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PAPER: HOW DID THE POST-PANDEMIC MIGRATION SURGE AFFECT LABOR AND HOUSING MARKETS?

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STEINSSON: So our third presenter of the afternoon is Jennifer Hunt. So, take it away.

HUNT: Thank you very much. I'm pleased to present this work done with Pia Orrenius and Madeline Zavodny. And we're examining how the post-pandemic migrant surge affects labor markets and housing markets. So immigration to the US surged between 2021 and 2024, and this surge was driven by people who entered through pathways that were either previously small or were newly created. And these are the entries that we're focusing on, in part because well, those are the ones that grew, and those are the ones that grabbed people's attention at the time.

And cumulatively, these entries were 4.5 million people, and that was 1.3% of the 2021 population. And I think it's actually a bit in the eye of the beholder if that was big or small, but the be- most beholders and the public viewed that as, as big. So here's what the time series looked like. You can see that at a certain point in 2024 that there were 300,000 people entering a month and then that did die down at the end of 2024.

So who were these people? So a lot of them applied for asylum, and those people did so principally at the southern land border. Then there were a set of new programs which required, in fact, having a US sponsor, and one program was aimed particularly at Cubans, Haitians, Nicaraguans, and Venezuelans.

A different program was for Ukrainians. Of course, the, the war began in this period, and those people mostly flew in. And if we look at the top 10 origin countries for inflows of this type, they account for 80% of the surge inflows. So you can see Venezuela at the top 15%, then Cuba, Mexico, Haiti, and so forth. Notice geographically a bit different, Ukraine a bit further down at 5.1%.

So what we're asking is, what was the impact of the surge on wage employment, rent, and GDP in the cases, the outcomes except for GDP will distinguish results for the impact on everyone versus the impact on the native-born. And another question we're going to ask thinking about adjustment mechanisms in the economy is, how did US internal migration respond to the arrivals?

So what would we expect from either the theory or literature? So with the rent, I think this was the result we felt most confident about ex-ante. If you have an unexpected increase in the population, and we know we don't have a very big elasticity of supply for housing we expected rent to go up.

Employment for total employment, we expected that to go up because some of these people will work, and we didn't expect there to be a one-for-one crowd out of existing workers. In terms of the employment rate, here, just based purely on the whole past immigration literature, we expected no effect, so that's not a theoretically motivated result.

Now, wages is quite different. So first of all, let's a-assume that the, the surge immigrants are less skilled than the natives. And I should say assume because it turns out the American Community Survey did a very bad job of capturing these people, and so we actually don't know their education. So in terms of the all-worker average of wages, we expect the one effect to be that it would decline just due to the average being brought down by the less skilled surge migrants.

In terms of the native wage, they'd probably be substitutes for the low-skilled natives and complements with the high-skilled natives. The net effect could be ambiguous. And then you're more macro than, than we are, but they could be, particularly in the short term and particularly because some of these people couldn't work initially, there could be a consumption-fueled boom initially that might benefit wages.

In terms of internal migration, of course, there are many ways the economy can adjust, but the one that's relatively easy to measure is migration within the US. And potential local movers, depending on what's ha- what's actually happening in the absence of this adjustment might be deterred from moving to a place or attracted to it, and similarly for people thinking of moving out.

And this - if this reaction happens, it will distribute, diffuse the effects of the surge migration over larger geographic areas which will, therefore, we're going to be focusing on metro comparisons. It will mute the effects on high surge migrant metros.

So I'll just mention that there are two concurrent papers. I don't have time to tell you about them. One of them is by the discussant. And so I'll go on to the statistical approach.

So we're going to be looking at 164 metros that we can identify in the American Community Survey in all the years, and we're going to be differencing almost all the outcomes except net migration.

And we'll either difference across so 2024 minus 2021, or be differencing adjacent pairs of years. So in terms of this equation, there'll be a difference of K years. And here with the equation is just for the total employment, so just difference it on the left-hand side. On the right-hand side, surge, that's going to be the total number of surge migrants either over the one year or the, the multiple years, and the, the ϕ is going to be the coefficient of interest.

