UNEDITED TRANSCRIPT

Lunch and Learn Discussion Series: The Employment and Wage Effects of the Pandemic Recession

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KAREN ANDERSON: Thank you for joining today's lunch and learn discussion series, which showcases University of Chicago Economists, discussing research relating to key events of the day. My name is Karen Anderson. And I'm the Senior Director of Policy and Communications for the Becker Friedman Institute for Economics, or BFI.

I'm going to quickly step in for our Director, Michael Greenstone, who is scheduled to give welcoming remarks but has gotten a little bit held up. We have a very tight agenda today. So we're just going to start without him.

It's my pleasure to introduce today's presenter, who I have the pleasure of working very closely with. Erik Hurst is the Frank P. And Marianne R. Diassi Distinguished Service Professor of Economics at the Booth School of Business. He also serves as Deputy Director of BFI. Erik's work lies in the intersection of macroeconomics, labor economics, and urban economics.

Most recently, his research has focused on measuring the changes in the US labor market during the early stages of this pandemic economics. And that's what we're going to hear about today. We have a packed agenda for the next hour. Erik's going to give an overview of his new working paper, "The US Labor Market During the Beginning of the Pandemic Recession". If you haven't read the paper yet, there's a link on your screen. And you can just download it while we're talking.

I'm going to ask him a few questions after that. And then we're going to open up the program to Q&A. At anytime during today's program, go to the Q&A box at the bottom of your screen. And you can start sending in questions. So without further delay, we'll turn the program over to Erik, and we appreciate you joining us today.

ERIK HURST: Thank you, Karen. It's good to be here. I know there's a large crowd watching online. Many of them are students from the College, and the MBA program, and the Harris School, and the Law School, and our alumni. And you've seen the Becker Friedman Institute put these types events on in the past, often in person.

We call them Becker brown bags or Friedman forums. And so today, I'm going to try to give you a little bit of sense of some of the research I'm doing. And then we could get into some broader issues of how the labor market, we think, will evolve going forward. So what we do and what I'm going to do today and what we do in the paper is we use data from ADP.

And ADP is the largest payroll processing company in the United States. And so what it does is it has individual data for about 26 million individuals about their labor market attachment. So we're going to measure everything that's on a paycheck.

And so this is one-sixth of the US labor market that we could then see the evolution of what is happening to employment in the aggregate economy, and disaggregated levels by different groups, gender, wage, parts in the wage distribution, sector, firm size. We're going to be able to measure how wages are evolving, how our work is evolving, whether businesses are shutting down, and then when those shutdowned businesses are reentering. And when they're re-entering, are they bringing back the same workers? And then we'll be able to see employment responses as states close and open to see what type of effect does closing and opening have on the employment market.

So our goal with the paper is to use this data as a taxonomy of the labor market during the last few months in the United States. And the benefit of this data, relative to other data that the BLS puts out, are a couple. One is it's scale. Again, we have 26 million workers. That's about one-sixth of the US workforce.

It is representative of firm size and industry and workers. And we've shown this in some of our other work. But the large samples and high frequency analysis-- what do I mean by high frequency? We can measure paychecks at the weekly level.

And so if you want to start doing cross-state variation for when states open and close, weeks matter. And so the government statistics are going to be [AUDIO OUT] measure things one week per month. But sometimes, you miss some of the high frequency changes when things are moving so fast.

Data that links employees to employers, so I could see what happens to the firm. And then I could see what happens to the workers. And so, in much of the government's studies, you can't see whether he's given firm is bringing back the same workers. And so if we want to really think about worker recall, this data is well suited for that.

And the data has administrative records on wages. And having data on wages that are free from measurement error is allowing us to really get in to see who has wage cuts and who has wage gains during the recession. So the data is going to be beneficial on many margins. But these are the ones I want to highlight today.

OK, so let's just get in. I'm going to show you a few pictures before we go back to Karen and we have some discussions. So the first thing I'm going to show you is just what happens to employment in the United States since mid-February.

So every picture I show you from now on is going to be anchored at February 15 levels. And so the numbers on the vertical axis are going to be percent declines relative to February. And so a number like 0.9 means we are 10% below in terms of employment relative to where we were in mid-February.

So this picture has two lines on it. The data in ADP allow me to measure two things that are distinct from each other but economically important. The solid line is going to be how many workers are paid within this ADP data set. The dash line is how many

workers are on the firm's payroll system. And we're going to call those active employees.

The difference between the two is going to be, at least from the firm's perspective, how many workers they have temporarily laid off. They're not paying them. But they are still on the payroll system, maybe with the expectation that they will be recalled going forward.

I'm going to focus most of my attention on paid employment because that's what's going to touch the workers. Do the workers have a job? And are they getting paid? And the trough of the employment declines occurred in late April so far in our data.

