



COVID-19: Economic Implications and Policy Response

Dana Tom's Wonky Wednesday
March 25, 2020

Jon Haveman, Ph.D.



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National Economic Education Delegation

• Vision

- One day, the public discussion of policy issues will be grounded in an accurate perception of the underlying economic principles and data.

• Mission

- NEED unites the skills and knowledge of a vast network of professional economists to promote understanding of the economics of policy issues in the United States

• NEED Presentations

- Are **nonpartisan** and intended to reflect the consensus of the economics profession

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Who Are We?

- **Honorary Board: 47 members**

- 2 Fed Chairs: Janet Yellen, Ben Bernanke
- 6 Chairs Council of Economic Advisers
 - o Furman (D), Rosen (R), Bernanke (R), Yellen (D), Tyson (D), Goolsbee (D)
- 3 Nobel Prize Winners
 - o Akerlof, Smith, Maskin

- **Delegates: 500+ members**

- At all levels of academia and some in government service
- All have a Ph.D. in economics
- Crowdsource slide decks
- Give presentations

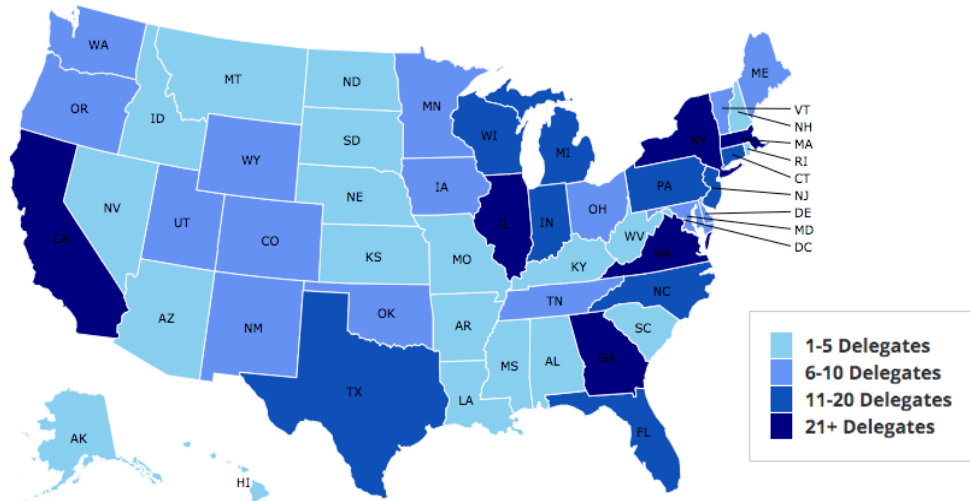
- **Global Partners: 45 Ph.D. Economists**

- Aid in slide deck development



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Where Are We?



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Available NEED Topics Include:

- US Economy
- Climate Change
- Economic Inequality
- Economic Mobility
- US Social Policy
- Trade and Globalization
- Trade Wars
- Immigration Economics
- Housing Policy
- Federal Budgets
- Federal Debt
- 2017 Tax Law
- Autonomous Vehicles



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Credits and Disclaimer

- **This slide deck was authored by:**
 - Scott L. Baier, Clemson University
 - Jon D. Haveman, NEED
- **Disclaimer**
 - NEED presentations are designed to be nonpartisan.
 - It is, however, inevitable that the presenter will be asked for and will provide their own views.
 - Such views are those of the presenter and not necessarily those of the National Economic Education Delegation (NEED).



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Outline

- What is this?
- What does economics offer?
- Economic implications
- Vulnerabilities
- Evidence
- Policy



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What is This?

- A health crisis with enormous economic implications.
- It is:
 - A perfect storm of economic difficulty
 - Supply side
 - Demand side
 - Financial
 - Without a culprit



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Fiscal Policy Timeline

| Phase | Amount (\$ bn) | Action |
|---------------------|--------------------|--|
| Phase 1 March 6 | \$8 | Emergency response, health care, vaccine development, prevention |
| Phase 2 March 18 | \$100 | Paid sick leave, unemployment insurance, free virus testing |
| Phase 3 Pending | \$250 | Direct cash payments to families with income cap; \$1,200 per adult, \$500 per child |
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| | \$100 | Corporate tax changes |
| | \$17 | Community lending |
| | \$500 | Loans & loan guarantees for businesses, incl. airlines |
| | \$180 | State and local governments & Education |
| \$100 | Hospitals | |
| TOTAL | \$1.5-2.5 Trillion | 7-12% of GDP |

What does economics offer?

- **Insight into the transition of the virus from health to the economy.**
- **Data on the magnitude of economic vulnerability.**
- **Cost benefit analysis of social distancing.**
- **Insight into government response:**
 - Appropriate targets of government policy
 - Evaluation of current measures
 - Fiscal and monetary policies
 - What else might be done and why?

GDP Shares

| Countries | Share of World GDP | Manufacturing as a Share of GDP | Services as a Share of GDP |
|---------------|--------------------|---------------------------------|----------------------------|
| United States | 24% | 11% | 77.4% |
| Canada | 2% | 10% | 66.7% |
| UK | 3% | 9% | 71.0% |
| Germany | 5% | 20% | 61.8% |
| France | 3% | 10% | 70.3% |
| Italy | 2% | 15% | 66.3% |
| Spain | 2% | 11% | 67.7% |
| Japan | 6% | 21% | 69.1% |
| China | 16% | 29% | 52.2% |



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Perception of Implications – Timeline

- **Initially**

- Limited geographically – hence fallout limited to Manufacturing
 - o Supply and supply chains

- **Became clear not contained**

- Harder hit to supply chains
- Demand side implications

- **Duration**

- Financial sector implications



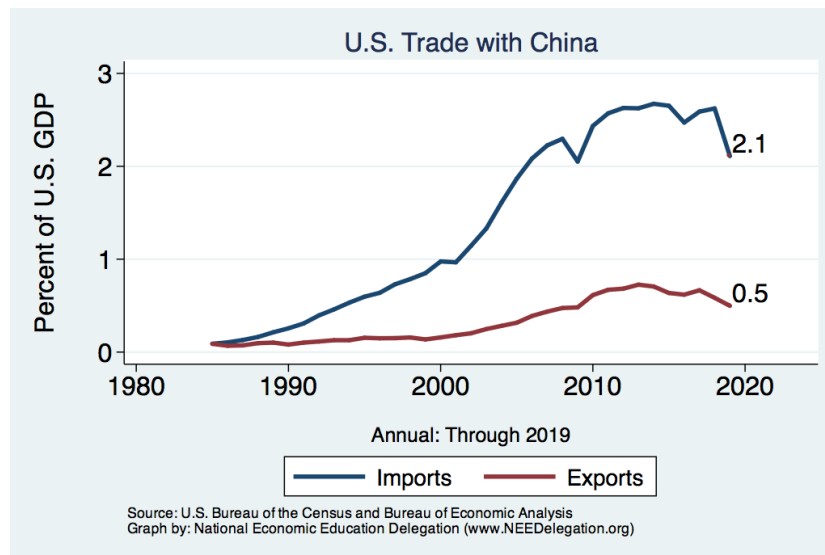
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Perfect Storm for the Economy