In this particular equation, we'll also control for the initial population, and then we'll have some controls that are actually well, one of which is actually particularly important for wages. One is particularly important here, so the, the previous in the second row, the previous trend in employment, and also what happened to employment over the COVID period because this will be, as I say, more important than for wages.

We know that average wages jumped up enormously because the low-wage people lost their jobs. And so we want that one thing we do to adjust for that is to have this control. And then in this particular equation, we're also controlling for the employment distributed by sectors initially.

For almost everything else, though, we're actually going to scale the surge by the population of the metro, and ϕ will be the coefficient of interest. And when the outcomes are for natives we're going to adjust at the micro level for gender, education, age, and some interactions to try to control that way for differences in composition over time, and especially in unwinding the change during COVID.

So internal migration will be different 'cause they're already a flow, so we don't difference them, we sum them, but I won't give you that equation. Of course OLS is not going to do the job here because migrants go to good places, and so you tend to find good effects in OLS. So one approach we use is pretty standard.

That doesn't mean universally beloved, but pretty standard in the immigration literature is the shift share Card 2001 paper, And that's just parceling out the inflows at the national level to places where people from those origin groups used to go. So you have a predicted immigration of people who've gone to places based on ethnic networks.

And then surge migrants who were bused by the states of Texas and Arizona, of whom there are a 125,000, a large fraction of which went to New York City. But it's relevant here that per capita, by far the largest number went to Denver, point six percent of the population in, in, in one year.

And because of this surge right at the end, this instrument is effective for 2023 to 2024. So because the ACS doesn't capture these people properly, we're using this data we like to call the EOIR data, which immigration court data, to work out in each year and metro where these people are.

For the shift share instruments, for the shares, we're using historical ACS data for where the people from different origin countries lived. But for this, the shift, we're actually using the Customs and Border Protection entries that I was showing you at the beginning. And then for the native outcomes, we do use the American Community Survey and then a variety of of sources for the aggregate outcomes.

So the results, so one is a bit different from the other, the, that first equation I showed you, so I'm highlighting in blue. We find that if you had one more surge migrant of any age, by the way, that employment goes up by point four people, workers. Okay, so that's the highlighted in blue. All the others are an increase of point nine percentage points in the migrant share, because that's on average across our metros how much their share went up. So this gives you the overall impact over 2021 to four.

And for the employment rate, so this is the right-hand column now, we just get zero. Going down to the next outcome, GDP we get a one point five percent increase in GDP. And for wages, we have apparently conflicting results here because although it's statistically insignificant, we do have a minus one point five percent for the aggregate wage, whereas for natives we have a point nine percent increase in the wage.

And then rents the two actually rather agree. We find that overall rents went up one point five percent. So in terms of-- so one of the things we do is we look at these pairs of years, so we see how things are evolving over time, and we find that the, the impact of the surge over time declined to zero even as the migration actually went up. And so we interpret this as the economy adjusting in part to the people who've already arrived, but also realizing there's going to be more people coming, so anticipating them.

And we find that internal migration offsets over the whole period, 90% of the metro's surge migration. Now, using the bus passenger instrument, we're looking here only at the top 30 metros because those, the bus passengers only went to large metros, so we want other cities that seem like reasonable control groups.

And we don't actually get anything if you look in the left column for our aggregate outcomes, everything is statistically insignificant. But for natives, we find contrary to if you do the same period and metros with the shift share instrument, we find a -1.8% effect on native wages. And we also don't find any internal migration offset.

So one interpretation is that this is something specific to Denver which really drives the instrument and Denver is, for some reason, not as able to adjust to immigrant inflows as cities more generally. Or it could hint that it's bad policy to send people to random places, that it's not only not as good for them to not go where they have networks, but it's actually the, the impact is negative rather than, at least in this period, zero on the natives.

So in, in conclusion, the surge migrants expanded the economy and natives were not negatively affected except you might say in Denver. And we do a calculation of the-- so wages went up, but rents went up also, but rents are only about 30% of of income. And so if you do a very rough calculation, you find that net of rent, native renters were better off by at least 0.6%. I mean, that's actually not much, but it's not negative.

Now, we would have liked to test various theories as well as looking at the distributional effects for their own sake. But unfortunately, once you start cutting the natives into education groups, the standard errors get very large, and on the whole, we think we can't really learn too much from that, although it is in the paper.

