

Donna K. Ginther
Dean's Professor of Economics
Director, Institute for Policy & Social Research, University of Kansas
Research Associate, National Bureau of Economic Research

March 2020





Caveats

- These slides were completed on March 31, 2020
- Things will have changed by the time you see this presentation.
- This presentation is based on my readings and data from sources noted throughout.





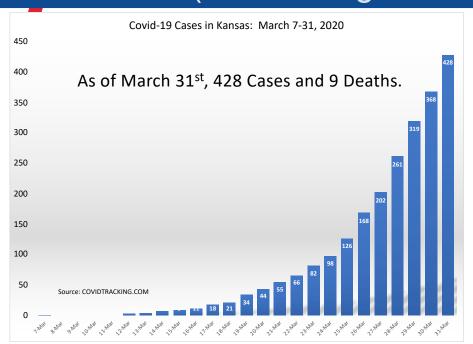
Overview

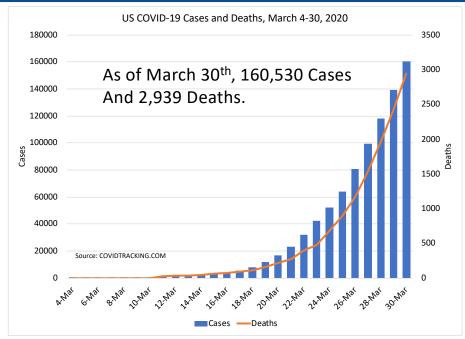
- Update on the Coronavirus in Kansas and the United States
 - We have not yet bent the curve
- What's happened to the economy so far?
 - Stock Market
 - Unemployment Claims
- Policy responses
 - History Lesson—Economic Impact of 1918 Influenza
 - Federal Reserve Board Action
 - CARES Act





The US and Kansas have a Pandemic (data through March 30, 2020 4:00 PM)





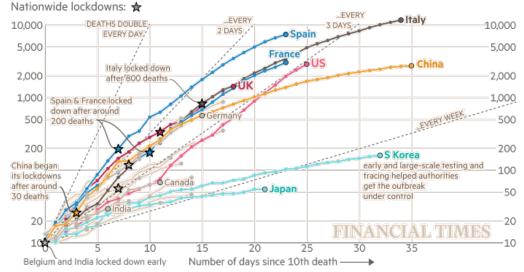
The University of Kansas

In both Kansas and the US, we're experiencing exponential growth in cases.

COVID-19 Deaths by Country

Coronavirus deaths in Italy, Spain, the UK and US are increasing more rapidly than they did in China

Cumulative number of deaths, by number of days since 10th death



FT graphic: John Burn-Murdoch / @jburnmurdoch Source: FT analysis of Johns Hopkins University, CSSE; Worldometers; FT research. Data updated March 30, 19:00 GMT

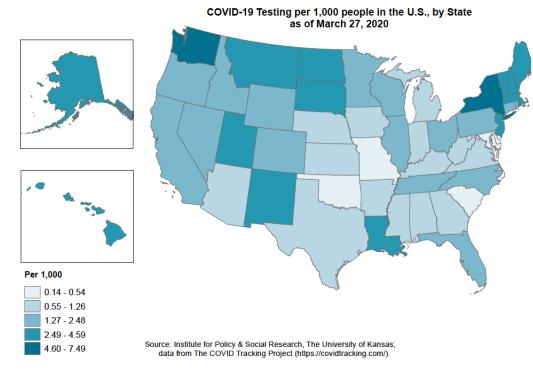
- Financial Times shows that US deaths from COVID-19 are doubling every three days.
 - No bend in the curve yet.
- Death rates in US are increasing at a faster rate than in China at the same time as the epidemic.





Testing has been uneven across the country

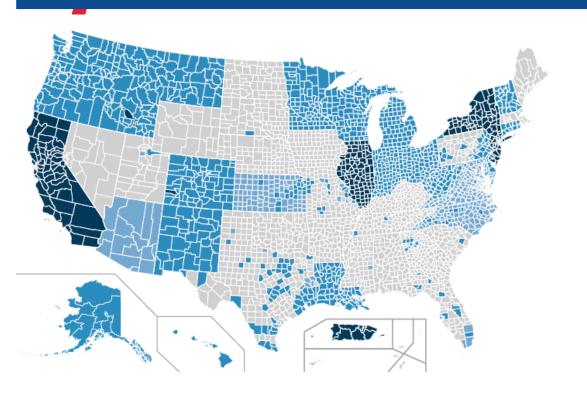
- We used data from the COVID Tracking project to calculate the number of tests per 1,000 people in each state
 - Kansas has performed only 1.18 tests per 1,000 people.
 - Missouri & Oklahoma are lagging with < .5 tests per 1,000 people.