- Supply side
- Demand side
- Financial

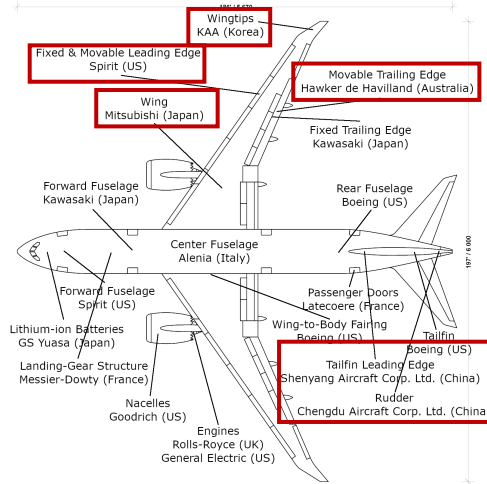
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Trade with China is Significant, but Small



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Coronavirus: Supply Chains



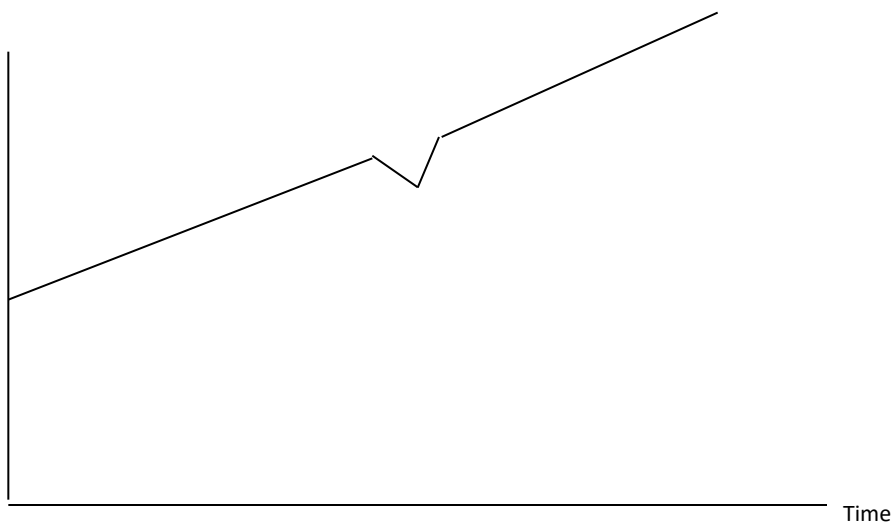
- Boeing 787 Dreamliner
- Parts and components from suppliers all over the world:

- Japan
- Italy
- China
- Australia
- ...

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Modest Impact on GDP of COVID-19

GDP per Capita



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GDP Shares

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Originally, believed that COVID-19 would be largely contained within a few countries and would disrupt manufacturing supply chains.

The more a country's manufacturing relied on these supply chains the bigger the impact on GDP.

Still the effect was likely to be to slow GDP by 0.25 to 0.50 from its baseline prediction.

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Coronavirus: Demand Side

- **Stock market**
 - Postpone major purchases
- **Event cancellations**
 - More broadly tourism
- **Universal pseudo-quarantine**
 - Work from home
 - Eat at home
 - Watch movies at home

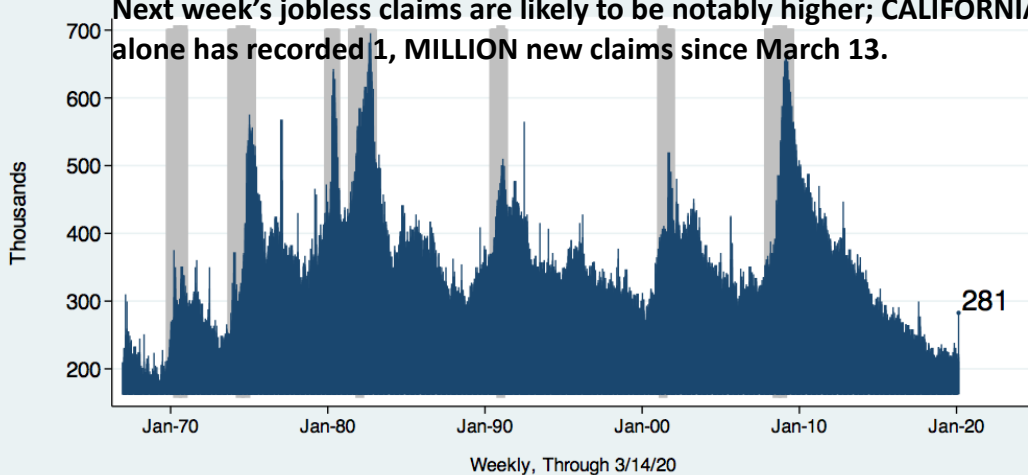
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Vulnerable Industries

| Industry | Share of GDP |
|--|--------------|
| Arts, entertainment, and recreation | 1.1 |
| Management of companies and enterprises | 1.9 |
| Other services, except government | 2.1 |
| Accommodation and food services | 3.1 |
| Transportation and warehousing | 3.2 |
| Retail trade | 5.5 |
| Educational services, health care, and social assistance | 8.7 |
| Manufacturing | 11.3 |
| Real estate and rental and leasing | 13.3 |
| Total | 50.2 |

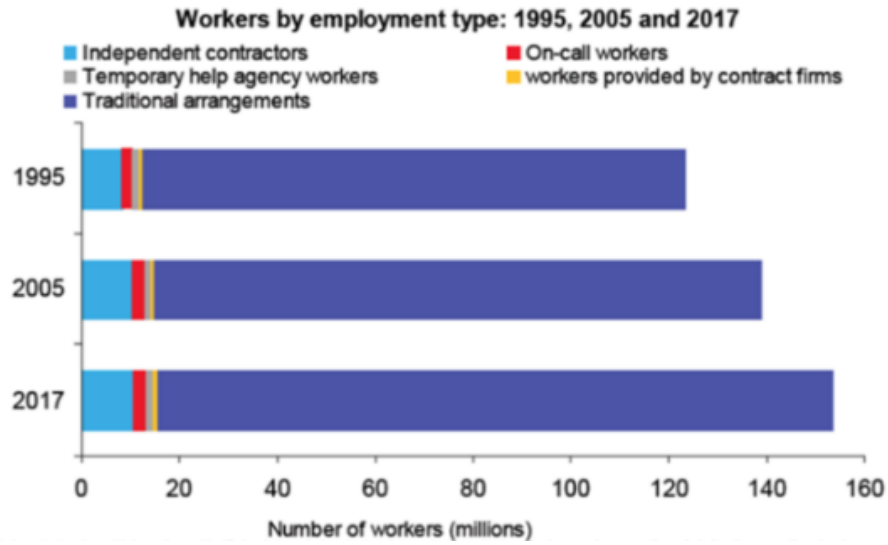
Weekly New Unemployment Claims

Next week's jobless claims are likely to be notably higher; CALIFORNIA alone has recorded 1, MILLION new claims since March 13.