And another important conclusion here is that domestic migration is a big adjustment factor. And that means, though, that the national effects of the surge migration are somewhat smaller than what we're measuring here because they're being diffused over larger geographic areas than the metros that we're comparing.

Thank you very much.

STEINSSON: And our first discussant is Michael Clemens.

CLEMENS: Hi Thank you so much. I am Michael Clemens. I appreciate the invitation. It's a pleasure to come over here from the brand-new School of Government and Policy at Johns Hopkins in in Washington, D.C. Watch that space, expect greatness.

You know, many of us maybe most of us were taught that the Econ 101 model of the economic effects of migration is the downward-sloping demand curve. Labor is more abundant, wages go down, labor is more scarce, wages go up. Just go back to Alfred Marshall. If you actually do go back to Alfred Marshall, you find him specifically mocking the great vitality of the common belief that wages could be raised generally by making labor scarce. He distinguished it in Econ 101 between long-term and short-term effects, between unadjusted and adjusted effects.

And really the slope of the labor demand curve i-is not set by Econ 101. It is an empirical question in Econ 101. And here we have a landmark study in a really fascinating laboratory that we all just lived through to investigate the slope of what Alfred Marshall called the, the general, or you might think of the aggregate labor demand curve, a tectonic event that was the largest ever inflow of unauthorized immigrants into the United States.

Actually, in terms of all immigration as a fraction of the US population, regular and irregular over a sustained period, it was the highest rate as a fraction of the population since 1850. So if there are going to be effects this is where we would see them in the partial equilibrium models that still reign supreme in, around government offices and in many academic faculties.

This is the worst-case scenario for US workers. Concentrated effects, huge inflows to some cities, primarily unskilled, chaotic, sometimes being bussed to random places as Jenny just pointed out. So these findings that that Jenny, in a very dispassionate way, just went through should make us kind of stop in our tracks and maybe reevaluate some of the models that are in our heads.

We see GDP per capita, which Jenny didn't highlight going up substantially, native wages going up and all of these not at some future day after a slow process of adjustment, but actually amidst the surge these effects are being measured. And this is a very important study. I think it goes without saying it's one of those few where there's really an, an academic contribution to be made that's of the highest policy relevance.

I want to point out the, you know, I do a lot of work in this area, so when I got the paper I saw that I had almost all of the data I needed just on my hard drive except for one piece which they kindly sent me. So I took it upon myself, can I, from the raw data and only the information in the paper, reconstruct these findings? And I was able to replicate them with very high precision. So that, that should let you know that you're dealing with people who are operating at the very highest levels of scientific credibility and transparency. And that's the basis for a lot of what you'll see is, is essentially their own data and their own methods.

So three comments and recommendations I wanna make in a very brief time. That fundamentally, I'm just, fundamentally I'm not convinced by the bus lift instrument. And it comes down to one city with Denver, Colorado, as you as you mentioned, but I wanna draw out some of the implications of that.

First, I wanna point out the core results on the 2SLS coefficient for the bus lift, the negative effect on native wages, the negative effect on the native employment rate, the negative effect on the employment rate for less than high school and replicating with very high precision. So I can ask, well, look, this negative coefficient on native wages, where does that come from? Here is what Angrist and Pischke called the visual IV plot, which is just the the conditional residual on the adjusted wage on the vertical axis against the predicted by the instrument conditional residual on the surge. And you can see this is really coming primarily from Denver, maybe Chicago and New York to a lesser extent, pulling in the same direction. This is the visual IV plot for the negative coefficient on employment with New York and Chicago pulling in opposite directions.

Really, this pattern and the results come-- depends exclusively on Denver, as you recognize. You know, we have very rigorous methods now to deal with N equals one, which was kind of a joke when I was in grad school. But now we can deal with it quite carefully. And so why not run a synthetic control on Denver against a pool of donors drawn from the never treated top 30 metros that were never a bus lift city.

And this is this is adjusted native wages on the vertical axis here. And you can see Denver as the solid line. It's true in 2024, when the bus lift hit Denver, perhaps wages declining a little bit with respect to the synthetic control, but remaining above it. And you could also imagine the same story being told by an uptick in 2023.

