

Unedited Rush Transcript

Conference: Labor Market Slack: Assessing and Addressing in Real Time

Panel 2: Constructing estimates of slack – dimensions of the difficulties

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Moderator: So let's get started on our next session which is going to be an exploration of how we actually go about making quantitative assessments of the degree of labor market slack. And we have four participants in this session that--as Adam had indicated--that need no introduction. You're welcome to read their bios. But I think we'll go ahead and get started if we can get the rest of the participants up here. I know what happened to Andy. Oh, there's Andy. Okay. It's okay when we missed the slides but if we actually are losing the presenters, it becomes a more serious problem. So I think at this point let's get started. Wendy, would you like to go ahead and start?

Wendy: Hi there. So a lot of what I'm going to say is going to echo what we've heard already today. And I'll try to cue you when I'm switching slides. So, looking at our first slide, that shows our estimated gap between actual output and potential output. CBO estimates that GDP was about 4% less than its potential or in other words its maximum sustainable value, in the first half of this year. That slack reflects the estimate in amount of underutilized productive resources, including business equipment and structures that are idle, houses that are unoccupied, and people who would like to work but are not working or people who are employed but would like to work longer hours.

To be sure, conditions in the labor market have improved notably in recent quarters, but nevertheless, CBO estimates that a significant amount of slack remains in the economy and in the labor market.

So switching to your next slide titled Slack in the Labor Market. The labor force participation rate is well below what CBO estimates would be

achieved if the demand for workers was currently stronger. That is the labor force participation rate is well below our estimate of the potential participation rate, that reflects the estimated effects of both demographics, most importantly the aging of the population, and of the number of people who have left the labor force permanently, in our estimates, in response to the recession and weak recovery.

The unemployment rate is also shows slack. It's above CBO's estimate of the natural rate. That is CBO's estimate of the unemployment rate arising from all sources except fluctuations and aggregate demand. In combination, the short fall in labor force participation and the elevated unemployment rate have resulted in substantially lower employment in 2014 than would otherwise be the case. And the share of part time workers who would prefer full time work is significantly higher than it was before the recession. That's been discussed already.

One important signal that significant slack remains in the labor market in our minds is continued slow growth in hourly labor compensation. But measuring slack we recognize is quite difficult. And the current amount of slack could be a good deal larger or a good deal smaller than CBO estimates.

So in the next slide, I have a chart of the labor force participation rate and our estimate of the potential labor force participation rate. The labor, as has already been discussed earlier this morning, the labor force participation rate fell from 65.9% in the fourth quarter of 2007 at the beginning of the recent recession, to 62.8% in the second quarter of 2014. CBO estimates that about three quarters of a percentage point of that decline since late 2007 represents the extent to which actual participation is below potential participation because of the contemporaneous weakness in both employment prospects and wages.

According to CBO's analysis, most of the decline in the rate of labor force participation since late 2007 is attributable to two other factors. First, long term trends, especially the aging of the population, account in our estimates for about one-and-a-half percentage points of the decline. Second, unusual aspects of the slow recovery of the labor market that led workers to become discouraged and permanently drop out of the labor force, account in our estimates for about three quarters of a percentage point of the decline.

So the next chart shows the actual unemployment rate and CBO's estimates of the Natural Rate of Unemployment. The unemployment rate stood at 6.2% in the second quarter of this year, roughly one-and-a-quarter percentage points above its level before the recession. CBO estimates that about one-half percentage point of that net increase reflects temporary

weakness in the economy. Much less than the peak effect of temporary weakness, estimated to be more than four percentage points in late 2009.

In CBO's view the remaining three quarters of a percentage point of the net increase in the unemployment rate from before the recession stems primarily from two structural factors that have boosted the Natural Rate of Unemployment to about five and three quarters percent currently. The stigma and erosion of skills that can stem from long term unemployment and a decrease in the efficiency with which employers are filling vacancies.

So the next slide I have summed this up in an unemployment shortfall. In combination the elevated unemployment rate and the shortfall in labor force participation have resulted in substantially lower employment in 2014 than would otherwise be the case. In the second quarter of 2014 about three and three-quarters million more people would have been employed according to CBO's estimates if two things were to happen. One, the unemployment rate had returned to its pre-recession level and, second, the labor force participation rate equaled its potential rate.

So my next slide shows something that we've already talked about, workers who are unemployed part-time. Another manifestation of slack in the labor market is the number of people who are employed but are not working as many hours as they would prefer. The incidents of part-time employment for economic reasons resulting from slack or business conditions or workers' inability to find full-time employment remains much higher than it was before the recession.

And looking on your next slide at other measures of under-utilization in the labor market. By other measures as well, the under-utilization of labor remains quite high. The BLS' U-6 measure has come down from its peak in 2009 but remains well above its 2007 value. Although the rate of short term unemployment, I'm not sure that we've actually defined it yet this morning, the percentage of the labor force unemployed for 26 weeks or less, has returned close to its average rate before the recession. But the rate of long-term unemployment remains about a percentage point above its average rate. Those facts have accentuated concerns that stigma and an erosion of skills may be hindering the efforts of the long-term unemployed to get stable work.

In the same vein, CBO estimates that those factors have raised the Natural Rate of Unemployment. Nevertheless, the agency expects that many of the long-term unemployed will be employed again. That view reflects recent research that the long-term unemployed are in many ways similar to the short-term unemployed. Moreover, the rate at which the long-term unemployed to find jobs, while still quite low, appears to have picked up in recent months.

Your next chart shows measures of wages and salaries paid to employees. Labor compensation has grown slowly, another indication that a significant amount of slack remains in the labor market. For example, the growth of the employment cost index for total compensation of private industry workers slowed from an annual rate of about 3% before the recession to roughly 2% during the past several years. And it has not yet returned to its previous faster rate of growth. The ECI for wages and salaries of those workers, which is actually what's plotted here in the figure, has continued to increase at an annual rate of less than 2% since the recession. And the growth rate of average hourly earnings of production and non-supervisory workers and private non-farm industries has turned up in the past year but it remains way below its ratings from before the recession.

The next slide goes to some of the difficulties that we see in measuring labor force slack. To be sure measuring slack is quite difficult, especially given the unusual developments in the labor market since the recession ended. And the current amount of slack could be a good deal larger or smaller than CBO estimates. For example, with regards to labor force participation, CBO may have underestimated or overestimated how many people permanently dropped out of the labor force because of such factors as long-term unemployment. Therefore, potential labor force participation could be higher or lower than the agency estimates.

As another example, CBO's estimate of the Natural Rate of Unemployment depends on the speed of recovery and the efficiency with which employers are filling vacancies. That recovery is expected in our estimates as workers acquire new skills, shift to faster growing industries and occupations, or relocate to take advantage of new opportunities. Relative to CBO's projections those adjustments could occur faster or slower or not at all.

And on my last slide I just have some notes to show you where the figures that I showed on the proceeding slides came from and some definitions of what we define a natural rate to be. Thanks.

Michael Horrigan: Good morning. So the only consequence of not seeing the slides is I can't use my distance glasses so I'm using my reading glasses right now and I can't see any of you.