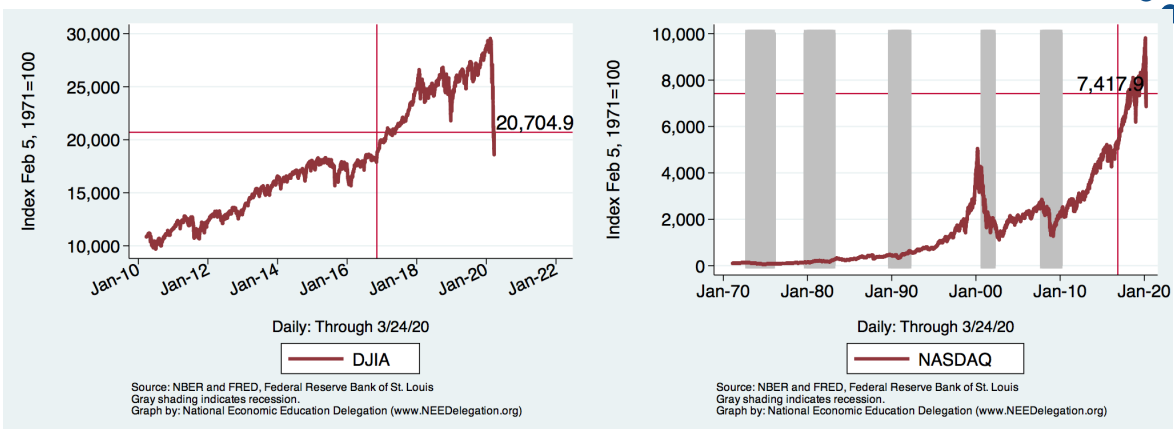
Source: Bureau of Labor Statistics
Graph by: National Economic Education Delegation (www.NEEDelegation.org)

Particularly Vulnerable Workers



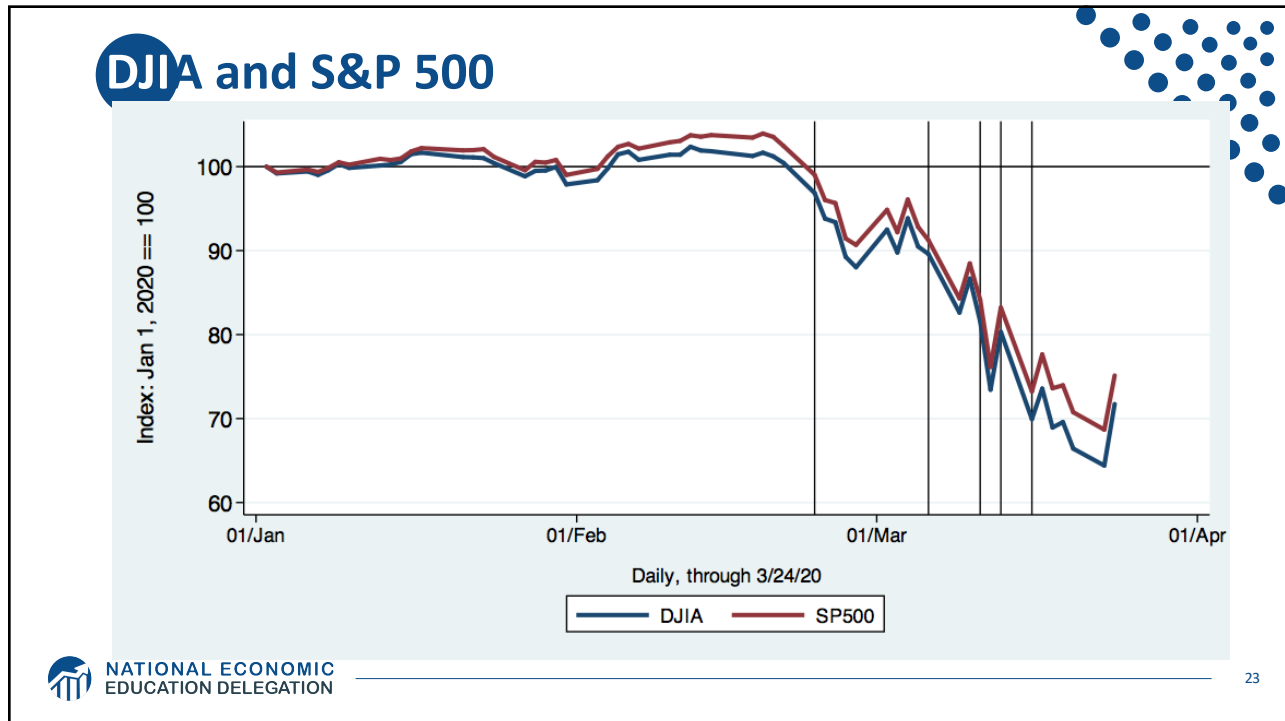
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Financial Markets



Big Q: What happens to banks lending standards and credit markets generally?

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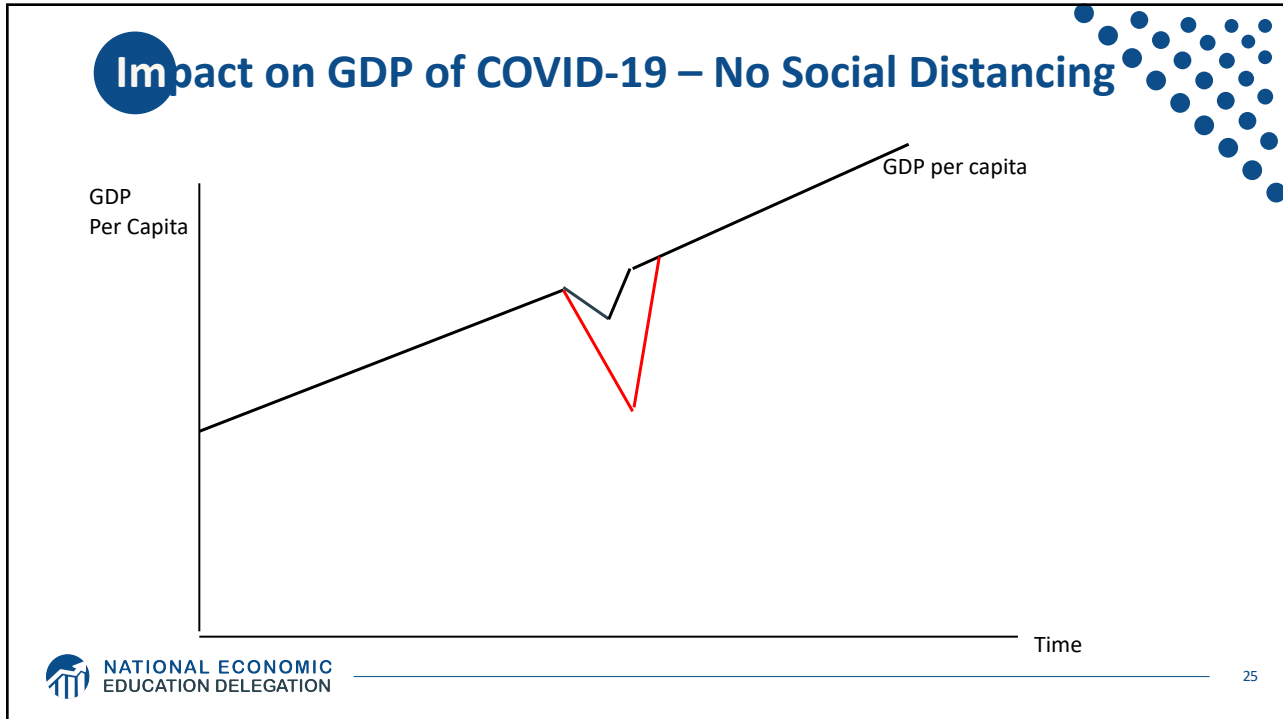
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GDP Shares and Sudden Demand Stops

| Countries | Share of World GDP | Manufacturing as a Share of GDP | Services as a Share of GDP |
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| France | 3% | 10% | 70.3% |
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Epidemiology