And by late April, we were 21% in terms of employment. Again, one out of five workers who were working in February were not working in late April. And if we put those into numbers of people, that is about 26 and 1/2 million jobs went away between early February, mid-February, and late April.

And since that time, paid employment has rebounded by about 7 million jobs. And so I'm going to just pause for one second. Then I'll show you a couple other results.

But this 26 million jobs, slightly higher than what the BLS has gotten from their numbers. So the BLS, remember, measures-- the US Bureau of Labor Statistics is going to measure employment gains in the second week of each month, so February 11-ish, February 9-ish. So if we compare those periods to each other, we're getting roughly similar numbers.

And importantly, the May 9, the May 16 period, which was last month's jobs numbers, was about 3 million jobs the BLS said we added. And those same 3 million jobs is what the number we get, OK?

And we're going to see for tomorrow, those numbers were through the end of May. Their numbers are going to be through early June. We're going to expect them to add another 3 to 4 million jobs just in tomorrow's report based upon the ADP's number.

OK, so I'm going to show you a couple other pictures. And then I'm going to show you some of the strength today. This is all descriptive. Some of this you know. So now, I'm going to take a look at firms that had certain numbers of employees in mid-February.

So I'm going to look at firms with less than 50 workers, firms with 50 to 500 workers, and firms with more than 500 workers. And then this shows you how much employment has moved, again, in percent deviations relative from mid-February for each of the groups. And then, guys, I want you to focus your eyes on the black line.

And so the black line shows that, in small businesses, employment has fallen by 28% relative to mid-February. That is a staggering amount. One in four workers who worked

in a firm with less than 50 employees lost their jobs through the end of February, relative to mid-March.

But then I also want you to notice many of those jobs have started coming back in the last month. So now, all firms of all sizes are down about 15%, 16% relative to mid-February. Now, a couple of things-- 15% to 16% down relative to February is historically large.

So in the Great Recession, which was the worst recession we had in the US history since the Great Depression, we lost 7% of employment. So a 15% decline is still double the employment losses during the Great Recession. But small firms, some of them are starting to reopen.

And I'll show you this a little bit later. But this is going to correspond with many of the states reopening things like nail salons, and restaurants, and gyms. As states are starting to reopen, those closures were really hitting small businesses. And now, they're coming back in terms of employment levels.

OK, there's a lot of numbers on this table. I don't want to highlight too much. But what this is is big industries and where those industries saw employment declines through late February and, again, through late May. And I just want to highlight a couple of things.

The industries for which the employment declines were the largest were the ones you would expect-- arts and entertainment, food services, retail trade, other services. The other services are going to include things like the nail salons and the barber shops.

And employment in those industries fell by between 25% and 50% through late February. That is massive. You're starting to see some rebound now in those industries between late February and late May. All the numbers get smaller in the right column.

And so some of the gains are coming back in these industries. But they're still way below where they were in February. And I want to compare that with some other industries that have also saw large gains. Manufacturing, and construction, and health care all are starting to get some rebound in employment over the last few months.

But some sectors like transportation, we're still not flying. We're still not taking Ubers. Educational services, schools still aren't opening. You're not seeing the employment rebound occurring in these sectors like other sectors.

But it all makes sense to you. It's all in the background. These are things that you should see. But this is the data behind that.

All of that was descriptive. oh, I have two more descriptive statistics. And then I'm going to show you some other things before. I could show you the same patterns by gender. And then the next part, I want to show you by parts in the wage distribution.

The decline in employment, pulling over all industries and all firm sizes, for women is in the red and for men is in black. And you could see declines in employment were larger for women over this recession. And the rebound has been smaller for women. And you might conjecture that some of that differential decline between men and women is due to the fact that women are in sectors more prevalently in things like restaurants in service sectors relative to men.

But when we condition on sector, only about one percentage point of this five percentage point gap in the last month-- or the last week of our data is due to industry differences across men and women. So it's saying, even within these industries, women are declining in their employment more than men. So the story that it's all industry composition just isn't borne out in the data.

It explains some of the story. But the overwhelming majority of it is occurring within industry. And why that is we're not sure. There's conjectures. Maybe things like child care demands are changing, and those are hitting women more than men. We don't have data on that. But that might be a conjecture for this pattern.

This next picture is the one that tends to get quoted most in the newspapers, which is the employment declines by workers at different initial wages. So suppose in mid-February, we group workers by which quintile of the wage distribution they're in. The bottom quintile, those are people earning like $14 an hour or less. The top quintile, those are people earning $35 an hour or more.

And look at what happened to their employment declines over this time period. And the employment declines for those at the bottom of the distribution were massive relative to the top of the distribution. In almost one-third of all workers in the bottom quintile of the wage distribution lost their job.

We're not getting paid. So they either lost their job or on temporary layoff through late April. That is massive. And then the rebound, while has occurred, had been only modest during this time period.

