Economic Winners versus Losers and The Unequal Pandemic Recession

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Motivation

- Recent recession has hit sectors unevenly
  - Sectors exposed to virus suffered more both in downturn and recovery
    - Example: Retail stores → Amazon; Airlines → Zoom; Movie theaters → Netflix
Motivation

Revenue During Recession: Contact vs Non-Contact Sector

![Graph showing revenue during recession for contact and non-contact sectors. The graph displays the log-distance from trend (real) over time, with distinct lines for aggregate, contact, and non-contact sectors.]
Motivation

- Recent recession has hit sectors unevenly
  - Sectors exposed to virus have suffered more both in downturn and recovery
- Spending shift from exposed “contact” goods to safer substitutes
  - e.g. Retail stores → Amazon; Airlines → Zoom; Movie theaters → Netflix
- Substitution from pandemic “losers” to “winners” may
  - Enhance inequality
  - Enhance recession, depending on complementarities across sectors
What We Do

1. Disaggregate revenue into: contact sector losers; winners; non-contact sector
   (a) We find: Quantitatively nontrivial substitution from losers to winners
   (b) Reallocation from losers to winners expected to persist

2. Develop 3 sector New Keynesian model to explain data
   (a) Model captures unequal recession and recovery
   (b) Also captures some of inflation runup
Identifying Contact Sector Winners vs. Losers: Three Steps

1. Begin with industry classification into contact vs non-contact by KMV (2020)
   - Include in contact portion of IT that provides substitutes (e.g. Amazon)

2. Stock market response to COVID news to identify winners vs losers
   (a) Construct Covid Resilience measure to summarize stock market response
      (i) Based on Davis et al. (2020)
      (ii) Sort into winners (favorable relative response) vs. losers (unfavorable)
   (b) Measure link between revenue and Covid Resilience

3. Aggregate firm revenues of winners and of losers to obtain sectoral series
The Unequal Pandemic Recession: Winners’ vs Losers’ Revenue

![Chart showing the unequal pandemic recession: winners' vs losers' revenue over time.](Image)
Model Overview

- NK model with 3 sectors (contact losers, winners, non-contact)
- Borrowing constraints
  - Introduces complementarity between sectors (GLSW, 2021)
- Learning by doing (productivity depends on recent activity levels)
  - Helps capture persistence in revenue gap between winners and losers
- Virus: 2 sectoral shocks (demand and labor supply) that hit contact losers
  - Shocks picked to target sectoral revenue and inflation data
Demand Shock vs Supply Shocks

Real Rate vs Natural Rate

Demand Shock
Output
Inflation

Supply Shock
Output
Inflation
OpenTable Reservations vs Model Demand Shocks

Global Supply Chain Pressures vs Model Supply Shock

Supply Chain Pressure
Supply Shock

Model Demand Shock

Model Supply Shock
Model vs Data

Revenue


Aggregate Losers Winners Non-Contact

Year over Year Inflation

Model Data

Q1-20 Q2-20 Q3-20 Q4-20 Q1-21 Q2-21 Q3-21 Q4-21 Q1-22 Q2-22 Q3-22 Q4-22

-0.4 -0.2 0 0.2

Revenue
No Learning-by-Doing

Revenue
Solid: Counterfactual. Dashed: Benchmark

Year over Year Inflation
Solid: Counterfactual. Dashed: Benchmark
Inflation: Example of Winners vs Losers in Retail Trade

YoY Inflation

- Retail Trade
- Electronic Shopping: Electronic Goods
- Clothing
Concluding Remarks

- Provide measures of unequal sectoral dynamics during Covid-19 recession
  - Emphasize reallocation between contact sector winners versus losers
  - Implications for contraction and recovery phase

- Develop simple 3 sector NK model with learning by doing
  - Captures both aggregate and disaggregated data reasonably well
  - Also captures some of recent inflationary pressures

- Issues
  - Evidence for LBD
  - Disaggregated inflation data
  - Implications for monetary policy?
No Fiscal Policy

Revenue

Solid: Counterfactual. Dashed: Benchmark

Year over Year Inflation

Solid: Counterfactual. Dashed: Benchmark