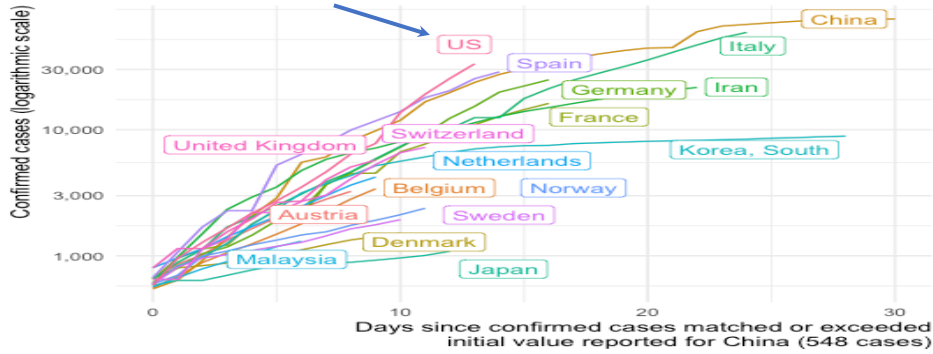
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Confirmed Cases by Country

Focus on the first month: Confirmed Cases

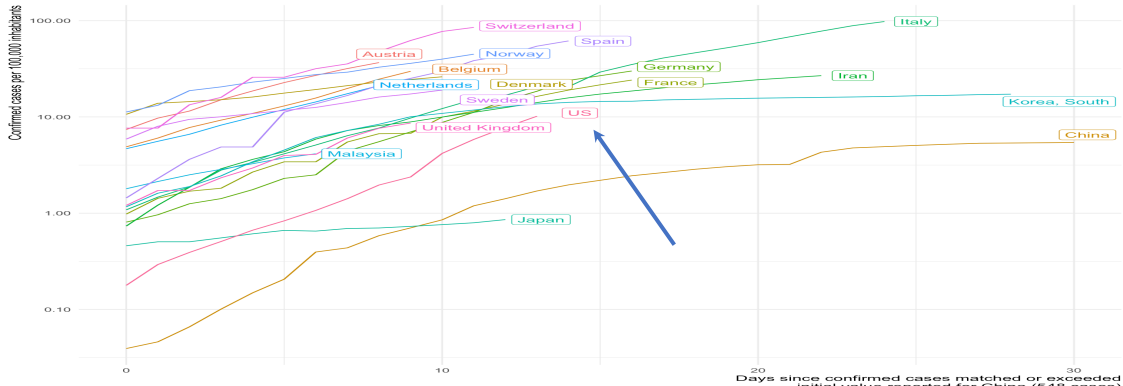


Data as provided by Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE) and obtained on March 23, 2020. The sample is limited to countries with at least seven days of positive event days data. Code and walk-through: <https://joachim-gassen.github.io>.

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Per Capita Incidence Cases per 100,000

Cases relative to population



Data as provided by Johns Hopkins University Center for Systems Science and Engineering (JHU CSSE) and obtained on March 23, 2020. The sample is limited to countries with at least seven days of positive event days data. Code and walk-through: <https://joachim-gassen.github.io>.

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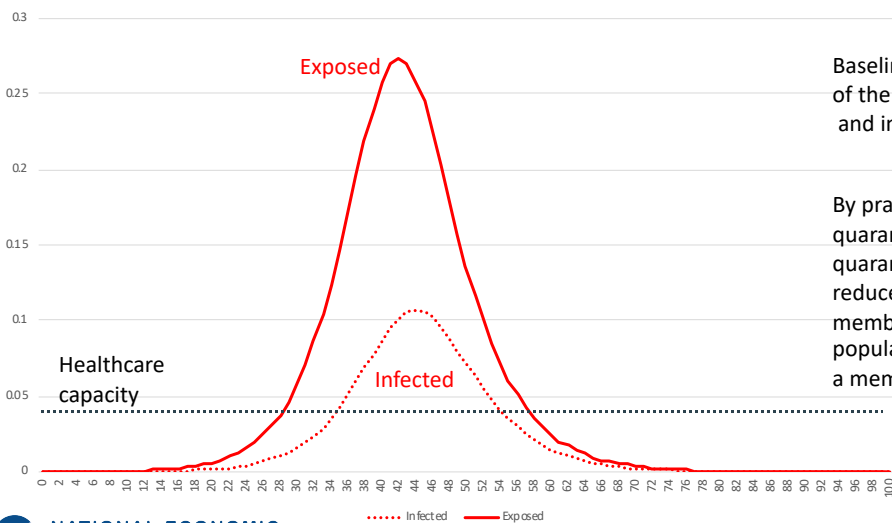
GDP Shares and Impact of COVID-19

| Countries | Share of World GDP | Manufacturing as a Share of GDP | Services as a Share of GDP | Confirmed Cases | Deaths |
|---------------|--------------------|---------------------------------|----------------------------|-----------------|--------|
| United States | 24% | 11% | 77.4% | 63,098 | 886 |
| Canada | 2% | 10% | 66.7% | 3,290 | 30 |
| UK | 3% | 9% | 71.0% | 8,365 | 435 |
| Germany | 5% | 20% | 61.8% | 37,323 | 206 |
| France | 3% | 10% | 70.3% | 25,583 | 1,331 |
| Italy | 2% | 15% | 66.3% | 74,386 | 7,503 |
| Spain | 2% | 11% | 67.7% | 47,611 | 3,445 |
| Japan | 6% | 21% | 69.1% | 1,307 | 45 |
| China | 16% | 29% | 52.2% | 81,661 | 3,281 |

Source: World Bank, Johns Hopkins Coronavirus Resource Center, Worldometer

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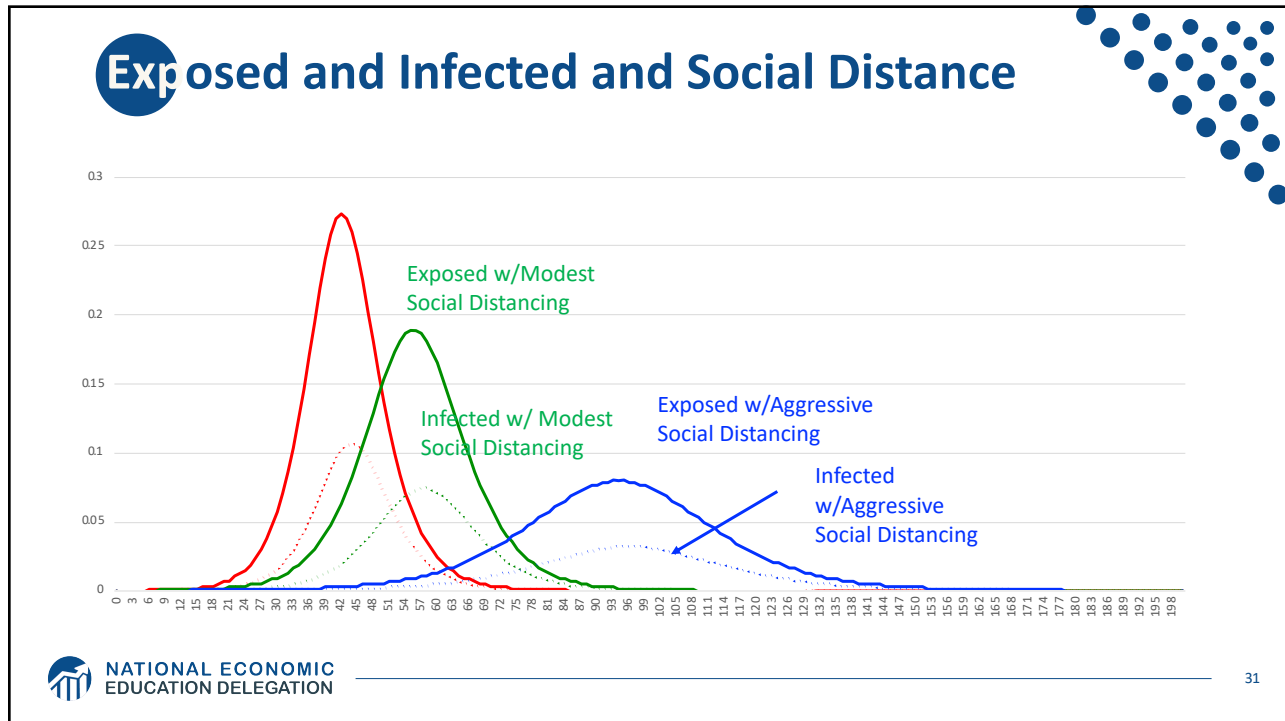
Exposed and Infected – Baseline Case