First slide, Michael W. Horrigan, Associate Commissioner, OEUS. The only thing that's important about that is that I'm newly minted. I've been in this job for two months. I was Associate Commissioner in Prices for the last 10 years. So it's kind of fun coming home to rediscover all these programs that I worked in earlier in my career. I used to run the NLS, the Occupational Employment Statistics Survey, projections. So I have a lot of

familiarity with OEUS programs. But now with this kind of issue coming up I'm learning a lot more about JOLTS, for example, QCEW.

So I've been in this job enough time to get a little bit of a perspective because this particular issue immediately hit me when I first came on board. And so what I want to do in my remarks is concentrate really on measurement issues, on measurement wish list, the things that you want to add to our surveys; we already have a question for this March CPS, but to look at some of the priorities and see if we can, sort of through dialog, figure out what some of the priorities would for this issue or in general.

I'll do it in a couple of ways. If you go to the second slide, I'm going to look at some considerations. I'm measuring labor market slack and then I'm going to talk about JOLTS, CPS, OEUS, and there is a mistake, there's a missing bullet, quick response surveys. There's just one slide at the very end on that.

So if you go to slide three, from three through five, I'm going to talk about some considerations. And then I want to expand upon those a little bit by going through the individual surveys. By going through the individual surveys I'm also hoping that I'll spark some sort of conversation in terms of things that I may have missed, as far as things that I think we should consider in this issue.

Obviously one size doesn't fit all, from slide three, and details matter. I went through all the papers and I took a look at just sort of in general the question of do we have enough detail in certain areas and not enough in others? And for the labor force participation rate stuff, for example, in the washer paper and some of the others, the age, sex, educational attainment, there doesn't seem to be a cry for more detail on those areas; though I do have one exception to that.

It seems more that there are concerns about getting more state representation, more geography coverage, and perhaps even industry coverage. But going back to the age, sex, education, I do wonder whether or not an increase in sample size would help with the efficiencies of the estimates in terms of having greater clarity. But also I want to point out that we're about to introduce CPS questions on licenses and certification. So, for example, the old thing where if you're in a community college, you're not working towards a degree, you're working towards a certificate, in the CPS you count as high school only. This is going to give us some insight into, I think, an area of increment quality that would be potentially very important.

I also wonder about the relative lack of information and how it translates into LFPRs on college dropouts, that is a particular class of educational attainment; people who have perhaps, a college burden. They went to

college, they've dropped out. And then looking at daily report participation rate and the kind of jobs that they hold. I believe you can get information on that from the October supplement, but you're not able to get monthly information from the CPS.

In general, I think I wouldn't be surprised to find out that you want more coverage of geography, industries, and perhaps occupations. There are differences in the survey. OEUS has, obviously occupational employment survey, has wonderful coverage of occupations. But household surveys are limited in all these respects and it varies in the establishing surveys. JOLTS does not have geographic detail. It doesn't have information, even below that in terms of things like the occupations for which openings are being posted.

Another consideration for slide four is that JOLTS reflects demand side. And I think that one of the problems here is that we're looking at an equilibrium market within demand and supply and how we measure that. And in some ways the demand supply view requires a coordination between the establishment and household surveys and I think that can be tough.

I would like to point out towards the end or at least propose, that maybe we under-appreciate a little bit the potential of looking at equilibrium outcomes and things like an OEUS time series. And I'll sort of note some of the work that we're doing to try to look towards creating time series for the occupational employment statistic survey.

Going to five, I think there is a need for looking at the issue of existence versus intensity. We have a lot of existence measures but we don't have certain intensity measures, such as how intense is the search by firms for employees? How intense is the search by employees for jobs? Or how intense, to use Betsy's example, is the desire for more hours if you're working part-time or if you're working full-time or the desire for another job?

So, I want to try to bring these sort of points home by example, and the plan is I'm not going to go into great detail on each of these charts in terms of showing the cyclical behavior, that's really being covered by a lot of the speakers I want to point out sort of the relationship between the points I just made and what you see in the data and also I want to show you the kind of data that we provide across these surveys.

So if you go to JOLTS, and on slide seven, which for some reason seven didn't appear, the point that I want to make with JOLTS is that you get mixed signals. So in the first one if you look at unemployed to person's per job opening, it's falling indicating decreasing slack in the labor market. A positive sign, and also if you go to slide eight, if you look at increasing job

openings themselves, the job openings also indicate a lack of slack. As a matter of fact, the job openings have recovered to their previous session high. So after the fall it's come back.

But then the puzzle begins. If you look at slide nine, the low level of hires relative to openings indicates that there is slack. We have this wedge, this growing wedge, between the number of openings and the number of hires.

So in slide 10 I kind of explore that, where you have to juxtaposition between the number of hires and the number of openings. And part of this may be how intensive is the search by firms for employees? They're posting jobs, they're hoping for the best person to come through the door, but if there is slack in the labor market they have patience in terms of who they actually hire, so having other measures. And [inaudible 00:18:21] and Davis have come up with measures in a recent paper that they wrote, where they're looking at things like advertising expenditures, screening methods, hiring standards, and also the attractiveness of compensation packages. So an obvious question, is could we, should we, and could we is often a very pragmatic operational management decision, but could we add questions about search intensity to JOLTS, even if only for a special survey.

If you go to slide 11 I think a lot of the conversation today is embodied in slide 11, and that is basically from the JOLTS day to the beverage curve has shifted to the right. If you look at the pattern in going down to June 09, we sort of have one beverage curve, and then shifting to the right from 2010-14, we're recovering but we're on a completely different level. We have shifted to the right so that for any level of job openings we have a higher associated unemployment rate indicating some sort of greater friction in the market in terms of finding these matches. Are there variables that would give us better indicators of friction in the exchange between employers and employees?

On slide 12 you have just this, again, this sort of dichotomy. You have the low level of quits but you also have a low level of layoffs, kind of indicating different things in the market. And if you go to slide 13 and you look then at the ratio of quits to layoffs, what you'll see is one is pro-cyclical, the other is counter-cyclical. What you kind of get here is an indication of the strength of that ratio over recessions and what's happened to it in the current recovery. And so we have not sort of gone back to the previous session levels that we had. And I think this may point out where we need some more information by more detailed industries.

If you take a look at slide 14, it's at a fairly high level. You have construction, manufacturing, and health services, but you get some interesting differences in the trends. Health has been above the unity ratio in the entire JOLTS history. Construction, except for a couple of times,

has really been below one the entire history, and manufacturing dips up and down below; above and below. And I think it could be instructive if you had more detailed industry information in terms of really understanding the notion of turnover in these industries and how quits and layoffs are kind of playing out and what is “normal” for these industries.

All right, so slide 15 kind of summarizes maybe we need to consider measures of recruiting intensity, greater industry detail. And I'm not here shilling for money, but if geography is needed then geography and more industry detail just translates simply into sample size, okay.

All right, let's take a look at CPS household data. So, much of this is familiar. You've seen the charts already today. But in going through them I'm going to point out a couple of things that relates to the points I made in the beginning and also talk about a few things that I think have emerged in the conversation today.

So the participation rate in slide 17, obviously falling dramatically. The EPOP ratio, which I thought Julie does a really nice job in looking at the decomposition there, also falling and then kind of holding steady for the last several periods but at a fairly low level.

