New Perspectives on Consumption
Panel Discussion

Christopher Carroll[1]

[1]Johns Hopkins University and NBER
ccarroll@jhu.edu

December 17, 2016
London School of Economics
December 2016

Progress!

- I feel the way Galileo must have felt ...
- ... before he started grinding lenses
- Conference shows lots of people grinding away!

- I feel the way Galileo must have felt ...

- ... before he started grinding lenses

- Conference shows lots of people grinding away!
    - National Registry Data ('Registries')
    - Administrative Data from Aggregators ('Aggregators')
    - Consumer Credit Panels ('CCP')
    - Surveys

- I feel the way Galileo must have felt ...
- ... before he started grinding lenses
- Conference shows lots of people grinding away!
    - National Registry Data ('Registries')
    - Administrative Data from Aggregators ('Aggregators')
    - Consumer Credit Panels ('CCP')
    - Surveys

- I feel the way Galileo must have felt ...
- ... before he started grinding lenses
- Conference shows lots of people grinding away!
  - National Registry Data ('Registries')
  - Administrative Data from Aggregators ('Aggregators')
  - Consumer Credit Panels ('CCP')
  - Surveys

Progress!

- I feel the way Galileo must have felt ...
- ... before he started grinding lenses
- Conference shows lots of people grinding away!
    - National Registry Data ('Registries')
    - Administrative Data from Aggregators ('Aggregators')
    - Consumer Credit Panels ('CCP')
    - Surveys

- I feel the way Galileo must have felt ...
- ... before he started grinding lenses
- Conference shows lots of people grinding away!
  - National Registry Data ('Registries')
  - Administrative Data from Aggregators ('Aggregators')
  - Consumer Credit Panels ('CCP')
  - Surveys

Progress!

- I feel the way Galileo must have felt ...
- ... before he started grinding lenses
- Conference shows lots of people grinding away!
    - National Registry Data ('Registries')
    - Administrative Data from Aggregators ('Aggregators')
    - Consumer Credit Panels ('CCP')
    - Surveys

- I feel the way Galileo must have felt ...
- ... before he started grinding lenses
- Conference shows lots of people grinding away!
    - National Registry Data ('Registries')
    - Administrative Data from Aggregators ('Aggregators')
    - Consumer Credit Panels ('CCP')
    - Surveys

What Would the Perfect Lens Look Like?

Perfection:

- Huge Sample Sizes
  - (Registries; Aggregators)
- Accurately Measured Data on c, y, a, d
  - (Registries; Aggregators)
- Data on *expectations* and *preferences*
  - (Surveys)

What we most desperately need:

- *Integrated*: Balance sheets *and* expectations
- Leth-Petersen is the only example (and small sample size)

Perfection:

- Huge Sample Sizes
  - (Registries; Aggregators)
- Accurately Measured Data on c, y, a, d
  - (Registries; Aggregators)
- Data on *expectations* and *preferences*
  - (Surveys)

What we most desperately need:

- *Integrated*: Balance sheets *and* expectations
- Leth-Petersen is the only example (and small sample size)

Perfection:

- Huge Sample Sizes
    - (Registries; Aggregators)
- Accurately Measured Data on c, y, a, d
    - (Registries; Aggregators)
- Data on *expectations* and *preferences*
    - (Surveys)

What we most desperately need:

- *Integrated*: Balance sheets *and* expectations
- Leth-Petersen is the only example (and small sample size)

What Would the Perfect Lens Look Like?

Perfection:

- Huge Sample Sizes
  - (Registries; Aggregators)
- Accurately Measured Data on c, y, a, d
  - (Registries; Aggregators)
- Data on *expectations* and *preferences*
  - (Surveys)

What we most desperately need:

- *Integrated*: Balance sheets *and* expectations
- Leth-Petersen is the only example (and small sample size)

What Would the Perfect Lens Look Like?

Perfection:

- Huge Sample Sizes
  - (Registries; Aggregators)
- Accurately Measured Data on c, y, a, d
  - (Registries; Aggregators)
- Data on *expectations* and *preferences*
  - (Surveys)

What we most desperately need:

- *Integrated*: Balance sheets *and* expectations
- Leth-Petersen is the only example (and small sample size)

What Would the Perfect Lens Look Like?

Perfection:

- Huge Sample Sizes
  - (Registries; Aggregators)
- Accurately Measured Data on c, y, a, d
  - (Registries; Aggregators)
- Data on *expectations* and *preferences*
  - (Surveys)

What we most desperately need:

- *Integrated*: Balance sheets *and* expectations
- Leth-Petersen is the only example (and small sample size)

What Would the Perfect Lens Look Like?

