

The Global Economy After COVID: Implications for Trade and Inflation

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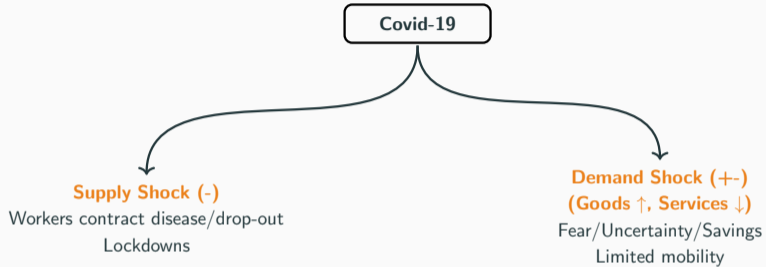
NYFED, Research Conference, April 2023

COVID-19 was a Global Crisis...

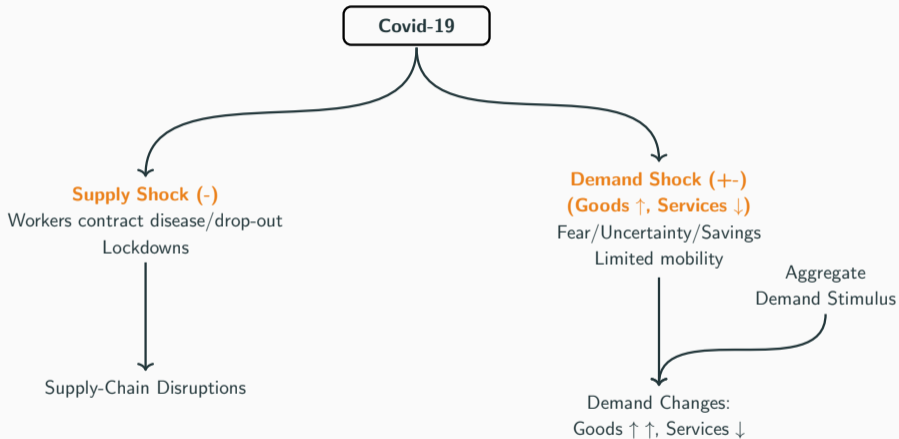
- ...Needed a global solution.
- Both economic stimulus and vaccine policies of countries ignored this fact.

Results: Lower output, lower trade, higher inflation across the world

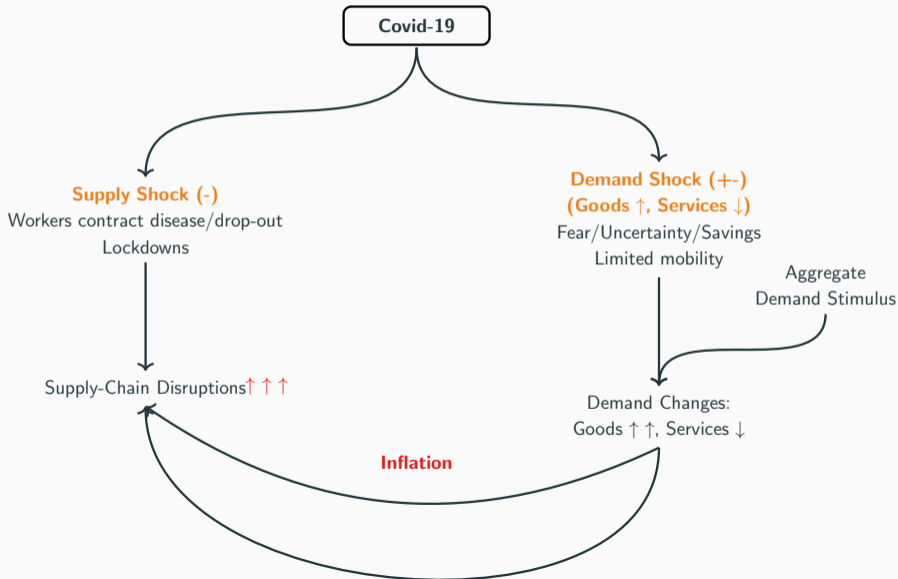
SECTORAL Supply-Demand Imbalances ↑ on a Global Scale During 2020–2021



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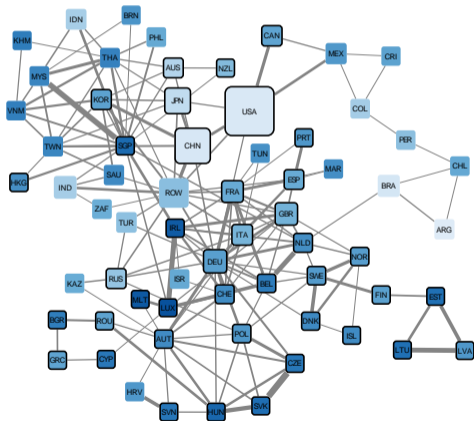