Going to slide 19, we have the traditional chart of part-time for economic reasons rising greatly and then as people had pointed out, has fallen slowly in the current recovery expansion. But what I find interesting is that if you look at slide 20 you have a much bigger decline in part-time for economic reasons due to slack work. So if you look at the questions, the CPS questionnaire, there's a variety of reasons that are listed. Things like childcare, for example. But you also have two specific reasons that go into part-time for economic reasons. One is due to slack work, and the other is could only find part-time work. That's the one that has been stubborn. So there seems to be sort of a difference here in terms of what's been recovering and then what has not made much progress in the current recovery.

If you look at slide 21 and 22, what I'm trying to bring out is just the point in the data that we have on both long-term unemployment and then the question of, well, when the long-term unemployment rates fall as they have, this is the levels but the rates behave the same. If you look at 27 weeks and greater there's been a really large decline. The question is where did they go?

Now our gross flow data are limited in a sense that you get a snapshot of where they went first. But what you see in slide 22 is if you look at the light gray bar that gets bigger and bigger, those are the transitions, the Markov transition probabilities, from U to N, but it's just that one stage. What we don't frankly, is whether or not they go from U to N and then



back to E at some point, back to employment. And I apologize; N is out of the labor force. I'm from the government. I speak in acronyms.

So U to N is the transitions from unemployment to out of the labor force. But I think gross flow data are something that do hold a lot of potential for looking at the outcomes, if you will and I think there's other potential besides gross flow, which is month to month. You have a 4-8-4 rotation sample in the CPS. You can match a lot. You can match, including if you have match with work experience, you can do conditional matches based on work experience, but you can match four, 12 months. You can do a four-profile. If you're concerned about duration dependence then you could take, for example, people who are zero to four weeks and their first month in sample and then match the forward and find out what the resolution of their unemployment experience is.

There's a lot of things that you can do besides just the month-to-month snapshot. We don't publish the things I was just mentioning. Those are available in public use micro-data. But I think there's a lot of things that you could do, especially with sort of duration dependence modeling and looking at what are the characteristics that leads to long-term unemployment, how have those changed in the current situation, and what basically has happened in the recovery of long-term and where have these people gone? So I know we're talking about official statistics, but I think there's a lot of data and the micro-data that could be useful.

All right, I'll hopefully close this out fairly soon. How am I doing at time? Am I all right? Okay. I saw the 10 to 12 last night in email but I think we said 15 is fine? Okay. Good. So my mother will be proud. I continue to talk as fast as I did when I was a kid.

All right. So then, just touching on what we've talked about before in slide 23, and then 24 and 25, some of these other measures. So in 23 we have the marginally attached and the discouraged workers. So what we're looking at is basically a class of people who have looked in the last year, is not conditioned looking prior to that, it's an interesting concept. I was trying to think of ways in which when you capture that through matching and it's kind of difficult just because you have to take a look at—you have the condition on sort of number of weeks unemployed in the first month in sample in order to sort of go back. Or I think it would just be a difficult exercise.

But there you have the, sort of; the big uptake in both marginally attached and then discouraged workers, which are subset in terms of whether discouraged for very particular reasons.

The other thing that we have that I think is a good measure of, potential measure of slack in the analysis and people have already mentioned it, are

the U1s through U6, the various unemployment rates. We have U3 as the official and then it's basically more restricted for one and two and then ask more folks between four and six. And what you find in 25 is that point that Danny Blanchflower was talking about, it falls kind of in lock stack, and here are measures adding the part-time for economic reasons in then the discouraged workers. But when you add these folks in U6 it really explodes up. We do not have a measure of the hours measured that you're talking about for the UK, which I thought was kind of interesting.

All right. So I've talked about the JOLTS data. I've talked about the CPS. Let me talk about some other potentials. So one of the things that we have potentially going for us is that we're in the present 2015 budget to give us the power to do supplements for the CPS. Every other year it will be a supplement basically on our contingent work practices, work force, but then we have the off year where we can do it on the subject of our choice. So that would give us the opportunity to create a survey instrument that would respond to emerging academic, public policy, those kinds of needs. So that has the potential if indeed that part of the present's budget goes through.

Second, I want to talk about OEUS time series. So if you're not familiar with OEUS data, it's huge. We have 1.2 million establishments, which is a representative sample over a three-year bases, so it's not a representative sample on a yearly basis. That's the problem. It gives you employment and wages, over 720 occupations for national, state, all the way down to the MSA level with a lot of detail. And also by detailed [inaudible 00:28:30] six digit [inaudible 00:29:32] category. So it's got a lot of detail.

If it was a time series, in other words what you would have to do is convert the three-year sampling strategy to a one year; you would also have to ask yourself how much sample size you need to truly represent changes from one year to the next? You could potentially look at outcomes from one year to the next that represent market equilibrium outcomes. Such as what are the occupations and industries that are contributing to rising wages and rising employment or perhaps rising wages and employment above certain thresholds, analytical thresholds? But I think there's a lot of information that you could get from in terms of how the outcomes of this slack or non-slack labor market are actually proceeding? What are the outcomes in terms of that hiring process, the two-sided search, between firms and employees?

So we're looking very seriously at time series. We're doing the research. We have a methodology for how we would translate the sample. But frankly speaking, it's probably going to give you less detail as you go down the geographic ladder than people would be hoping for, even though we have a budget for a very large sample size. Preliminary indicators

suggest that we'd also have to add, if we do it within our current budget parameters, add some modeling to the effort.

The final thing I just want to mention is the commissioner, Commissioner Groshen, convened a senior staff retreat. And we at the [inaudible 00:30:01] just love senior staff retreats. I speak as sort of an old bureaucrat there, but it was actually a really good retreat. And we came out with four visionary, sort of, approaches to how we want to look at the future of BLS; and that's the commissioner's job. And one of the things that came out of this, which nothing we weren't expecting or surprised by, but it just wasn't talked about prior to the retreat and it got a ton of votes. The sticky dots that you put up, with quick response surveys, quick response surveys in establishments.

Now I ran quick response surveys at the bureau in the early 90s. I did the surveys of employer provided training. And what it basically was is you get a request from say an outside agency or you have your own concept that you want to measure and you draw an independent stratified probability draw from the QCEW and then you have a vehicle for data collection. You come up with an instrument, get on approval. Well, my process took a year at least to get in the field, and then have six months of fielding and reporting the results.

The challenge that the commissioner gave to us is when it was ended is she would like to do this and she would like to do this within six months if possible, which is probably a stretched goal. But the point is, is that we do not have a vehicle currently for quick surveys of establishments that would allow us to investigate questions like slack labor market where we just need to add types of questions. And so it's a priority. We do not have budget for it. We would have to figure out how to do it. But I think it's a direction, a vision for the bureau that is particularly important.

Now, the other option is to add questions to existing surveys. And I can tell you from my prior negotiations with survey managers, you're not going to get a lot of questions that—I mean, I did a job vacancy survey and asked the OEUS folks if I could add 45 questions and they said I could add three. So at the end of the day I think an independent sampling draw would probably be the best approach. But I like this vision because I think it may, in the future, help to address these kinds of public policy questions. Thanks.

Moderator: Thank you Michael. Andy.

Andy Levin: I just want to start by thanking Adam for hosting this. I don't think he's still here actually. But [inaudible 00:32:37] anyway I think—right.

