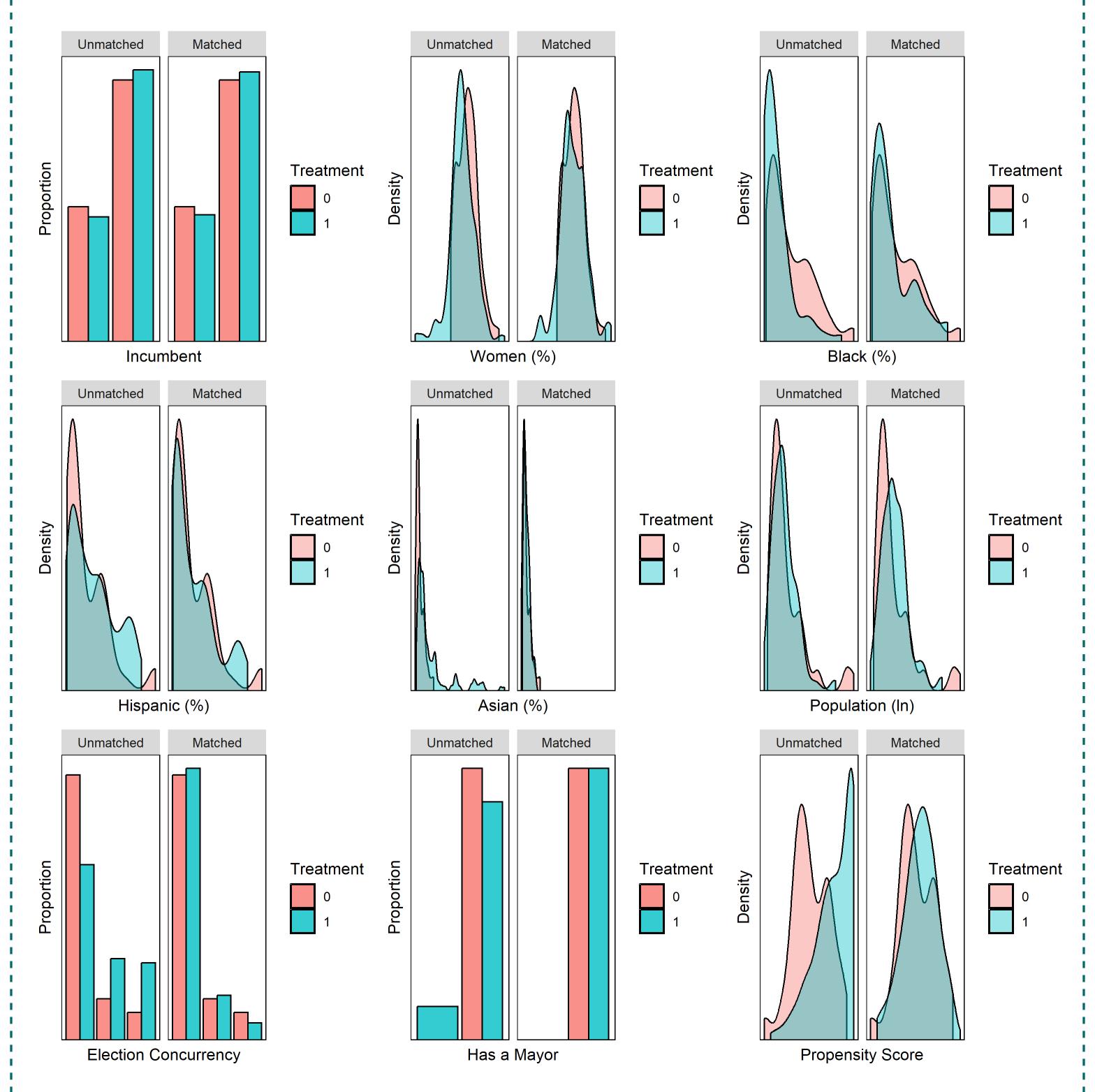


Figure 1: Individual Distributional Balance for Matched Covariates

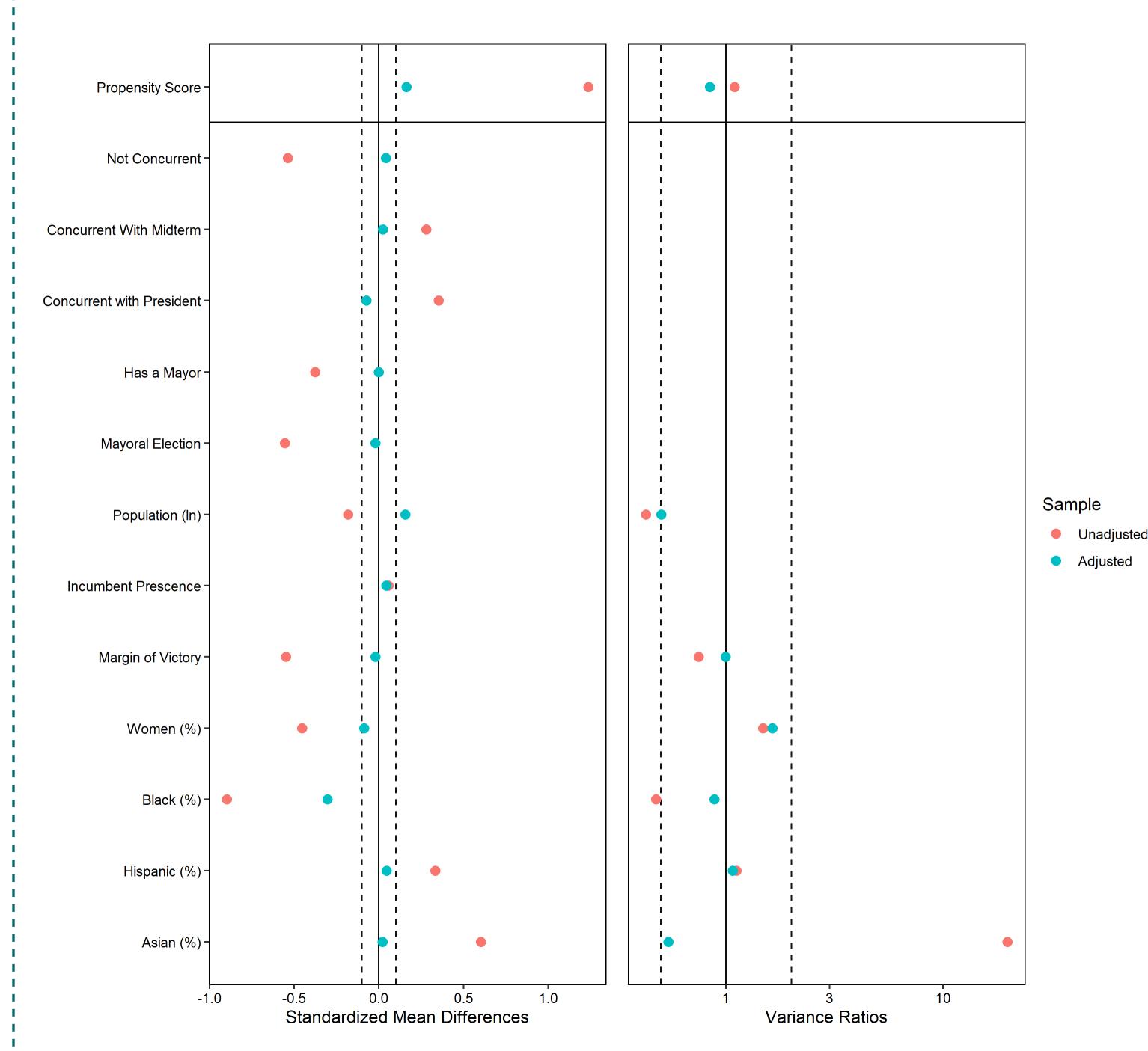


Figure 2: Love Plot for Matched Covariates

#### Results

	Dependent variable:  Voter Turnout  OLS	
	Unmatched	Matched
	(1)	(2)
Manager	-3.55* (-6.56, -0.55)	-2.54 (-5.23, 0.16)
Midterm Concurrency	24.88* (21.70, 28.06)	24.06* (19.58, 28.53)
President Concurrency	35.06* (31.87, 38.26)	30.38* (24.79, 35.97)
Has a Mayor	-5.75* (-10.50, -1.00)	
Mayoral Election	-13.48* (-16.60, -10.37)	-17.89* (-22.27, -13.51)
Incumbent Presence	2.86* (0.34, 5.37)	2.40 (-0.49, 5.29)
Margin of Victory	-0.18* (-0.22, -0.14)	-0.15* (-0.19, -0.10)
Percent Women	0.98 (-0.05, 2.01)	0.46 (-0.76, 1.69)
Percent Black	-0.12* (-0.21, -0.04)	-0.06 (-0.14, 0.03)
Population(ln)	0.18 (-1.63, 2.00)	0.58 (-1.42, 2.58)
Percent Hispanic	-0.23* (-0.29, -0.18)	-0.17* (-0.24, -0.10)
Percent Asian	-0.21* (-0.33, -0.09)	0.40 (-0.28, 1.08)
Constant	-1.84 (-61.44, 57.77)	12.20 (-58.11, 82.51)
Observations	396	194
$R^2$	0.73	0.73
F Statistic	$87.16^* (df = 12; 383)$	$43.66^*$ (df = 11; 182)
Note:	*p<0.05, 95% CI in parentheses	

## Discussion

Overall, the regression shows a clear negative association between city managers and turnout, although on the matched sample the loss in sample size, may have increased the variance of the coefficient estimate, it could also be that the clarified coefficient is not significant. However, the relatively small size of the coefficient related to other factors, means that municipalities should look more readily to other electoral changes instead of removing their manager. Given the lack of significance, it may be worth revisiting the typical notion surrounding city managers reducing turnout, especially if their professional managing can provide better outcomes for residents. This analysis, still suffers from many issues, and future research should address performing a similar analysis on larger data sets that are more diverse and representative.