You can see some pre-trend problems there. So not inconsistent with an effect of the bus lift, but maybe admitting other explanations. Turning to synthetic diff and diff to try to get a better

match closer to the baseline of 2023. You can see also a downturn in 2024, but a, a big pre-trend problem in that there was an uptick in the, in leading from 2022 to 2023.

So not really compelling evidence from this that something terrible was happening in Denver but maybe. I think there's some evidence in the paper that, that, that suggested a-another explanation that you could really explore, which is there's that, that negative two point six coefficient, the, the, the 2SLS coefficient on the bus lift for average wages, for adjusted wages. All these are adjusted wages that are residuals after controlling for education levels, age, age structure, et cetera, to remove compositional effects which you do and is very standard and is right to do. But in an appendix, you point out that the, the without that adjustment the effect of the bus lift instrument is zero and that's very interesting because as a matter of accounting, that means that when the adjusted wage is going down and the average realized wage is zero, that requires, as a matter of accounting, that there was a positive compositional change.

The fraction with college going up, the fraction of younger workers going down and in fact, that did happen. These are the ACS one-year files for Denver showing that around 2023, 2024, there's a four percentage point jump in the college fraction of the natives in Denver and a two percentage point drop-off in the very young low-pay fraction of the native workforce in Denver, both of which together can entirely account for that.

So are we looking at nothing happening to average wages in Denver and then this compositional effect or are we looking at a decline in wages? It's unclear. This could be explained by the internal adjustment that you talked about. If fewer low-skill male young workers who are natives are coming to Denver due to the arrival of a bunch of immigrants there, this is what you would see in the native workforce. And all of those things could entirely generate the coefficient you get. So that's just worth digging into a little bit more.

Much more natural to just I think to just to take a, take the bus lift as a natural experiment. This is the magnitude of the bus lift as a fraction of the population in the six cities where it happened. You can see that in Philadelphia and Los Angeles, it was kind of a nothing burger with respect to the size of the local labor market, but there was a substantial hit in four cities. So let's take those four cities as the treatment in a synthetic control and just ask, in those four cities on average, did something strange happen to, to wages when the bus lift happened?

Here I'm lining them up with zero being the first post-bus lift year. And the answer is, well, not really. But there's some pre-trend issues there, so maybe turn to a synthetic different diff and try to line them up better just at baseline. And could it be that there is a decline of something like a percentage point in the adjusted native wage in the four bus lift cities collectively for one or two years after the bus lift? Yes, that's possible here with a lot of noise. There's also some pre-trend problems that you can see. But it wouldn't be unreasonable.

It wouldn't be unreasonable for the local average treatment effect of the bus lift, as you highlighted, Jenny, to be completely different from the local average treatment effect of the card instrument in that putting people on buses and sending them to Denver for entirely political reasons need not have the same economic effects as other forms of dispersal.

But to me, this is just a more fruitful line of inquiry than sticking with the instrument. It's it would be good to present the instrument as a parallel research design, but I would dig into it with with methods that are designed for low end.

Very briefly, two other points it would really be great to develop the macro contribution of this paper. First of all, I mean, one of many reasons is that as, as you mentioned, there are some other papers out there. My little note is not a competitor to yours at all. This is a much better exercise, but none of them are exploring the macro productivity implications, and I think there's a lot to be said.

Here's your results for GDP per capita, which is not highlighted in the paper. In the first row, there are many other papers using quite different methods. You're working at the city level. There's there's Giovanni Peri's work at the state level in restats. There are some national level studies out there too, coming from IMF, finding larger GDP per capita effects. You could think of these of these as, as being quite different settings. You're studying very short-term effects of a sudden irregular inflow, and these are all immigration. So that, that might be o-one reason why the magnitudes are different. We can imagine another reason which which will be the subject of my third comment.

But I just want to point out that what you're finding and what four of the, excuse me, three of the other four papers I put up are also finding is that the, the GDP per capita boost is coming primarily from productivity. And that's very highly policy relevant when the brilliant economists at the Congressional Budget Office calculated the fiscal effects of this exact surge. They used a model which, and I know and love them, this is not a criticism of them at all. They're working with what they've got to work with in the literature. They used a model in which the TFP effect of low-skill migration was zero, except to the extent that a compositional effect re-reduced the skill level of the workforce.