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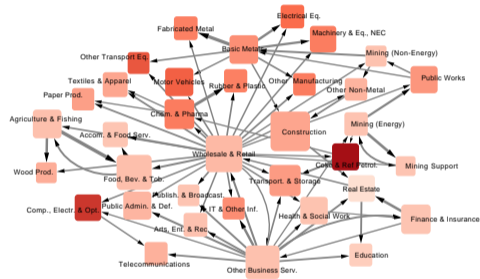


SECTORAL imbalances amplified via global trade and production network

(a) Countries



(b) Industries



35 industries in 65 countries, giving us a matrix of 2275×2275 entries

Quantification of Inflation Drivers based on a Structural Model

- Mimic 2021-2022 events
 - Co-existence of **slack and inflation** and also **tightness and inflation** (aggregate and sectoral)
 - 2021: Output lower than potential \Rightarrow cannot be only demand shocks..
 - 2022: But the role of fiscal policy as a large aggregate demand shock also cannot be ignored
 - **Timing and sectoral heterogeneity:**
 - Goods vs services inflation from 2021 to 2022
 - **Services inflation becoming broad based and sticky by 2023**

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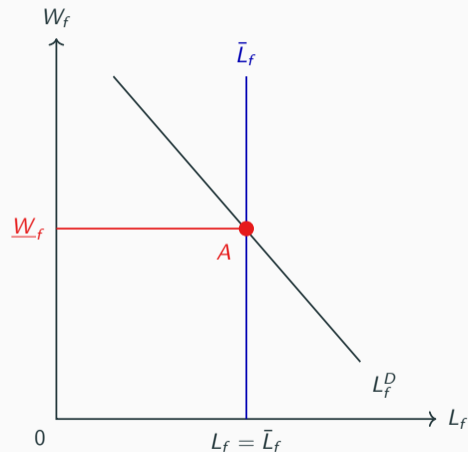
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Important to focus on sectoral labor markets:

- Covid is a set of disaggregated demand and supply shocks before Russia-Ukraine war (supply shock does not mean only energy shock)
- **Labor supply shocks** link sectoral imbalances and labor shortages
- **Complementarity:** global and local supply chain disruptions—reallocation of consumption demand meets global production network with complementarities among intermediate inputs and labor

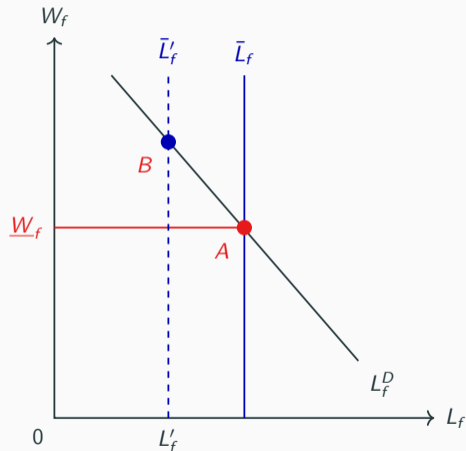
Segmented Labor Markets: 2020-2022

- \bar{L}_f : Potential labor (or any factor) f .
Decrease due to workers getting sick, shutdowns.



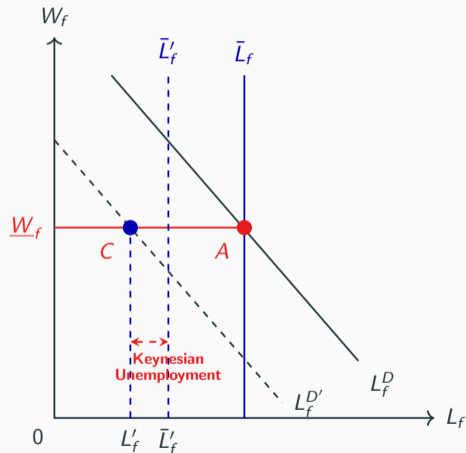
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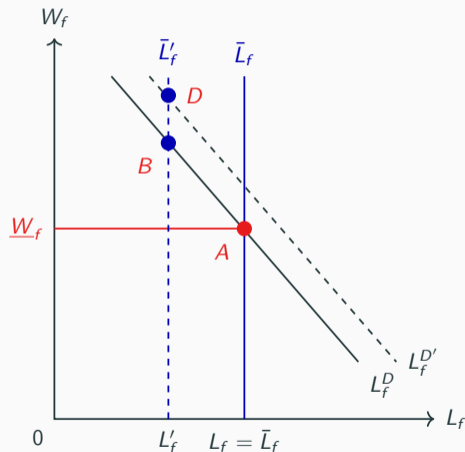
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 - Demand effects+downward wage rigidity
⇒ Keynesian unemployment