I'm an economist for many, many years. I think we often talk in terms of GEP statistics and economic growth. I think the reason I sense an urgency in this topic is because when we talk about people who are underemployed we're talking about, say, a single mother who maybe relying on food stamps and Medicaid, there's an urgency for those people. And I think as this- the sluggishness of this recovery following a very deep recession has dragged on and on. I worry that when we just do statistical analysis with cohort effects and time effects and all the fancy methods we have as econometricians, first of all we lose track of this real people, and secondly we forget to just ask those people. That's why in the Q&A earlier I referred to this Reuters study and I think it's a crucial—again, with the work the BLS is doing, to try to enhance the information they collect. Which is asking people, what would it take for you to come back to work. I worry that the CBO has become very pessimistic now about the extent of irreversibility.

So again, following up on what Julie said, we think that one-and-a-half percentage points of the drop in LFPR is probably due to the Great Recession. But now the CBO thinks that half of that is irreversible. So I mean, this would be very bad news. It means that many millions of Americans are never going to be able to find a job again. And we're not talking about people who are retired. We're talking about people who are prime age. So these are urgent questions. And again, I'm really glad that Adam has organized this conference and I hope that it'll be one of many over the next year or two because these are urgent public policy questions, not just academic interests.

The other thing, if you look at my slides on the front page, is even though I'm affiliated with the IMF, these are just my own views so please don't misunderstand that.

If you turn the page, the first table is just to show that this issue of underemployment is not just an issue for the US or even for Britain, as Danny mentioned in his presentation, it's an urgent issue in Continental Europe. You can see a couple of rows there for Italy and Spain. And also for Canada where they seem to have some significant progress in reducing underemployment in the wake of the Great Recession but now it's actually picked up again more recently. So thinking the need for more across-country work people have already mentioned, but the rest of my comments this morning are just going to focus on the US.

So turn the page again, you can see this composition of underemployment. Michael just mentioned this a minute ago. I'm going to actually break it down a little bit more finally than he did. The four components of underemployment. One is just seasonal demands fluctuations. It's a little hard to see but it's a tiny hatched area at the bottom of the graph that's been very stable over the last 10 or 15 years.

Another is employer's lack of people who indicate that they usually work full-time. So these are people who are working part-time in the reference week. They are only working less than 34 hours in the reference week but they indicate that they usually work full-time and that the reason they're working part-time is because of slack work conditions. This would be, say, an employer who's doing some renovation or maintenance or they just tell the workers, sorry, this week I only need you for 20 hours instead of 40. That series went up a lot during the Great Recession. It's actually come back pretty close to normal again.

Another form of slack is the people who usually work part-time and are working part-time in the current reference week of the survey. So you could think of this as a more persistent problem. That is someone—it's not just the one week that they happen to have their employer tell them only come in for a few hours, this someone who is regularly working part-time, who indicates that they would be available to work full-time and the reason they're not doing so is because of the slack work conditions.

And then finally this answer of can't find a full-time job. As I've looked through this data, these are people who maybe just entering the workforce, they've taken a part-time job, but they really want a full-time job. They're looking around. The issue isn't that their own employer is sort of constrained. This is a part-time position and if you want it we'll give it to you but don't expect it to become a full-time job. And that person in the BLS survey says I want to full-time job. I just haven't been able to find one. And so as Michael said, when you add up all these components together it's still very elevated.

Now why is this important in terms of this bigger picture today? It's because the participation rates, it's very difficult to distinguish cyclical, structural, reversible or irreversible. But these are people who are in the workforce. They're working. They've shown that they're employable, okay, and they've indicated that they want a full-time job and they can't find one. So it seems to me this is just very clear, straightforward evidence that the labor market is now back to normal, that there still is a lot of slack, that in a healthy economy that these people who want full-time jobs would be able to find one.

There are people, as Michael has shown in his presentation, who are working part-time who are happy to work part-time and there will always be a lot of those. But there's still way too many people who are working part-time who want a full-time job and can't find one or their employer just isn't employing them enough hours a week.

So, now if you turn the page again you can look at the state level data on underemployment. The picture here, the horizontal axis is how hard was a

given state hit during the Great Recession? So the change in the unemployment rate in that state from 2007 average to 2010 average. You can see some states weren't hit too hard, other ones hit very severely. And that's plotted against on the vertical axis, the change in the underemployment rate, which is the total number of people working part-time for economic reasons in that state. And again, it's a change relative to what we'll think of as hopefully a roughly normal level in 2007, how high was the underemployment rate in 2010?

And what you'll notice in this picture is a very striking correlation. There's a linear regression line drawn through there. The R-squared is 50% for the statisticians in the room, which actually for a state level day like this, that's a pretty high R-squared for a regression with two coefficients in it.

Another thing to notice here is the intercept of this line. The intercept is where does that regression line hit the vertical axis? And the answer is pretty close to zero. The number is actually 0.16. That intercept says if there hadn't been any changes on average for states in their unemployment rates in 2007-10, how much of this regression tell us with we would have expected to see change in underemployment? And the answer is very little.

So again, coming back to the questions Julie and the other panelists were asked in the first session, how much is cyclical and how much is structural? The state level data seems to indicate that almost all of the changes in underemployment that happened in the wake of the Great Recession were in fact cyclical, but there just isn't evidence that there was something else going on independent of the recession. This is very similar to the kind of state level of events that Mike Kiley presented, by the way, in the first session.

Okay. So again, my reading of the data, which of course we can discuss in the Q&A, is pretty clear evidence that this underemployment increase was in fact, a very strong signal of slack. The concern, which if you turn to the next slide, is this reversible or is it hopeless? Is it just going to be built in to the economy in ways that we can't do anything about it anymore?

One way to look at that question I think and I'll show you in a minute, is to look at more narrow categories of demographic groups by age and gender. Looking at industry and occupational categories, I've gotten to spend lots and lots of time digging through the BLS website and trying to think about this. If it was very narrowly confined to certain categories you might be more pessimistic. Those guys, they're never going to get out of this. If it's widespread that would be symptomatic of what we think of as a typical slack in the labor market.

Okay, second question. Are there flows into and out of underemployment? Okay, or do people seem like they're stuck? And then the third question is

the connection to the wage data, which was also mentioned in the earlier session. So let's just take a quick look at this. I'll try to stick within my time allotment too and they will kick me or start throwing pebbles at me.

So if you turn the page this is the underemployment. Again, we're talking here about part-time for economic reasons. Did we miss a page? There should be one that's for--how did that happen? There's a page for—all right we'll make do. There actually were three pages of graphs. I can show you on my Blackberry. Yeah, right. Yeah, we'll make sure we post this. Boy, did I spend a lot of time polishing the line styles on those graphs. So there's one picture for youths, one for prime age and older males, and one for prime age and older females.

Okay, so just take my word for it on the youths, underemployment is a very severe problem. We know that. These will be people who are 16 to 24-years-old. But you, oh well, but okay, those people will quickly get in to prime age in another few years if we're patient. This page that is in your packet at least, is the one for prime age and older males. What you see is that the problems that have been pervasive for 16 to 24-year-olds are carrying over into the 25 to 30-year-old males. That their underemployment, where they say I want a full-time job, I'm available to work time and I can't find a full-time job, has come down a bit from its peak in 2010 but it's way, way above where it was in 2006 and 07.

Now again, if you ask me is this reversible? I hope so. It seems essential for monitoring fiscal policy and all of the tools of the government to make sure this is reversible. These are people where work is a normal part of their life for decades to come and so just allowing these people to be continuously underemployed for year after year it seems like not a good situation.

