The Economic Impact of COVID on the US economy

Nick Bloom (Stanford)

SIEPR, May 2020
Warning – depressing economic forecasts. Take precautions.
Key Points

1. Massive uncertainty - medical progress, policy response, industrial impact etc
2. Short-run - unemployment rising to about 20% and GDP down about 20% in 2020Q2
3. Long-run – likely U-shaped (very slow recovery) or W-shaped (double-dip)
4. Recovery headwinds – bankruptcies, skills erosion, trade, immigration, taxes, politics
I asked a friend who is a senior forecaster about his views:

“Since the beginning of March we basically quit trying – if you ask me, it is a stupid exercise and the only reason anyone would even attempt a forecast at any horizon is because they are getting paid, have no shame, are drunk, or likely all three.”
My PhD was on uncertainty – these are incredible figures

S&P500 Implied Volatility (VIX)

Notes: Weekly implied volatility on the S&P500 index from the Chicago Board of Options Exchange 1/2/1990 to 5/7/2020. This is the 1 month VIX (implied volatility over the next 30 days) in annualized units. Source: https://fred.stlouisfed.org/series/VIXCLS

Economic Policy Uncertainty (EPU)

Notes: Weekly US economic policy uncertainty index, monthly average data 1/2/1990 to 5/7/2020. This reports the normalized share of US daily newspaper articles discussing economic policy uncertainty. Source: https://fred.stlouisfed.org/series/USEPUINDXD
COVID now the largest source of uncertainty for 90% of firms

% U.K. firms reporting Covid-19 as their top source of uncertainty

Survey submission date

Source: Decision Maker Panel Survey conducted by the Bank of England, Nottingham University and Stanford University, Details in Bloom, Bunn, Chen, Mizen, Smietanka and Thwaites (2019) and on www.decisionmakerpanel.com
This uncertainty is leading firms to abandon earnings guidance

Source: https://www.wsj.com/articles/stocks-keep-rallying-despite-lack-of-visibility-on-economy-11588498201?mod=hp_lead_pos1
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One way to see the damage is the share of daily lost GDP, which has risen to about 30%.

Source: https://www.wsj.com/articles/state-coronavirus-shutdowns-have-taken-29-of-u-s-economy-offline-11586079001
Happened incredibly fast - went from February 2020, a 60 year low rate of unemployment, to April 2020, an 80 year high.

What is your best guess for the impact of coronavirus developments on your firm's sales revenue in 2020?

<table>
<thead>
<tr>
<th>Anticipated Coronavirus Impact on Sales in 2020</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Week, Mar 9-13 (# responses)</td>
</tr>
<tr>
<td>2nd Week, Mar 14-20 (# responses)</td>
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<tr>
<td>1st Week, Apr 13-17 (# responses)</td>
</tr>
<tr>
<td>2nd Week, Apr 18-24 (# responses)</td>
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</tbody>
</table>

COVID has a hugely varied impact on firms and industries

By what percentage will COVID-19 raise/lower your firm's 2020 Q2 sales?

40% of Firms

Mean = -29%

Also variation across firms by founder types (driven by industry mix)

By what percentage will COVID-19 raise/lower your firm’s 2020 Q2 sales?

- Humanities: -36%
- Bus. & Econ: -28%
- Law & Other: -28%
- Social Sciences: -25%
- STEM: -24%

By what percentage will COVID-19 raise/lower your firm’s 2020 Q2 sales?

- Female: -33%
- Male: -26%

COVID → “Frankenstein recession”: combines the size of the Great Depression, the speed of Katrina and the reallocation of WWII

“The coronavirus pandemic is forcing the fastest reallocation of labor since World War II, with companies and governments mobilizing an army of idled workers into new activities that are urgently needed.” (Wall Street Journal, 3/29/2020)

https://bfl.uchicago.edu/working-paper/covid-19-is-also-a-reallocation-shock/
Hence, I am less optimistic than the market
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Recovery Alphabet
Economists compare the shape of potential recoveries to letters of the alphabet, and a swoosh

V-Shaped Recovery
- Economy recovers but activity permanently lost

U-Shaped Recovery
- GDP recovers, but slower than V-shape

Swoosh-Shaped Recovery
- Recovery is longer than V-shape, faster than U-shape

Z-Shaped Recovery
- Spending surge fuels GDP above pre-crisis levels

W-Shaped Recovery
- Restrictions lifted too soon, GDP suffers as more cases paralyze economy

