Unknows, Challenges and Opportunities in the Time of Covid-19

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A new world?

- Major public health implications (preventing millions of global deaths)
- Major economic implications (possibility of the most severe global recession in at least the last 90 years)
- Major political changes (likely to follow).

But much we do not understand and are basing on guesses and imperfect knowledge.

This talk will emphasize four areas where more thinking, research and evidence-based public policy are needed.
Key questions we do not (yet) know the answers to:

1. Dynamics of infections when epidemics interact with economic and social behavior.
2. Economic interventions when supply chains may collapse.
3. What kinds of institutions and states-society relations led to the failures and delays in government response in places such as Italy, the US, the UK and Turkey.
4. What the pandemic will imply for the future of economic and political institutions.
The SIR Model

- The classic “SIR” model as an example of a simple search-matching setup (similar to Diamond, 1982):

\[
\Delta \text{Infected population} = \beta \cdot \text{Susceptible pop.} \cdot \text{Infected population} - \gamma \cdot \text{Infected population}
\]

\[\beta = \text{contact rate}\]
\[\gamma = \text{recovery rate}\]

- Fast increase in infected population when both susceptible population is high and infected population has reached a sufficient threshold.

- Key parameter:

\[R_0 = \frac{\beta}{\gamma}\]
Lockdown and social distancing change dynamics:

\[ \Delta \text{Infected population} = \beta \cdot \theta^2 \cdot \text{Susceptible population} \cdot \text{Infected population} - \gamma \cdot \text{Infected population} \]

where \( \theta \) is the lockdown rate — how much you reduce interactions.

Now key parameter becomes

\[ R_0 = \frac{\beta \cdot \theta^2}{\gamma}. \]
Implications of Lockdown?

- Possibly, but we do not know.
- And lots of uncertainty about fatality rates.

Fig. 2 Phase-adjusted estimation of the number of COVID-19 cases in Wuhan, China (1 December 2019–30 April 2020, \( E = 20 \)). In all, 55,869 represents the estimated peak number of COVID-19 cases on 19 February 2020 in Wuhan, China with \( R_0 = 0.5 \); 58,077 represents the estimated peak number of COVID-19 cases on 23 February 2020 in Wuhan, China with \( R_0 = 0.9 \); \( E \): number of exposed cases; \( I \): number of infectious cases; \( E \) was assumed to be 20 times of \( I \) at baseline.
\[ \beta \] depends on economic and social behavior affect “matching”.

- Social distancing, changes in different social activities and basic public health measures impact \( \beta \) even without lockdown.
- In practice, different subpopulations have different infection, hospitalization and fatality rates as well as different social behavior.
- Economic transactions change with technology adoption and use.

Another issue: in a globalized world, cross-country linkages create stochastic evolution of infection due to travel of infected individuals—implications for different strategies.
So far macroeconomic policies in the West have (rightly) gone after:

1. Transfers to people losing jobs or suffering economic hardship.
2. Limiting collapse of aggregate demand.
3. Providing liquidity to businesses.

Less emphasized is what happens to supply chains as people stay away from work and some companies go bankrupt.

Acemoglu and Tahbaz-Salehi (2020): Amplification of shocks in the short or the medium run due to failures in the supply chain can far exceed direct impacts and multiplier effects working through sectoral prices.

Is this likely to be an issue in the current crisis? If so how to deal with it? Can interventions in a few “critical” parts of the supply chain be sufficient?
Institutional Failures

- Huge variation in the response to the pandemic across countries in:
  - how quickly public health measures were taken;
  - testing;
  - tracing;
  - investment in bolstering the public health system.

- Why?
- One hypothesis: **atrophying in the capacity of state institutions**, because:
  - erosion in public trust in state institutions (various reasons but related to inequality, perceived or real capture of politics by banks and business elites, and response to the global financial crisis);
  - weakening of technocratic, autonomous civil service as a political strategy (e.g., Italy, the US, the UK, Turkey);
  - general underinvestment in social safety net and public health systems (for various reasons);
  - already very weak state institutions in the developing world.

- All to be investigated...
A Trust Deficit?

A lot of variation, but much of it, especially in authoritarian countries, may be what Timur Kuran (1997) calls that “preference falsification”. Does this type of “trust” still enable swift action?
What the Future May Hold

- A critical juncture for our institutions? If so, what are the paths?
- Lots of challenges and opportunities:
  - backlash against globalization or greater international coordination?
  - fear turning us towards authoritarian leaders or recognition of their failures?
  - an overeager, supercharged Leviathan with no regard for privacy and much greater control in the economy or a more competent but still “shackled” Leviathan?
  - better understanding of the value of public health, social safety net and regulation?
  - more democracy or less democracy?
Beveridge report in 1942, emblematic of the rise of the social welfare state in post-war Europe.

Hayek disagreed and worried about the state's dominance over society.

“This means, among other things, that even a strong tradition of political liberty is no safeguard if the danger is precisely that new institutions and policies will gradually undermine and destroy that spirit.”
But something very different than what Hayek worried about happened, first in Sweden after the Workers Party came to power in 1932, and then in much of Europe (and the US) after the war.

Similarly, need for the state to shoulder more responsibilities—a better social safety net, greater coordination, better regulation. . . But also need for society to become more vigilant. Can we prove Hayek wrong again?