Now if you look at the older age groups, those actually all attract together. I was surprised how close they are together. And again, they're all elevated. This doesn't look like it's just a youth problem or even just a kind of young adult problem. This is pervasive across all of the age categories for men. Now you'll have to take my word for it. There is a picture here for the prime age and older females. It's a little different than this, but we say it's good enough for government work, I would say for government at work just assume it looks a lot like this picture. But there are some interesting differences we'd have to talk about when those slides are available.

Now, there is a slide for underemployment by sector. What's interesting here is that the pattern of underemployment in the wake of this recession is very different than it was in the Volcker disinflation in the early 80s. So there what happened was a lot of the underemployment was in manufacturing. It was auto workers who were only coming in say, part-

time or a few days a week so they're not working their full 40 hours. Same in steel and other manufacturing, where the manufacturing industries started going on idle temporarily. And then as the economy picked up speed again in 83 and 84 and happy days are here again, those people returned back to working full-time.

What you see in this case is that manufacturing was hit very hard in 2008 and 09. A lot of underemployment in that sector. But it's more or less reverted back close to normal. The manufacturing sector, there isn't a lot of underemployment anymore. Same with construction. You should not think of the problem of underemployment in the US as a bunch of construction workers who year after year have been sitting around on the sidewalk and not working enough hours. That was true to some extent in 2008 and 09. But again, in construction now there's very, very few underemployed workers. Those people have moved on. That's why the rest of the table is important here.

Where did the people who couldn't get a full-time job in manufacturing or construction, where did they go? Well, the answer is they went to wholesale/retail trade, they went to hospitality and leisure, they went to health and education. And for those sectors the underemployment is still very, very elevated; very little sign of progress, okay. So again, in terms of is this slack? It seems to me that these statistics make it look like a lot like what we'd expect if there was slack that was very pervasive across all the industries of the economy, again, with the exception of manufacturing and construction.

Now, sorry there was another table, you don't get to see it until you go on the internet, about occupations. I'll just say that there's a debate about polarization. So one of the things that I documented in that slide is that the underemployment is not just the sort of low-skilled people. There's a lot of underemployment of people who list their occupation as management and professional services. In fact, the maintenance repair is the lowest level of underemployment of all the occupations I looked at. So this is not just an issue of sort of structural polarization type problems. It really does seem like slack.

Now what about the flows? This is a slide here that's taken from Federal Reserve Board economists posted on the Federal Reserve website I just literally pasted into my presentation. But what's interesting here is there is a lot of gross flows in and out of underemployment. This is actually a little bit different in some way, I think, from the long-term unemployment where those people are in that state for a long time and the likelihood of your long-term unemployed today that you still will be a year from now is quite high.



It appears at least from these flow data there are some underemployed people who either dropped out of the workforce, but there's a lot of them who do, over time, get full-time jobs or they gave up their part-time job and they've become unemployed and start searching. And so that's good news in terms of reversibility because again, it doesn't look like it's John and Jane just underemployed year after year, that there does seem to be some flows in and out.

Okay. There was a nice slide about how to measure the employment gap. So let me just say that I'm not very satisfied with the U6. I think it has its own purposes. But I'll just identify two specific problems with the U6.

One of them is that it adds in marginally-attached and discouraged workers, which is a good thing. But the only problem is those definitions are restricted. In order to be called marginally-attached or discouraged, you have to have searched for a job in the last year. So all the people that are caught by the Reuters survey, where they're not restricting it to whether you searched in the last year or not, the Reuters survey suggests there are a lot of people who are discouraged, who have dropped out of the workforce, who are not searching for a job this month and who haven't even searched in the past year, but they're not hopeless people. They're people who would have come back if they got the right signals.

And I completely agree with Betsy Stevens analogy about the coffee shop. Betsy talks to real people. That's how full-time moms end up coming back into the workforce, is they hear a friend. And sometimes it's directly from out of the workforce to employment without even an unemployment transition because the person says, "Hey, my firm is looking for someone just like you. Would you come in for an interview?" And those happen say, when the kid's starting kindergarten and it happens again when they're starting in third grade or fifth grade or eighth grade. These are people who've been out of the workforce for three years, five years, ten years. We don't say all of those people are hopeless.

Pier Foundation did a study they published in April, it actually uses BLS data, where they found a very high sharp increase in the fraction of stay-at-home moms who indicate that the reason they're staying at home full-time is because they couldn't find a job. So anyway, again, marginally-attached and discouraged component of the U6 I think is a very pessimistic underestimate of the total amount of the participation gap.

I think the CBO at this point, I believe may be too pessimistic about the participation gap because they're now assuming that half of the people who have dropped out for economic reasons are never coming back. I hope that's not the case.

The underemployment in U6, they just add the number of people who are working part-time for economic reasons. That's an overestimate because if you ask the question, well, how many full-time jobs do we need to create in order to fill that gap? Roughly, you should just multiply by a factor of a half. And the OEUS published this data, how many hours per week are the involuntary part-time people working? And the answer is more or less 20 or 22 or 23. And people who are working full-time are working 41, 42, or 43 hours.

So just in your mind imagine that you had 100 people who are underemployed, you take 50 of those people and give them full-time jobs and the other 50, their employers says, oops, we have someone leave. Would you now be willing to fill this job twice? Or I will turn it from part-time to full-time. He only need 50 full-time jobs to solve that problem.

Okay. So what I call the employment gap measured in terms of full-time equivalent jobs is not U6. Part of it's bigger than U6 because it's counting a lot more people who dropped out of the workforce that could come back and partly because it's reducing the influence of the underemployment because it's reflecting the difference between part-time versus full-time equivalent jobs.

Okay. Now you add those together in this picture, what you see here is the unemployment gap, which is the deviation of unemployment from the NAIRU, is very misleading right now about whether the labor market is normal. The unemployment gap is, the unemployment rate 6.1, the CBO says the NAIRU is five-and-a-half. I think that's very reasonable. That means the unemployment gap is a little more than a half a percent today, which in normal times I mean that would be a great situation for the economy.

But what you see here is the participation gap, and this is using the CBO, so again, it might be even a pessimistic from my viewpoint but I took it, the CBO actual labor force versus potential labor force. That's the participation gap in this picture. That's worth more than a percentage point of unemployment.

And then the underemployment gap here is converted into full-time equivalent jobs using the fact of the ratio of full-time hours to part-time hours contributes another percentage point. So if you ask how much slack is in the economy, the answer is there's a lot still; maybe three or four times as much as you'd think just looking at the U3 unemployment rate.

So the last slide in my presentation online was a quote from the FMC statement of its longer running goals and strategy. That statement indicated that the FMC makes its policy decisions based on deviation from inflation from its target of 2%, and deviations of employment from its

assessments of maximum employment from the FMC's assessment of maximum employment.

It seems to me, and maybe Bill can address this, maybe he can't, but it seems like an important question. Is that if the FMC is going to communicate clearly to the public and to the Congress and to economists and to real people around the world, explaining its decisions, those assessments of acts of employments need to become public. The FMC should start to publish, either a committee assessment or even individual assessments of the participants.

My assessment here you can see, but who cares about my assessment. What we want to know is the policy makers assessment and then that can be a part of the discussion. The CBO can comment, the BLS maybe could comment. But those are a crucial part of the monetary policy framework and it's one area where the FMC is still is not as transparent as it could be. So I'll just end there.

