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wiiw Global Economy Lecture 2020 2020

# “Globalization and Pandemics”

Pol Antràs (Harvard)

# Road Map

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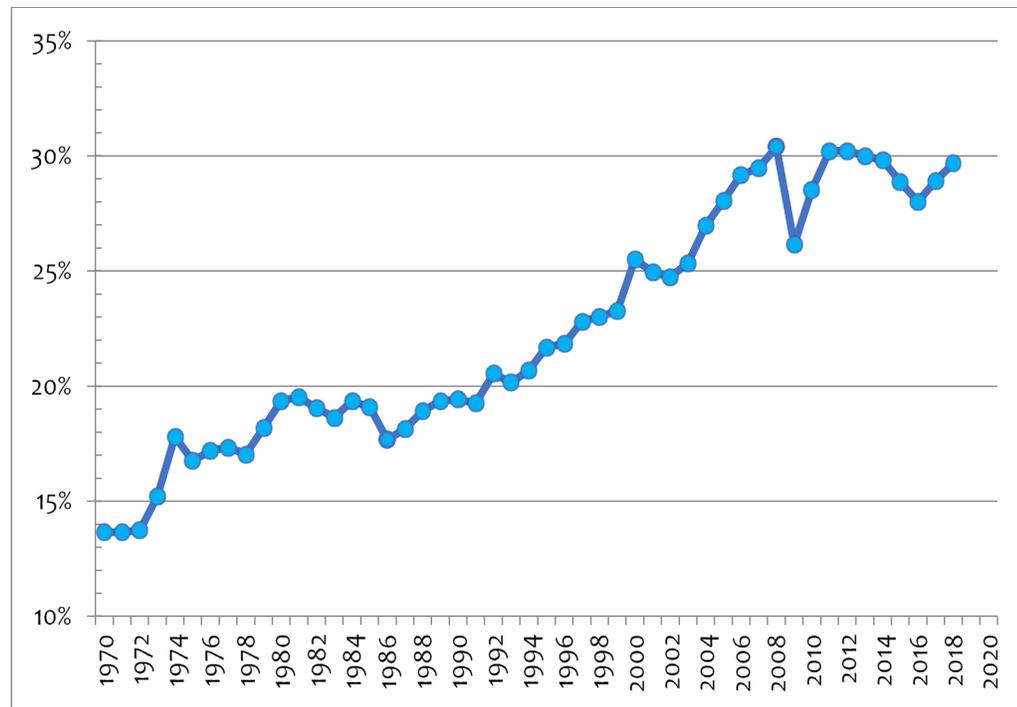
- Review recent trends in the global economy
  - Have we entered a phase of de-globalization?
  - Are global value chains retrenching?
- Study trade and GVC dynamics during the COVID-19 health crisis
- Discuss the interplay between globalization and pandemics
- Speculate on the future of globalization and of GVCs
- Organize the presentation around 10 points with a [theoretical interlude](#)

# De-Globalization? The Facts

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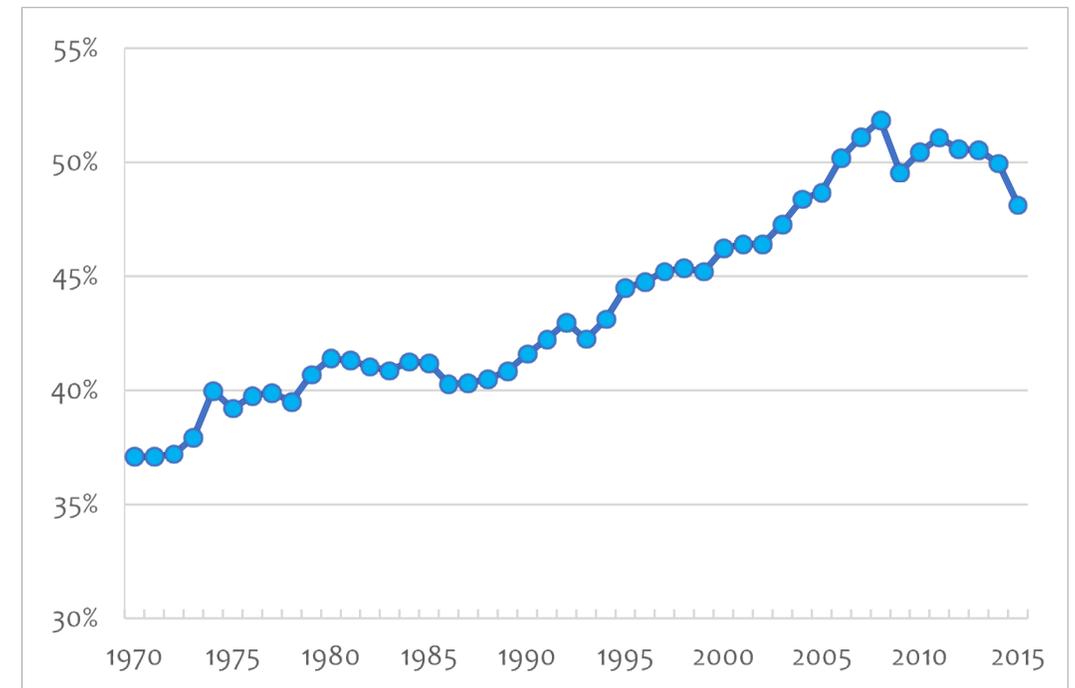
# Point #1: Slowbalization not De-Globalization