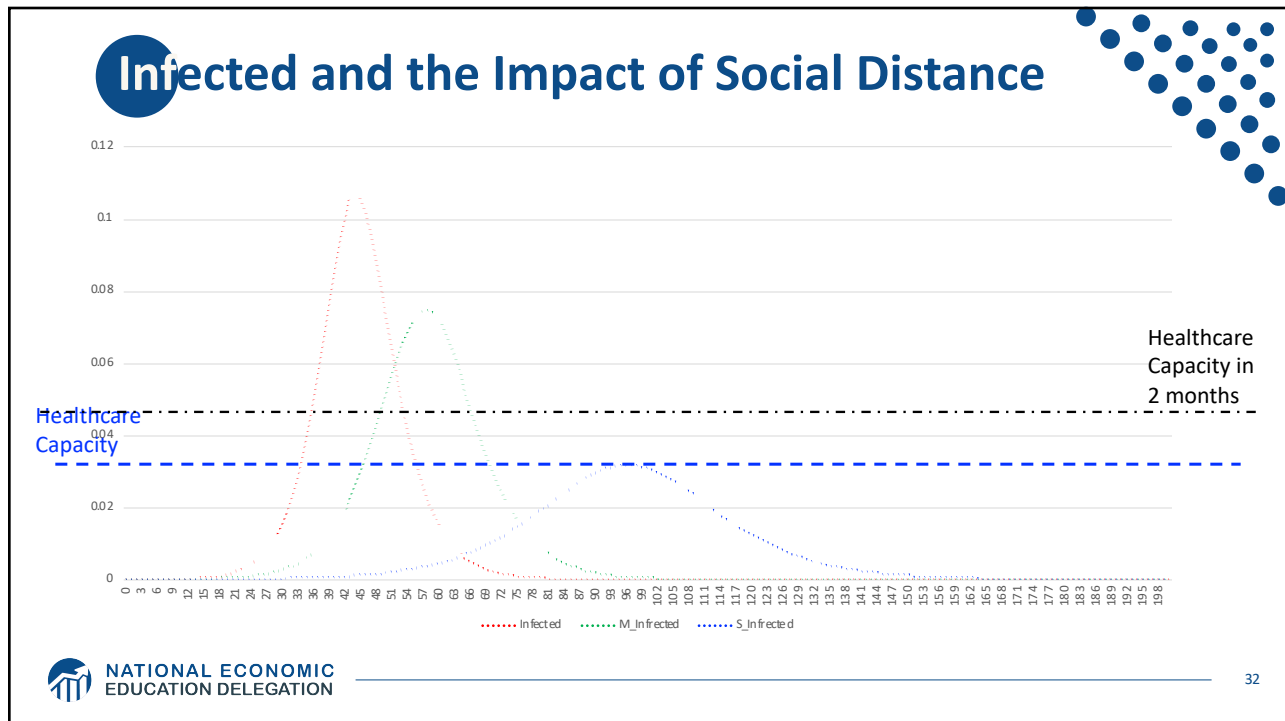
Baseline case of the fraction of the population exposed and infected.

By practicing social distancing, quarantining the sick, and self-quarantining the exposed, you may reduce the likelihood that (or when) a member of the susceptible population will be in contact with a member of the exposed population.