Moderator: Thank you Andy. Maybe Bill can clarify all these things for us.

Bill Marsher: I may leave that last question to Charlie Evans to take on. Thank you for inviting me to be here today. Again, my remarks today are going to be my own views and not those of the Federal Reserve Board or anybody else in the system.

As the theme of this session suggests, measuring labor market slack isn't as straightforward as we'd like. Of course we're fortunate to have a lot of high quality data pertaining to the labor market, much of which is produced by the Bureau of Labor Statistics. But given the severe disruptions caused by the financial crisis and the ongoing structural changes in the labor market, interpreting these data can be challenging, as we've heard so far today. So I'm going to highlight some of these challenges as I see them, but some of these are going to be to some of the same issues that we've talked about before.

I have a set of charts that don't have my name on them but they have the unemployment rate as the first chart on there, and I think they're all there actually. So we often like to say that if we had just one indicator available to just to say to the labor market, we'd probably pick the unemployment rate. And again, so far the statement we've heard why that would not be the case or that we need more. But with that in mind, this first exhibit plots the unemployment rate against the alternative measures of the normal rate of unemployment. And I've included on here the CBO's long run natural rate that Wendy talked about, and the central tendency in range of the longer run normal rate of unemployment, and the FOMC's latest survey of economic projections.

Now I can't tell you how each of the FOMC participants comes up with their long-run normal rate of unemployment, but you can see that there is a variety of use around the system here with a range of normal unemployment rate estimates from 5% to 6%. So the CBO estimates the unemployment gap is a little more than a half percentage as Wendy noted, while FOMC participants view the extent of remaining slack, or at least the employment gap, anywhere from near zero to as much as one percentage point.

Now at the board we have a large scale econometric model that we can look at to help us to gauge slack and that's the FRB/US model. That model embeds this estimate slack in an unobserved components model of the supply side of the economy. This model, which it's describing detail on a working paper by board staffers Charles Fleischmann and John Roberts, essentially uses the growth accounting approach to estimating potential output and a new Keynesian and Philips Curve to help tie down the Natural Rate of Unemployment. And this is the model that Dave [inaudible 0059:04] David Wilcox and I used, in the paper we presented the IMF a year ago to try to estimate the extent of structural damage in the economy caused by the financial crisis and Great Recession.

So the next chart shows the estimate of slack, our labor market slack, as—well, it's estimate of slack but I calibrate it in terms of employment rate points estimated by the FRB/US model in the second quarter of this year and that's a little less than one percentage point with a 90% confidence interval around that estimate of close to mind is about three quarters percentage point.

Now as we've heard many have expressed specific concerns about using the unemployment rate as a measure of labor market slack. And one area that's been highlighted is the sharp decline in the labor force participation rates since 2007. So the next chart provides my own take on the question of labor force participation and this plots the actual participation rate along with the trend in fitted values from the cohort-based model of participation that I and several co-authors presented in a recent bookings paper.

As you can see, that model attributes most of the decline in the participation rate to the aging of the population, that's about one-and-a-half percentage points according to our model and other structural factors that have been putting down pressure on the participation rate for a long time; more like 15 to 20 years. So as a result this model puts the current shortfall in participation only at about three tenths of percentage point, but you can also see that there is a residual of about the same magnitude.

The next chart shows the estimate of the cyclical effects from that model, so that's the line closure to zero is the cohort model. And then as Justin noted this morning, we also try an alternative estimation strategy that uses

a panel state level data to estimate the cyclical shortfall in participation and that estimate is somewhat above one percentage point in the second quarter. He mentioned the lags that we find in that estimation strategy and this incorporates those lags. So it seems like the range from our paper is somewhere between roughly a quarter percentage point to one-and-a-quarter percentage point.

We also look at estimates of discouragement as measured by the Bureau of Labor Statistics and they seem to suggest a roughly similar shortfall in the participation rate. So the next exhibit shows various measures of discouragement. So the bottom-line is sort of the official measure of discouraged workers in the current population survey. The middle line is the marginally-attached estimate that Andy referred to and then the top line presents the share of the people not in the labor force—the share of the people in population who aren't in the labor force but say they want a job, regardless of when they last look.

And all these measures look like they're still in the high side relative to pre-recession levels but only by enough to account for about half a percentage point on the participation rate. Of course what really matters here is the extent to which these patterns are unusual. If they all follow the unemployment rate exactly, then the unemployment rate would be a sufficient measure of labor market slack, even though it understates the amount of slack in the labor market at any particular time. There are always some people who are discouraged. There are always some people who are working part-time for economic reasons, et cetera.

So in this regard the end of regression of these different measures of discouragement on the unemployment rate and it suggest that the fraction in each category is somewhat higher than predicted but not markedly so. So I don't view the participation rate to be as large as Andy indicates that he does, but I would mention that we do find evidence of the lag defects that he and Chris [inaudible 01:03:10] had built through their DSGE model in their paper for the Boston Fed Conference.

Now I do think a more compelling source of additional labor market slack consist of people who are working part-time but who would like a full-time job. So as you can see on this next chart, the percentage of those employed part-time for economic reasons rose much more than what had been predicted by a simple regression of the series on the unemployment rate, and this series remains quite unusually high despite the decline in the unemployment rate.

There are likely some structural factors at work here. For example, the downward trend in manufacturing jobs and the relative expansion of the service economies that have led to an increase in the share of part-time jobs over a longer period. But an analysis by several of my board

colleagues suggests that the high level of involuntary part-time unemployment primarily reflects cyclical factors and so should be considered this part of the current under-utilization of the US workforce. So I agree with Andy on this point certainly.

Now we've talked a little bit about why the unemployment rate; the understating slack—well, actually the next chart just shows the quit rate that my Mike Horrigan referred to and I plotted two measures here: the one from JOLTS, which hasn't gotten back to its pre-recession level and the one, quits into unemployment from the current population survey, which remains quite low. And this can be interpreted as also evidence of slack in labor markets.

So I want to give a little bit of attention to some arguments that there may be less slack in the unemployment rate is suggesting—or standard measures of the unemployment gap are suggesting. So one we've talked about before, Michael Kiley talked about it in particular, that the—some have argued that the short-term unemployment rate is a better measure of labor market slack than the overall unemployment rate on the grounds that many long-term unemployed have minimal attachment to the labor force and has little influence on wage or price inflation. And as Michael indicated as evidence, they note that inflation didn't decelerate as much as would've been expected in an inflation model that uses the aggregate unemployment rate as a measure of slack. And they showed that using the short-term unemployment yields a better fit over the past several years.

And so you can see on this next chart, the short-term unemployment rate here defined as 14 weeks or less has come back to where it was prior to the recession. Well, as we know the long-term unemployment rate remains elevated.

I agree with Michael. I think these analogies are subject to important caveat. He noted that there's a lack of robustness there. And in particular, there would seem to be several possible explanations for the lack of a sharper deceleration in inflation during the recession and slow recovery. For example, the use of the short-term unemployment rate works well and in acceleration of this model of the Phillips Curve, but no better than the aggregate unemployment rate in a model that includes measures of expectations, suggesting that well anchored inflation expectations might be an alternative reason for our recent inflation dynamics.

