Productivity and resilience in COVID-19: A U.S. perspective

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Business responses and reallocation

- Business-level responses to productivity/revenue shocks are critical to aggregate productivity (Decker, Haltiwanger, Jarmin, Miranda 2020)
- Overall responsiveness is comprised of incumbent firms and entry/exit margin
  - Responsiveness and reallocation can be impeded by labor adjustment costs (Hopenhayn & Rogerson 1993) and entry costs

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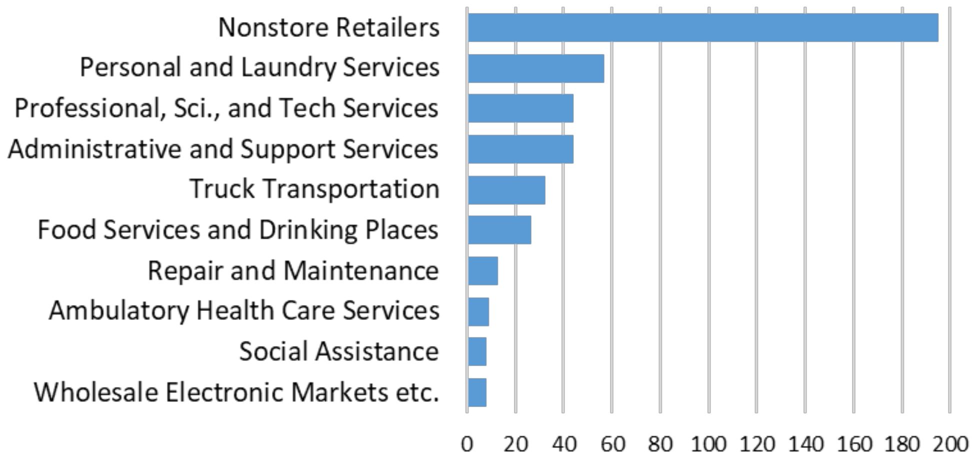
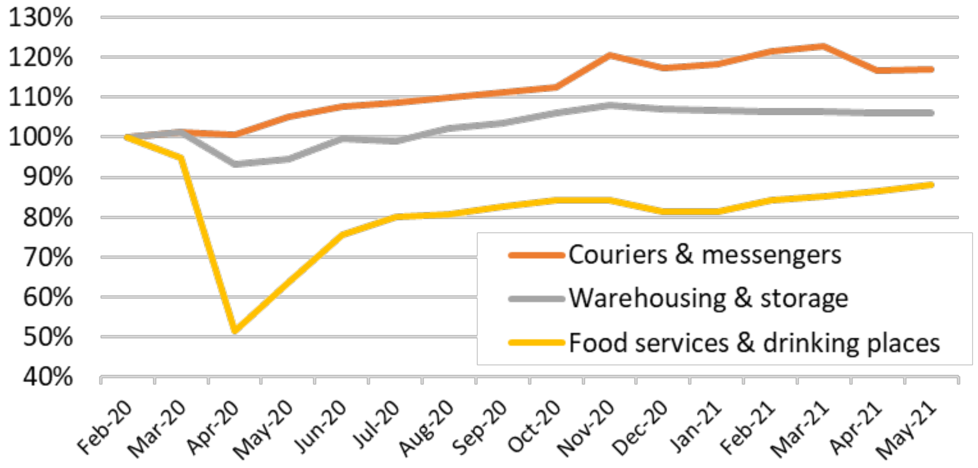
  - Responsiveness and reallocation can be impeded by labor adjustment costs (Hopenhayn & Rogerson 1993) and entry costs
- The U.S. pandemic featured
  - Surge in (likely) entry of businesses that helped facilitate the pandemic economy and lifestyle (see Haltiwanger 2021; Dinlersoz, Dunne, Penciakova, Haltiwanger 2021)
  - Flows from social distance-affected sectors to pandemic-mitigating industries
  - Policy adjustments to improve fluidity (e.g., suspension of state-specific medical licensing)
- These reallocative patterns boosted *robustness* and exhibited *resourcefulness,* and supported *productivity*

Business applications: 2020 vs 2019 (thousands)



Source: Census Bureau Business Formation Statistics. Data through October.

Employment relative to February 2020 levels (U.S.)



Source: Bureau of Labor Statistics Current Employment Statistics.

