The Brookings Institution
Recession Remedies Podcast

"How did COVID-19 demonstrate the value of nontraditional data?"
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Episode Summary:

Data collection has exploded over the last decade. These new sources of nontraditional data—for example, credit card transactions and restaurant reservations—can help to fill gaps in traditional datasets by offering policymakers more timely or granular information. How were nontraditional data used during COVID-19? What are the benefits and potential pitfalls of using it in future crises? On this episode, hear from Laura J. Feiveson, chief of the Household and Business Spending Section in the Board of Governors of the Federal Reserve System's Division of Research and Statistics. Dr. Feiveson's audio comes from an interview recorded in April 2022.

WESSEL: Welcome to the Recession Remedies podcast, exploring lessons learned from the economic policy responses to the COVID-19 pandemic, so we know what we should repeat, avoid, or modify the next time we have a recession. I'm David Wessel.

Over the last decade, all sorts of new, non-traditional, often privately gathered data has become available to fiscal and monetary policymakers, data that can provide them with more timely or more granular or simply different information to supplement the substantial amount of economic data collected by government statistical agencies.

Four economists from the Federal Reserve Board—Tomaz Cajner, Laura Feiveson, Christopher Kurz, and Stacey Tevlin—review the usefulness of this data during the pandemic for the Recession Remedies project, a joint venture of the Hamilton Project and the Hutchins Center at the Brookings Institution. Please note that they are speaking for themselves, and not for anyone else at the Federal Reserve.

Here are some excerpts of an interview we recorded with one of the authors–economist Laura Feiveson.

FEIVESON: Our chapter looks at how non-traditional data was used in the COVID recession by both policymakers and those analyzing the recession. So we look at how non-traditional data were used and how they may be used for future recessions. So we consider this to be a test case to see, Is it useful to use non-traditional data in addition to more standard administrative datasets when assessing the depth of a recession and also how to respond.

WESSEL: The government's economic indicators come from periodic surveys of consumers, employers, and businesses and from administrative records, such as the number of people applying for unemployment insurance. Businesses gather all sort of other data for their own purposes, data that can provide insights into the twists and turns of the economy.

FEIVESON: We look at credit card and debit card transaction data, so these are data that just comes about from payment processors, when people go into a store and swipe their card, then you get a record of that purchase. And if you accumulate a lot of different credit card transactions for both online and in-person sales, then you can get a sense of what household behavior is and what consumer spending is.

Another data source that we highlight is data from ADP, which is an employment data processing set, and with the Federal Reserve Board, there is an index that has a really up-to-date version of what payrolls are. So, employment growth every month or with using this data set, we can get employment growth on a weekly basis and very, very real time. So those are two examples of many.

WESSEL: The authors identify three aspects of this non-traditional data that proved particularly important during the pandemic.

FEIVESON: One is that with these kind of new data sets that have been used over the last few years, we can get a read of the economy that is faster than standard data sets are. And this fills in gaps at times where policy makers need to make very quick decisions. So that's one benefit.

A second benefit is that some of these data sets look at details of consumer or firm behavior that we don't even get from traditional data sets at all, so an example of that is getting very finely geographic data, such as the subway use in New York City, which gave a very, very quick read on how much the economy in New York shut down when the pandemic first took off in New York.

WESSEL: The COVID virus hit the New York, Connecticut, and New Jersey area early. Tracking subway usage in New York City showed how many fewer people were going to work, or going shopping, or otherwise engaging in the usual economic activity. This data was useful to the Fed and other economic policymakers because it gave a hint of what could happen to the rest of the economy in the rest of the country as the pandemic spread.

One of the big questions about sending money to households in a recession is how much they'll spend—helping to give the economy a much needed boost—and how much they'll save. In the past, economists have answered this question only long after a recession was over. The answer came more quickly during the pandemic.

FEIVESON: Another example is getting daily data on consumer spending from these credit card transactions stated, and what that allowed us to do or policy makers to do was to say, When stimulus checks came in, what was the immediate response of spending. And that gives a sense of how effective these policies were in helping to prop up spending at a time when it was necessary.

WESSEL: Of course, the pandemic posed challenges to the economy quite different than those in recessions caused by oil price shocks or increase in interest rates. So, suddenly policymakers were scrambling for information that their traditional sources of economic data simply couldn't provide.

FEIVESON: I don't think any of us, three years ago, were thinking there was going to be a pandemic, so health data was gonna be so important, and school closure data was gonna be so important. Usually there are no school closures and suddenly the measure of how many schools are closed was so important for our understanding of what was happening in the economy.