Another possibility was mentioned in the Q&A this morning and that's the presence of downward nominal wage rigidity reported by Mary Daly and Bart Hobijn at the San Francisco Fed, which they argued kept inflation above that suggested by standard inflation models and is now perhaps depressing inflation.

Michael mentioned this in his work and the work of Christopher Smith at the board using cross-data, metropolitan data seems to me this suggest a role for longer term unemployment in influencing wage and price inflation. So I'm persuaded by Michael's arguments there.

In terms of other data series that could be viewed as suggesting a smaller amount of slack than suggested by the aggregate unemployment rate alone. One prominent example is the rate of job openings as measured in the JOLTS survey. And you can see in the next chart that this has risen sharply in recent months and now stands close to its 2007 level. And again, as Mike Horrigan showed, the beverage curve shifted out to the right after 2008 and has yet to move back in line with its pre-recession locus.

So there's been a number of explanations suggested for this persistent outward shift. But one emphasized by my colleague, Andrew Figura and his co-author Regis Barnichon, and that's shown on the next exhibit, is that the rate at which unemployed workers move from an unemployment to employment, which hits the solid line in the next panel, is surprisingly low relative to what would be implied by a regression of that on the vacancy employment ratio.

It's striking that these two series have fit quite well prior to the recession. Now, for vacancies here I'm using the Help Wanted Index, or he uses the Help Wanted Index. And these have fit quite well going back to 1980 and really it's this period since 2008 where they diverged. And I think one interpretation of this slow rate of job finding is that there's been a reduction in efficiency of matching workers to vacancies and so a higher Natural Rate of Unemployment relative to the pre-recession period.

So given all these different statistics that sometimes pointing to different directions. One direction we've been going is to look for ways to compiling the information from these and other labor market indicators through the use of principal component or factor models. We have one version at the board, which we call the Labor Market Condition Index or LMCI, that attempts to measure changes in labor market conditions from a set of 19 labor market indicators ranging from the major data series reported in the BLS Household and Establishments Statistical Programs to information from private sponsored surveys of households and businesses, to measures of wages.

And the takeaway from this index, at least the takeaway that's been highlighted recently, is that the labor market has improved steadily over the past year according to this measure. This bar is represented in this next chart show the changes in the labor market as measured by this LMCI index. And the index indicates that the labor market has improved over the

past year, but not as much as suggested by the decline in the unemployment rate alone.

Relatedly, economists at the Kansas City Fed have constructed a version of a labor market conditions index that attempts to measure the level of labor marketing conditions relative to the one on average; and that's shown on the next chart. This index is based on 24 different labor market indicators. Like our own LMCI, this index has improved over the past year, although it still indicates that labor market conditions are below normal. And according to the economists at the Kansas City Fed, who constructed this index, the current level of the index is consistent with the unemployment rate of 7.1%, rather than the published figure. So I think this line of research has considerable potential and I hope to see more progress on it going forward. But there's more to be done here.

So the last two chart attempts to get a little bit of the question of whether there is [inaudible 01:10:29] in labor markets. So the first one here is the unemployment to employment transition rate by unemployment to duration. So these are month-to-month transitions. And the bottom-line is the transition rates for the long-term unemployed, those unemployed for more than 52 weeks. The line above that is the transition rates for people who have been unemployed from 27 to 52 weeks. And the top line is the unemployment transition, UE transition rate for people who have been unemployed for 26 weeks or less.

Now you can see here, and this is again, Mike showed this, that people who have been unemployed longer have lower transition rates to employment in general. But what we would look for here is whether there's a divergence in these transition rates in relative terms. And you can see more recently, they've all moved up somewhat, but there has been a higher or bigger increase in the transition rate for those who are shorter-term unemployed, which eventually is a concern but it's not really that market yet. And actually, some of my colleagues at the Fed have argued that if you look at transition rates over a year the long-term unemployed are finding jobs.

Then the last one shows the same thing, except these are unemployment transitions from unemployment to out of the labor force by duration of unemployment. And in this case the bottom-line at the end is the short-term unemployed. The middle line close to the end, is the medium-term unemployed, and the upper red line is the long-term unemployed. And here, again, these things move around a lot but there has been some increase in transitions out of the labor force for both medium-term and longer-term unemployed.

So to sum up, so Dave asked just for an assessment of where I think slack is. And again, my own view is that the absence of upward pressure on



wage inflation is consistent with significant slack remaining in the labor market. And as I mentioned, I'm not a big fan of focusing on short-term unemployment to measure labor market slack. Likewise I'm not yet ready to view the outward shift in the beverage curve as suggesting a significantly higher Natural Rate of Unemployment than prior to the financial crisis.

I think whether the unemployment rate is understating slack to an unusual degree is harder to judge. There does seem to be some evidence of an unusual short fall in labor force participation, although I don't think it's as large as some have suggested. I do think that the large number of individuals involuntarily employed part-time seems likely to provide an additional source of labor supply as the labor market continues to improve. But I think what I've emphasized most of all is that, and Wendy mentioned this as well, but a substantial uncertainty surrounds any estimate of any labor market slack and we ought to be pretty humble about the extent to which we can measure it. And hopefully we'll learn more as we continue, as the economy continues to improve. Thanks.

Moderator: We have time for questions. Again, I think we were supposed to have a roving microphone and I've got questions back here. And anybody else who wants to—I think we have a question back here.

Larry Myer: Larry Myer here. I have a question for Bill Marsher and Andy Levin, but it could apply to some of the earlier speakers as well. It seems to me that the role of slack here is being used in two different ways. And I'll call slack to the question about whether it's measured in terms of U3 or some broader measure; I'll call it U6 as a proxy. So most of the papers were focused on what's the best measure of slack in something like a Phillip Curve, okay? We're very interested in that.

Now Andy, I know you've been focused on that too. But at the end I heard you talking essentially about how to measure the plight of workers and the struggle of workers. And that suggest to me that a question that you're asking is what belongs in the social welfare function? What belongs in the welfare function? Is it U3 or is it U6? And it seems to me this is very important. I note a recent paper by [inaudible 01:15:25] Bush and Williams, who talk about a wedge if the measures in the Phillips Curve and the loss function are different and the implications of being able to simultaneously achieve full employment and price stability. So have I gotten that story right in particular for you, Andy?

Moderator: Yeah. Why don't we take a few more questions here then Danny Blanchflower up.

Audience: I think your estimates, the quarter to one and a quarter level of slack from an activity look surprisingly small. So I'm interested in the sensitivity of

those estimates. And I certainly looked at what was driving it. And so it really, for it to be true you kind of argued about demographics. But all the rise in activity—I have a table on it—inactivity fell amongst those age 55 and over and it rose hugely amongst the young. And if I take—I might have got it wrong—but if I just take your estimate it looks about half the size of the increase in inactivity of the 18 to 24-year-olds alone. And the number is about as large as that again for people 25 to 54. So you're telling me that the level of inactivity, the level of slack measured by the labor force participation rate isn't even equivalent to half of the increase in inactivity amongst the young. I don't believe it.