Perfection:

- Huge Sample Sizes
  - (Registries; Aggregators)
- Accurately Measured Data on c, y, a, d
  - (Registries; Aggregators)
- Data on *expectations* and *preferences*
  - (Surveys)

What we most desperately need:

- *Integrated*: Balance sheets *and* expectations
- Leth-Petersen is the only example (and small sample size)

What Would the Perfect Lens Look Like?

Perfection:

- Huge Sample Sizes
  - (Registries; Aggregators)
- Accurately Measured Data on c, y, a, d
  - (Registries; Aggregators)
- Data on *expectations* and *preferences*
  - (Surveys)

What we most desperately need:

- *Integrated*: Balance sheets *and* expectations
- Leth-Petersen is the only example (and small sample size)

- Microeconomics
  - Lots of reasons
- Macroeconomics
  - "Aggregate Demand"
  - Finance-Macro Nexus

- Microeconomics
  - Lots of reasons
- Macroeconomics
  - "Aggregate Demand"
  - Finance-Macro Nexus

- Microeconomics
  - Lots of reasons
- Macroeconomics
  - "Aggregate Demand"
  - Finance-Macro Nexus

- Microeconomics
  - Lots of reasons
- Macroeconomics
  - "Aggregate Demand"
  - Finance-Macro Nexus

- Microeconomics
    - Lots of reasons
- Macroeconomics
    - "Aggregate Demand"
    - Finance-Macro Nexus

"Almost nothing from the academic macroeconomics literature over the prior 30 years was useful in understanding what to do"

- A *reliable* (set of) *quantitatively useful* structural models
  - Theorists can
- What do we need?
  - Much better *data and* **models** of expectations
  - Measures of *behavior conditional on expectations* ...
  - ... to be fed into a calibrated strucutural model

- A *reliable* (set of) *quantitatively useful* structural models
  - Theorists can
- What do we need?
  - Much better *data and* **models** of expectations
  - Measures of *behavior conditional on expectations* ...
  - ... to be fed into a calibrated strucutural model

- A *reliable* (set of) *quantitatively useful* structural models
    - Theorists can
- What do we need?
    - Much better *data and* **models** of expectations
    - Measures of *behavior conditional on expectations* ...
    - ... to be fed into a calibrated strucutural model

- A *reliable* (set of) *quantitatively useful* structural models
  - Theorists can
- What do we need?
  - Much better *data and* **models** of expectations
  - Measures of *behavior conditional on expectations* ...
  - ... to be fed into a calibrated strucutural model

- A *reliable* (set of) *quantitatively useful* structural models
    - Theorists can
- What do we need?
    - Much better *data and* **models** of expectations
    - Measures of *behavior conditional on expectations* ...
    - ... to be fed into a calibrated strucutural model

- A *reliable* (set of) *quantitatively useful* structural models
    - Theorists can
- What do we need?
    - Much better *data and* **models** of expectations
    - Measures of *behavior conditional on expectations* ...
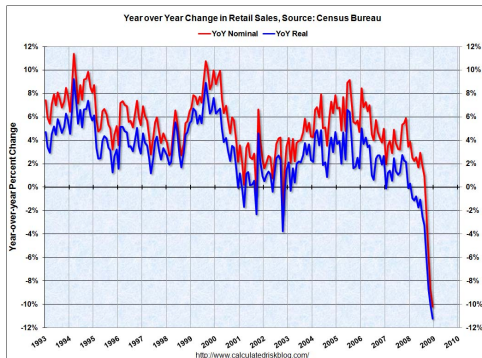   - ... to be fed into a calibrated strucutural model

- "Housing Wealth Effect" estimates are converging
- Kaplan, Mitman, Violante; Leth-Petersen and Andersen; CKHI
- *Crucial* point: Size of effect depends on credit availability ('collateral channel')

- "Housing Wealth Effect" estimates are converging
- Kaplan, Mitman, Violante; Leth-Petersen and Andersen; CKHI
- *Crucial* point: Size of effect depends on credit availability ('collateral channel')

- "Housing Wealth Effect" estimates are converging
- Kaplan, Mitman, Violante; Leth-Petersen and Andersen; CKHI
- *Crucial* point: Size of effect depends on credit availability ('collateral channel')

"*Almost nothing from the academic macroeconomics literature over the prior 30 years was useful in understanding what to do*"

Zombies:

- Rep Agent/Certainty Equivalent DSGE models
- Campbell-Mankiw (Savers/Spenders)

Desiderata: Uncertainty and Heterogeneity

- Uncertainty
  - Landais & Spinnewijn: Unemployment $\Rightarrow C \downarrow$
  - $\Rightarrow$ uncertainty is hugely important

- Heterogeneity
  - Concavity of the Consumption Function:

Zombies:

- Rep Agent/Certainty Equivalent DSGE models
- Campbell-Mankiw (Savers/Spenders)