So as of late May, mid-May, we're talking about employment for the bottom quintile being down 30% relative to February, where the top quintile was down 5%. Huge differences during this time period.

OK, so those are the descriptive stuff. Now, let me talk to you a little bit more about business closures, re-entries, and recalls, which is going to be important when we start thinking about the persistent effects of this recession and whether it is destroying sorts of capital in the industry-- in the economy. So what I'm showing you now is a orthogonal of the business closures. I'm going to take a look at continuing firms in the red line and all firms, which I already showed you in the black line, and ask how much employment decline was in continuing firms.

And you could see, even firms that didn't shut down, there was a massive amount of employment decline. And I'll go even further-- and I'll tell you this on the next slide or so-- the bulk of all employment decline was not due to firm shut down. It was due to existing firms, continuing firms, using payroll.

And so in this time period, I just want to highlight this because it gets lost in the discussion. What I'm showing you here is, again, for that sample of continuing firms, by firm size, so each color is a different firm size, look at each those firms, how much their employment has changed from mid-February to late May, and then put them in a distribution, the bottom 10%, the 20th percentile, the 30th percentile, and such.

And see what employment decline has occurred or employment increase has occurred at what parts of the distribution. And the key thing I want you to focus your eyes on are two things. One, if you start looking at the 60th percentile and above, that means at least 40% of businesses, small and big, didn't shed more than 5% or 6% of their employment.

If they contracted, it was by a small amount. And about 10% of them actually grew, 10-20% of them actually grew. So during the pandemic, some firms are still growing. Not many, but there are some growth occurring.

However, most firms-- you take a look at the 60th percentile and below, most firms are doing some sort of meaningful contraction. And some firms are contracting by a lot even though they're continuing. What does that mean?

It means these firms kept some people on payroll. So suppose you have a 500 employee firm, you might have laid off 490 some of them. But you kept five, six, seven of them around maybe to security in the building or janitorial services or a manager who's doing bookkeeping. But some firms are, essentially, cutting down-- is shutting down even among continuing firms.

And then if we were going to do a decomposition of how much of the employment decline through late February-- that's the top-- and through late April-- that's a top-- through late May. So the growth that has occurred from late April to late May, how much of it was due to continuing firms and firms that are exiting?

And what you see is about 25% to 30% of employment declines through late April was in firms that have actually shut down. So shutdown is important, but about 80% of the decline is coming from continuing firms. In terms of growth rates from late April through late May, about 1/3 of all of the employment gains were from firms reopening. These are firms that shut down, stopped paying their workers for a period of time, and now have come back.

OK, so in the boom-- boom is a strong word-- in the slight employment rebound that we've seen from late April through late May, re-entry of firms is playing a meaningful

role in some of those gains. Let me just kind of highlight a couple more things, and then I'm going to turn it over to questions from Karen.

So when these firms re-enter, what does their employment look like relative to February? So on the x-axis, what you're getting is for a re-entering firm, a firm that was there, shut down, and has come back, what is their current employment in late May relative to early February? So a number like 0.5 means their employment is 50% lower than it was in February. A number like one means it's back to its February levels, and a number greater than one is they're now even bigger than they were in February. So that's the x-axis.

The y-axis is how many firms are at each one of those reopening levels. So if you go to the y-axis, you go to a number like 0.5. I have a pointer in my head. You cannot see that pointer, but I'm going to 0.5 on the y-axis. If you go over to the blue line and then go down to the x-axis, it says 50% of firms are coming back at a level that is about 25% as big as it was in mid-February. And if we took the mean of this distribution, that says the mean firm that is re-entering is about 40% as big as they were in mid-February.

So firms are coming back, but they're coming back at a much smaller level. Again, your restaurant is opening, but it's not at the same scale that it was in mid-February. And then we could ask, why is that important? It means that these re-entering firms still have room to grow when the economy eventually, post-vaccine, ever gets back to full strength. These re-entering firms have plenty of room to grow to even get to their February levels.

This next picture-- again, this is my last hard-to-digest picture-- is of those employees that are back in these re-entering firms, what percentage of them were there in February? So this is a measure of firm recall. And so on the x-axis, a number like 0.8 means that of the employees in late May, for these re-entering firms, 80% of them were there in February.

So basically, 80% of the workers have been recalled. And if you go to the median of this distribution-- 0.5 on the y-axis-- and go over to the blue line, it's basically saying 95% of all employment in a median re-entering firm is coming from employee recall. So employee recall is the predominant way firms are adding employment after they reopen.

So again, firms are reopening and bringing back some of the same workers. We'll talk about that with Karen a little bit later on about why that might be important for the economy as a whole. But it is a strong feature of the data. OK, I'm going to show you one or two pictures on wages, and then I want to show you some stuff on states reopening and then we'll go to the question.