Dan Sullivan: Hi, Dan Sullivan from the Chicago Fed and I wanted to ask a question of one of our most—probably our most illustrious former research assistants, [inaudible 01:17:31] Anelburg, about the sort of the Natural Rate of Unemployment figures that the CBO uses. And you talked a lot about demographics and effects on the labor force participation rate. But I think—is it of interest or have you done sort of kind of shifts in demographics and things related to sort of understanding what's going on with the Natural Rate of Unemployment? Because I think at least some calculations I've done suggests there's a bit of a downward push given some of the developments we've had recently. Educational status of the labor force has improved greatly. They tend to have lower unemployment rates. The teenagers don't find themselves in the labor force as much anymore. Those things I think, pushed down several tenths potentially. I am interested in whether you think that's important consideration?

Moderator: I think we could take one more question if we have another question from the floor. Okay. I think at this point why don't we turn it over to the panelists? Wendy, why don't we start with you and just move right down the table here.

Wendy: So I think my short answer is that's really interesting and we have to think about it more. I mean, as you know, estimating the Natural Rate of Unemployment is exceedingly difficult. We actually called it the Natural Rate of Unemployment and not the NAIRU, given many of the complications that have been talked about already about the relationship between the unemployment rate and the rate of inflation.

Well I guess I'll site two other things, neither of which will really address your question. We estimate that the recession weak recovery have boosted the Natural Rate of Unemployment not just now but over the next decade. And so with that in mind, we estimate that the natural rate or the underlying rate of unemployment, will be about 5.4% at the end of the next decade instead of 5%, the rate that I think we would have estimated without the recession.

And yeah, I think about it more as to what demographic does to that. And the other thing is and the declining mortality rate. So we do look, one positive thing to say, which is that we do have an explicit assumption or an explicit estimate of the relationship between the improving mortality rate and participation and that is most definitely in our underlying estimates. So we estimate that for every one year improvement in mortality we estimate a three-month extension of lifetime labor force participation. So that's in there explicitly. The Natural Rate of Unemployment is still harder.

Andy Levin:

So I guess I think that Larry, I think we essentially see this the same way that there are two census—and by the way, Larry and some others in the academic literature have pointed this out previously, that in principle the measure of the employment gap that's relevant for society doesn't have to be exactly the same as the one that's in the Phillips Curve. And so for example, if it turned out that long-term unemployment affected wage determination differently than short-term, in society we might put equal weight on those people, or even more way that the social cost of long-term unemployment may actually be higher than for short-term unemployment spells and therefore society would see more urgent reasons to try to take steps to reduce long-term unemployment, even if from the same point the Phillips Curve, it wasn't a big deal.

Now as it happens, and Danny mentioned this in his presentation this morning, that he has been working a lot with Adam and with other co-authors, and I'm now on the verge of becoming an co-author with him which is exciting, looking at the way data, the participation gap, they call it the inactivity gap and the underemployment are both highly significant. So it doesn't look like those are irrelevant for the Phillips Curve.

That said, the Phillips Curve seems to be very flat and so the urgency of closing the employment gap is really, in my view, mostly about the society needs to serve all of its people and having people who are on food stamps because they can't get a full-time job or can't find a job at all just isn't acceptable for American society.

The other thing I wanted to comment on, it was actually a slide in my presentation online, but I didn't talk about it because it wasn't in the handout, I just want to point you to it. Is that the principal components and factor analysis are a little bit like magic. And I've worked with them myself. They are very well suited to certain things. Where principal components is well suited is if you add a bunch of different measures of essentially the same thing together, principal components is a way of underlying signals. So if you do for example, a test of someone's typing ability 15 times and then you take the principal component, that would be a very good measure of their true typing ability.

But the labor market industries that have now, in the last year being treated as magic, in my view is a econometric mistake because it's throwing a bunch of things into the kitchen sink that are not the same. It's including the vacancy rate, the quit rate, the payrolls growth, the short-term unemployment, the long-term unemployment, the participation rate. By the way, another thing about principal components, is it's a linear method that's very well suited to, I'll call it to say a case where there's no structural changes going on, so the patterns of relationships are stable.

We know from what Michael said, that that's clearly not the case for the vacancy rate. It can't be the case of that the NAIRU has shifted up dramatically because if it were we would already have been starting to see a lot of wage inflation when unemployment was up on the seventh or the highest six and we're still not seeing it today. That suggests there's been a structural change in the unemployment to vacancy relationship. Which all these things should make us very cautious about throwing a bunch of things into a kitchen sink and then trying to draw out a principal component as an indicator.

I think that focusing on certain things like when you ask people a question, which the BLS does, are you working part-time? Yes. Would you like a full-time job? Yes. Are you available now? Yes. That's not a kitchen sink. That's real people answering a reasonable question.

Reuters survey asking people: are you working, have you worked recently? No. Would you come back? Yes. Okay, that's a fair question. So again, I think rather than focusing so much on these fancy econometric tools that are well designed for certain purposes but maybe very misleading in other circumstances, we need to spend more time focused on the questions of real people.

Michael Horrigan: Just in response to that and just the general discussion about alternative measures of people's preferences say for additional hours or preferences for a different job, two things. One, there's a lot of concepts in the CPS we don't usually use the name of the concept. In other words, we ask factual questions like: how many hours did you work as opposed to are you unemployed? Are you working part-time? That kind of thing. Partly because our knowledge of the cognitive difficulties of interpreting that.

The second is I think, that if you look at the UN through U6, what's really important sort of generically about those series, is that they move in parallel. And then when they don't, when one is exacerbated relative to another, it's a signal of something. And I think the kind of additional information that you want might be valuable in that sense. But I think the other thing I would caution against is sort of a cognitive difference between things that are stated in intent versus revealed behavior.

So stated intent probably has a higher variance. It probably has some, in sense, more variability in its statistical properties than looking at what people actually do. So I think that a word of caution has to be made in terms of how you would interpret the kind of variables that you're talking about and how they would affect the trend over time or during a recession. You might put some signal to the fact that that one added measure that you want, like the one that Danny is proposing, could have an impact in terms of showing a big increase. But because it's not revealed behavior, I think you have to look at it with caution. Thank you.

Moderator: Thank you Michael. Bill, you want to finish up? You can respond to either the questions or Andy or however you wish.

Bill Marsher: So in terms of Larry Myers question, I think the [inaudible 01:27:31] Williams idea is intriguing. I kind of like it and I don't have any objection to it, maybe that policy-makers want to approach it in that way. I would say however, that we should not limit ourselves to thinking only about counter-cyclical policies. If we say that we can't reduce slack further it doesn't mean we're giving up should be giving up on the long-term unemployed or people who are on for economic reasons. There are structural policies that we can bring to bear as well and I gather that we're going to hear some of that later this afternoon.

On the participation rate that Danny Blanchflower raised, so there are a lot of factors that it's hard to distinguish whether they're structural or cyclical and I definitely admit that. I think what informed our judgment is that some of these declines in participation of particular groups have been going on for a long time. The participation rates for youth have been falling since the mid-1990s. For men, since the early 1980s. For women, they went up for a while and now women look more like men and they're declining.

These look like trends. I don't know that we can identify exactly what's causing them. Some for use, some of it appears to be the increase in the returns to schooling, which is probably a good thing going forward. But participation rates have been falling for a long time for youths who are not in school as well. And that may be related to the polarization of the labor market and the people who used to have middle jobs taking lower skill jobs and pushing the youths out of labor markets, similarly for low educated men, polarization may be part of the story, but there are other factors as well. But these looks like trends rather than cyclical factors in our judgment and that's why we came to that view.

Moderator: Well, please join me in thanking the panelists, I think, for a very substantive discussion here.