U.S. policies for business resilience

- U.S. direct lending programs had a *notional* scope covering 97% of employment (Decker, Kurtzman, Lutz, Nekarda 2021) – though significant limitations within size and legal form classes
  - **Paycheck Protection Program (PPP):** Small firms + accommodation & food services*; loans converted into grants*
  - **Main Street Lending Program (MSLP):** Small/medium firms up to 15,000 employees/$5 billion receipts; *loans*
  - **Commercial Credit Facilities (CCF):** Large firms; *corporate bond purchases*
  - **Municipal Liquidity Facility (Muni LF):** State and local governments; *municipal bond purchases*
- Comprehensive coverage, in principle, could backstop the resilience of labor markets, business-customer relationships, and supply chains
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- Did it work? Too early to tell
  - Business death appears to have been below spring 2020 expectations (Crane, Decker, Flaaen, Hamins-Puertolas, Kurz 2021)
  - PPP likely saved many jobs, though clean identification is difficult (Doniger & Kay 2021; Autor, Cho, Crane, Goldar, Montes, Peterman, Ratner, Villar, Yildirmaz 2020)
  - MSLP may have stimulated lending (Minoiu, Zarutskie, Zlate 2021); CCFs reduced bond spreads (Li & Momin 2020)
  - Measured effects may understate the ex ante value of precautionary insurance against worse shocks
  - If unproductive firms were saved, there could be adverse productivity effects or coming failures; productivity costs of resilience policy (see, e.g., Gournichas, Kalemli-Ozcan, Penciakova, Sander 2021)
- Is this a good way to ensure resilience to large shocks? Should it be used again?

Thanks

References

- Autor, David, David Cho, Leland Crane, Mita Goldar, Joshua Montes, William Peterman, David Ratner, Daniel Villar, and Ahut Yildirmaz. 2020. Working paper. At https://economics.mit.edu/files/20094.
- Crane, Leland, Ryan Decker, Aaron Flaaen, Adrian Hamins-Puertolas, and Christopher Kurz. "Business exit during the COVID-19 pandemic: Non-traditional measures in historical context." FEDS working paper #2020-089. At https://www.federalreserve.gov/econres/feds/files/2020089r1pap.pdf.
- Decker, Ryan, John Haltiwanger, Ron Jarmin, and Javier Miranda. 2020. "Changing business dynamism and productivity: Shocks versus responsiveness." *American Economic Review* 110 (12): 3952-3990. At https://www.aeaweb.org/articles?id=10.1257/aer.20190680.
- Decker, Ryan, Robert Kurtzman, Byron Lutz, and Christopher Nekarda. 2021. "Across the universe: Policy support for employment and revenue in the Pandemic Recession." *AEA Papers & Proceedings* 111 (May): 267-271. At http://econweb.umd.edu/~haltiwan/aer_dec20.pdf.
- Dinlersoz, Emin, Timothy Dunne, John Haltiwanger, and Veronika Penciakova. 2021. "Business formation: A tale of two recessions." *AEA Papers & Proceedings 111* (May): 253-257. At https://pubs.aeaweb.org/doi/pdfplus/10.1257/pandp.20211055.
- Doniger, Cynthia and Benjamin Kay. 2021. "Ten days late and billions of dollars short: The employment effects of delays in Paycheck Protection Program financing." FEDS working paper #2021-003. At https://www.federalreserve.gov/econres/feds/files/2021003pap.pdf.
- Gournichas, Pierre Olivier, Sebnem Kalemli-Ozcan, Veronika Penciakova, and Nick Sander. 2021. "COVID-19 and SMEs: A 2021 'time bomb'?" *AEA Papers & Proceedings* 111 (May): 282-286. At https://www.aeaweb.org/articles?id=10.1257/pandp.20211109.
- Haltiwanger, John. 2021. "Entrepreneurship during the COVID-19 pandemic: Evidence from the Business Formation Statistics." In *Entrepreneurship and Innovation Policy and the Economy, Vol. 1*, eds. Josh Lerner and Scott Stern. University of Chicago Press. At https://www.nber.org/books-and-chapters/entrepreneurship-and-innovation-policy-and-economy-volume-1/entrepreneurship-during-covid-19-pandemic-evidence-business-formation-statistics.
- Hopenhayn, Hugo and Richard Rogerson. 1993. "Job turnover and policy evaluation: A general equilibrium analysis." *Journal of Political Economy* 101(5): 915-938. At https://www.journals.uchicago.edu/doi/abs/10.1086/261909?mobileUi=0&.
- Li, Jessica and Rayhan Momin. 2020. "The causal effect of the Fed's corporate credit facilities on eligible issuer bonds." Working paper. At https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3684136.
- Minoiu, Camelia, Rebecca Zarutskie, and Andrei Zlate. 2021. "Motivating banks to lend? Credit spillover effects of the Main Street Lending Program." Working paper. At https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3773242.