Shelter-in-place Orders are being imposed



- As of March 30th, these are the locations where shelter-in-place orders have been issued.
 - Kansas, Kansas City Metro
- California, New York, New Jersey, Illinois, and Puerto Rico issued orders first.

Source: By Minh Nguyen - Own workData:

https://commons.wikimedia.org/w/index.php?curid=88465988





Recall that to help the economy we need to stop the virus

- So far, we have not bent the COVID-19 case curve.
 - Cases and deaths are continuing to increase.
- States and localities are doing more to enforce social distancing.
 - Social distancing is the most effective way to slow the spread of the virus.
- It will take another two weeks to see whether the policies we have now will eventually bend the curve.

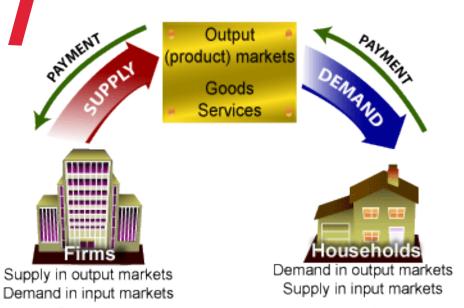


COVID-19 and the US & Kansas Economies

It's not good.



Circular Flow of the Economy



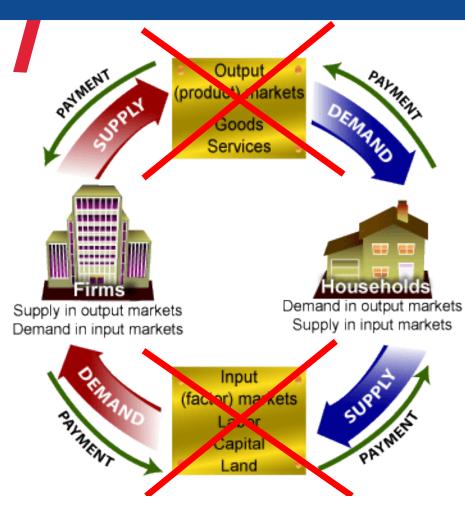
- Factor Markets Supply Labor, Capital and Land
- Output Markets Provide Goods and Services.
- Payments from from Firms to Households







Circular Flow of the Economy is Stopped with COVID-19



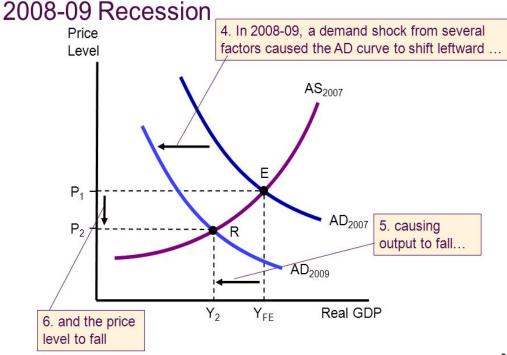
- Households are under shelter-in-place orders
- Production is slowing and stopping in several sectors
 - Especially Services
- Financial Markets are extremely volatile





A Decrease in Aggregate Demand from COVID-19

An AD and AS Analysis of Two Recessions:



- By shutting down the economy we're essentially decreasing aggregate demand.
- Real GDP will fall as will prices (on certain goods like services)
 - What about toilet paper?





Public Goods & Externalities

- **Public goods** (**social** or **collective goods**) are goods that are nonrival in consumption and/or their benefits are nonexcludable.
 - Public goods have characteristics that make it difficult for the private sector to produce them profitably (market failure).
- An externality is a cost or benefit resulting from some activity or transaction that is imposed or bestowed upon parties outside the activity or transaction.