And this is... your results are not consistent with the, with those findings and that that would have an important effect on the results of such an exercise. So I think in understanding the productivity effects short term for low-skill migration can have productivity effects of this magnitude, that's something that is that by, by itself, just as a corner of this paper is a real important contribution.

As, as I mentioned, there's another reason why the magnitudes of the GDP per capita effects in that, at that table could differ, and it's that you're working at the city level and those are more aggregate. And I just want to point out that there, we have many studies suggesting that GDP per capita shocks spread outside of cities. Whether it's whether it's city level GDP shocks at the city level from productivity shocks, from defense spending shocks, from the China shock. There are various papers suggesting that something like a third or more of these of these effects are realized in other cities.

And to the extent that you're measuring the GDP per capita effect on Minneapolis of migrants going to Minneapolis, it could be that a substantial fraction of the nationwide effect is not being captured. And that, that would that would that, that could explain some of the of the gap here. And adjusted for that, these are starting to be not only in quantity but in the channel of productivity quite a, quite an interesting story approached from a variety of different of different perspectives.

Thank you for this really nice paper that's just an extraordinarily timely academic and and relevant contribution.

STEINSSON: And our second discussant is Wendy Edelberg

EDELBERG: Thanks. And thanks to the organizers for inviting me to discuss this. I really enjoyed digging into it, and I will take the prerogative as second discussant to not do nearly as good of a job of summarizing what the paper did, except to highlight something that I want to focus on in my comments.

So what the paper does is it uses cross-metro variation to estimate how the post-pandemic migration surge affected employment, GDP, wage rents, and domestic migration. So the paper uses CBP data released entrants, I'll come back to why I mention that, as a central benchmark, acknowledging that CBP does not include, obviously, people who entered without inspection.

The paper then very carefully shows that EOIR, and I'm totally now gonna call them EOIR data, that those EOIR cases are approximately proportional to the CBP measure across origins and places. And the reason why that's so useful is the EOIR cases have all the necessary cross-metro detail to be able to do the analysis that they wanna do.

Okay, so that means that the regression coefficients are initially gonna be in effect per EOIR case or per one percentage point EOIR share. Translating it to a broader migration concept requires rescaling. So the rescaling matters depending on what you have in mind as your surge immigrant. So the paper's regression treatment is EOR.

Over this time period, July '21 to June '24 they have three point seven million EOR cases. And the CBP population that they're using is four point four million. They just said four point five million. I'm not sure if I have this wrong. But anyway, that gets you to roughly a scaling that's necessary of point eight.

So if you see a coefficient in the paper, that's gonna be per EOR, and if you want to rescale that to think about per CBP, you have to scale it by point eight. So for example the paper finds that there's point five jobs per EOR case, and you scale that and you get point four jobs per CBP entrant.

So this is totally sensible if the population that you think is really interesting is the CBP population. But my guess is that's not the population that's in your heads. My guess is that the population that's in your heads is the whole gross flow of all immigrants who came outside of legal channels.

So the paper's benchmark of CBP, that's four point four released or granted entry migrants. If I add TARA and STAND in my estimate of how many people came during this same time period, the July '21 to June '24 who entered without inspection, I need to add another two point one million.

So now I have a gross surge inflow of six point five million. That means I need to scale all of the coefficients by point six instead of point eight. Well, now broader still, this gets a little

more in the weeds. But again, I said that they used the CBP notice to appear and released into the population group.

I think what CBO uses and what we used when we looked at the CBP population is we included a broader set, including those people who were given a notice to appear and yet detained on the theory that then they would ultimately you know, we have evidence that a lot of them were ultimately released, but then they're not redefined in the CBP data.

That adds another seven hundred thousand. So now I need to rescale all of the coefficients by point five instead of point eight. And I'm gonna show you what that means for interpreting the coefficients. Oh, I want to take a brief detour. So I just said that the gross flow of immigrants who came in this three-year period, July '21 to June '24, was approximately seven point two million.