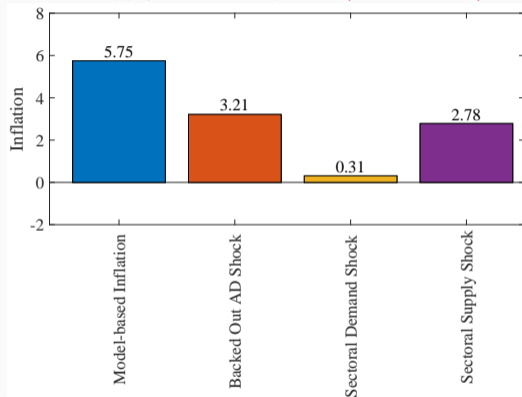
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- During recovery – point D: where these unemployment gaps are closed
(heterogeneous across sectors, may not be back to 2019 but still inflationary).

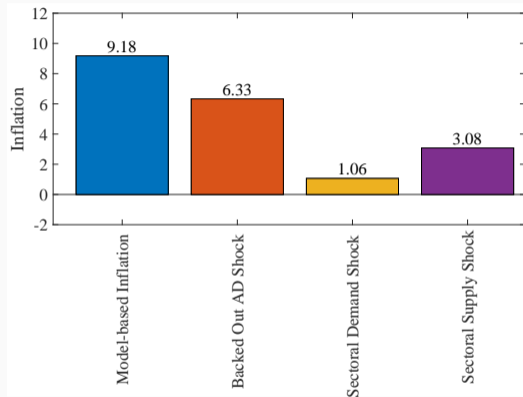


Drivers of OBSERVED Inflation Before the WAR—EA: 4.69: US: 8.47

Sectoral supply shocks explain 1/2 of EA, 1/3 of US observed inflation



(a) Euro Area: 45 Sectors



(b) U.S. 66 Sectors

Extending to mid-2022 confirms these findings and shows that a large part of AD is fiscal stimulus

Trade and supply chain bottlenecks

The increase in trade and supply chain bottlenecks happened simultaneously

⇒ Led to erroneous thinking that supply chain issues will be transitory

- Given pre-pandemic global input-output linkages, what are the expected international trade flows that follows from changes in final demand?
- Key intuition:

$$\text{Output Changes} = \text{Global IO Matrix} \times \text{Final Demand Shares} \times \text{Changes in Final Demand}$$

	Panel I. Data				Panel II. Model			
	Panel A. Great Financial Crisis							
	Collapse		Recovery		Collapse		Recovery	
	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
United States	4.35	3.31	5.90	4.99	2.65	1.74	1.67	2.09
Euro Area	2.74	3.11	5.39	5.65	1.34	2.05	0.86	2.39

	Panel B. Covid-19 Pandemic							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
United States	2.43	2.63	2.50	1.52	0.60	1.09	1.31	1.20
Euro Area	1.42	1.45	1.49	1.82	0.87	0.74	1.04	1.16

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- Trade responded much less to changes in GDP during Covid-19 relative to GFC
- Intermediate goods trade played a larger role than final goods trade during Covid-19 than in GFC

Taking Stock

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- **Demand stimulus in a supply constrained world has larger inflationary effects**
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 - Monetary policy can tame inflation by contracting aggregate demand, however, **there will remain an upward pressure on price growth with sectoral supply shocks**

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- **A network model with asymmetric sectoral supply and demand shocks and segmented labor markets**
 \Rightarrow endogenous sectoral cost-push shocks \Rightarrow **inflation**

Implications for Monetary Policy

Two views on US inflation—FED-Market Disconnect:

1. Establishment View: Data dependent, data is volatile given many shocks, FED is consistent
2. Market View: Long and variable lags do not go with being data dependent (signals get messed up). FED is not consistent, create market volatility as message changes from inflation to disinflation back to inflation

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Lots of speculation on upcoming/not coming credit crunch \Rightarrow recession

Caglio, Darst, Kalemli-Ozcan (2022): Stress test banks provide 65-70% of the C&I loans and small firms do borrow from these banks, most private firms are small and private firms makes up 74% of US employment

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Bottomline: Financial markets cannot do forward-looking pricing under so much **uncertainty**

⇒ **The root cause of uncertainty is a combination of unique shocks:** COVID related disruptions leading to asymmetric recessions and recoveries + uneven and aggressive policy response

⇒ All playing out at sectoral and global level

Implications for Geo-Political (and Economic) Fragmentation

- A policy-driven reversal of global economic integration, guided by strategic considerations
- Plethora of estimates from IMF on costs of friend-shoring and fragmentation for the US (low growth assuming we go down the path of geo-political fragmentation)
- Secretary Yellen: “The argument that friend-shoring is going to cause huge fragmentation and loss of the benefits of trade is really not valid. I see friend-shoring as an approach to dealing with supply-chain risks, but maintaining tremendous scope for global trade to continue. We are concerned with over-dependence on China.”

