Multiple Lessons from a Single Paper on Urban Sprawl

Research on the negative impacts of sprawl is one of my favorite topics. I recently reviewed a paper that supports and expands several important findings regarding sprawl, illustrates the value of peer review, highlights an urban journal to keep an eye on, and makes the case for use of statistical consultants by academic planners and practitioners alike. The paper, just accepted for publication by the journal Cities, is titled “How Do Sprawl and Inequality Affect Well-Being in American Cities?”

I served as a reviewer of this paper and will give you a preview here. Surprisingly, the authors are three academics from the University of Queensland in Australia, Wen Hao Lee, Christopher Ambrey, and Dorina Pojani.

Then . . .
The positive attributes of the authors’ paper are also things that I have studied, and perhaps that’s why it’s so appealing. I have written extensively about the costs of sprawl, one being the lack of upward social and economic mobility for residents of sprawling metropolitan areas. We now have direct evidence that sprawl also contributes to income inequality—and negatively affects a subjective sense of well-being within the populace.

I also have explained how the process of peer review improves papers that are good to begin with and have covered planning journals with high impact factors and international readership that offer an alternative to the historic mainstays of the planning profession: Journal of the American Planning Association, Journal of Planning Education and Research, and Journal of Planning Literature.

And, I have investigated the use of structural equation modeling as an alternative to the simple linear regression models we learned as students. SEM is often preferred when relationships among variables are complicated, particularly when there are mediating variables on the causal pathway between exogenous influences and an ultimate outcome.

And now
In this new paper, income inequality lies on the causal pathway between sprawl and subjective well-being. It lays out four research hypotheses:

- Income inequality is negatively linked to well-being.
- Sprawl is negatively related to well-being.
- Sprawl is positively linked to income inequality.
- Sprawl is negatively related to well-being via income inequality.

The paper finds that, consistent with a priori expectations, lower levels of sprawl are, on average, associated with lower levels of income inequality. Additionally, lower levels of sprawl correspond to higher levels of perceived well-being. While the evidence is not unimpeachable, these
findings lend some support to conventional anti-sprawl urban planning wisdom for American cities.

On the peer review process, the sprawl paper was improved immensely as it moved through the process. The suggestion, for example, that the terms sprawl, income inequality, and subjective well-being be defined qualitatively up front led the authors to do so. The suggestion that the authors add a conceptual framework led to the addition of the graphic shown here. The comment that the authors overreached in their conclusions, making recommendations that did not follow from the preceding analysis, caused the authors to rein in the conclusions.

On the choice of journal for scholarly research in planning, the journal Cities has an international editorial board, with an impact factor that ranks second among the 38 journals in that category. The latest issue contains articles from across the globe: Taiwan, China, Chile, Japan, Greece, Mexico, the Czech Republic, the United Kingdom, and several other countries.

As someone who has published with Cities twice recently—and is now a member of the publication’s editorial board—I can vouch for the fact that the journal is a delight to work with. It also has an impact factor of 2.449, meaning that the average article is cited more than two times within just the first two years after publication (an indication that the paper will ultimately have significant influence).

Why should an author care about a journal’s impact factor? Our analysis of article citation counts indicates that journal impact factors are a strong predictor of article citation counts for academic planners. And article citation counts play into tenure and promotion decisions, planning program reputation and prestige, and ultimately affect the practice of urban planning. This analysis will be the subject of a future column, and the paper that contains it is currently under review at JPER.

The one area in which the authors did not demur to reviewers was in the use of simple linear regression to model the relationships between sprawl, income inequality, and perceived well-being. We suggested the use of structural equation modeling instead, on the advice of a top SEM expert and friend, Jim Grace. Grace argued for the use of SEM in this case, but did not close the door on the author’s more limited approach: “VanderWeele’s mediation method.”

Statistical advice is something I have sought throughout my career, and I strongly recommend it to academics and practitioners. There are true experts out there, like Steve Raudenbush on hierarchical modeling, Bill Greene on multinomial logistic regression, and Jim Grace on SEM. I have hired them as statistical consultants and coauthored with them. Many potential errors have been avoided through their involvement.

All that said, keep a watch out for “How Do Sprawl and Inequality Affect Well-Being in American Cities?” in an upcoming issue of Cities.

Reid Ewing is chair of the Department of City and Metropolitan Planning at the University of Utah, an associate editor of the Journal of the American Planning Association, and an editorial board member of the Journal of Planning Education and Research, Landscape and Urban Planning, and Cities. He is the coauthor with Shima Hamidi of Costs of Sprawl, published by Routledge. More than 60 past Research You Can Use columns are available at mrc.cap.utah.edu/publications/research-you-can-use.