Chart 1. World Trade over World GDP (1970-2018)



Source: World Bank's World Development Indicators ([link](#))

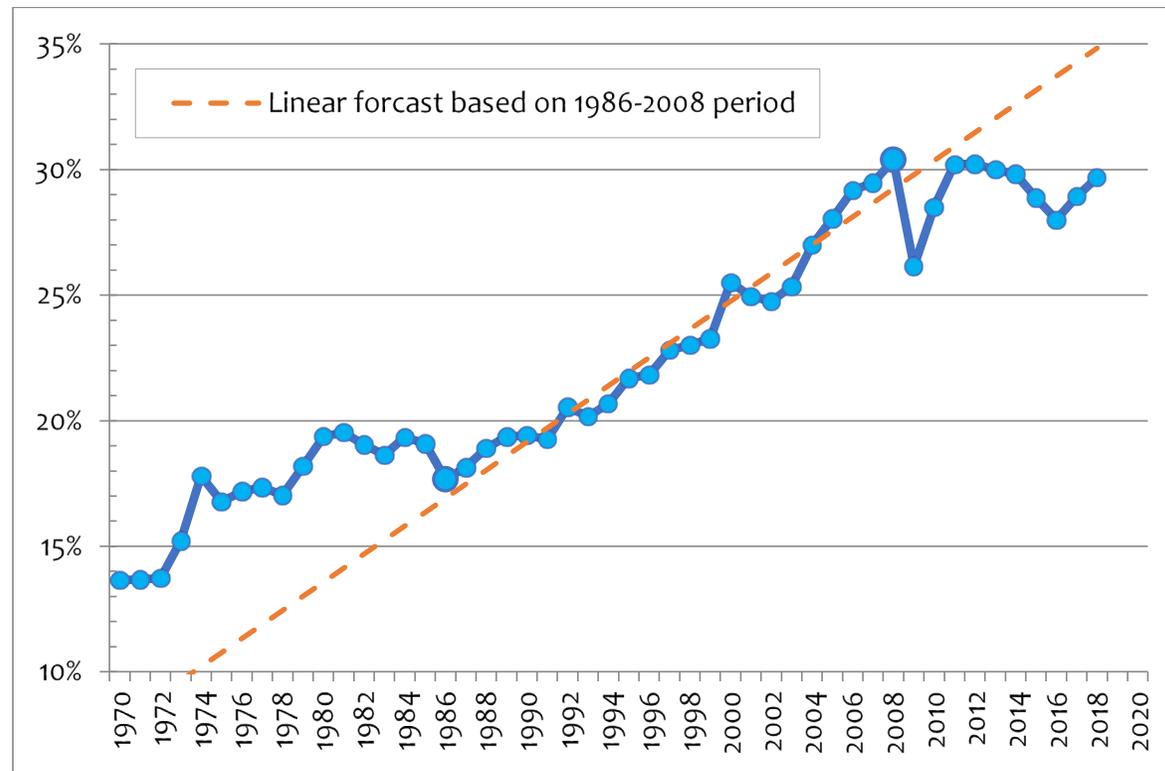
Chart 2. GVC Trade as Percentage of World Trade



Source: Borin and Mancini (2019), as reported in World Development Report (2020)

# Point #2: Slowbalization Was Inevitable

Chart 1. World Trade over World GDP (1970-2018)



Source: World Bank's World Development Indicators ([link](#))

# The Period of Hyperglobalization

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# Point #3: Three Key Drivers of Hyperglobalization

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1. **Technology:** Information and Communication Technology Revolution
  2. **Policy:** Acceleration in multilateral and regional trade liberalization
  3. **Politics:** Political developments that brought about a remarkable increase in capitalist “labour” force
- **Implication:** Disintegration of production across borders

# De-Globalization and Technological Factors

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# Point #4: Technology Will Continue to Foster Trade

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- The ICT revolution certainly did
- Significant new technological developments:
  - Automation / Industrial Robots
  - 3D Printing
  - Digital technologies
  - Open distributed ledgers (Blockchain)
- Although some appear to substitute for labor, they tend to generate increased demand for traded goods (e.g., automation)