L-Shaped Recovery
- Economy never fully recovers

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Taxes: another long run concern as they eventually will need to rise

Fiscal sustainability coming back as macro topic

<table>
<thead>
<tr>
<th>% of GDP</th>
<th>Fiscal balance</th>
<th>Gross public debt</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2019</td>
<td>2020E</td>
</tr>
<tr>
<td>Germany</td>
<td>1.3</td>
<td>-7.3</td>
</tr>
<tr>
<td>France</td>
<td>-3.2</td>
<td>-9.5</td>
</tr>
<tr>
<td>Italy</td>
<td>-1.6</td>
<td>-9.2</td>
</tr>
<tr>
<td>Spain</td>
<td>-2.1</td>
<td>-9.7</td>
</tr>
<tr>
<td>US</td>
<td>-4.6</td>
<td>-14.0</td>
</tr>
</tbody>
</table>

Source: DB Global Research

The US on track for World War II-like debt level
US federal government debt held by the public, in % of GDP, fiscal years. After 2019: Commerzbank forecasts

Source: CBO, OMB, Commerzbank Research

Deutsche Bank Research  Torsten Slok, torsten.slok@db.com  +1 212 250-2155  April 2020
Deficits from Great Depression and World War II led to sharp rises in income taxes that only came fully back down in the 1980s.

Political extremism: 50% of Americans are facing real hardship, which risks political disasters (think 1930s politics)
I’m guessing you finished your drink…
The Promise of Working From Home
Post COVID

Nick Bloom (Stanford)

SIEPR, May 2020
Working from home traditionally had a bad image (a 2017 search)
In 2012 I ran a randomized control trial of WFH on Ctrip, China’s largest travel agency ($15bn on NASDAQ, 40,000 employees)
CTrip – inside like a typical US office
The experiment was public: Chairman James Liang pulls the ball
Individuals randomized home (even birthdays)
First, massive improvement in performance – 13% more output
Second, quit rates drop by 50%
Third, choice doubled the impact – after the experiment the firm let all employees choose
CTrip increased profits by $2,000 per employee working from home, and actively rolled this out.
Firms with more employees WFH are now less negative on COVID

Source: Decision Maker Panel Survey conducted by the Bank of England, Nottingham University and Stanford University and Bloom, Bunn, Chen, Mizen, Smietanka and Thwaites (2019) and www.decisionmakerpanel.com
But working from home under COVID is hard for four reasons
2) Job match – only a third of jobs can (and are) working from home

Source: Headline: How many jobs can be done at home” Dingel and Nieman (2020), Covid Journal of Economics
If you have any photos to share of WFH challenges please send them to me at nbloom@stanford.edu thanks
4) Full-time – pre-COVID only 2% of people were full time

Why? Office time important for
1) Creativity
2) Motivation
3) Loyalty

Three key tips of WFH post COVID

1) Part-time – regular 2 days per week at home (e.g. T, Th)

2) Optional – only about 50% of employees want to WFH

3) Privilege – under-performers warned, recalled to the office
COVID will shrink the modern office, not eliminate it

**Pre-COVID** 5% of working days from home

**During COVID** 35% of working days at home

**Post COVID** I predict about 15% to 20% of working days at home
Further Reading References

COVID related blogs:
“COVID induced economic uncertainty”, Scott Baker, Nicholas Bloom, Steve Davis and Stephen Terry, April 2020,

“The productivity pitfalls of working from home in the age of COVID-19”, Nick Bloom, March 2020
https://news.stanford.edu/2020/03/30/productivity-pitfalls-working-home-age-covid-19/

“The bright future of working from home”, Nick Bloom, May 2020
https://siepr.stanford.edu/research/publications/bright-future-working-home

“COVID is also a reallocation shock” Jose Barrero, Nicholas Bloom and Steve Davis, May 2020
https://bfi.uchicago.edu/working-paper/covid-19-is-also-a-reallocation-shock/

Background:
Recent background of slowing US productivity growth

Three Surveys feeding into this briefing
www.decisionmakerpanel.com
https://www.frbatlanta.org/research/surveys/business-uncertainty

Three uncertainty databases
www.economicuncertainty.com
www.worlduncertaintyindex.com
www.stockmarketjumps.com