Desiderata: Uncertainty and Heterogeneity

- Uncertainty
  - Landais & Spinnewijn: Unemployment $\Rightarrow C \downarrow$
  - $\Rightarrow$ uncertainty is hugely important
- Heterogeneity
  - Concavity of the Consumption Function:

Off-the-shelf Macro Models

Zombies:

- Rep Agent/Certainty Equivalent DSGE models
- Campbell-Mankiw (Savers/Spenders)

Desiderata: Uncertainty and Heterogeneity

- Uncertainty
  - Landais & Spinnewijn: Unemployment $\Rightarrow C \downarrow$
  - $\Rightarrow$ uncertainty is hugely important
- Heterogeneity
  - Concavity of the Consumption Function:

Zombies:

- Rep Agent/Certainty Equivalent DSGE models
- Campbell-Mankiw (Savers/Spenders)

Desiderata: Uncertainty and Heterogeneity

- Uncertainty
    - Landais & Spinnewijn: Unemployment $\Rightarrow C \downarrow$
    - $\Rightarrow$ uncertainty is hugely important
- Heterogeneity
    - Concavity of the Consumption Function:

Zombies:

- Rep Agent/Certainty Equivalent DSGE models
- Campbell-Mankiw (Savers/Spenders)

Desiderata: Uncertainty and Heterogeneity

- Uncertainty
  - Landais & Spinnewijn: Unemployment $\Rightarrow C \downarrow$
  - $\Rightarrow$ uncertainty is hugely important
- Heterogeneity
  - Concavity of the Consumption Function:

Zombies:

- Rep Agent/Certainty Equivalent DSGE models
- Campbell-Mankiw (Savers/Spenders)

Desiderata: Uncertainty and Heterogeneity

- Uncertainty
    - Landais & Spinnewijn: Unemployment $\Rightarrow C \downarrow$
    - $\Rightarrow$ uncertainty is hugely important
- Heterogeneity
    - Concavity of the Consumption Function:
        - Low wealth people have much higher MPC's

Zombies:

- Rep Agent/Certainty Equivalent DSGE models
- Campbell-Mankiw (Savers/Spenders)

Desiderata: Uncertainty and Heterogeneity

- Uncertainty
    - Landais & Spinnewijn: Unemployment $\Rightarrow C \downarrow$
    - $\Rightarrow$ uncertainty is hugely important
- Heterogeneity
    - Concavity of the Consumption Function:
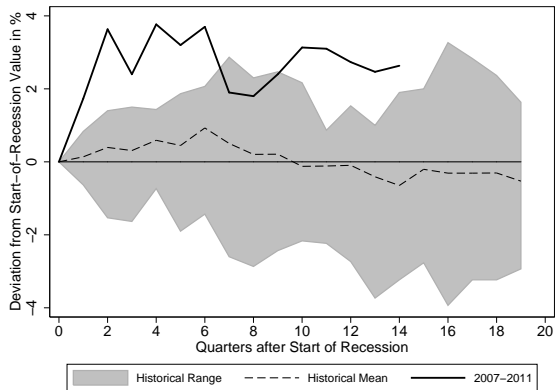   - Low wealth people have much higher MPC's

Zombies:

- Rep Agent/Certainty Equivalent DSGE models
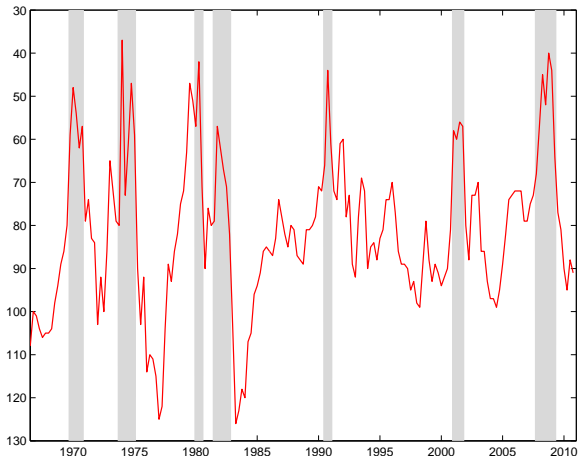- Campbell-Mankiw (Savers/Spenders)

Desiderata: Uncertainty and Heterogeneity

- Uncertainty
    - Landais & Spinnewijn: Unemployment $\Rightarrow C \downarrow$
    - $\Rightarrow$ uncertainty is hugely important
- Heterogeneity
    - Concavity of the Consumption Function:
        - Low wealth people have much higher MPC's

Unemployment Expectations $\mathbb{E}[\Delta u_{t+1}]$

Model fit to aggregate saving rate history fits well. Ranking of reasons for s rise:

