DISCUSSION OF

Credit Shocks and Equilibrium Dynamics in Consumer Durable Goods Markets

BY GAVAZZA AND LANTERI

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Period utility flow

$$u(c_{it}, d_{it}) = \frac{\left(c_{it}^{\alpha} \boldsymbol{d_{it}}^{1-\alpha}\right)^{1-\gamma}}{1-\gamma}$$

with

$$\boldsymbol{d_{it}} = d(n, \theta_i) = \begin{cases} q_n & \text{if car of quality } q_n \\ \theta_i & \text{if no car} \end{cases}$$

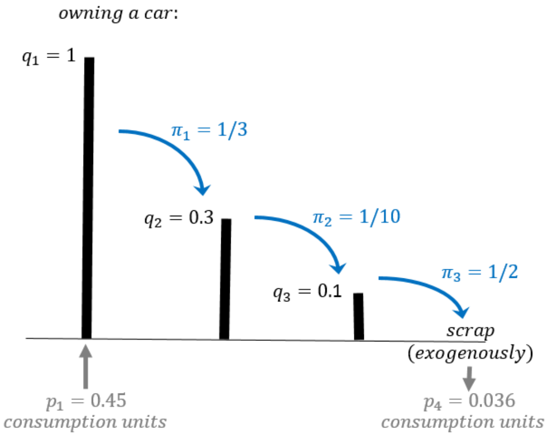
Model Recap

Technology (US calibration)

- Endowment income of w_{it} c-goods every period
- Can turn $p_1 = 0.45$ of c-goods into 1 new d-good with $q_1 = 1$
- Quality of d-good evolves stochastically:
  - with probability $\pi_1 = 1/3$ becomes quality $q_2 = 0.3$
  - afterwards, with $\pi_2 = 1/10$ becomes quality $q_3 = 0.1$
  - afterwards, with $\pi_3 = 1/2$ becomes quality q_4
- When d-good reaches q_4, receive $p_4 = 0.036$ units of c-good

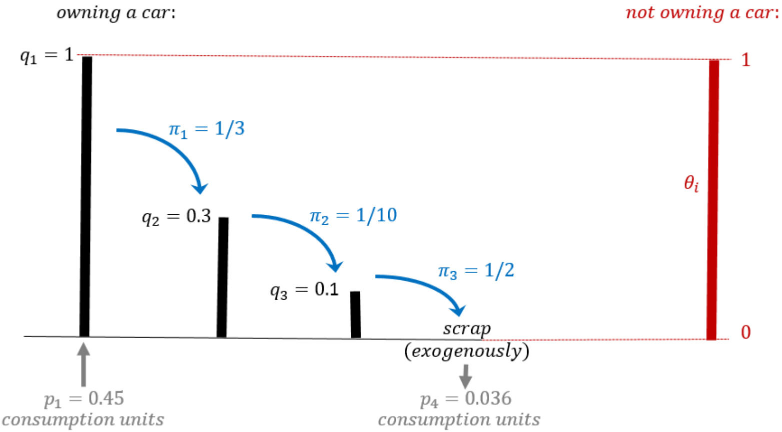
MODEL RECAP

TECHNOLOGY (US CALIBRATION)



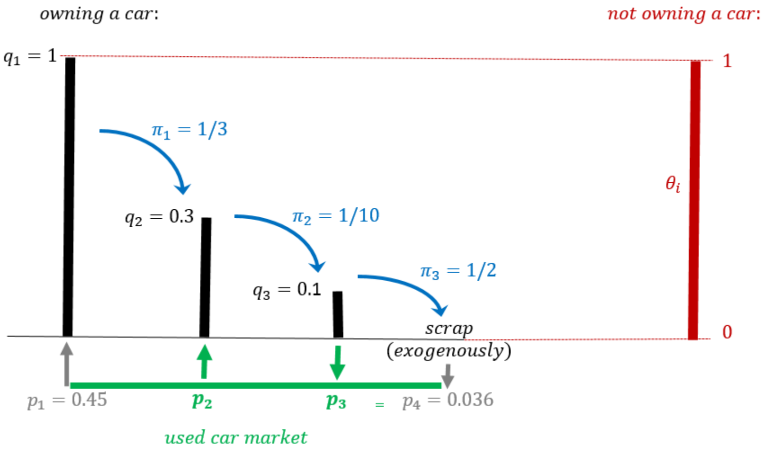
MODEL RECAP

TECHNOLOGY (US CALIBRATION)



MODEL RECAP

USED CAR MARKET



The presence of the used car market and the ability to scrap cars allows the following actions:

- Owner of q_2 cars can sell car and buy q_1 car
- Owner of q_3 cars can scrap car and buy q_1 car
- Owner of q_3 cars can scrap car and buy q_2 car

Income risk is not insurable, agent i faces:

$$b_{i,t+1} \geq \phi$$

Incomplete markets in combination with variation in p_2 generate endogenous illiquidity

- A used car becomes a less valuable asset in downturn
- This makes it more difficult move up the quality ladder

In the stationary equilibrium of this economy, study macroeconomic dynamics:

- Credit shock
- Income shock
- Policy intervention

COMMENT 1/4

ISN'T THE STABILITY OF NEW CAR PRICES PUZZLING/INTERESTING?