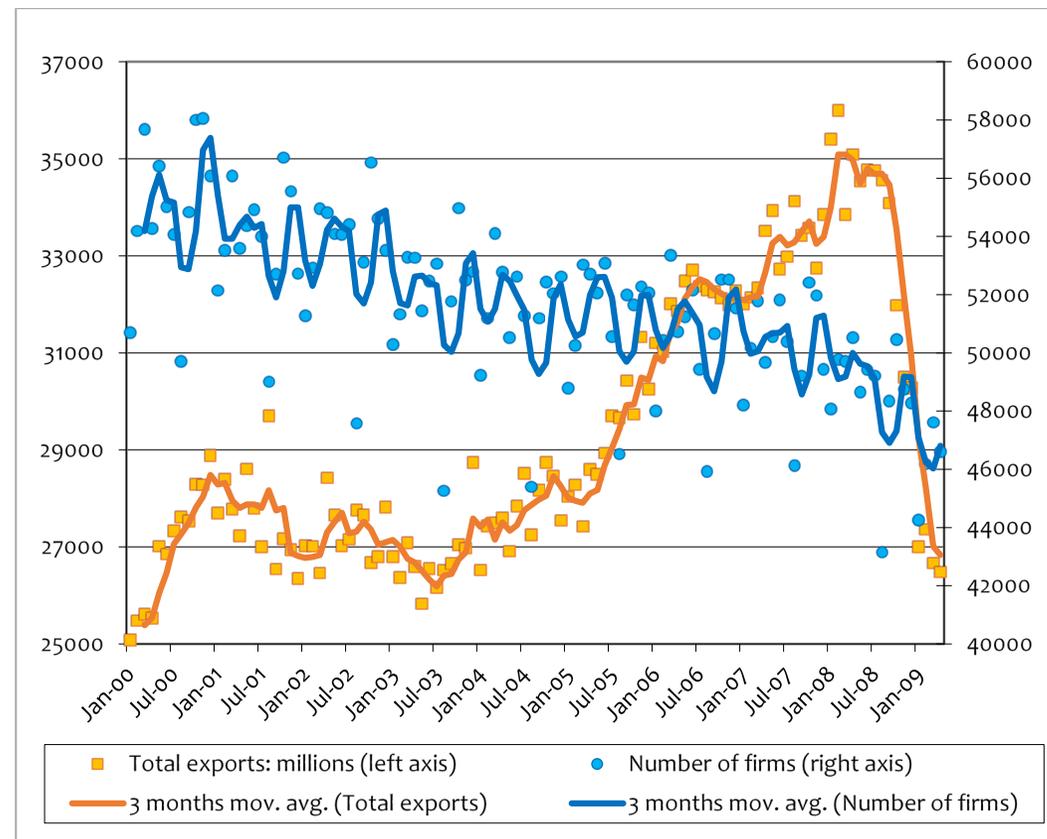
# Point #5: Fixed and Sunk Costs and GVC Stickiness

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- Fixed costs of offshoring generate scale economies (firms rationalize global strategies)
- Fixed costs are also often sunk in nature
- This has important implications:
  - *Ex-ante* decision to offshore  $\neq$  *ex-post* decision to reshore
  - Only persistent shocks generate large relocation

# Stickiness: Evidence

Chart 9. The Extensive Margin of Trade during the Great Recession



Source: Bricongne et al. (2012, Figure 1)

# De-Globalization and Policy Factors

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# Point #6: There Are Signs of Growing Protectionism

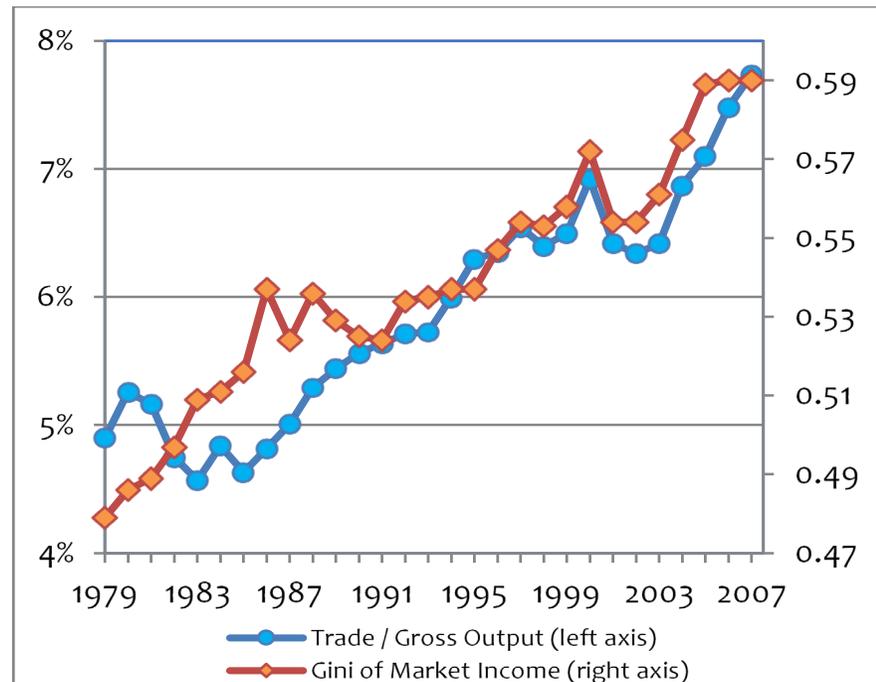
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- Three particularly worrisome developments:
  1. Multilateral liberalization agenda under the umbrella of the WTO is at an impasse
  2. Process of regional liberalization has also largely stalled, and shows signs of being in retreat (Brexit, USMCA)
  3. Recent U.S.-China trade war