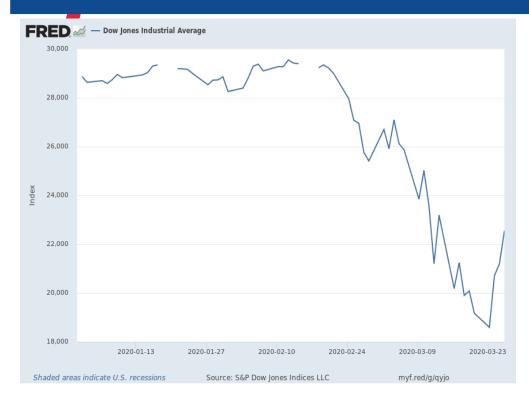


Public Health is a Public Good

- According to Dean Sandro Galea at Boston University:
 - First, building on the classical definition of public goods, public health is a collective property that depends principally on the conditions that create public health (i.e. the structural, social, and political forces that produce health of populations) rather than on any individual action. These conditions are features of social structures that are not owned and not buyable by individuals.
 - Second, public health, the health of the collective, represents a classic example of shared gain from a shared good.
 - Source: https://www.bu.edu/sph/2016/01/10/public-health-as-a-public-good/



The Stock Market: January 1 – March 26,2020



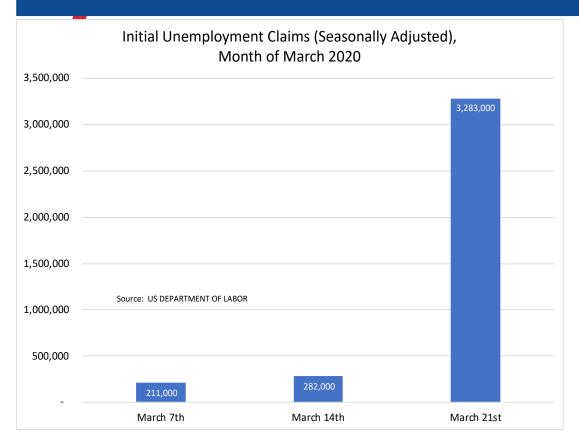
Source: FRED https://fred.stlouisfed.org/series/DJIA

- The Dow Jones Industrial Average peaked at 29,348 on February 12th.
 - It bottomed out on March 23rd, and recovered to 22,552 on March 26th.
 - Down about 23% since the peak
- On February 24th:
 - 2,600 cases world-wide
 - 14 cases in the US





Unemployment Claims Set Historic Record



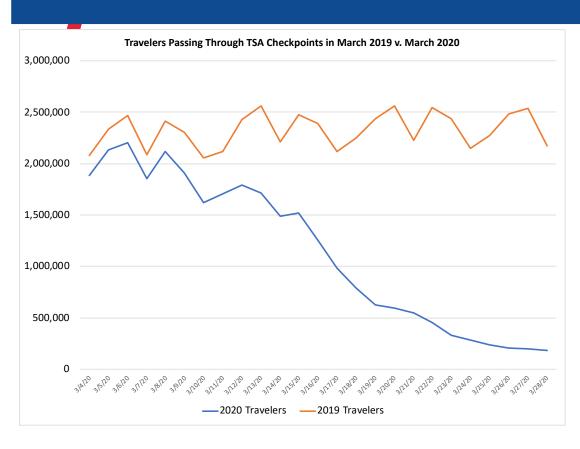
Source: https://www.dol.gov/ui/data.pdf

- US Initial Unemployment Claims Increase to 3.3 million for the week of March 21st
 - Previous High was 695,000 in October 1982
 - This was a 1,556% Increase over the previous week.
- This was also before widespread shelter-in-place orders.





Air Travel has been Grounded



- In 2019 over 2 million people traveled by air per day in the US.
- On March 28th, only 184,000 people traveled by air.
 - This is a 92% decrease in air travel.