So let me show you some wage stuff. So this is a picture that you might see in the newspaper sometimes. So the black line is what is the average wage of a worker who is working over periods of time. And so that black line is going up during the pandemic,

and you're saying, what? The average wages of workers are rising during the pandemic? That black line going up is all due for what we call selection effects.

What does that mean? It means the bottom of the wage distribution is no longer working. I've already showed you that before. So by taking away the bottom of the distribution disproportionately, relative to the top, low-wage workers stopped working, so they're no longer in the sample. That's rising average wages.

So what we can do, and that's the red line, is we can follow the wages of a given worker over time, and the wages of a given worker over time haven't been increasing at all. And so all of that increase in wages for the average worker in the economy is due to what we call the composition effect, the selection effect, that these low-wage workers are no longer working.

If anything, for a given worker, the red line, you could see it was rising from February to March. It's going up a little. Why? Because in good times, all of us are getting raises. Not all of us, but some of us are getting raises over periods of time, and the wages should be trending up. And you can see that has flattened in the recent period. We're not seeing average wages in the economy move at all for a worker who stays on the job.

And so we could then decompose for workers who we expect, given the past data, should be getting a wage increase, what is happening to their wages. What do I mean by workers who should be getting a wage increase? Most firms, including mine at the University of Chicago, adjust wages of their workers once a year. We get our wage increases in July. Some firms do it in March. Others do it in September.

So using our historical data, we take a look at which firms usually adjust their wages in March, April, or May, based upon past data. And the dark blue line is what they did last year. And so the dark blue line tells us that last year, these firms that adjusted their wages in March, April, and May historically, 75% of them had wage change. 25% of them had no wage change or a wage freeze.

So panel A is measuring wage freeze. Panel B is measuring who gets a wage cut. And essentially, none of them got a wage cut in last year. And so of those 25% of workers who got a freeze, none of them got a cut. That meant 75% of workers got a wage increase during their normally-scheduled months in March, April, May of last year.

The light blue lines or what happens this year, and so let me start with panel B and then I'll go to panel A. So in panel B, this year, 11% and change of workers actually got a wage cut this year during March, April, and May. So not only are firms laying off workers, for those who remain, wage cuts are far more common now than they were in the past.

And if we go further, how many of them are getting a wage freeze? Nearly half of them are getting a wage freeze this year. So if half of them are getting a wage freeze, 11% or

so are getting a wage cut, that means only about 40% of them are getting a wage increase, where last year, it was 75%. So you could see the whole wage distribution is shifting during the pandemic, relative to last year, which we think of as a normal year in the labor market.

And if we ask where those wage cuts are coming, now I'm going to break it out by wage quintile. So first quintile means the poorest workers, the lowest-wage workers. The fifth quintile means the highest-wage workers, now in panel B. And wage cuts, where are wage cuts concentrated? Wage cuts are concentrated among the high-wage workers.

So while low-wage workers are getting displaced-- losing their job, getting laid off-- high-wage workers are getting wage cuts, and over 15% of them are getting a wage cut. We're focusing a lot on the employment in the newspaper, but the wages are also adjusting. This is one of the advantages of the ADP data is we can actually look in detail at what's happening to the wage distribution.

OK, last question then I'm going to turn it over to Karen. So there's a lot of discussion in the news about how much our state closures deterring firm employment. And the answer, it has to be some. But the question we want to think about is, is it a lot or is it a little? Now, you're going to see lots of people do this now in academic research and then conveyed to you in the newspaper about comparing states that opened early and opened late, in terms of their employment decline. And I just want to make a few caveats on that, and then I'm going to show you a picture.

First, we have to keep in mind, in most states, essential businesses were kept open, and the definition of essential businesses was broad. Often, that included most manufacturing and construction and things like finance and some retail, like grocery stores, and we know some medical. So a lot of employment wasn't shut down. And I do have to keep that in mind because most of this cross-state variation might be in sectors where there's not much variation because all these states kept open these kind of sectors.

The second thing that I want to kind of focus on is the last point on this thing, and I want to show you some data on this. When states reopen, they don't do so randomly. Most they had when health metrics got to a certain level, we'll start reopening.

Now, why is that important? When we're trying to think about confounding how much of employment variation across states is due to some constraint on whether businesses could open or whether how much employment differences across states are due to the fact that health factors are different across states and health affects whether we want to go to a restaurant or not. If we all get a high chance of getting sick, we're not going to go to a restaurant, whether the state is open or not. And I'm saying, most of that variation is confounded when we use cross-state variation. And let me just show you one picture that kind of summarizes this, and then I'll conclude.

So what this picture is is employment in the ADP data in one sector, the restaurant and hotel sector. And you have two lines here. The dark line, the black line, is going to be for states that opened late. What do I mean by opened late? These are states like Illinois and Pennsylvania and Virginia and Washington that started relaxing restrictions on restaurants in late May. In the dashed blue line is large states that relaxed their restrictions on restaurants in late April-- Florida, Georgia, Texas.

