

# Discussion of “What Do We Learn From Cross-Sectional Empirical Estimates in Macro?” by Guren, McKay, Nakamura and Steinsson

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# This paper

- ▶ Past decade has seen a “credibility revolution” in macro:
  - ▶ Turned to cross-section for identification
  - ▶ Very influential papers used heterogeneous cross-sectional exposure to identify effects of: fiscal policy [Nakamura Steinsson 2014], housing net worth channel [Mian Sufi 2014], China shock [Autor Dorn Hanson 2013], credit market disruptions [Chodorow-Reich 2014], UI extensions [Hagedorn Manovskii Mitman 2015]...
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*“What Do We Learn From Cross-Sectional Empirical Estimates in Macroeconomics?”*

- ▶ This paper offers the following answer:

*From regional variation, you may be able to learn about partial equilibrium effects (here: MPC out of housing wealth, MPCH)*

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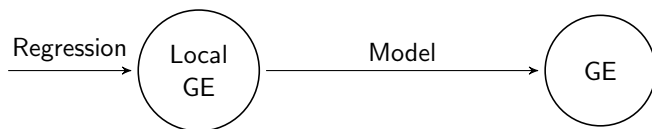
*From regional variation, you may be able to learn about partial equilibrium effects (here: MPC out of housing wealth, MPCH)*

# The paper in context

- ▶ What do we already know about regional regressions?
  1. They contain certain “local” GE effects [eg nontradable multipliers]
  2. They difference out “national” GE effects [eg monetary policy]

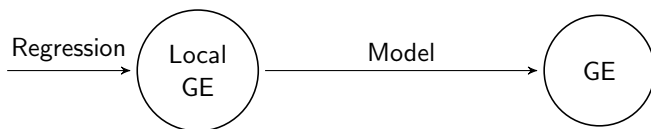
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- ▶ This paper proposes a method to **take out** the local GE effects in 1
  - ▶ Objective: “pure” MPCH



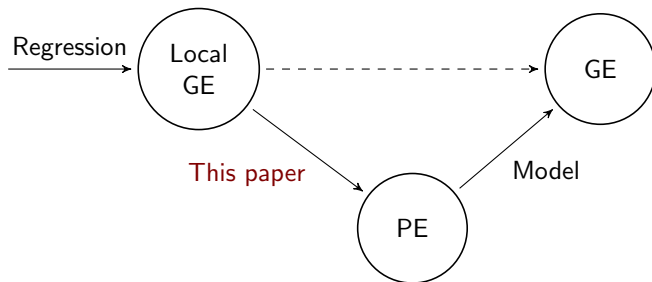
# Why is this important?

- ▶ Why do we care about PE objects such as the pure MPCH?
  - ▶ From intro: “for [model] calibration purposes”
- ▶ But these models are ultimately designed to answer GE questions!
  - ▶ eg “what’s the contribution of net worth channel to Great Recession?”



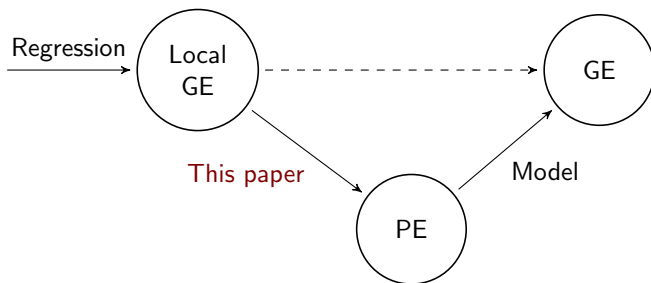
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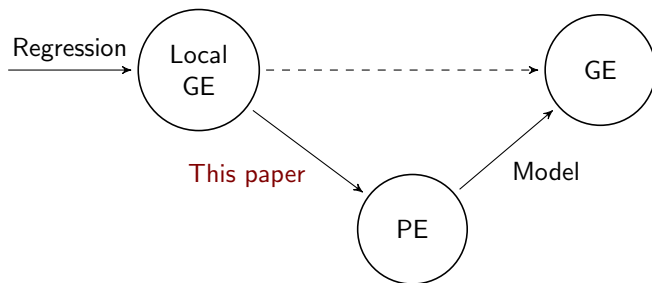
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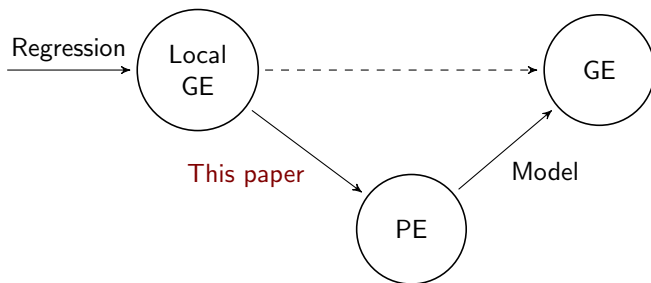
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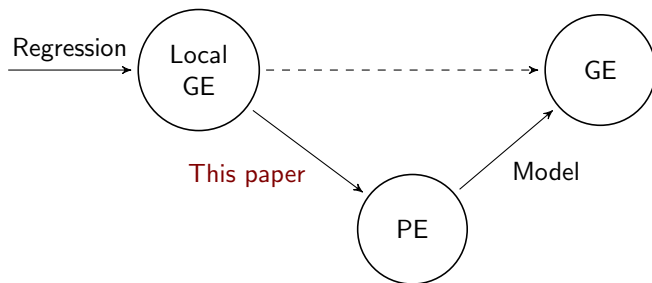
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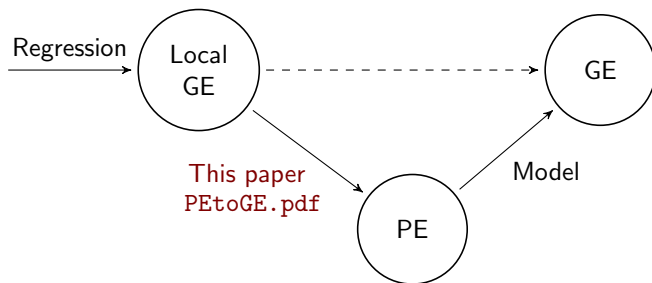
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1. Does this extra leg make GE answer more credible? **Yes sometimes**
2. Can't we get the PE from some other type of cross-X? **Maybe not**
3. What can we learn about the final step, PE to GE? **Or can we?**

