Q&A Summary
February 10 Webinar

Question: Can you comment on Uplan model and its applications?

Answer: Uplan is in a category of tools that we could call 'sketch-planning' or visioning tools. These use user-input decision rules and a highly visual GIS platform to engage users, but generally lack the behavioral content and empirical calibration process of more advanced models. As a starting point they may serve a useful role, but one should be careful to not over-interpret results.

Question: Can we get a list of references of papers or documents for this presentation?

Answer: We'd be glad to provide a list of references after the webinar.

Question: We iterate between the transportation results (Accessibility and TAZ based congestion measures) and the Uplan with a convergent process. Any comments on this approach?

Answer: As long as Uplan has some behavioral content that reflects the role of accessibility and congestion, then this is certainly preferred over not iterating with the travel model.

Question: A further comment on Systems Dynamics: it doesn't seem to lend itself to representing markets and prices - works better for physical systems

Answer: There may be room for interpretation. Systems dynamics models deal with feedback loops, and in the same way ecosystems or stocks and flows in physical systems have feedback loops, markets could be represented with supply side and demand side feedback loops on quantity and price. The hard part is representing space, which systems dynamics does not really lend itself to very well.

Question: How does system dynamics modeling fit in the history of modeling (e.g. Jay Forrester's work)?

Answer: See response above.

Question: How do "agent based" models fit into the context of today's discussion?

Answer: Agent-based models (ABMs) are similar to microsimulation models in that they are both modeling individual agents. But the ABM 'purists' would differ in that they allow agents to only interact with their immediate neighbor agents, whereas microsimulation models often allow information to be available to the agent that is not from their immediate neighbors. ABMs are more focused on embedding simple theoretical behavior into agents and observing emergent properties, than in rigorously calibrating such models to real data.

Question: how does this model do if you lack most of this data as input? is it necessary to have all of the inputs listed?

Answer: This question was in reference to TRANUS and MEPLAN. It is often claimed that such models can be simplified, and implemented with less data. For example you could suppress the real estate quantities and prices. But simplifications come with a cost, and the cost may be in making the model considerably less realistic and usable.

Question: What are your thoughts on possible feedbacks between congestion levels and regional growth rates?

Answer: There is some potential that congestion levels could affect aggregate growth of the economy. In order to deal with this, the macroeconomic model should be calibrated using historical congestion levels and the relationship between congestion and output tested statistically. I am not aware of any operational models that have done this. One could always make assumptions about this, say in a spatial input-output model, but that is not the same as calibrating it over a historical period.