Household Welfare: Do We Need Big Data?

Imagine, just for a moment, there was a massive crisis, throwing many household finances into chaos. Might it not be a good idea to have as much data as possible to identify who needs help and how much? **By Jeremy Gaunt**
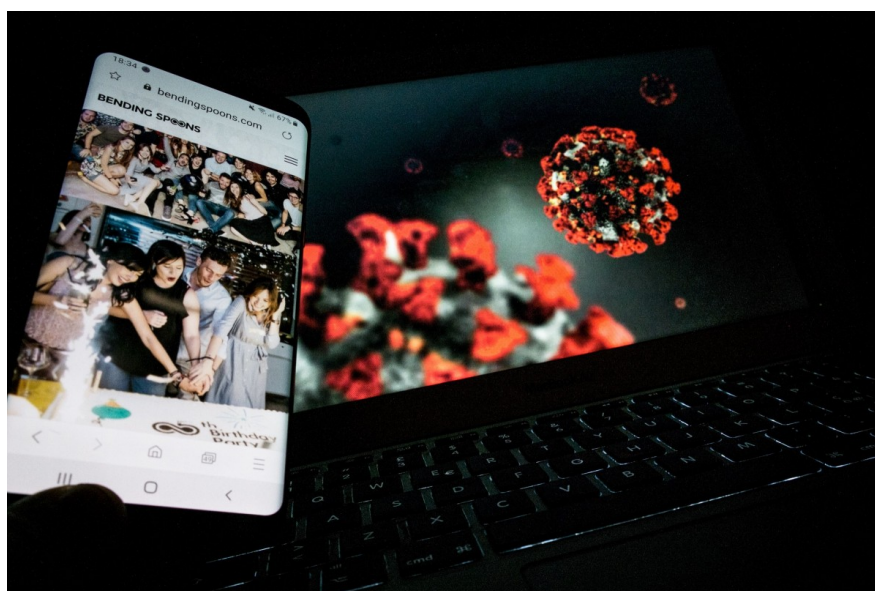

Illustration: Data on the spread of Covid-19 is being collected on smartphones

A virtual conference on Big Data

If you answered "yes" to the above, you would be in agreement with a panel of high-level economic and finance experts brought together virtually on May 7 by the Think Forward Initiative and the Centre for Economic Policy Research. The task was to investigate what selected Big Data -- the mass of information collected and stored through technology -- could do for household welfare.

The overall conclusion was that despite issues of privacy and transparency, having lots of specific information about individual household wealth and liabilities is in the interest of those households, allowing for help when needed.

"We want to understand the vulnerabilities of households," said Martin Flodén, deputy governor of Sweden's Riksbank, explaining the overall need of policymakers for Big Data.

Although the session was not called specifically because of the COVID-19 pandemic, the global health crisis provided a highly pertinent backdrop. How much better could policymakers' responses be if they had the data to understand the diverse conditions of different households?

"To target relief (in a disaster), we need to know both who suffers an income loss and who lacks emergency funds," Harvard University Professor John Campbell, an early advocate of the economic study of household finance, said in his presentation.

Campbell cited the "crude" approach of the recent U.S. CARES Act, which, among other things, gives $1,200 to any American adult with adjusted gross income roughly below $150,000 whether or not they need it because of the pandemic.

Lacking specific household data, the act is scattershot, albeit that it is also supposed to generally lift consumption as well as provide relief.

Having Big Data could make relief more targetted

In a similar vein, Gianluca Violante, professor of economics at Princeton University, said that the pandemic lockdown impacts occupations in highly different ways. A secondary school teacher and a flight attendant may both be earning around $50,000 a year, for example, but the former currently has virtual work and the latter doesn't.

Again, having Big Data could make relief more targetted.

Looking at past crises, Violante also noted that governments conducted stress tests on banks to see how they would fare in a major shock.

"What is missing from policy is a stress test on the household," he said. "What is needed is high-frequency data on household balance sheets."

Flodén agreed. He said it was hard for a central bank like his to assess risks and come up with calibrated policies without data on household wealth and liabilities.

In fact, the Riksbank was asking lawmakers to resume collecting such data, which was abandoned in 2007 when Sweden's wealth tax was abolished.

What's to be done?

The term Big Data has come to be used to describe the phenomenal gathering of information that has occurred with the advent of digital technology. Back in 2010, then-CEO of Google Eric Schmidt famously pointed out that while five exabytes (or five quintillion bytes) of information was gathered "between the dawn of civilisation through 2003", that much was being gathered every two days.

This is bound to have greatly increased, and how to use this information has become a major preoccupation of governments, policymakers, financial institutions and companies as underlined by the European Union's two-year-old General Data Protection Regulation (GDPR).

How to use this information has become a major preoccupation of governments

ING Global Head of Data, Shiler Khedri, told the session there was now nothing particularly new about the use of data and technology; what was novel was the increasing quality of the data and the subsequent way it could be used.

She said there were numerous benefits -- allowing policy to be adapted in real-time, for example, or allowing for clearer definitions and predictions of risk. But there were also issues, not the least being ethical ones.

"We need to be mindful and very careful about how we bring data together," Khedri said.

The panel acknowledged the transparency and privacy issues inherent in Big Data but was primarily concerned for this session with the positive ways it could be used vis à vis helping and protecting households.

For Princeton's Violante, it was the ability to monitor financial fragility, target policy interventions, and evaluate the effectiveness of those interventions. For Harvard's Campbell, it was to respond to disasters, effectively target consumption in times of economic hardship, and to ensure financial regulation was appropriate for diverse household conditions.

"We should avoid one-size-fits-all regulation," Campbell said, emphasising the heterogeneity of the world's households.

The panel was chaired by Paulo Sodini, director of the Swedish House of Finance National Data Center, and Karolina Ekholm, a former Riksbank deputy governor and Swedish finance ministry official. It was introduced by Mark Cliffe, global head of ING's New Horizons Hub.

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