Sourcehttps://www.tsa.gov/coronavirus/passenger-throughput





Kansas Initial Unemployment Claims by Industry as a Share of Total Employment

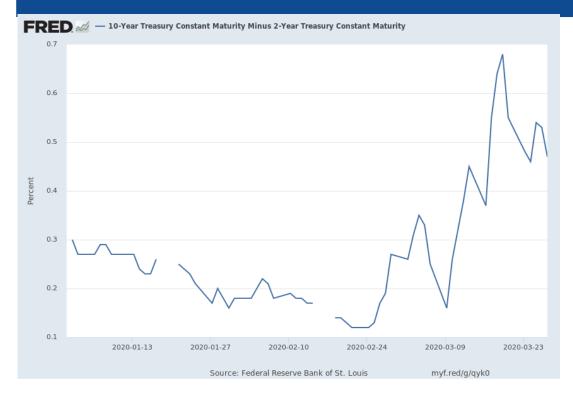
Industry	Share of Total Employment
Mining	1.60%***
Utilities	0.00%
Construction	1.39%***
Wholesale Trade	0.34%
Information	1.88%***
Finance and Insurance	0.19%
Real Estate and Rental and Leasing	1.64%***
Professional, Scientific, and Tech Ser.	0.57%
Management of Companies	0.10%
Administrative and Waste Services	1.06%
Educational Services	3.34%***
Health Care and Social Assistance	1.57%***
Arts, Entertainment and Recreation	6.09%***
Accommodation and Food Services	6.20%***
Other Services (except Government)	1.93%***
Government	0.04%
Manufacturing	2.09%***
Retail Trade	0.86%
Transportation and Warehousing	1.76%***

- I calculated the share of initial unemployment claims on March 21st over total employment by industry in February, 2020
 - The service sector is and will continue to be hammered.





Yield Curve Was Close to Inverting, but has recovered



- 10 Year 2 Year Treasuries (Yield Curve) was trending down through February / early March.
- Fed Cut Interest Rates by 50 basis points March 3rd
- Fed Cut Interest Rates to zero on Sunday, March 15th
 - This was an emergency cut.

Source: https://fred.stlouisfed.org/series/T10Y2Y





This is Just the Tip of the Iceberg: The US Economy is Rapidly Closing Down

- Stock Market is Volatile
- Unemployment Claims hit Historic Highs
 - Service Sector is hurting
- What Does the Future Hold?







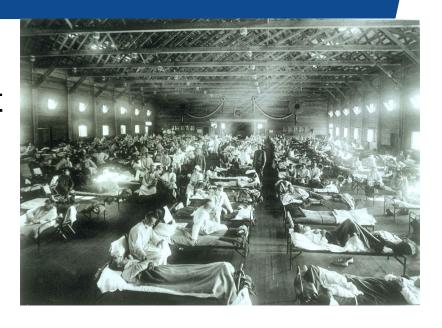
Lesson From History: The 1918 Flu Pandemic and the US Economy

Public Health is a Public Good.



Influenza of 1918 Started in Fort Riley, Kansas

- The Spanish Flu started with an outbreak at Camp Funston in Fort Riley Kansas, on March 4, 1918
 - 500 soldiers were hospitalized within one week
 - In part because of World War I mobilization, it infected the US in three waves between 1918-1919

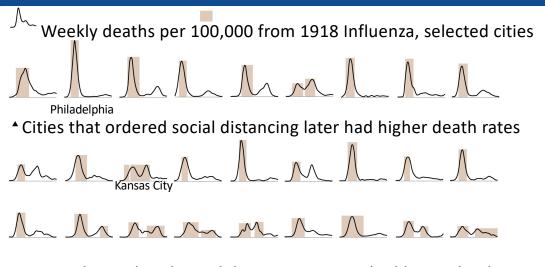


Camp Funston, Fort Riley, Kansas 1918 Source: Kansas Historical Society





1918 Influenza Can Inform Policy Today



- Cities that ordered social distancing sooner had lower death rates.
- St. Louis

- Cities varied in response to the influenza epidemic.
 - St. Louis imposed social distancing measures and had lower death rates
 - Philadelphia held a parade and had some of the highest death rates.
 - · Kansas City was in-between.
- We can think of these variations in policies as a natural experiment.

Source https://www.nationalgeographic.com/history/2020/03/

how-cities-flattened-curve-1918-spanish-flu-pandemic-coronavirus/#close





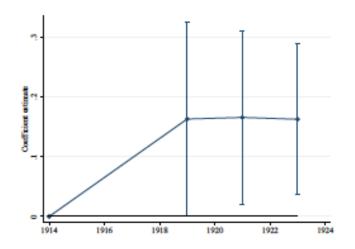
Pandemics Depress the Economy, Public Health Interventions Do Not: Evidence from the 1918 Flu

- New paper by Sergio Correia, Stephan Luck and Emil Verner (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3561560)
- Researchers used the natural experiment of each city's non-pharmaceutical interventions (NPI--shelter-in-place) responses:
 - Speed and duration of responses to the 1918 Flu pandemic.
- To examine the impact on Economic Growth

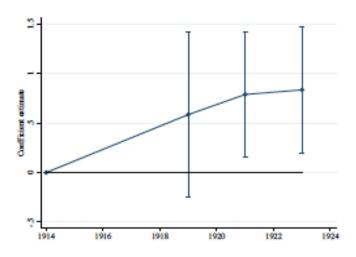




Pandemics Depress the Economy, Public Health Interventions Do Not: Evidence from the 1918 Flu



(c) Duration of NPIs and log of manufacturing output.