A couple of things, these states were trending nearly identical in the pre-period. Second, after the states had opened restaurants, you saw restaurant employment go up. So opening, mechanically, has an effect on unemployment. But the thing I want you to focus on, even in Florida, Georgia, and Texas, employment in these sectors is still 40% below where it was in February. So opening is not the panacea to get employment back to its initial level.

And then the last thing I want to say, even in the states that didn't open, you saw a trend in employment occurring prior to their opening. And why is that? Because health conditions were improving, and people like me, hanging out in Illinois, might have ventured out of my house to get takeout a little bit more than I did in the past. Now, I'm still way below where I was, but the fact is, disease conditions are going to interact with states opening or closing or not.

And I'll list conjecture, and then we'll conclude and then turn it over to Karen. These blue states, even if they stay open, I'm imagining employment might not be rising much going forward. Why? Because in Florida and Georgia and Texas, the disease component is still ramping up. And even if the states stay open, people may choose not to go to this sector to mitigate their risk of disease. And so you need to keep these in perspective when we're doing these types or policies.

OK, so here's a summary, unprecedented paid employment decline at the start of the recession, concentrated among low-wage workers, women, small firms. Employment has increased meaningfully during May by about 7 million workers, but we're still down 20 million, relative to the start of the recession. There are selection effects when we look at average wage increases. Wages are going up in the economy but as an average, only because the bottom of the distribution is no longer working. And if we look at an individual worker, we're not seeing wage increases. And if anything, we're seeing wage freezes and wage cuts.

Firm shutdown is important, but some firms are beginning to re-enter. And I didn't show you this, growing businesses are mostly recalling previous employees, so a lot of people are getting recalled. And not surprisingly, employment increases when states reopen, but those employment effects are small, relative to the changes in employment in the sectors that are there.

That's all I got. Karen, I'm in your hands. You could take it over from now. At this point, I usually look at the audience, and they basically say, man, that was amazing. But I can't see it in their eyes right now, so I'm going to trust you to lead me for me here.

KAREN ANDERSON: Well, Erik, I am going to say it, that was amazing. You gave us a lot to process. For everyone in the audience who enjoyed that slide deck, we're going to post it, and we'll circulate it so you can certainly have a copy of it later today. And again, you can download Erik's paper. And he has a couple of great podcast episodes, and you can find those links if you want to hear more about this.

Just as a reminder to everybody, there's a Q&A button at the bottom of the screen. We've got some great questions coming in, and I'm going to actually incorporate a few of those with my questions because they're pretty overlapping. I think we're all thinking alike in a few areas. I just want to start piggybacking on where you left off on state reopenings.

So your research shows employment losses are greatest in those industries with a lot of social interaction-- restaurants, nail parlors, bowling alleys. So with the infection rates now on the rise in many parts of the country, we actually do see in a lot of these states, they're rolling back their reopening strategies. How do you think this is going to impact employment going forward, particularly in those industries? I assume no one here is running out to a bar or a crowded gym anytime soon.

ERIK HURST: Some are but not in the same propensity they were. And so just to kind of take one big step back, which I think will be underlying a lot of our discussion going forward, unlike many other recessions, almost all that I could think of, in those prior recessions, something was amiss with the economy in the pre-period. So think about the Great Recession. Prior to the Great Recession starting in 2004, 2005, 2006, 2007, we were building too many houses, making too many loans relative to trend, and some of that needed to be corrected during the recession.

So usually, the shock that hits the recession is some amorphous aglomoration of some thing that happened in the pre-period where things might get a little out of line. In this recession, is different. We know exactly what the shock was. It is a health shock from a virus that when caught, has extreme adverse effects, including death. And that shock, we know exactly what it is, when it started.

And the effect on that shock is going to affect demand for certain sectors, regardless of whether the state closes or not. So we're not going to expect to see restaurants and business travel and convention space and vacation rentals and a whole bunch of other sectors where we interact with people come back very quickly, if at all, until there is a vaccine. And so when states start to reopen, again, as Karen said, they're doing it because the health is bad.

The disease is running more prevalent in those areas, and so there's no doubt that employment in sectors like bars and restaurants and hair salons are going to either fall or not grow much, regardless of whether the states close or open or not. And again, the way to say it is the disease is the shock. As long as there's the disease, whether we're open or closed isn't going to have large effects on employment. It'll affect on the margin. Yeah, I don't want to mitigate. 7 million jobs is a lot of jobs. But relative to the 20 million

that are still out there lost, we're talking small variation rather than larger variation from the reopening.

KAREN ANDERSON: Great. Well, there is a lot of interest from folks on digging in a little bit on differences in the ADP data and BLS data. One question I had, you talked about the benefits of ADP payroll data at the beginning of your presentation. So obviously, tomorrow, we're all waiting to see what Bureau of Labor Statistics puts out with employment numbers. I think a lot of people were really surprised last month with the May numbers, with the unemployment rate falling to 13.3%.

