Thinking Ahead on Covid19 and GVCs

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Outline of talk

1. Nature & duration of shock
2. Why this one is different
3. Supply-chain contagion & re-contagion waves
Medical imperative – Flatten the epi curve

(we all now have to understand epidemiology a bit)
Recession: unavoidable public health measure (in rich nations)
Containment policies = Unusual recession

- International demand shocks (direct, wait & see behaviour, etc.)
- Households: Bankruptcies, or financial distress
- Financial sector: Bank crises
- Rest of World: Payments for imports, Payments for exports
- Store closures, delivery restrictions, travel bans, etc
- Consumer spending
- Government: Taxes, Transfers, Government buying & transfers
- Businesses: Bankruptcies, Taxes, Postponed investment (wait & see behaviour, cash flow issues, etc)
- Wages, salaries, etc
- Labour layoffs, reduced hours, etc
- Investments
- Int’l supply chains
- Domestic supply chains
- Supply chain disruptions

International demand shocks X
How long will the shock last?
1. Couple of quarters?
2. Couple of years?
Infectious (I) → Susceptible (S) → Recovered (R) → Immune

Can give it → Can get it

New cases

Recovery

Illustrative dynamics

Illustrative dynamics (% of pop)

- Infectious (stock)
- New recovered
- New cases
- Total cases (stock)

China epi curve, daily new cases, 31/12/19 - 17 Mar 2020

Source: Author’s illustration
1. new cases = $\beta I \frac{S}{N}$

2. new recoveries = $\gamma I$

3. Top of infections when ‘new cases’ = ‘new recoveries’

$$\frac{S}{N} = \frac{\gamma}{\beta} \equiv \frac{1}{R_0}$$

4. $R_0$ from 2 to 3?
This time is different
As in 2008-09 sudden, severe, synchronised, but demand side
New elements:

1. Hit all the biggest traders/manuf within 2 months
2. Supply & demand
3. Global GVC integration is bigger (next slide)
1. Higher ‘exposure’ to imported inputs

2. Asynchronous supply shocks

Illustration of medical and supply-chain contagion and reinfection
If there’s still time...
Woolly and wishful thinking vs hysteresis

Did anything really change?

Permanent change in GVC will require government subsidies, government mandated stockpiles, diversification, or massive tariffs on all inputs & final goods.
End – thanks for listening