- 60 percent: Uncertainty
  - Idiosyncratic (precautionary) and aggregate
- 25 percent: Wealth Effects
- 15 percent: Credit Supply

Model fit to aggregate saving rate history fits well. Ranking of reasons for s rise:

- 60 percent: Uncertainty
  - Michigan Survey: Unemployment Expectations
- 25 percent: Wealth Effects
- 15 percent: Credit Supply

Model fit to aggregate saving rate history fits well. Ranking of reasons for s rise:

- 60 percent: Uncertainty
    - Michigan Survey: Unemployment Expectations
- 25 percent: Wealth Effects
- 15 percent: Credit Supply

Model fit to aggregate saving rate history fits well. Ranking of reasons for *s* rise:

- 60 percent: Uncertainty
    - Michigan Survey: Unemployment Expectations
- 25 percent: Wealth Effects
- 15 percent: Credit Supply

Model fit to aggregate saving rate history fits well. Ranking of reasons for s rise:

- 60 percent: Uncertainty
  - Michigan Survey: Unemployment Expectations
- 25 percent: Wealth Effects
- 15 percent: Credit Supply

Most important question they can answer:

- *Whose* circumstances (y, a, etc) change
- Whose *behavior* changes ('active saving')
    - Regional differences will be profoundly useful

Most important question they can answer:

- *Whose* circumstances (y, a, etc) change
- Whose *behavior* changes ('active saving')
    - Regional differences will be profoundly useful

Most important question they can answer:

- *Whose* circumstances (y, a, etc) change
- Whose *behavior* changes ('active saving')
    - Regional differences will be profoundly useful

More is different:

- *Everything* is durable at the weekly frequency
- Expenditure shocks can't be ignored
- More 'coping strategies' than we usually model

More is different:

- *Everything* is durable at the weekly frequency
- Expenditure shocks can't be ignored
- More 'coping strategies' than we usually model

More is different:

- *Everything* is durable at the weekly frequency
- Expenditure shocks can't be ignored
- More 'coping strategies' than we usually model

1. Survey design
   - Transaction, wealth, income data
     - Collect using technology (`Mint.com`, other aggregators)
   - Only survey people on beliefs, expectations, preferences
2. Use admin data as sampling frame for surveys
   - That way you get the combination
   - Need panel data on expectations to model them

1. Survey design
   - Transaction, wealth, income data
     - Collect using technology (Mint.com, other aggregators)
   - Only survey people on beliefs, expectations, preferences
2. Use admin data as sampling frame for surveys
   - That way you get the combination
   - Need panel data on expectations to model them

1. Survey design
   - Transaction, wealth, income data
     - Collect using technology (Mint.com, other aggregators)
   - Only survey people on beliefs, expectations, preferences
2. Use admin data as sampling frame for surveys
   - That way you get the combination
   - Need panel data on expectations to model them

1. Survey design
   - Transaction, wealth, income data
     - Collect using technology (`Mint.com`, other aggregators)
   - Only survey people on beliefs, expectations, preferences
2. Use admin data as sampling frame for surveys
   - That way you get the combination
   - Need panel data on expectations to model them

1. Survey design
   - Transaction, wealth, income data
     - Collect using technology (`Mint.com`, other aggregators)
   - Only survey people on beliefs, expectations, preferences
2. Use admin data as sampling frame for surveys
   - That way you get the combination
   - Need panel data on expectations to model them

1. Survey design
   - Transaction, wealth, income data
     - Collect using technology (Mint.com, other aggregators)
   - Only survey people on beliefs, expectations, preferences
2. Use admin data as sampling frame for surveys
   - That way you get the combination
   - Need panel data on expectations to model them

1. Survey design
   - Transaction, wealth, income data
     - Collect using technology (`Mint.com`, other aggregators)
   - Only survey people on beliefs, expectations, preferences
2. Use admin data as sampling frame for surveys
   - That way you get the combination
   - Need panel data on expectations to model them

The scientific revolution is coming to macroeconomics!

The scientific revolution is coming to macroeconomics!

References I

CARROLL, CHRISTOPHER D., JIRI SLACALEK, AND MARTIN SOMMER (2013): "Dissecting Saving Dynamics: Measuring Wealth, Precautionary, and Credit Effects," *Manuscript, Johns Hopkins University*, http://econ.jhu.edu/people/ccarroll/papers/cssUSSaving/.

CASTANEDA, ANA, JAVIER DIAZ-GIMENEZ, AND JOSE-VICTOR RIOS-RULL (2003): "Accounting for the U.S. Earnings and Wealth Inequality," *Journal of Political Economy*, 111(4), 818–857.

DEN HAAN, WOUTER J., KEN JUDD, AND MICHEL JULLIARD (2007): "Description of Model B and Exercises," *Manuscript*.