# Point #7: Inequality Caused Backlash

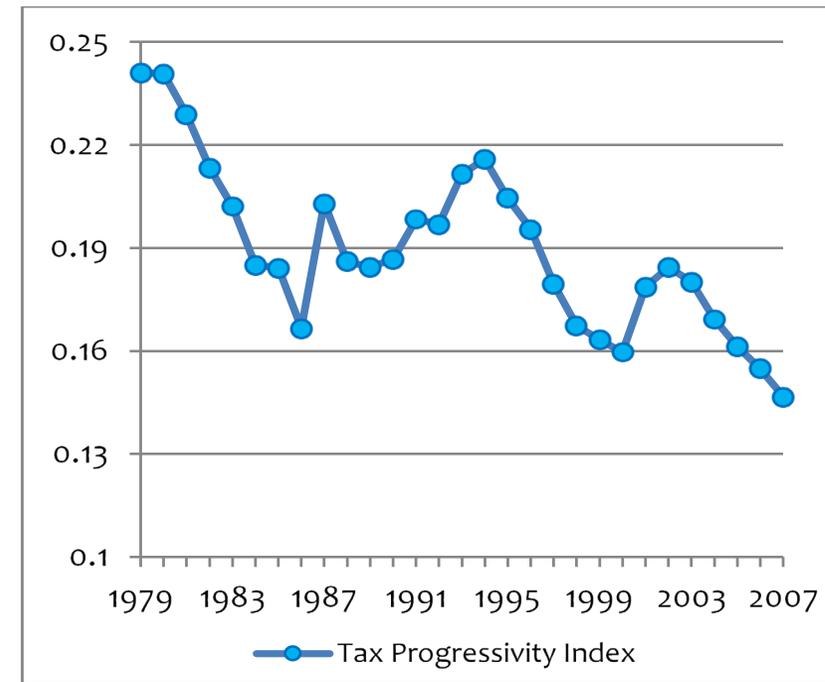
Chart 15. Inequality and Redistribution in the United States

Panel A. U.S. Trade Openness and Gini Coefficient



Source: Antràs, de Gortari and Itskhoki (2017).

Panel B. Index of U.S. Tax Progressivity



Source: Antràs, de Gortari and Itskhoki (2017).

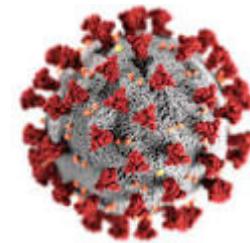
# Point #8: Underlying Forces Will Not Go Away

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- We are likely to continue to see trade-induced inequality
  - Automation, digital technologies might give globalization a second wind, but they will also increase inequality
  
- Will redistribution systems do a better job of compensating the losers from globalization? Unlikely

# Globalization and Pandemics

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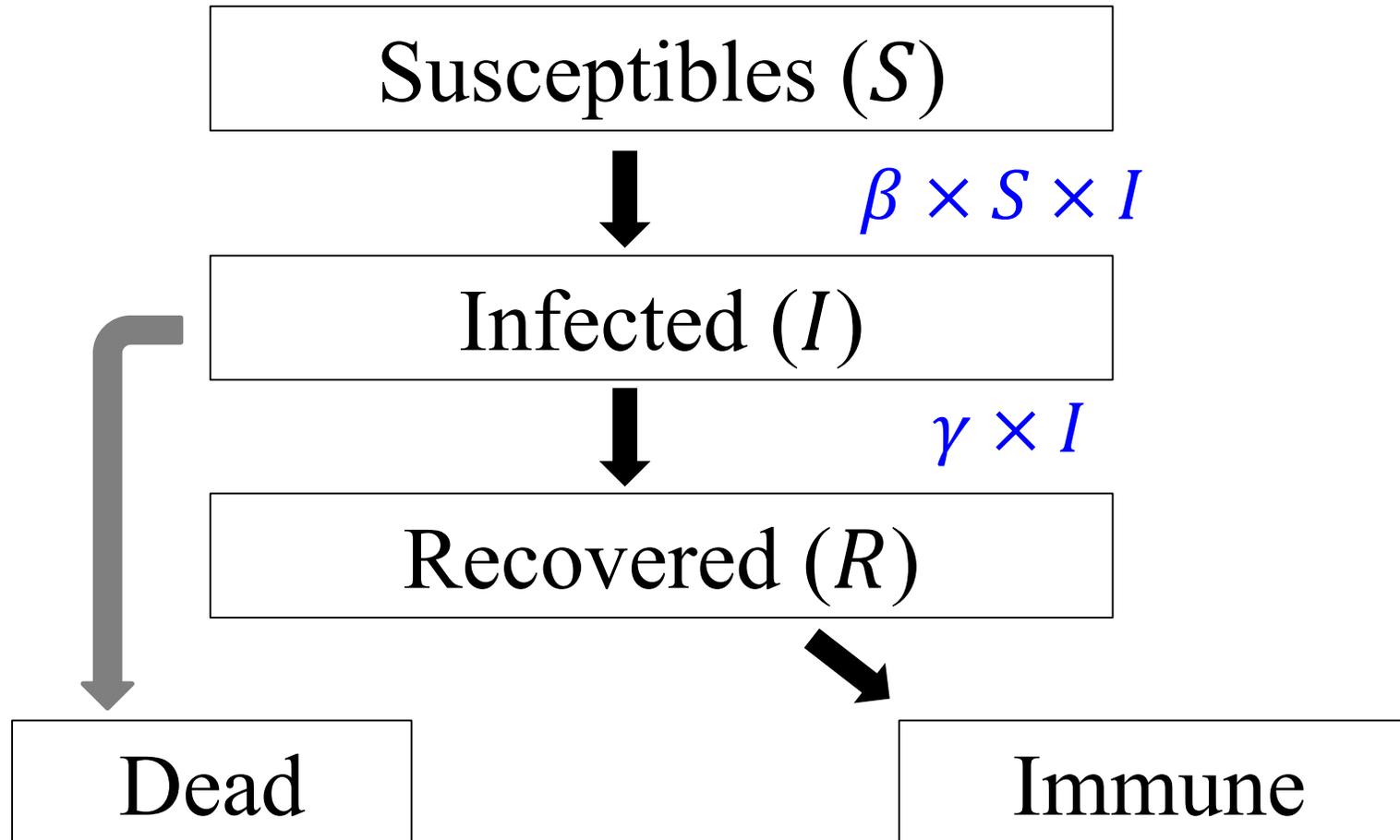