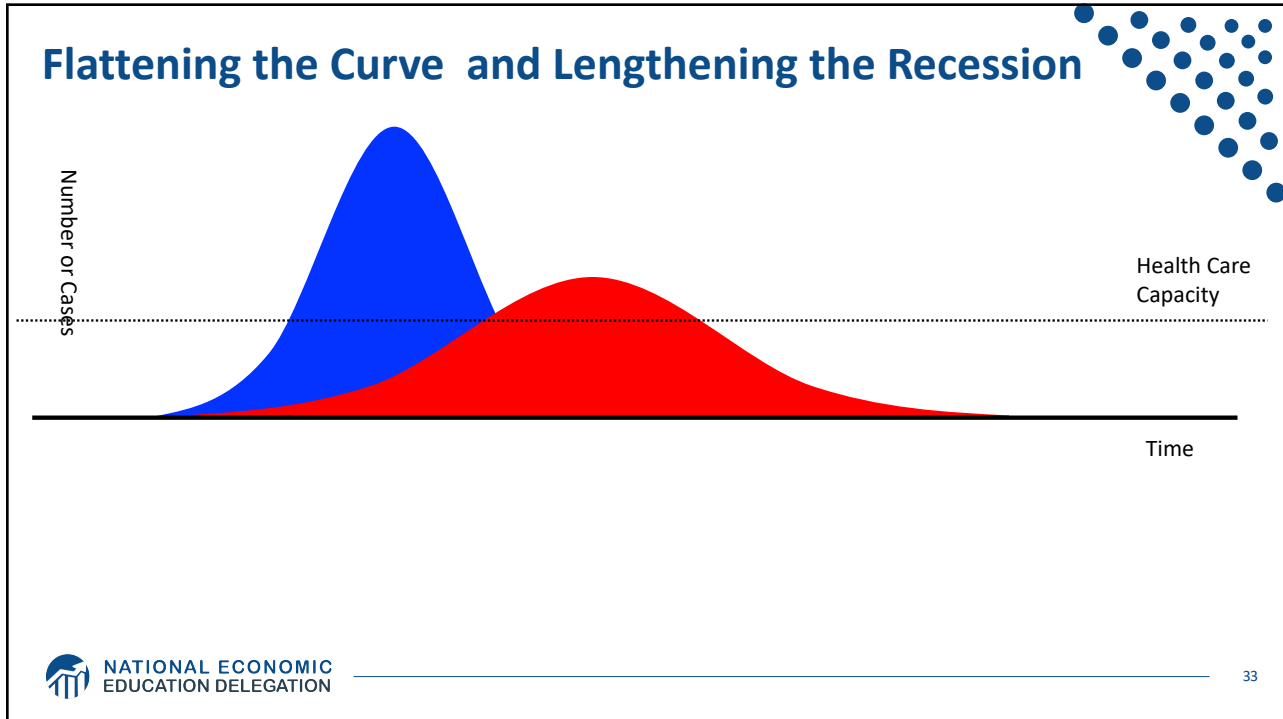
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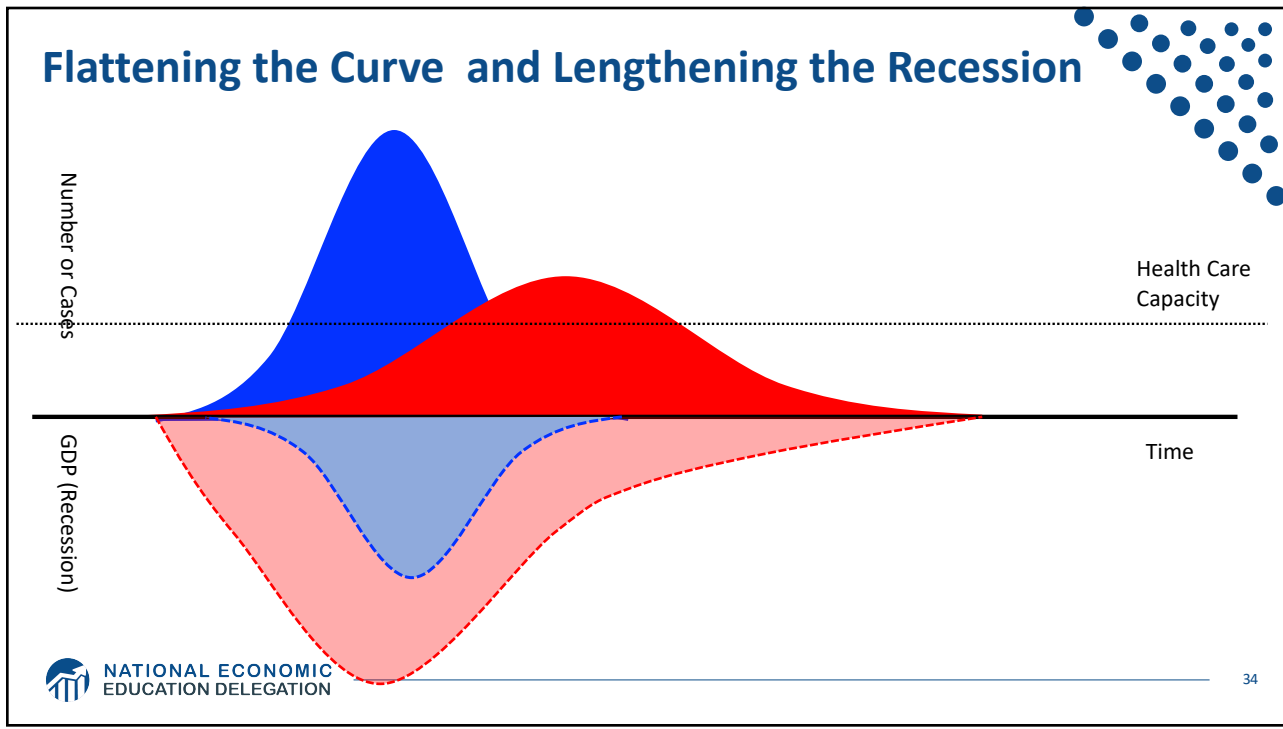
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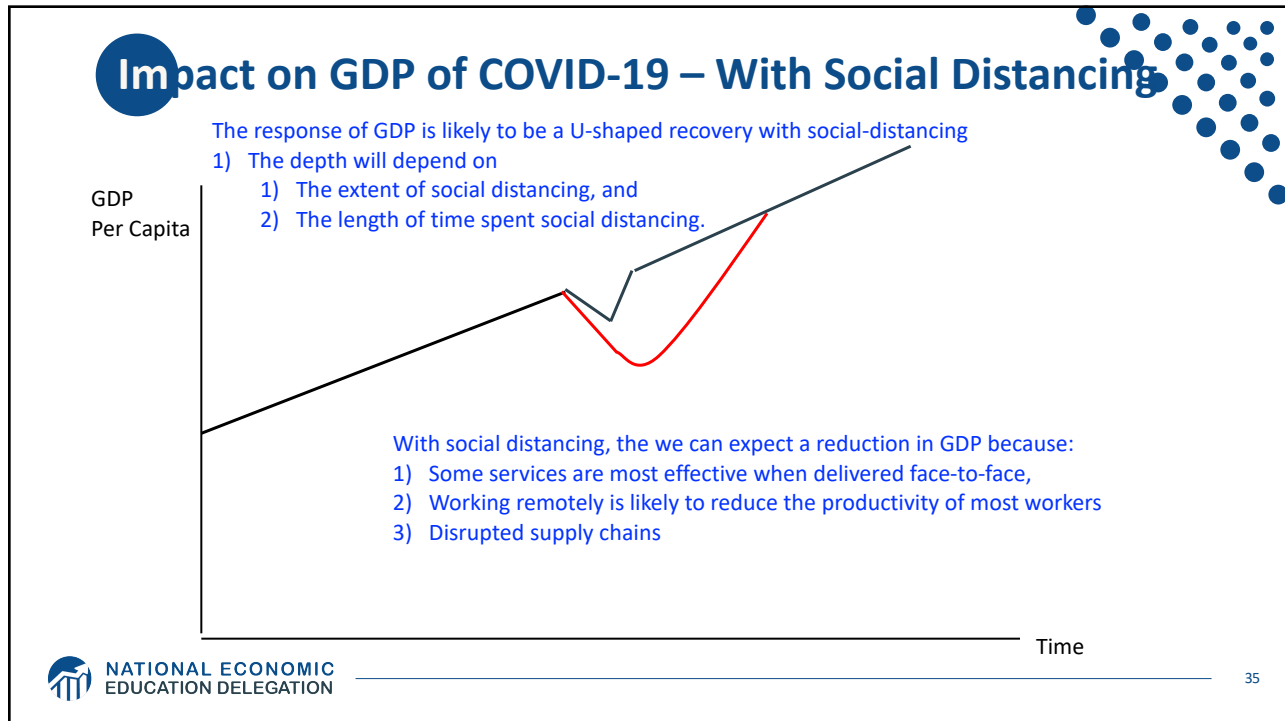
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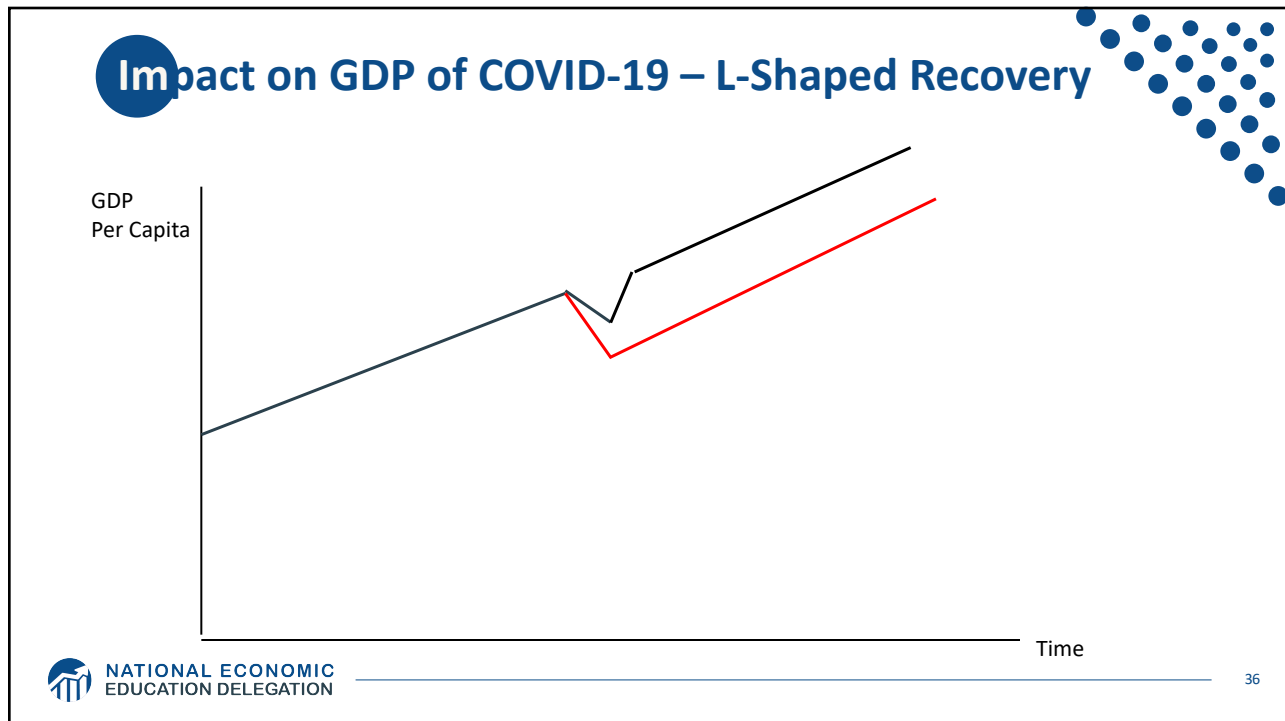
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Cost Benefit Analysis: Tradeoffs