It's since been reported that BLS was having an adjustment or transition that some workers had been improperly counted as employed rather than unemployed. And presumably, that's going to be fixed for the June jobs report. So how will that adjustment affect what we see tomorrow out of BLS? And will the ADP data still be consistent, even with that potential adjustment?

ERIK HURST: So the BLS reports two sets of numbers. And so they have their jobs numbers, when they say 20 million jobs are lost, comes from a survey of firms asking them how many workers they're paying, which kind of looks like ADP. So the employment side of the BLS numbers isn't subject to that misclassification error. And I'll come back to that a second. Let me just tell you what else the data measure.

The BLS measures a household survey. And so a household survey, they call people up on the phone and say, are you working, or are you not working, are you laid off, et cetera, and those are what compute the unemployment rate. And so the classification of laid off, I still have a job but I'm not working this week, they haven't fired me, but they're not paying me is showing some of the differences of the BLS, which they're thinking about with their unemployment numbers.

The job numbers, though, from their firm survey, match very closely to job numbers in the BLS employment data set. It's not always exact because there's caveats on both. Like, the BLS historically doesn't really have to worry about firm exit with the same veracity because most times, firms aren't exiting en masse all at once, even in a recession. And so they had to make some adjustment to their firm exit margin, which we do.

We don't really have births in our data. Birth for us means starts contracting with ADP. So the BLS has some births in the background. So some firms are starting-- not many-- but some firms are actually starting during the pandemic. So there's always going to be little differences between the two. But for us, the trends from our numbers in the BLS have been nearly identical. And when they said jobs went up by about 3 million, in firms survey, we had exactly the same thing.

Now, how much is unemployed versus not working versus laid off? That's the household survey, and they're fixing that. And that's why I tend not to focus so much on unemployment rate numbers versus employment change numbers. So everything I

showed you today was changes in employment, and I didn't try to decompose how much of that change in employment was due to people being unemployed, people not being unemployed, people being laid off. That decomposition might matter, but everything I'm measuring is in employment declines, which is more consistent with the BLS's firm survey.

KAREN ANDERSON: Great. We may come back because there are a lot of questions about ADP data, so we'll save a few of those for Q&A. Can you just talk a little bit more about what makes this pandemic recession so unique, different from previous recessions, different from the Great Recession? Has there ever been a recession where we had a government-forced shutdown of businesses? What has made this so unusual overall?

ERIK HURST: So I'm going to talk about some features of unusualness, but then we'll go back to the primitives again and think about with the shock. So one feature that is unprecedented in any recession is the speed and the magnitude of job loss over a two-month period. So as I mentioned before, we lost about 1/5 of all employment. All people who were working, 1/5 of them stopped working between February and the end of April. In the Great Depression, two and a half years in, three years in, we had the same amount of job loss then we got more after that.

So the Great Depression actually had more, and the Great Depression was much longer, in terms of its duration. But the speed and the magnitude in which employment fell is unprecedented by every measure. And again, it blows my mind to think about, one out of five workers are losing a job over a two-month period. Again, when I say losing a job, stop getting paid. Maybe they come back, maybe they don't. That's going to be some time. But even today, we're still talking about 15% workers are still not working, relative to February, and that is twice as bad, twice as large as it was in the Great Recession, which was a massively bad recession in historical standards. So that is one defining feature of the observations we see in the labor market.

On the other side is what I said before, we know exactly what the shock is. The shock is a health shock. And as much as me and some of my colleagues like to pretend we're epidemiologists, we cannot predict when that health shock is going to mitigate, when is it going to be vaccine, when there's going to be some innovations and medical treatments that mitigate the adverse effects of the health shock. But this is 100% a health shock.

And if we had vaccine today, this moment, and we did that for the whole world, I assume we would get back to close to February levels rather quickly. The longer this goes on, the less likely that is to occur, and we could talk about that through other questions. But what makes this different is we know what the shock is. We know what will end it, but that end date is uncertain because it depends on innovations in the medical sector.

KAREN ANDERSON: All right, I'm going to start pulling. We've got some great questions coming in the queue that you talked to in your presentation about employment losses being most concentrated among our least paid workers and that bottom fifth of the income distribution. A lot of folks are curious about the pandemic unemployment assistance, that $600 federal benefit for unemployed workers under the CARE Act, which is set to expire at the end of July. Folks are really wondering how that has contributed to potentially the slow rebound with the bottom quintile of wage earners. Has it served as a disincentive for people coming back to work?

ERIK HURST: So OK, let me just kind of set the stage for some of the background. So as the unemployment benefit extension occurred, they gave a $600 federal cap-off to some unemployed workers. And for some workers, $600 plus their unemployment benefit is more than their salary. So there's been some speculation that that would act as a discouragement to workers coming back.