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- Hard to pin down with past data and models

Need to focus on real-time micro data and ask: what do global firms do?

- Diversify away from China for intermediate inputs keeping costs under control (Apple)
- This will require investment and financing, important implications for global capital flows (Indonesia-semiconductors, integrated oil/shipping)

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Overall, even the world changed after COVID, we should not be too negative on the global economy. We can adjust to the new world with the right policies.

The talk draws from:

With Çakmaklı, Demiralp, Yeşiltaş, Yıldırım:

- COVID-19 and Emerging Markets: Demand Shocks and Capital Flows (**April 2020, RR-JIE**)
- The Economic Case for Global Vaccinations: An Epidemiological Model with International Production Networks (**January 2021, RR-RESTUD**)

With Gourinchas, Penciakova, Sander:

- Fiscal Policy in the Age of COVID: Does it 'Get in all of the Cracks?' (**August 2021, Jackson Hole Symposium**)

With di Giovanni, Silva, and Yıldırım:

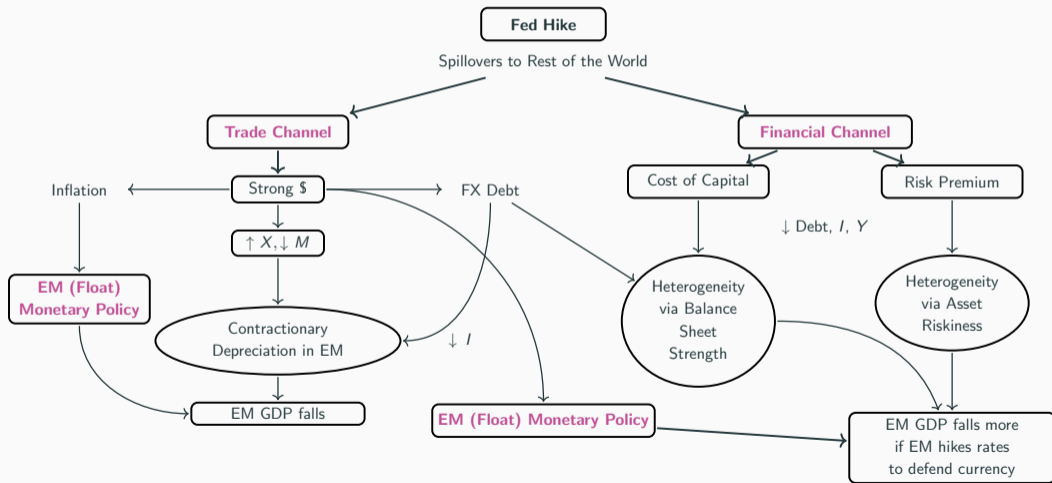
- Global Supply Chain Pressures, International Trade and Inflation (**June 2022, ECB Sintra Forum**)
- Quantifying the Inflationary Impact of Fiscal Stimulus under Supply Constraints (**January 2023, AER P&P**)

With Akinci, Queralto:

- Global Spillovers of U.S. Uncertainty Shocks: The Role of Risk Premia and Capital Flows (**2022, NBER WP**)

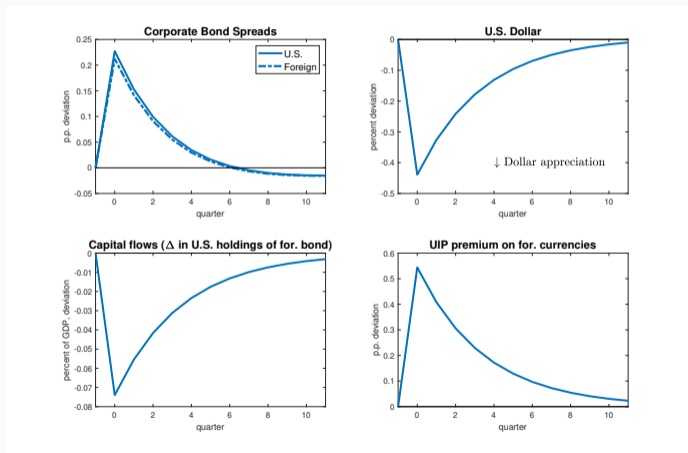
Appendix

Why monetary policy should not be coordinated internationally?



What if U.S. Monetary Policy leads to higher uncertainty for earnings?

Uncertainty shocks are amplified through pricing of risk and balance sheet constraints



Source: Akinci, Kalemli-Ozcan, Queralto (2022)