- In the model, p_1 constant and pinned down directly by technology
- This is well in line with data
- But: isn't this fact is actually quite interesting?
- In some sense the mechanism relies on a "price rigidity"
- Worth making this more explicit in the paper?
- Could even carry out a counterfactual simulation:
  - Drop marginal costs alongside the shock to the credit limit to generate a fall in the price of new cars

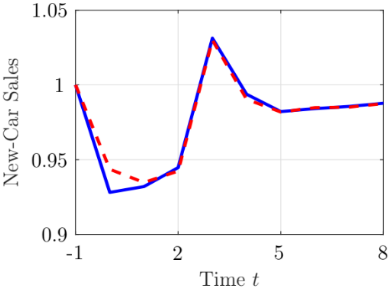
Comment 2/4

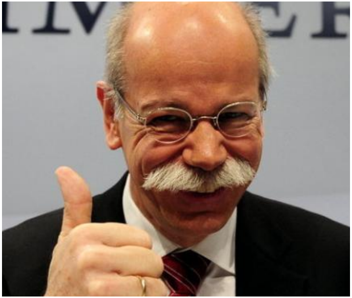
Cash for clunkers

- Extremely interesting result that "cash for clunkers" program is dampened by general equilibrium effects
- Could model be missing something important? A quick anecdote from Germany
- 12 Jan 2009: German government introduces comprehensive stimulus program
- Included an "Abwrackprämie" – Word of the year 2009 by the Society of the German language
- Why is Germany an interesting case?

COMMENT 2/4

CASH FOR CLUNKERS





COMMENT 2/4

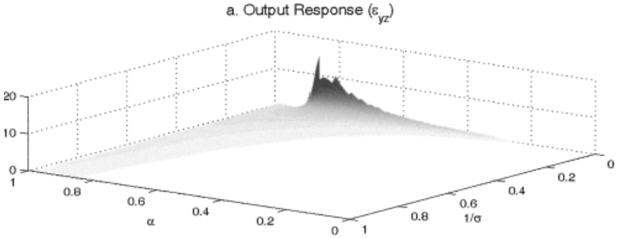
CASH FOR CLUNKERS: WHAT COULD BE MISSING?

- Car industry hugely important for the economy as a whole: 7.7% of value added originate in automotive manufacturing, substantial links to rest of the economy
- In the paper: stimulus program dampened because of secondary market
- However, stimulus could transmit with additional kick via:
  - Labor markets
  - Intermediate inputs
- I am sure this is the argument Dieter Zetsche (pictured above) would make in today's seminar
- It would be interesting to think through such channels

COMMENT 3/4

COLLATERAL CONSTRAINTS AND AMPLIFICATION OF CREDIT CYCLES

- Amplification via collateral constraints small in quantitative DSGE models (see chart from Cordoba and Ripoll, 2004)



- Standard tricks: e.g. working capital
- Secondary market gives big amplification and is very much in the spirit of a traditional collateral constraint. Personally, I would make this a bigger deal in the paper!

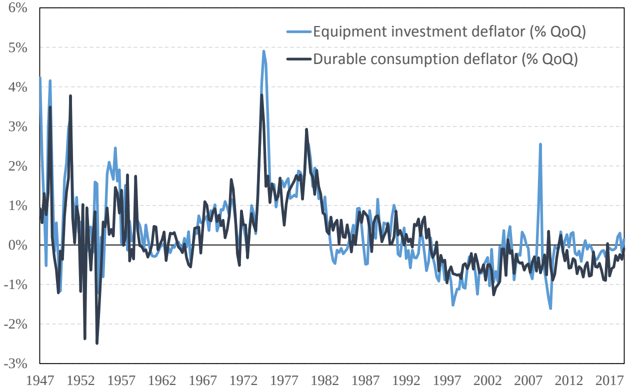
COMMENT 4/4

CONSUMER DURABLES VS. FIRM EQUIPMENT

- Lanteri (2018) studies the market for used firm capital
- Gavazza and Lanteri (2018) study the market for used consumer durables

COMMENT 4/4

CONSUMER DURABLES VS. FIRM EQUIPMENT



Lanteri (2020) studies their important interactions?!

TAKEN TOGETHER

- Amazing paper: grabs a key feature of reality, embeds it skillfully in a general equilibrium framework and characterizes consequences in a very transparent way
- Strongly policy-relevant implications
- Inspires to ponder about further questions, such as the ones raised above

Bibliography

Cordoba, J.-C. and M. Ripoll (2004): "Credit Cycles Redux," *International Economic Review*, 45, 1011–1046.

Lanteri, A. (2018): "The Market for Used Capital: Endogenous Irreversibility and Reallocation over the Business Cycle," *American Economic Review*, 108, 2383–2419.