I think that is second order, third order at this period in time. And why is that? Because employment really isn't coming back that strong in any sector right now. And so suppose there's some worker out there in your restaurant industry and that worker didn't want to come back because of the short-run gains they're getting from this unemployment benefit. And there's another worker that they had that might be willing to come back.

So if there's some heterogeneity that they had and some of us want to come back and some of us don't, so the disadvantage effect affects some of us, then there's others that it might not affect. And I just don't see it as a being discouragement effect for some workers that are out there.

Now, the longer this goes on and the closer we get to full employment, the more likely I think that would be a problem. And if this was becoming extended, if the $600 was going to last for eight months or 12 months, that could be a discouragement as well. But right now, it's set to expire this month. And so people are trading off, do you go back to your job and get a couple extra hundred dollars for a couple of months or a couple of weeks, or do you lose your job altogether? And I just don't think it's a big deal, the discouraging effect.

KAREN ANDERSON: Tacking onto that, longer term, what do you think the implications of this recession are for inequality in the United States?

ERIK HURST: OK, so there are two things on my mind. So after vaccine, so in our mind, we get vaccinated at some point in the future-- six months, nine months, 12 months hopefully in the future, the world is vaccinated, and the health shock is mitigated. How will the labor market be different? That's part one. And in the ways that it will be different, will that affect workers at different parts of the distribution?

So there's two things that are on my mind that I think both enhance inequality going forward about the differences in the labor market post-vaccine. I think the first of those

is that during this time period, firms-- us-- are doing some sorts of innovation in ways that might automate certain jobs away. And so we'll talk about Zooming this in a little while, but we'll think about McDonald's.

McDonald's has been experimenting for a little while with kind of electronic kiosks to do the ordering. Instead of ordering to a person, you order to a machine. And the more machines you have, the less workers you need. And what is the benefit of the machine in a pandemic? The benefit of a machine in the pandemic, it doesn't need to be socially isolated and doesn't call in sick.

And so we're seeing firms are innovating in ways now with technology that might actually displace certain types of workers. And after the pandemic is done, those innovations are going to remain. They're not going to un-forget those innovations. And these are innovations firms have been experimenting pre-pandemic. So the pandemic is just accelerating that experimentation, and it's doing so in a way that might affect low-skilled workers.

And that is related to my second point, which is there's a large amount of industry now being created for businesses to do business with each other, not to do so in person. And so think about the business travel industry, which is a large part of our economy where people would fly across the country for work, for meetings to engage in certain types of activities. And in doing so, you support a lot of employment-- restaurants and rental car companies and airlines et cetera.

And if firms are now going to shift their business model away from some of those types of activities, that also is going to affect mostly low-skilled workers because the workers working in the rental car companies and the restaurants and convention centers for the most part tend to be from the bottom parts of the distribution, as opposed to the top. But it'll still affect the top, but disproportionately, it might come from the bottom.

So in both of those ways, if firms do these types of adjustments either through technology or how they do business, I think it's going to disproportionately fall on the burden of lower-skilled workers, relative to higher-skilled workers. And that's going to just make these inequality trends more long-lasting. They might have happened anyway, and you and I have talked about this before.

We've been trending in ways where inequality for decades, but this might accelerate some of those trends. And by accelerating it, it concentrates them in a short period of time, which means the adjustment of workers is just a lot harder when it's all happening at once, as opposed to spread out over years and decades.

KAREN ANDERSON: We also have several questions about age groups and if you've been able to look at age groups, what are our impacts for younger people entering the labor market or what are impacts potentially for retirees. Have you been able to break that out by age group?

ERIK HURST: Yeah, so in the paper, we do. We actually look at age differentials, in terms of employment loss. And for workers 30 to 60, there's not much variation by age. For younger workers, employment losses have been larger by about 4% or 5%, but that happens in all recessions. The young tend to be in the most fragile jobs. As you start getting tenure, your job gets a little bit more stable.

And so young workers tend to always be more cyclical than older workers, and we're seeing that in this recession as well. And as workers are entering into a labor market where not a lot of people are hiring, they are also sitting idle. So if you were lucky enough to get a job three years ago, you're much, much more likely to be employed now, given that very few firms are hiring on net right now. So younger workers are there. I imagine, the longer this goes on, the more effect it will have on recent graduates when firms just aren't going to be hiring.

On the other hand, we're also seeing larger declines for those over 60. Now, some of that, again, happens in recessions as people accelerate retirement and such. But in this recession, there's an additional effect that the health effects are disproportionately worse for workers as they age. And so some of the employment declines are likely also adjusting for older workers because those workers choose not to work for health reasons. And so again, for anyone from 30 to 60, there's no age gradient whatsoever. But for young workers and older workers, we are seeing larger declines.

KAREN ANDERSON: Here's a question from someone in the Booth community. How long before job losses affect mortgage markets and other markets?

