Appendix

Note on Codes and Data

The entire paper was written in, and with the help of, R. The codes for downloading the data, cleaning, merging and finally presenting are all open source and available at Github.

Urbanisation codes

Table 1: Overview of urbanisation codes in the US

RUCC 2013 Codes	Collapsed Codes	Description
1	1	Counties in metro areas of 1 million population or more
2	2	Counties in metro areas of 250,000 to 1 million population
3	3	Counties in metro areas of fewer than 250,000 population
4	4	Urban population of 20,000 or more, adjacent to a metro area
5	5	Urban population of 20,000 or more, not adjacent to a metro area
6	4	Urban population of 2,500 to 19,999, adjacent to a metro area
7	5	Urban population of 2,500 to 19,999, not adjacent to a metro area
8	6	Completely rural or less than 2,500 urban population, adjacent to a metro area
9	6	Completely rural or less than 2,500 urban population, not adjacent to a metro area

R Packages

Allaire, J. J., Cheng, J., Xie, Y., McPherson, J., Chang, W., Allen, J., ... Arslan, R. (2017). rmarkdown: Dynamic Documents for R. Retrieved from https://cran.r-project.org/package=rmarkdown

Bache, S. M., & Wickham, H. (2014). magrittr: A Forward-Pipe Operator for R. Retrieved from https://cran.r-project.org/package=magrittr

Bivand, R., Keitt, T., & Rowlingson, B. (2016). rgdal: Bindings for the Geospatial Data Abstraction Library. Retrieved from https://cran.r-project.org/package=rgdal

Chan, C.-h., Chan, G. C. H., Leeper, T. J., & Becker, J. (2016). rio: A Swiss-army knife for data file I/O.

Croissant, Y., & Millo, G. (2008). Panel Data Econometrics in {R}: The {plm} Package. *Journal of Statistical Software*, *27*(2). Retrieved from http://www.jstatsoft.org/v27/i02/

Gagolewski, M. (2017). R package stringi: Character string processing facilities. Retrieved from http://www.gagolewski.com/software/stringi/

Garnier, S. (2017). viridis: Default Color Maps from 'matplotlib'. Retrieved from https://cran.r-project.org/package=viridis

Hester, J. (2016). gmailr: Access the Gmail RESTful API. Retrieved from https://cran.r-project.org/package=gmailr

Hlavac, M. (2015). stargazer: Well-Formatted Regression and Summary Statistics Tables. Cambridge, USA: Harvard University. Retrieved from http://cran.r-project.org/package=stargazer

Kahle, D., & Wickham, H. (2013). ggmap: Spatial Visualization with ggplot2. *The R Journal*, *5*(1), 144–161. Retrieved from http://journal.r-project.org/archive/2013-1/kahle-wickham.pdf

R Core Team. (2016). R: A Language and Environment for Statistical Computing. Vienna, Austria: R Foundation for Statistical Computing. Retrieved from https://www.r-project.org/

Robinson, D. (2017). broom: Convert Statistical Analysis Objects into Tidy Data Frames. Retrieved from https://cran.r-project.org/package=broom

Schloerke, B., Crowley, J., Cook, D., Briatte, F., Marbach, M., Thoen, E., ... Larmarange, J. (2016). GGally: Extension to 'ggplot2'. Retrieved from https://cran.r-project.org/package=GGally

Wickham, H. (2009). *ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. Retrieved

from http://ggplot2.org

Wickham, H. (2016a). rvest: Easily Harvest (Scrape) Web Pages. Retrieved from https://cran.r-project.org/package=rvest

Wickham, H. (2016b). scales: Scale Functions for Visualization. Retrieved from https://cran.r-project.org/package=scales

Wickham, H. (2017). tidyr: Easily Tidy Data with 'spread()' and 'gather()' Functions. Retrieved from https://cran.r-project.org/package=tidyr

Wickham, H., & Francois, R. (2016). dplyr: A Grammar of Data Manipulation. Retrieved from https://cran.r-project.org/package=dplyr

Xie, Y. (2014). knitr: A Comprehensive Tool for Reproducible Research in {R}. In V. Stodden, F. Leisch, & R. D. Peng (Eds.), *Implementing reproducible computational research*. Chapman; Hall/CRC. Retrieved from http://www.crcpress.com/product/isbn/9781466561595

Xie, Y. (2015). *Dynamic Documents with {R} and knitr* (2nd ed.). Boca Raton, Florida: Chapman; Hall/CRC. Retrieved from http://yihui.name/knitr/

Xie, Y. (2016). knitr: A General-Purpose Package for Dynamic Report Generation in R. Retrieved from http://yihui.name/knitr/

Zeileis, A., & Hothorn, T. (2002). Diagnostic Checking in Regression Relationships. *R News*, *2*(3), 7–10. Retrieved from https://cran.r-project.org/doc/Rnews/