Simultaneous Modeling of Developer Behavior and Land Prices in UrbanSim

Response to Referees reports

General:

We would like to thank the referees for their thoughtful and constructive comments that have helped to sharpen this paper.

All referees commented on the lack of validation in the paper and the need to compare the results of the individual and simultaneous estimations with real observed data. We did this for 4 variables (population, employment, residential units and commercial floor space) for the years 2002 and 2003. This is now addressed on pp 16-17 and presented graphically in Figs 8-11.

Individual responses:

Reviewer A:

1. Reference seminal papers on hedonic pricing: this now appears on pp. 3-4.

2. Theoretical rationale for modeling approach: the expanded literature review (pp.3-6) now helps situate the current modeling strategy

3. Future development of grid cells: over the long run this is governed by the exogenously determined ‘development types’ in the model. In the short term this is determined by the user-specified time step.

4. Validation of results: see above.

Reviewer B:

1. Expand literature review: this has been done, pp 3-6.

2. Explanation of variables $y_1^*, y_2^*, y_2^{**}$: this appears on p8

3. Comparison of estimated coefficients for individual and simultaneous estimations: this appears in Table 6 and on p.16.
4. Present results of transition from vacant developable to residential development: this now appears on pp.12-13 and Table 2.

5. Validation of results: see above.

6. Improve Figures 3-6: these have been reproduced for a transect of the metropolitan region and the accompanying text has been changed accordingly (pp.13-14)

Reviewer C

1. Improve literature review to include treatment of simultaneity and endogeneity in state of the art urban models: this has been done (pp.3-4).

2. Price determination in the model: this has been clarified on p.6.

3. Time period for Israel Land Administration data: this is added on p.9

4. A figure describing the sub-models of UrbanSim has not been provided, as this appears routinely in many of Waddell’s papers describing UrbanSim.

5. Validation of results and benchmark: see above.