(d) Speed of NPI and log manufacturing output.

 They find that cities that had faster and longer duration NPI had better economic growth after the pandemic.



Does Social Distancing Matter?

- New paper by Michael Greenstone and Vishan Nigam (https://bfi.uchicago.edu/wp-content/uploads/BFI_WP_202026.pdf?fbclid=lwAR2-s82W8dpUCu1KjK_fnkuPwSKw0E3TB6SQQzropRbKb9rjg4Qs4u5uwMc)
- Using simulations of the spread of COVID-19, the authors monetize the effect of 3-4 months of social distancing.
 - They estimate that social distancing could save 1.7 million lives (630K from not overwhelming hospitals).
 - \$8 trillion in benefits



The Policy Response

The Fed and the CARES Act



The Federal Reserve Acted Quickly and Decisively

- Cut interest rates on March 3rd by .5 points and again on March 15th to an effective zero federal funds rate.
- Using the tool kit from the Great Recession to stabilize the financial markets:
 - Forward Guidance—on the future of interest rate changes.
 - Quantitative Easing—purchasing long-term Treasury Securities.





The Fed is Supporting Financial Markets

- Lending to Securities Firms through the Primary Dealer Credit Facility
 - Low-cost loans to large financial institutions to keep credit markets operational.
- Backstopping Mutual Funds via the Money Market Mutual Fund Liquidity Facility (MMLF)
 - Lends to banks to meet outflows from mutual funds
- Repo Operations:
 - Now offering \$1 Trillion to keep Repo market operational.





The Fed is Encouraging Banks to Lend

- Direct loans to banks
 - Lowered Discount Window rate to .25 percent; extended credit to banks for 90 days.
 - Encouraging banks to use the Discount Window.



Encouraging banks to dip into reserves to lend





The Fed is Supporting Corporations & Businesses

- Direct loans to major corporations through two new facilities.
- Primary Market Corporate Credit Facility
 - Allows the Fed to lend directly to corporations by buying corporate bonds.



- Allows the Fed to purchase existing corporate bonds.
- Commercial Paper Funding Facility (CPFF):
 - Fed is purchasing unsecured commercial paper, thus directly lending to companies.



The University of Kansas

The Fed is Supporting Businesses & Households

- Main Street Lending Program:
 - Fed will lend directly to businesses.
- Restarted the Term Asset-Backed Securities Loan Facility (TALF)
 - Supports lending to households, consumers, and small businesses by lending to holders of assetbacked securities collateralized by new loans. These loans include student loans, auto loans, credit card loans, and loans guaranteed by the SBA.





The Fed is Supporting Municipalities & International Markets

- Fed is supporting the municipal bond market through MMLF and CPFF.
 - These organizations can purchase highly rated muni's and municipal demand notes.
- Cushioning International Markets
 - Offering low-cost dollar loans to other Central Banks to support international currency swaps.





Why Did the Fed Act?

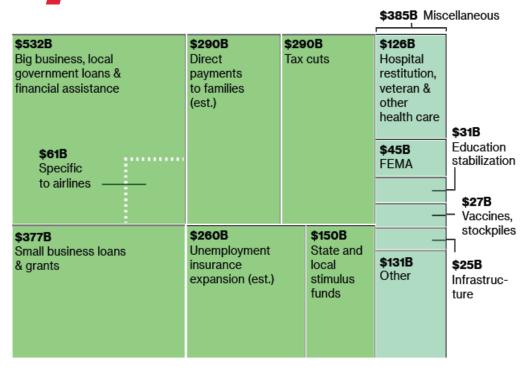
 The Fed's job is to insure the stability of financial markets by providing liquidity to the system.



