

## COMMENTS

### **“WHAT DO BUSINESS IMPROVEMENT DISTRICTS DO FOR PROPERTY OWNERS?” BY AMY ELLEN SCHWARTZ, INGRID GOULD ELLEN, AND RACHEL MELZER**

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**T**HE AUTHORS OF THIS PAPER EXAMINE THE impact of business improvements districts (BIDs) on commercial property values in New York City. BIDs are essentially private local governments in which businesses pay fees to supplement the package of public services in their local area. The authors attempt to measure both the direct effect of BID formation on commercial property values and spillover effects on neighboring properties. Using a difference-in-difference (DD) hedonic modeling approach, they estimate changes in property values in BID areas compared to those in non-BID areas. They conclude that prices of properties in BID areas increased significantly more than those in non-BID areas of NYC.

My comments focus on three primary areas for improvement in the paper. First, it would be helpful to strengthen the theoretical underpinnings for the concept of BIDs. Second, there are several estimation issues to consider that affect the potential reliability of the estimated models. Finally, there are economic implications for BID provision of local public goods to consider.

The theoretical underpinning for BIDs can be explained by the classic concept in public finance known as the correspondence principle. It might be helpful for the authors to anchor their analysis to this theorem in their introductory section of the paper. There is a perfect correspondence in a multilevel system of government when there is one level of government for each subset of the population over which the consumption of a public good is specified. The jurisdiction that provides the public good and determines the amount of its provision includes exactly those individuals who are consuming the public good. Perfect correspondence assures that the benefits from the provision of each public good are enjoyed by those in the community and there are no externalities. Thus, a Pareto-efficient provision of public goods is assured. Furthermore, the Decentralization Theorem assures that it is always more efficient for local government to provide the Pareto-efficient levels of output for

their respective jurisdictions than for the central government to provide any specified and uniform level of output across jurisdictions.

In estimation of the hedonic models, there is a selection bias issue to consider. It is essential to recognize that properties in BID areas may differ systematically from properties outside BID boundaries. In order to account for the difference, a sample selection bias estimation method could be used. Indeed, the authors' finding that prior to BID adoption property values were significantly higher in BID areas suggests that this may be the case. This issue is essentially that of endogeneity. BID formation and property value growth are simultaneously determined.

Beyond the selection issue, what may be required to address the endogeneity inherent in the reduced form hedonic price function is an instrumental variable (IV) estimation approach. A recent NBER working paper by Tauchen and Witte (2001) provides a very helpful guide to estimating hedonic price functions. Their main focus is on the use of IV methods in estimating hedonic functions. They summarize the estimation methods required under various combinations of assumptions about (1) the price function error term, (2) the assumption about the consumer/firm observables, and (3) arguments of the hedonic price function in addition to community characteristics that affect the price but not the utility or cost directly. Only in the case where (1) we assume the price function error term is uncorrelated with attributes, (2) the firm unobservables are uncorrelated, and (3) both attributes and community characteristics are assumed to affect price but not utility or cost is IV estimation unnecessary. Otherwise, some combination of firm and/or community characteristics is required as IVs in the model.

Since the DD method relies on observations over time, there may be serially correlated outcomes and there may be a resulting bias in the estimated standard errors that should be considered. Bertrand et al. (2002) also suggest that DD estimation, as it

is commonly performed, is likely to substantially underestimate the standard errors around the estimated intervention, leading to the implication that the findings may not be as precise as originally thought and the result of a false rejection of the null hypothesis of no effect having taken place.

Finally, there are a couple of economic interpretation issues to consider as we think about BID provision of local public goods. Brueckner (1979) first introduced the essential Samuelson Rule interpretation question in the context of hedonic models. The question is whether the optimal quantity of public services are being provided in the BIDs. That implies we should be looking for marginal impacts of service characteristics to be zero, since under-provision would result in positive marginal price effects and over-provision would result in negative marginal price effects. Capitalization of the BID services is also an issue to consider. It

would be useful to think about how the net benefits of BID formation may be capitalized into property values. Is the capitalization complete or partial? If partial, why?

### References

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