- **No containment policies**

- **Reduced** economic activity
- **More** coronavirus deaths
- **Non-coronavirus deaths**

- **Stringent containment policies**

- **Dramatically reduced** economic activity
- **Fewer** coronavirus deaths
- **Non-coronavirus deaths(?)**



Analysis of Containment Policies

Reduced economic activity < value of additional deaths

Complicated equation – both numerically and philosophically



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Cost Benefit Analysis: Some Additional Info

- **Value of a statistical life: \$5-14 million**

- Cost benefit: Depends on what the right value of a life is.
- Cost benefit: Depends on net difference in # of deaths.

- **Size of the economy: ~\$2 trillion per month**

- Cost benefit: Depends on economic impact
 - o Of unabated virus
 - o Of containment polices



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Potential Economic Costs of Shutdown

- **Unemployment**
 - About one-quarter of workers are affected by stay-at-home orders.
 - Unemployment on this scale has not been seen since the Great Depression.
- **Cascading bankruptcies of small and large businesses.**
 - Businesses face revenue shortfall and are unable to pay their fixed costs and service debt.
- **Forecasts indicate potentially dramatic declines in GDP.**
 - As much as -25% in Q2-2019.



Economic Crisis Tools

Fiscal and Monetary Policy

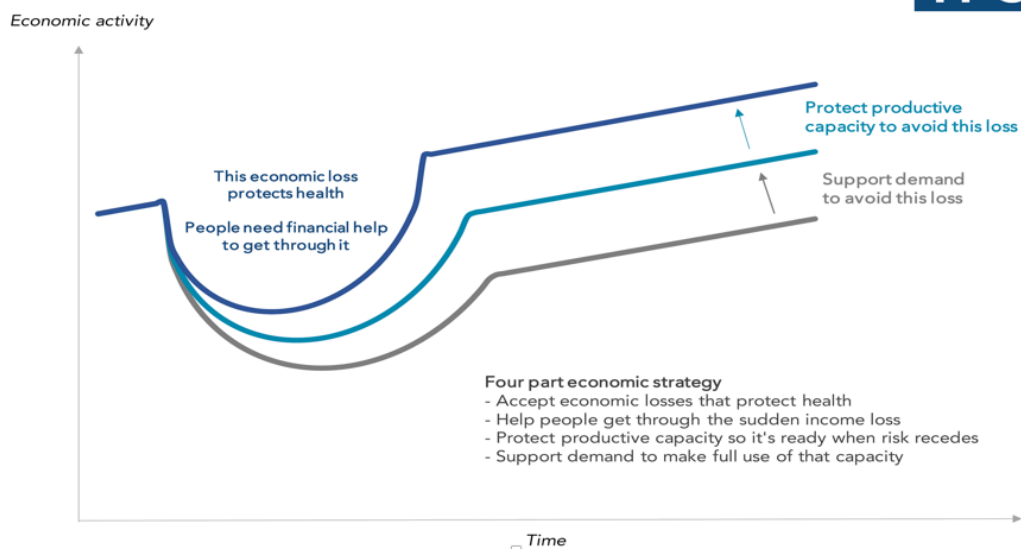


Priorities for Policy

- **Policies to protect public health**
 - Long run benefits for the economy.
 - Though there may well be short run pain.
- **Policies to protect the economically vulnerable**
- **Policies to maintain the economy**
 - Help firms stay in business, maintain ties with workers
- **Policies to stimulate aggregate demand**
 - Long run – once the economic switch is turned back on

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Economic Policy in the Time of COVID-19



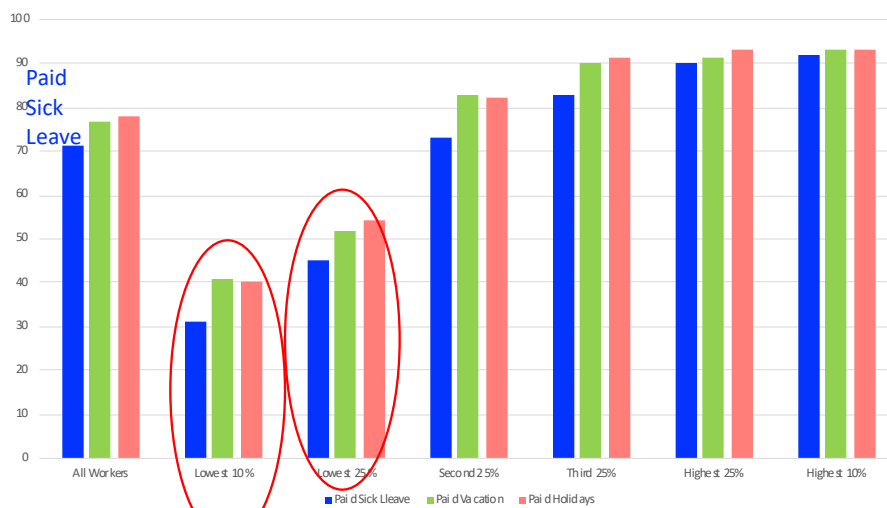
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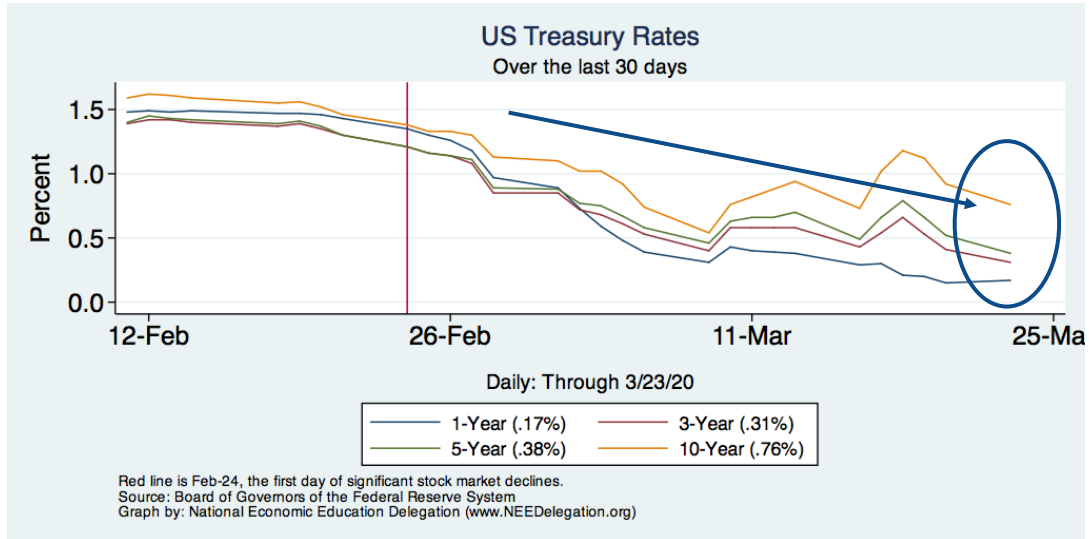
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Paid Leave by Income Category