- The Fed cannot fix the economy:
 - We have a demand-shock and stay-at-home orders.
 - This affects the real economy.
- The longer this crisis lasts, the more stress will be placed on the financial system.
- Read more at: https://www.brookings.edu/research/fed-response-to-covid19



Coronavirus Aid, Relief and Economic Security (CARES) Act



- Passed last week—
 provides \$2 Trillion to
 support all aspects of the
 US economy.
- Something for everyone

Source: Bloomberg

https://www.bloomberg.com/news/articles/2020-03-26/senate-passes-2-trillion-virus-rescue-plan-sends-bill-to-house



CARES Act

- \$500 Billion to make loans to businesses, states and municipalities
- \$32 Billion to the aviation workforce
- \$349 Billion in Small Business Loans
 - Loan forgiveness and disaster loans
- Refundable Tax Credits
 - \$1200 per individual, \$2400 per couple, \$500 for each child
 - Phased out for high income filers
 - Based on 2019 taxes





CARES Act

- Employee retention credit against payroll taxes for companies that retain employees
- Ability to withdraw \$100,000 from retirement plan accounts without penalty
- \$300 charitable contribution allowance for those who do not itemize taxes
- \$150 Billion to help states deal with crisis
 - Each state guaranteed at least \$1.25 billion
 - Kansas budget ~\$7.8 billion





CARES Act--Unemployment

- \$600 per week in "federal pandemic unemployment compensation" through July 31, 2020
 - Can receive Unemployment benefits for as long as 39 weeks (usually 26)
 - Available to those in quarantine, the self-employed, or people who would not usually qualify (e.g. Uber drivers)
 - Administered by the states





CARES Act—Health Provisions

- Hospitals would receive a 20% increase in Medicare payments
- Promote the use of telehealth
- Medicare would cover a COVID-19 vaccine cost
- Expand the strategic stockpile of Personal Protective Equipment (PPE)
- Health insurers will cover the cost of coronavirus testing and vaccines





CARES Act—Financial Aid

- Waives requirements for higher education institutions to match a portion of financial aid.
- Waives repayments of grants and loans for students forced to withdraw.
- Allows institutions to keep unused grant or loan assistance.
- Suspends loan repayments and interest through 9/30/20





CARES Act—Mortgage Payments & Foreclosures

- Suspend payments on federally backed mortgages for 180 days
- Or make partial payments





For Now, Health Policy is Economic Policy

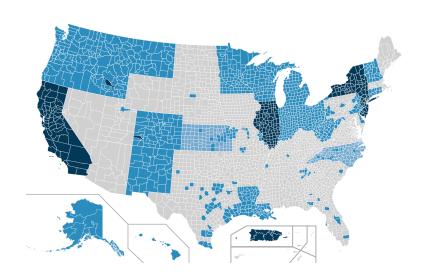
- Actions by the Fed and the Congress have moved to stabilize:
 - Financial Markets
 - Support those who have lost their jobs
- We still have not bent the curve of the pandemic.
- We can't fix the economy until we stop the virus.
- Preliminary research shows that stopping the virus may be better for the economy than a delayed response.





For Now, Health Policy is Economic Policy

- Just as in 1918, some locations are being more proactive than others.
 - The Greater Kansas City
 Chamber of Commerce
 commended @LauraKellyKS for
 her state-wide stay-at-home
 order, and asked Missouri
 @GovParsonMO to do the same.
- http://twitter.com/J_Hancock/status/1244020537254 346752

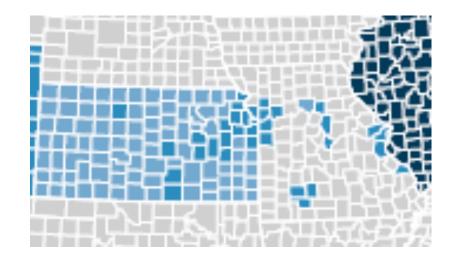






For Now, Health Policy is Economic Policy

- As of March 30th, Kansas has:
 - Statewide shelter in place order
 - 368 cases and 9 deaths
- Missouri has:
 - 1,050 cases and 13 deaths
 - No statewide order
- We will know in a few weeks which of these different paths promoted public health.







Economic Impacts of COVID-19

- In future lectures we will continue to monitor the economic fallout from the COVID-19 epidemic.
- We will also monitor the policy responses.
- I hope that you all stay healthy!





Thank You!