# Acknlowlegdements

Thank you to Professor Ryan Moore of American University for guidance and support with the project. Thanks also goes out to the creators of MatchIt(D. Ho et al. 2024), Cobalt (Greifer 2024a), Tidyverse (Wickham et al. 2019), R 4.4.1 (R. C. Team 2024), stargazer (Hlavac 2022), gridExtra (Auguie and Antonov 2017), and Rstudio (P. Team 2024) for creating the software to make this analysis possible.

## References

Alford, Robert R., and Eugene C. Lee. 1968. "Voting Turnout in American Cities." The American Political Science Review 62 (3): 796–813. https://doi.org/10.2307/1953431.

Auguie, Baptiste, and Anton Antonov. 2017. "gridExtra: Miscellaneous Functions for "Grid" Graphics." https://cran.r-project.org/web/packages/gridExtra/index.html.

Benedictis-Kessner, Justin de, Diana Da In Lee, Yamil Velez, and Christopher Warshaw. 2023. "American Local Government Elections Database," April. https://doi.org/10.17605/OSF.IO/MV5E6.

Bullock III, Charles S. 1990. "Turnout in Municipal Elections." Review of Policy Research 9 (3): 539–49. https://doi.org/10.1111/j.1541-1338.1990.tb01061.x.

Bureau, U. S. Census. 2022. "Total Population, Amerian Community Survey, ACS 5-Year Estimates Detailed Tables, Table B01003, 2010-2022." https://data.census.gov/table/ACSDT5Y2022.B01003?q=Population&t=Counts, Estimates, and Projections:Population

Total&gr=10XX00LISS1600000&tn=true

Greifer, Noah. 2024a. "Cobalt: Covariate Balance Tables and Plots." <a href="https://cran.r-project.org/web/packages/cobalt/index.html">https://cran.r-project.org/web/packages/cobalt/index.html</a>.

——. 2024b. "MatchIt: Getting Started." <a href="https://cran.r-project.org/web/packages/MatchIt/vignettes/MatchIt.html">https://cran.r-project.org/web/packages/MatchIt/vignettes/MatchIt.html</a>.

Hajnal, Zoltan L., and Paul G. Lewis. 2003. "Municipal Institutions and Voter Turnout in Local Elections." <a href="https://doi.org/10.1177/1078087403038005002">https://doi.org/10.1177/1078087403038005002</a>

Caren, Neal. 2007. "Big City, Big Turnout? Electoral Participation in American Cities." Journal of Urban Affairs 29 (1): 31–46. https://doi.org/10.1111/j.1467-9906.2007.00321.x.

Hajnal, Zoltan L., and Paul G. Lewis. 2003. "Municipal Institutions and Voter Turnout in Local Elections." *Urban Affairs Review* 38 (5): 645–68. https://doi.org/10.117//10/808/403038005002.

Hlavac, Marek. 2022. "Stargazer: Beautiful LATEX, HTML and ASCII Tables from R Statistical Output."

Ho, Daniel E., Kosuke Imai, Gary King, and Elizabeth A. Stuart. 2007. "Matching as Nonparametric Preprocessing for Reducing Model Dependence in Parametric Causal Inference." *Political Analysis* 15 (3): 199–236. https://doi.org/10.1093/pan/mpl013.

Ho, Daniel, Kosuke Imai, Gary King, Elizabeth Stuart, Alex Whitworth, and Noah Greifer. 2024. "MatchIt: Nonparametric Preprocessing for Parametric Causal Inference." https://cran.r-project.org/web/packages/MatchIt/index.html.

Karnig, Albert K., and B. Oliver Walter. 1983. "Decline in Municipal Voter Turnout: A Function of Changing Structure." *American Politics Quarterly* 11 (4): 491–505. https://doi.org/10.1177/004478083011004006.

Morlan, Robert L. 1984. "Municipal Vs. National Election Voter Turnout: Europe and the United States." *Political Science Quarterly* 99 (3): 457–70. https://doi.org/10.2307/2149943.

Team, Posit. 2024. "RStudio: Integrated Development Environment for R." Boston. Ma: Poist Software, PBC. <a href="https://www.posit.co/">https://www.posit.co/</a>.

Team, R Core. 2024. "R: A Language and Environment for Statistical Computing." Vienna, Austria: R Foundation for Statistical Computing. <a href="https://www.r-project.org/">https://www.r-project.org/</a>.

Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D'Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. "Welcome to the Tidyverse." Journal of Open Source Software 4 (43): 1686. <a href="https://doi.org/10.21105/joss.01686">https://doi.org/10.21105/joss.01686</a>.

Wood, Curtis. 2002. "Voter Turnout in City Elections." Urban Affairs Review 38 (2): 209–31. <a href="https://doi.org/10.1177/107808702237659">https://doi.org/10.1177/107808702237659</a>.