# Antràs, Redding and Rossi-Hansberg (2020)

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- What is the relationship between globalization and pandemics
  - Does globalization make societies more vulnerable to pandemics?
  - How do pandemics affect globalization (present and future)?
- We develop a model in which trade involves human interaction and human interaction transmits disease
  - Gravity model of trade
  - $R_0$  and disease dynamics are endogenous to trade
- Health policy externalities between countries
  - Good domestic policy may not stem an epidemic in the face of bad foreign policy
  - But (in some cases): unilateral incentive to liberalize vis à vis high-risk countries

# SIR Model: Closed-Economy Dynamics



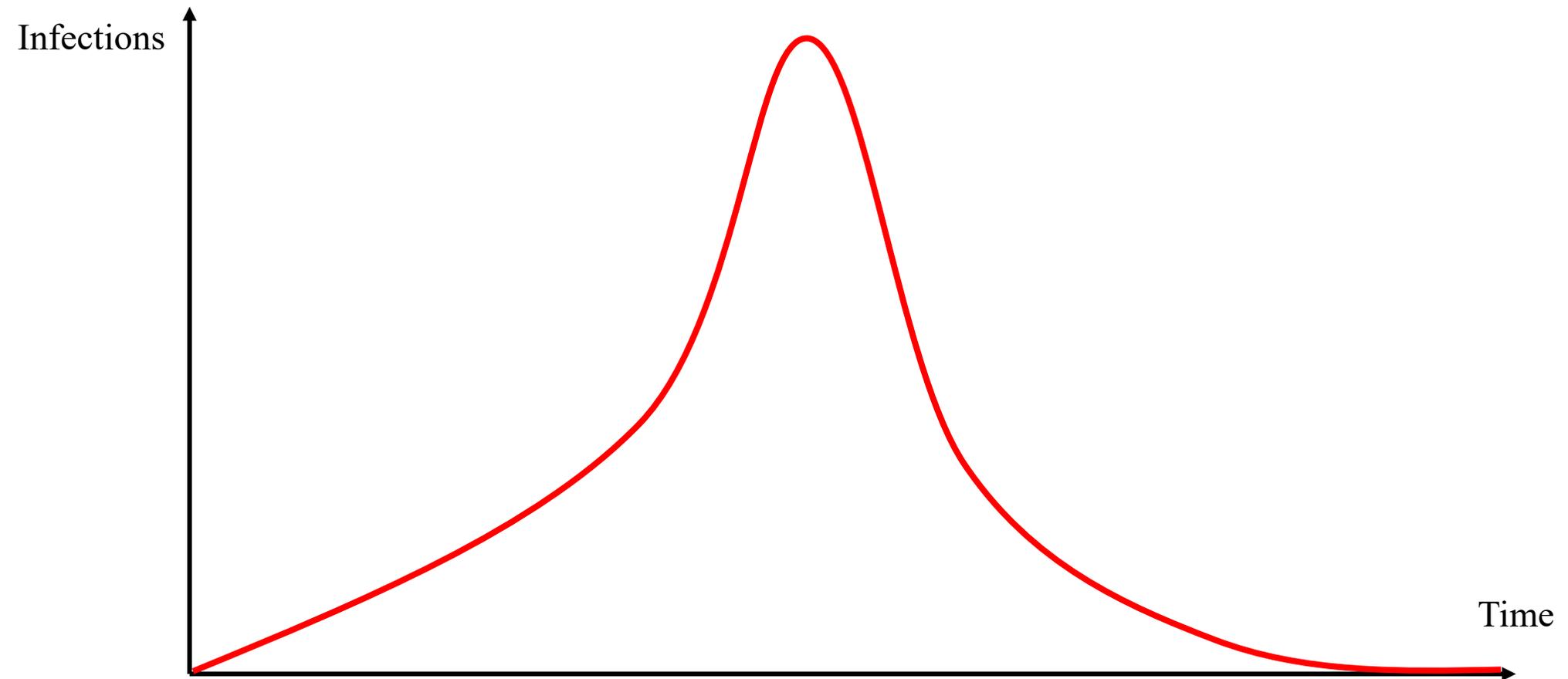
$$S + I + R = 1$$

$$R_0 = \frac{\beta}{\gamma}$$

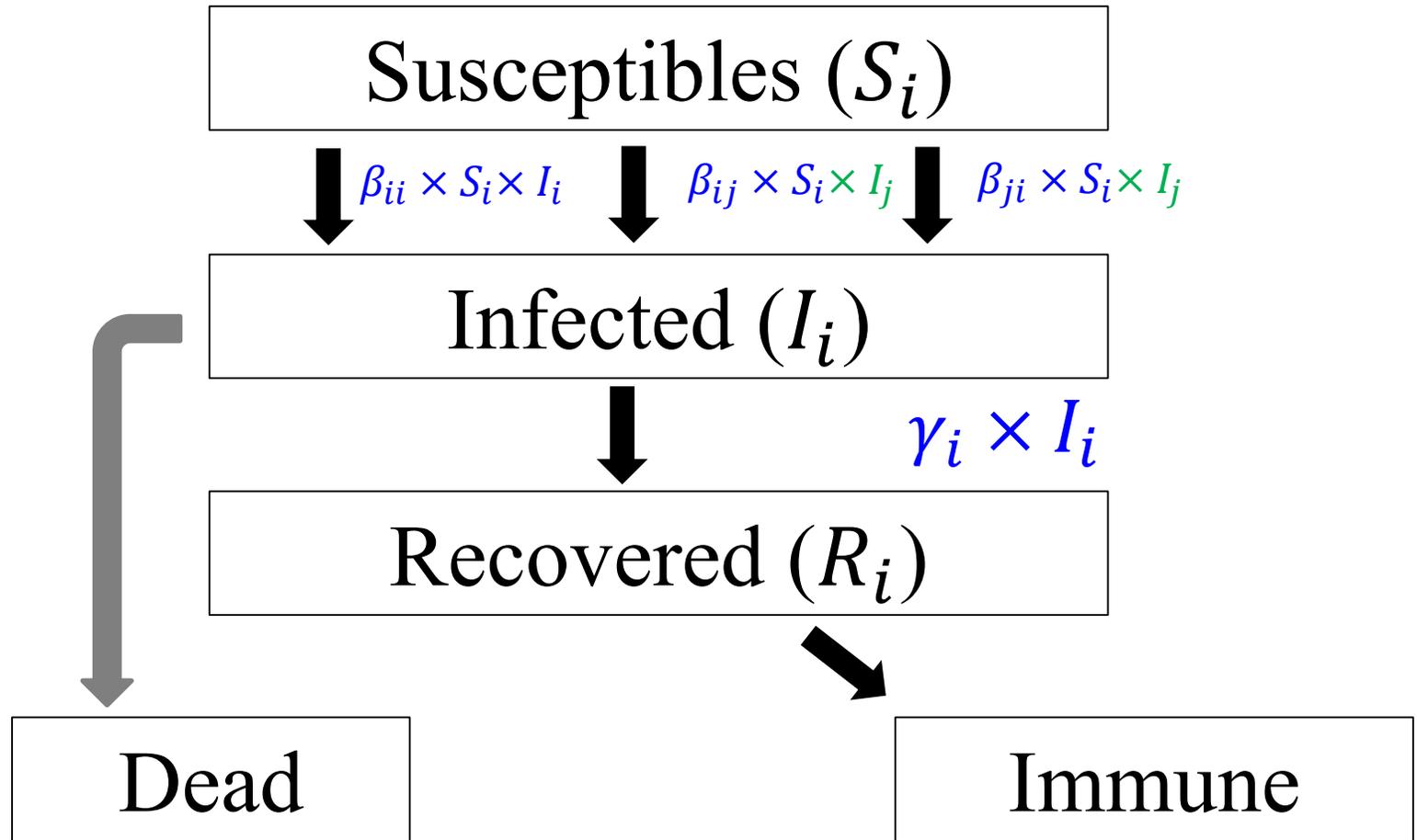
$R_0 > 1 \rightarrow$  Epidemic

# SIR Model: Closed-Economy Dynamics

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# SIR Model: Open-Economy Dynamics



$$S_i + I_i + R_i = 1$$

$$R_0 \geq \max \left\{ \frac{\beta_{ii}}{\gamma_i}, \frac{\beta_{jj}}{\gamma_j} \right\}$$