WESSEL: We then asked Dr. Feiveson whether the pandemic suggests policymakers should incorporate this non-traditional data going forward.

FEIVESON: When we think about what are the main things we can do looking ahead for the next recession is we can really focus on using these big data sources to invest time creating indexes so that they are ready to go in a time when we need them next. And that is well worth our time, even if they aren't useful, unless we're in a recession because the bottom line is a lot of

these information gaps are only important to fill in really difficult times for the economy, so it's well worth investing in the tools to fill those information gaps.

Now, some of these gaps we will not be able to anticipate. So, at this time it was a pandemic, maybe there will be some other crisis that we cannot anticipate, in which case, we want to be ready to act quickly to find the data that we need for those pandemic or crisis-specific needs.

WESSEL: And what lesson should members of Congress draw from all this, we wondered?

FEIVESON: One thing that we highlight in our chapter is not only the importance of being able to be flexible and use these non-traditional data, but how important the standard data are. So, if I had a short elevator ride with a senator who is thinking about data policy, I would emphasize the importance in maintaining the exceptional data that we do have, standard data sets that we do have.

The reason is that we have found that there are pitfalls and difficulties with using non-traditional data, they are not designed to be representative. There's often short time series, so they're hard to seasonally adjust or they're very hard to compare to some kind of historical episodes to understand what signal we can get from them.

On the other hand, the standard data sets that come out of government are designed to be representative and there's a very long time series, and those are very, very important to maintain.

So, that is a big priority in terms of data policy,

But the second would be that we want to be able to beef up some of the surveys that we do and some of the data collection that the government does during times of need, so that the government can be a player in this non-traditional market as well.

WESSEL: This non-traditional data—credit card and checking account transactions, ADP payroll records, online restaurant reservations, subway and bus ridership—all proved extremely useful during the pandemic, but were not gathered to serve the needs of economic policymakers. So, we asked Dr. Feiveson to sum up the advantages and shortcomings of non-traditional data.

First the pluses.

FEIVESON: I would say that in terms of what makes non-traditional data valuable, they are very timely or they have the potential of being very timely. For some traditional data sets, there's a long lag before we get a read on what's going on with the sector of an economy. And so at a time of great change in the economy, it is very useful for policy makers to fill in that time gap before we get that traditional data, and non-traditional data can definitely play a role there. For some of these data, they're almost instantaneous in which we can get a read on the economy or some sector.

The second benefit is that they're very granular in different ways. So, one example is that we can get data on different geographies in the U.S. and sometimes very small geographies, like even zip codes or census blocks. The second is that they are very high frequency or can be high frequency, and that helps for policy analysis. And the third way in which they are very granular is they give reads on different demographic groups or different income groups in the population, and that can give a very important read of how different households are faring in a recession, which may really influence what the policy attack will be in helping those households.

WESSEL: And then the minuses.

FEIVESON: There are, of course, pitfalls. So, one major pitfall is that most non-traditional data is not designed to be representative of the U.S. population or of any particular geography. And because of that, it can be hard to extract a signal of what is going on for the economy as a whole, as opposed to what is going on for the group of consumers that happens to use that particular payment processor or wherever the non-traditional data comes from.

Secondly, they have short time series, so that it may be very hard to seasonally adjust the data, or it may be hard to understand what we can learn from the data if we can't compare to historical episodes.

So, I would say that those are the two main pitfalls. One other pitfall is the non-traditional data can be very big, so it requires a lot of resources and expertise in order to just extract any signal from the data at all, which is one reason why it is worth investing in these data between recessions as opposed to trying to figure it all out very quickly during a recession.

WESSEL: And the bottom line?

FEIVESON: Our chapter didn't speak to how successful the policies were precisely, but what I can say with a lot of confidence is that without the tremendous policy actions taken at the onset of the crisis, we would be in a much, much different situation today, in a much worse situation today.

WESSEL: So, thanks to Laura and her coauthors for their work on this chapter. And you can read it and a one-page summary of it and all of the findings of our book at Brookings dot edu slash Recession Remedies.

I'm David Wessel, director of the Hutchins Center at Brookings. Recession Remedies is a joint project of the Hutchins Center and the Hamilton Project at Brookings, and is a production of the Brookings Podcast Network. Learn more about our other podcasts at Brookings Dot Edu Slash Podcasts and follow us on Twitter at PolicyPodcasts. You can send feedback to us at Podcasts at Brookings Dot Edu.

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