ERIK HURST: Yeah, so the one thing on the flip side of all this is the government, during the last few months, have injected a huge amount of money for workers and firms to try to mitigate these adverse effects. Because we know the shock is going to be temporary, we want to make sure we preserve as much of the institutional capital as possible during the recession.

And so the government has been doing that through their huge programs in supporting bank lending and the PPP for small businesses and the unemployment benefit extension through the CARE Act. You're having all this money come in. And I think as the government has come in, they are actually mitigating some of the adverse effects-- not all of them, but mitigating the adverse effects, particularly on lower-wage workers.

And some of our colleagues-- Joe Vavra and Peter Genam and Pascal Noel-- have this work looking at consumption. And despite employment losses being so much larger for lower-wage workers, consumption declines are exactly the same. And so how does that happen? Well, the government has come in and provided support to maintain consumption.

The longer this goes on, I am going to conjecture the amount of government support is going to get smaller and smaller. And if that happens, you're going to see more and more of these adverse events accumulating. With that, there's still adverse events

accumulating, as people have to start paying rent regularly. Landlords might have forgiven for one or two months and unemployment benefits might help for a third month. But the longer this goes on, we're going to see more and more disruptions, and that's going to spill over into lots of markets, including the housing market.

KAREN ANDERSON: People are also curious about what you think of the government response. Do you want to give us your rating of the policy response, fiscal policy and monetary policy?

ERIK HURST: I'm awful at these things. I'm extremely awful at it. What I do know is that in response to a temporary shock, if it was going to be truly short lived, having some response to preserve the institutional capital is going to be important. The longer this goes on, the more expensive this gets because these are big numbers that we are doing.

And I think the government has done what I would say is a kitchen-sink approach. And they did it very fast to get lots of money out to lots of different sources to try to preserve as much institutional capital as possible. Was some of it likely less efficient than it might have been if we had months and months to design this? Of course, but it is far better than doing nothing to try to preserve some of the institutional capital.

What I'm wondering is how long there will be an appetite for this the longer this goes on. And again, if a vaccine isn't until 16 months or 12 months away, the economy is not going to rebound until there's a vaccine just because people, even people with resources, are just not wanting to consume a large sector of the economy, the social sectors where we interact together.

KAREN ANDERSON: All right, well, you almost answered it. I was going to pull someone who had a great question that I thought could be a great closing question. So we'll just--

ERIK HURST: Oh, look at me with my rambling.

KAREN ANDERSON: [INAUDIBLE]. So let's assume that in September we have an effective vaccine, we can get it to everybody in the US and the world. How long does it take us to get back to normal, and what does that normal look like? How close to pre-recession levels do you think we can get?

ERIK HURST: OK, so normal is going to be in many different dimensions. What I think is if we had a full vaccine that was widely distributed, I would say that spending--

KAREN ANDERSON: September. We're working fast.

ERIK HURST: What?

KAREN ANDERSON: It's in September. We're working fast. Everyone's--

ERIK HURST: You're working--

[INTERPOSING VOICES]

Spending levels will probably return to normal within four, five, six, seven months or something like that. And you'll get a huge jump right on impact, but it'll still take time. A large sector is the vacation sector, and people can't all of a sudden just go take a vacation right in the same week. So some of that spending is going to gradually come in, and some people might not be believing that the vaccine actually works. So it will take some range of time, but I assume relatively quickly.

What it also means in the labor market, which has occurred in every sort of recession that we've seen for the last 30-some years in the US, the labor market lags relative to the general economy. Why? Because it takes time for workers and firms to recreate those matches. And so if some of those matches got destroyed between February and even September, it's going to take even longer for the labor market to get back.

Firms are going to say, hey, you know, I could probably service the restaurant thing with half the employees for a little while. And then you're going to start seeing, well, maybe a disease comes back, so I don't want to hire everybody quickly. So there's always a delay in the labor market. So even at that time, if we got a vaccine in September, I imagine we wouldn't have unemployment back to pre-pandemic levels probably for another year and a half after that, based upon past recessions.

KAREN ANDERSON: All right, with that, we're at time. So is there anything you want to add?

ERIK HURST: No, it's perfect. This was fun. This was good.

KAREN ANDERSON: Perfect.

ERIK HURST: You're making it too hard for me. I usually walk around. People know I talk with my hands. This is a very different--

KAREN ANDERSON: I know.

ERIK HURST: --way for me to communicate.

KAREN ANDERSON: --you hear rounds of applause. I'll give you my applause. Thank you for a great presentation. Thanks to our audience for joining us. I think we had a really great crowd on today's video conference. And just look out for future events. BFI is going to make this a regular series. And so you'll hear from us, and we hope you'll tune back in.

ERIK HURST: Thank you very much, Karen. It was fantastic.

KAREN ANDERSON: It was fun.