Guren, McKay, Nakamura, and Steinsson – "What Do We Learn From Cross-Sectional Empirical Estimates in Macroeconomics?"

Greg Kaplan opened the discussion by inquiring about the goal of the estimation and the nature of the counterfactual exercises carried out in the paper. He expressed concern that the exercises that study the response of households to changes in prices are treating an equilibrium object – home prices – as a parameter. Alisdair McKay responded that individual households treat home prices as exogenous. Thus, it is appropriate to treat home prices as a parameter in a partial equilibrium setting and study how sensitive household decisions are to that parameter. As a following step, it is then possible to aggregate housing decisions. He agreed that a real-world counterpart of this exercise is not immediate, because it would consider an average of different housing parameters across individuals. Kaplan agreed on the scope of the exercise in the context of the model, but he pointed out that we need to believe that the assumptions made in the model also hold in the real world. He also emphasized the importance of clearly stating the relevant real-world counterfactual at the core of the analysis that is being carried out. Jón Steinsson argued that it was important to distinguish clearly between two separate objects. The first is what is measured in the data, which is clearly defined by the empirical specification. The second instead is the interpretation of the measured object. A theoretical model can provide an interpretation for the object measured in the data. He highlighted that housing is not exogenous in the model presented in the paper, yet it corresponds to the object observed in the data. Adam Guren further pointed out that the home price shock is similar to a foreign demand shock and that the effect of such a shock on consumption is instrumental to correctly calibrating the housing wealth effect in a general equilibrium model.

Robert Hall suggested that a useful research proposal in this area would include (i) writing a model with regions, (ii) assembling data on regions, (iii) estimating the model with econometric tools, (iv) conducting policy analysis in the model. He expressed skepticism about the procedure introduced by the authors. Erik Hurst added that he explored the approach suggested by Hall in prior research and he argued that such an approach also has some weaknesses, such as being too dependent on modeling assumptions. Steinsson responded that their paper along with their earlier paper on housing contained many of the elements of Hall's proposal: they performed state-of-the art regional empirical analysis in the earlier paper and in this paper they had written down a state-of-the-art regional model to interpret their empirical results. He explained that the goal of their analysis was not normative. This meant that they did not conduct policy analysis. Instead, their goal was to introduce a dynamic micro-founded model that could correctly interpret the results of their regional estimates from their prior paper.

Esteban Rossi-Hansberg expressed skepticism about the lack of links between locations in the model, such as trade links or commuting networks. The use of a gravity equation, for example, could be a first step at introducing trade in the model, he specified. The authors responded that, through the lenses of their model, trade matters because it makes the local multiplier smaller than the aggregate multiplier. They added that incorporating more realistic geography in the model would be an interesting direction for future research, but beyond the scope of the current paper, which focuses on the adjustment to local partial equilibrium effect.

Ricardo Reis followed up on the discussion about the links across locations in the model. He inquired about the persistence of the shocks and the relevant time horizon for the analysis. He conjectured that, under the appropriate assumptions, the model could generate no migration in the short horizon, but some migration over a long enough horizon. McKay specified that the model is simulated at quarterly horizon. He added that their results are robust to different values of the persistence of shocks. However, their analysis does not consider the role of migration, he acknowledged.

In the last part of the discussion, the authors addressed some concerns raised by the discussants.

First, Guren responded to a comment by Valery Ramey, who proposed to use individual level data to directly estimate a partial equilibrium effect instead of regional level data and then adjusting it to get the partial equilibrium effect. Guren agreed with Ramey that for some questions directly estimating the partial equilibrium effect using compelling individual-level variation is preferable. However, Guren observed that for some questions, individual level data is either unavailable or has variation that is far less compelling for identification relative to regional variation. It is in these cases, he argued, that the methods in this paper are valuable. Guren pointed out that house prices are by definition regional, so it is difficult to convincingly estimate a PE effect using individual level data when the variation is regional.

Second, Steinsson commented on the local projection technique discussed by Ramey. He highlighted that this approach progressively drops more data in the analysis. Using a stable sample for the analysis delivered somewhat different results, such as a more pronounced response over time, he noted. Third, he pointed out that work by Chen (2019) using the local projection method on regional variation had found a non-trivial response in population and construction. He indicated this to be a promising avenue for future research.

References

[1] Chen, W. (2019). Essays on macroeconomics with microeconomic heterogeneity", *Mimeo, Boston University.*