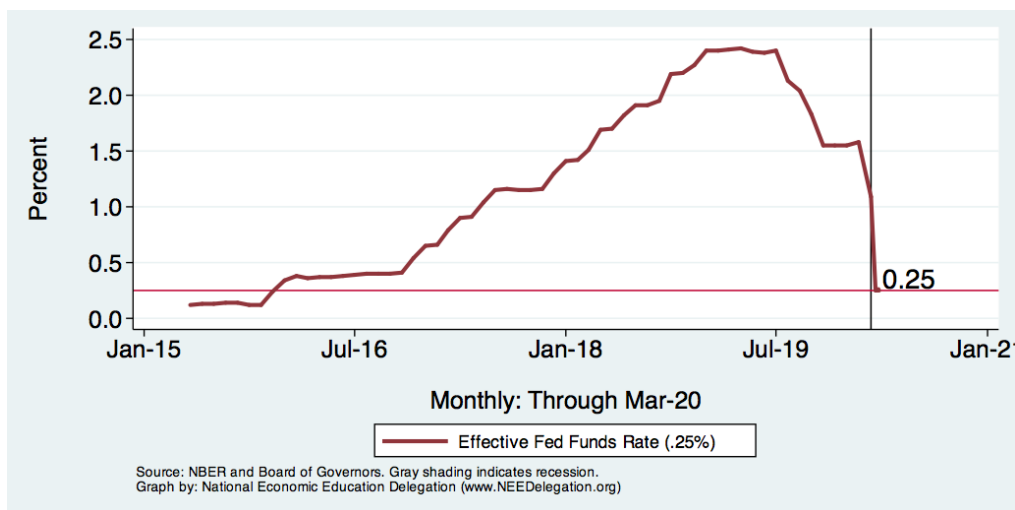
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US Treasury Rates: A Safe Haven?



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Federal Reserve Response: Federal Funds Rate



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The Most Important Roles of Monetary Policy

I. Macroeconomic Stabilization

- Raise aggregate demand by changing interest rates. To raise demand it needs to lower interest rates
 1. Traditional Monetary Policy uses open market purchases of short-term US Treasuries to lower short-term interest rates (in particular the federal funds rate).
 2. Quantitative Easing (QE) is where the Fed buys long-term Treasuries and Mortgage-backed securities to more directly affect these rates,.

II. Insuring Liquidity in Lending Markets by acting as the “Lender of Last Resort”

- The Fed has unlimited access to dollars and when the private sector does refuses to make illiquid loans, the Fed can. This insures that borrowers have access to credit.
 1. The Fed can make loans directly or by buying new debt issues (thereby increasing “market liquidity.”)
 2. The Fed can also provide loans to intermediaries, so that they in turn can provide loans to customers. (there by increasing “funding liquidity.”)



Macroeconomic Stabilization:

I. Short-term Interest Rates

1. March 3, the Fed lowers the target range for the federal funds rate from 1.75-1.5 percent to 1.25-1.0 percent.
2. March 15, the Fed lowers the target range to 0.25-0.0 percent, essentially 0.

II. QE

1. March 15, the Fed announces a QE program
 1. \$500 billion in Treasuries and
 2. \$200 billion in agency mortgage-backed securities.
2. March 23, QE is unlimited and should include commercial mortgage-backed securities



Insuring Market Liquidity

March 17-23, the Fed announced:

1. The Primary and Secondary Market Credit Facilities which will allow the Fed to buy corporate bonds so that companies can continue to pay workers.
2. The Commercial Paper Funding Facility which will allow the Fed to buy short-term debt of companies.
3. A Main Street Business Lending Program where the Fed will aid the Small Business Administration in making loans.



Insuring Funding Liquidity

March 17-23, Lending Facilities for:

1. Money Market Mutual Funds who buy commercial paper.
2. Primary Dealers who provide short-term financing in many different asset markets, such as repurchase agreements (repos).
3. Financial Institutions that trade state and local municipal bonds.
4. Foreign central banks, so that they can be “lenders of last resort” for foreign financial institutions who want dollar liquidity.



Monetary Policy Timeline

| Date | Action |
|----------|--|
| March 3 | Fed Funds Rate Lowered 1.75-1.5 to 1.25-1 |
| March 15 | Fed Funds Rate Lowered to 0.25-0, effectively zero |
| March 17 | Commercial Paper Funding Facility Primary Dealer Credit Facility |
| March 18 | Money Market Mutual Fund Liquidity Facility |
| March 23 | Primary Market Corporate Credit Facility Secondary Market Corporate Credit Facility Term Asset-Backed Securities Loan Facility |
| TBA | Main Street Business Lending Program |



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What is next and what else can be done?

- **How do we pay for it?**
 - Run larger deficits
 - Run the printing press MMT
 - Firms and/or individuals borrow through Treasury
- **Additional fiscal measures.**
 - Buyer of last resort (Piketty and Zucman)
 - Employer of last resort (MMT)
- **Additional cash disbursements.**
- **Ultimately: more fiscal policy to restart the economy.**



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What have we learned? Positive Take-Aways

- **May improve enhance the delivery of some services.**
- **Encourage firms, households, governments to have a business continuity plan.**
- **In an integrated world, this will likely not be the last pandemic...**
 - Improve social insurance for these types of events.
 - Allow more flexibility to governments and firms to respond.
- **Potential learning to be carried forward:**
 - Telecommuting
 - Telehealth
 - The value of the "walk around the block".



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Conclusion

- **COVID-19 is a health crisis that has macroeconomic implications.**
- **Negative GDP growth 2020:Q2. -25% is possible.**
- **The macroeconomic effects are derived from a perfect storm.**
 - Supply, demand, and financial.
- **Fiscal and monetary response should be targeted at health crisis first and income and employment maintenance.**
 - And it largely is. Fed policy will not stimulate the economy, but may well preserve it.
- **Have to be ready to stimulate the economy when health crisis is over.**



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Thank you!

Any Questions?

www.NEEDelegation.org

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