

Q&A...

with Jeffrey Brinkman,
a senior economist here
at the Philadelphia Fed.



Jeffrey Brinkman

Senior economist Jeffrey Brinkman grew up outside Columbus, Ohio, the son of an engineer and a high school math teacher. He studied electrical engineering at The Ohio State University before switching to public policy and then economics, earning his doctorate from Carnegie Mellon University in 2011. For the past 11 years, he has researched and written about urban economics and the local consequences of policymaking for the Philadelphia Fed.

What led you to study engineering in college?

I was more interested in physics, but engineering seemed like a practical form of physics, with a job waiting at the end of college. But my first job after college, I wasn't doing research and design. I was in quality control. That environment was less interesting to me.

Is designing a model in economics similar to the kind of work you were hoping to do in engineering?

Yes. A lot of people don't realize that we do a lot of math and computational modelling in economics. When I got to grad school in economics, I just had to learn a new vocabulary. The actual work is very similar to engineering.

It sounds like what drew you to both engineering and economics was the opportunity to solve problems.

Yes. There's nothing better than writing down a mathematical model and trying to solve it on the computer. It's a very focused activity.

You've lived in Los Angeles, Pittsburgh, Detroit, and Philadelphia. How did living in these different cities shape your thinking about urban economics?

Before I moved to Los Angeles, I thought, if you want walkable neighborhoods, all you need is density. Well, Los Angeles is one of the densest cities in the country, and yet it's very auto dependent. There are other dimensions for cities besides density—things like, how the streets are laid out, whether the city was built in the 19th or 20th century. Cities built today tend to have less transit infrastructure because now we have cars. All these dimensions matter. A city isn't just your standard model with a central business district surrounded by residences.

Models are supposed to be applicable to different situations, but you're also pointing out that every city is unique. How do you reconcile your models with all these differences among cities?

Models should make our thinking more

concrete, so that we all know what we're talking about, but they should also allow us to measure differences. Like in our article about freeways. Our model helped us measure the size of the negative effects of freeways on central cities. As our models get more sophisticated, they capture that heterogeneity, but more sophistication means more complication and maybe less clarity of what they're trying to tell us. So, there's a tradeoff between "let's try to model everything" and "let's have a simpler model where I can get intuition about what's going on."

For your article, you applied cost-benefit analysis to the proposal to cap I-95 through central Philadelphia. Did local transportation authorities use cost-benefit analysis when designing these freeways in the first place?

They did, but it was all about, what are the transportation benefits of these highways? How do we get people into and out of the city? How do we move goods? They weren't considering these big negative effects on central cities. Even urban mayors at the time were like, this is going to revive the city, this is going to bring people into the city. But the exact opposite happened. The highways took people out of the city. They allowed people to live farther away, and because there are these big negative amenity effects for the neighborhoods nearby, that pushed people out of the city, too. People quickly realized that this was a problem. It led to protests everywhere.

It sounds like the public blowback was in part a response to the unquestioned assumptions of the planners in their modelling and cost-benefit analysis.

That's one of the things I enjoy. I love identifying unintended consequences. People have been yelling about this for years, but I think we're among the first economists to quantify these freeway disamenities. Learning how to look at the data is important. It's not just, "locations near freeways declined." It's, "locations in central cities near freeways declined." You have to get into the model and think about the economics of it to understand how to look at the data. 