$R_0 > 1 \rightarrow$  Pandemic

# Four Main Results

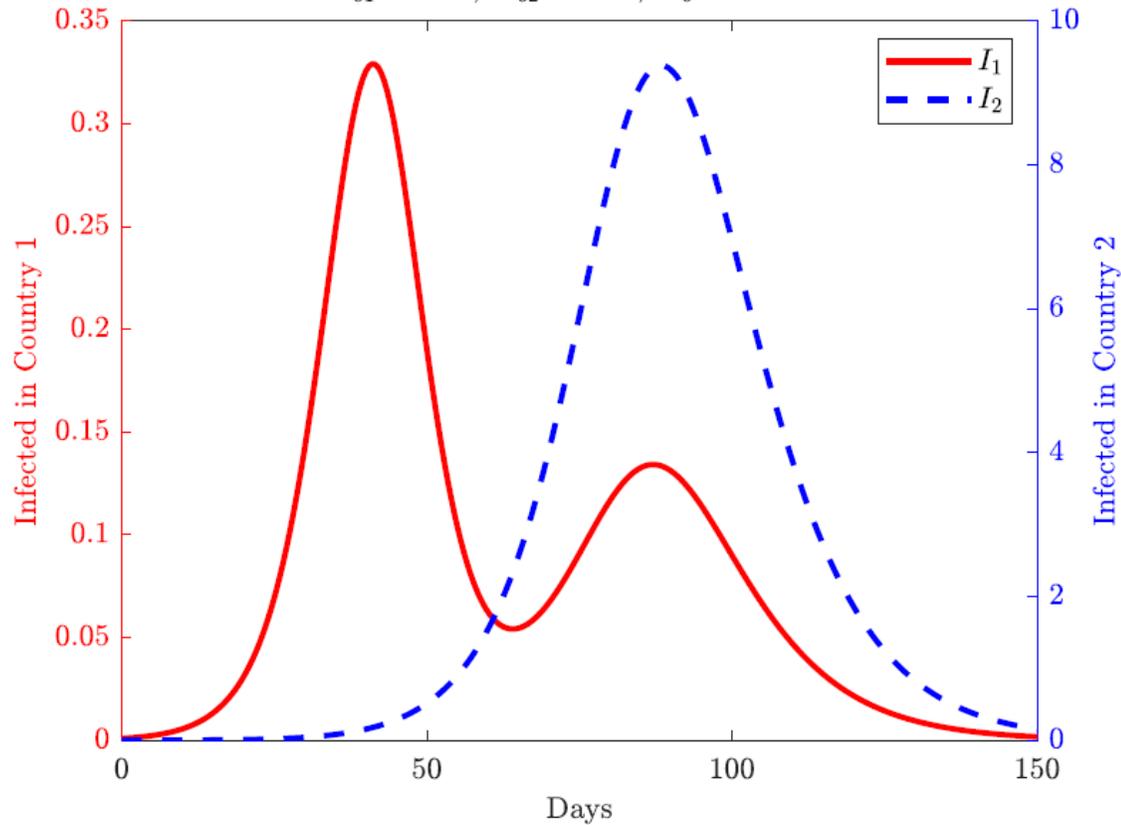
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- Globalization increases likelihood and severity of pandemics if countries are sufficiently symmetric
- Globalization reduces likelihood and severity of pandemics if countries are sufficiently asymmetric in their health environment
- Open-economy disease dynamics can exhibit multiple waves even in the absence of lockdowns or social distancing
- During a pandemic, the ratio of trade to output is expected to fall and then recover, with no long-term effects