# What is the core idea of the method?

- ▶ Start from Theorem 4 in Auclert-Rognlie (2018), or Proposition 6 in Auclert-Rognlie-Straub (2018), which say:

$$GE = M \cdot PE \quad (1)$$

where  $M$  is multiplier matrix;  $PE$ ,  $GE$  are impulse response vectors

- ▶ Here, GMNS show a regional version of this result:

$$GE^{local} = M^{local} \cdot PE$$

so, the paper proposes to calculate

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- ▶ Why not combine (2) with (1) to get  $GE$  from  $GE^{local}$ ?
  - ▶ **A:**  $M$  too complex,  $M^{local}$  may be simpler, and  $PE$  useful for  $M$  (eg MPC out of lotteries used for fiscal policy in ARS 2018, MPC out of stock market used for monetary policy in ARS 2020)

# What can we say about PE to GE in this paper?

- ▶ Model is textbook example in which PE-to-GE map  $M$  is highly sensitive to parameters
- ▶ Why? GHH preferences! From Nakamura-Steinsson:

TABLE 7—GOVERNMENT SPENDING MULTIPLIER IN GHH MODEL

	Closed economy aggregate multiplier	Open economy relative multiplier
<i>Panel A. Sticky prices</i>		
Volcker-Greenspan monetary policy	0.12	1.42
Constant real rate	7.00	1.42
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- ▶ Makes it reasonable to focus on stopping at PE rather than GE
- ▶ Is this going too far? GHH arguably extreme
  - ▶ Rejected by other data, such as direct estimates of GE multipliers?
  - ▶ HANK may deliver large local multipliers without need for GHH

# Implementation

- Implementation: assume  $M^{local}$  is diagonal and apply static version

$$PE \simeq \frac{GE^{local}}{M^{local}} \quad (3)$$

In simplest case of paper with no residential investment, this is

$$MPCH = \frac{\text{Measured Housing Wealth Effect}}{\text{Local Fiscal Multiplier}} = \frac{0.033}{1.5} = 0.022$$

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→ multiplier should be *multiplied* by 1.5 to 2
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- ▶ Underlying issue is non-diagonal  $M^{local}$  (dynamic linkages)
  - ▶ Think  $(I - \text{Home Bias} \cdot MPC)^{-1}$  and  $MPC$  matrix not diagonal!

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  - Very dependent on exact model: (2) is structural, but (3) is not
- Underlying issue is non-diagonal  $M^{local}$  (dynamic linkages)
  - One solution: study model  $M^{local}$  to find a good parametrization for off-diagonal elements, use to correct the approximation error



# Conclusion

- ▶ What Do We Learn From Cross-X Empirical Estimates in Macro?
- ▶ Question of the decade, paper makes significant progress!

*From regional variation, you may be able to learn about partial equilibrium effects (here: MPCH)*

- ▶ My suggestions:
  1. Provide extra context as to why PE is useful
  2. Parametrize  $M^{local}$  to improve quality of approximation
  3. Justify using regional variation to get MPCH