If you muse on this number later, you might realize how could that be different than a number that's highlighted in the paper, which is six point five million. The number says, you know, citing other sources, that six point five million migrants entered the country outside of usual legal pathways between 2021 and 2024. That's actually that whole four-year period, so it's even a longer period. So how can my seven point two be bigger than that six point five?

And it's this gross versus net concept that's critically important. So that six point five million is net. It includes exits. So it includes exits of people who moved into legal status. That's probably not a whole lot of people during this period, but also people who emigrated. You might think it's implausible that people who came during this period outside of legal pathways would emigrate after making this treacherous journey. But, you know, life happens and people do leave. So just we have a lot of numbers floating around, but I just wanted to make sure that people understood why that there's a six point five in the paper, and that's actually smaller than my seven point two.

Okay, so how the rescaling matters. So, for example, employment. The paper reports, as I said, point five jobs per EOIR person. That means point four for CBP. That's the number that Jenny mentioned in her talk. If I scale it for all gross entrants outside of legal channels, it's point three.

Let's now do GDP. GDP one point seven percent for the percentage point increase in EOR as a share of the population, that's one point four percent. For the CBP population, it's point nine percent. For this larger whole gross flow population of immigrants coming outside of legal channels, so, that would mean GDP per capita actually falls and doesn't rise.

So for-- the scaling is just to say the scaling matters. I do it for wages and rents too. It's the, it's just the math. Okay. I'm gonna pivot and talk about the fact that GDP effects are big. They're only moderately bigger than I would have-- than my priors but they are big. So using the 2021 to 2024 period estimates, they find that real GDP increases by one point five percent. I wanted to get a sense of how that compared to what I think might have happened to labor income using their estimates. I back out that their estimates imply an increase in employment of about one point four percent, and I do that using how many more people were employed. There were an additional one point six million jobs.

They report their baseline payroll employment, so I get my one point four percent increase in employment. Average hourly wages, if I take their estimate that average wages fell by one

point seven percent, then that means that, you know, after doing a little bit of per EOR share, that means that for this whole population wages fell by one point six percent.

What that means, if I assume that hours per person were roughly unchanged and the data are actually hard to interpret on this front, whether or not even average hours per person fell or rose during this period, but let's just assume that they were basically unchanged. That means labor income was actually down a little.

So GDP went up by one point five percent, labor income went down a little. Now, I'm putting a lot of pressure on their estimate that average hourly wages went down by one point seven percent. If we say that was only significant at the ten percent, you know, confidence level, and in fact, I'm just gonna assume that was zero, then in fact, now my calculation says that GDP went up by one point five percent and labor income went up by maybe one point four percent, remarkably similar.

But could it be that real GDP rose by one point five and labor income went down a little? That of course means downward pressure on the labor share. Yeah, you know, there's a consistency check. The labor share did indeed fall. So, you know, if that gives you some comfort in these numbers, You know, I know that they are grappling with what actually happened to wages, and wages in the payroll survey data are very different than the story being told by wages in the ACS data. I've never really used the wages in the ACS data the way that they're using them, but you know, it'd be-- this is worth trying to pin down.

Okay, I'm gonna pivot again. The net domestic migration result is really interesting. In the average metro area, I'm just repeating what Jenny said, the paper says roughly ninety percent of the surge was offset by reduced net domestic in-migration. The data aren't great on this so I pushed them, you know, with all of my questions as we went back and forth. My prior is that what's probably happening is that these migrants are going into cities, and then after spending some time in those cities, maybe spending some time in shelters in those cities, they are moving to different cities.

So that would be out-migration. They're actually finding that there's a lot of action on less in-migration but figuring out this whole net migration thing is super important. Like, think about the implications for the fiscal effects. So we, you know, we think hard about what immigration does to the resources at the state and local level. If we are not actually taking into account that following some sort of positive impulse of immigration into an area, there's actually a negative impulse that follows, we are not accurately thinking through what the fiscal effects are on a given area.

It's also really important for expectations. If households, firms, local governments are extrapolating from the positive impulse to demand and population growth are they then disappointed in the following year when that doesn't come to pass? Of course, this is complicated during the surge because, you know, immigration was rising, but just thinking about how net migration matters for all of these, you know, first order things, I think is really important.