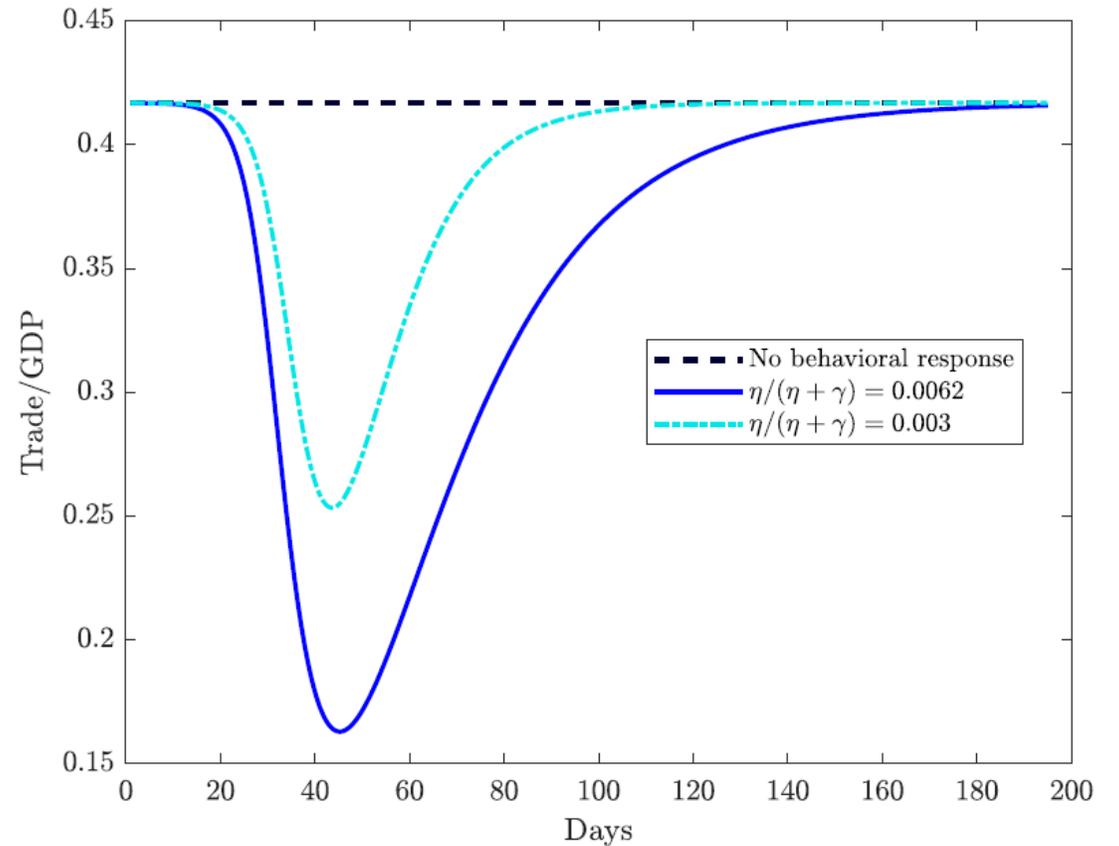
# Illustrations

## Multiple Waves

$\mathcal{R}_{01} = 1.08, \mathcal{R}_{02} = 1.66, \mathcal{R}_0 = 1.66$

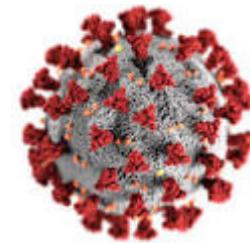


## A Trade Collapse



# The COVID-19 Crisis and the Future of GVCs

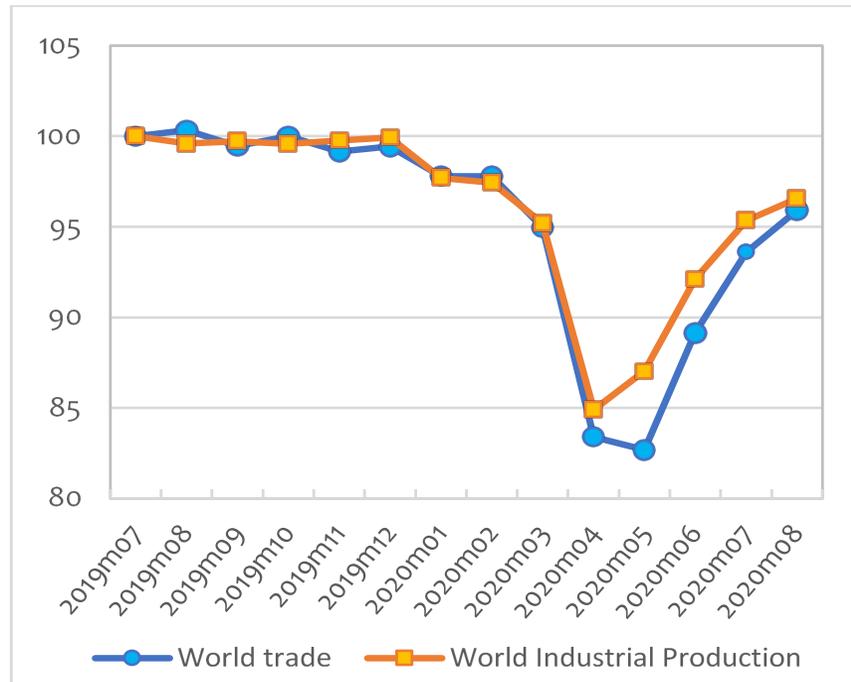
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# Point #9: COVID Halted Trade but Fast Recovery

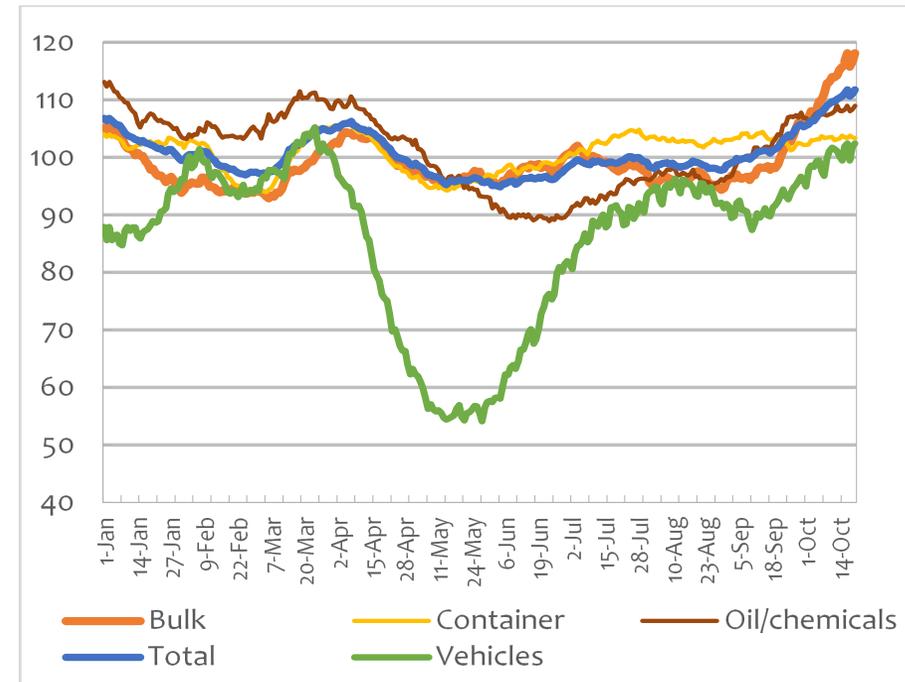
**Chart 16. The Impact of COVID-19 On World Trade**

*Panel A. World Trade and World Industrial Production*  
(Index July 2019 = 100)



**Source:** CPB World Trade Monitor ([link](#))

*Panel B. Estimated Metric Tons of World Exports*  
(30-day moving average in ratio to 2017-19 average)



**Source:** Cerdeiro, Komaromi, Liu and Saeed (2020); AIS data collected by MarineTraffic ([link](#))

# Point #10: COVID-19 and Trade in the Long Run

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- Decline in face-to-face interactions is likely to persist (though obviously in a less dramatic manner)
- But technical change might make virtual interactions a better substitute for face-to-face interactions
- More worrisome is the political landscape post COVID
  - Diplomatic tensions (“China/Wuhan” virus), EU tensions
  - Effects of the pandemic on inequality → populism

# Conclusions

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- Not obvious that world economy is de-globalizing, though there are clear signs of “slowbalization”
- Hard to conclude that technological developments or COVID-19 are likely to fuel an era of de-globalization
- Main challenge for the future of globalization is likely to be institutional and political in nature