It's also really important for dynamics and I'll show you what I mean by that here. Okay, so, the paper focuses a lot on this 2021 to 2024 period, and I have trouble wrapping my head around what is really being estimated because it is effectively pooling three different cohorts

of immigrants and asking what those three different cohorts in aggregate are doing to the economy in July 2024.

So that means that the first cohort has two years, the second cohort one year, et cetera. And frankly, even within a migration year, timing matters because a mid-2023 arrival has much more time to affect the 2024 outcomes than a mid-2024 arrival. This also matters for the net domestic migration piece in that the negative net domestic migration that comes after that first impulse is going to, you know, it, it has two years to, to matter for the July 2024 effect.

So I felt a lot more comfortable with the one-year effects. Yes I only have one more slide. Okay. Really. So one-year effects. Okay, so here's the employment effects for the 2022 to 2023 and the employment effects for '23 to '24. '22 to '23, point four jobs per gross surge entrant the next year point two. I thought it was useful to compare this to a benchmark, perhaps naive question of given what I think I know about what fraction of these immigrants are adults, sixteen and over, what their labor force participation rates are and what I think their employment rates are. And that calculation suggests that for each immigrant who comes in, just by virtue of that immigrant being employed, employment goes up by point four. That lines up awfully well with the '22-'23, but then '23-'24 is half that amount. Maybe the negative net domestic migration plus serial correlation and gross flows accounts for that. So I would love to see them do a lot more with lags but I've talked to them about this.

Very last thing as I walk away, surge relative to what? They use the entire surge, the entire gross flow on all of their right-hand side of their equations saying that surge was just different from past flows of immigrants who came in outside of legal channels but not completely different. So, surge relative to what? I think that just matters for expectations. Thanks.

STEINSSON: Okay. So, Bob Gordon

GORDON: The last slide said surge relative to what? I wanted to pick up on something, a important word from the first discussion and that phrase from the second discussion. The word from the first discussion was productivity. The most of the increase in income per capita was related to the increase in productivity. And in the second discussion, the importance of separating the three cohorts '21, '22, '22, '23, and '23, '24.

Okay, now why am I getting involved in this? Let's go back to the word productivity. Private non-farm business sector productivity over the last 20 years has grown at 1.6% a year. But in the four quarters of 2020, it grew at 5%, three times as fast. In the four quarters between mid '21 and mid '22, it fell. It was -1.5. Now, how can you have that? Was there some big positive productivity shock in the pandemic and then a negative productivity shock? If I read the macro literature, I'd almost believe that, but that's not what happened.

Some productivity experts think that it's a change in the composition due to the pandemic because we had a big switch out of the service sector, which are low paid, into high-paying sectors like information technology and finance. No, that's not it. We've got data for 17 industries quarterly. We've got a fixed industry weight productivity series. Doesn't explain anything.

So what was going on? What was going on is the same thing that happened in the great financial crisis. Instead of being proportional to the decline in output, the decline in employment and hours was way higher than usual. So you had a huge reduction in

employment relative to output in 2020. Of course, arithmetic says productivity growth is output growth minus hours growth, so you got a big surge in productivity. But then firms suddenly realized, "Oh, we let too many people go. We gotta rehire them." And so there was this enormous surge in rehiring starting in late 2020, and it came to a peak between mid '21 and mid '22.

Most people in this room are familiar with the vacancy unemployment rate. It peaked in March '22. What about the quit rate? It peaked in April 2022. So what we have is during this first wave of immigrants in mid '21 to '22 occurred when the labor market was tighter than at almost any time in the recorded history of Jolts going back for two decades. That is, the vacancy unemployment rate had never been anywhere near where it was then.

And so when you think about it --by the way, the other difference between the financial crisis adjustment and the pandemic adjustment is that pandemic, the whole thing happened much faster. I mean, we know the recession lasted two months. The rehiring was much faster. It took five or six years in the early 2010s after the financial crisis. So this is really important for any study of labor market behavior that takes as their base anything going on in '21 and '22.

And that includes, of course, right at the end of this period, we have ChatGPT introduced. And so the whole literature on is AI affecting or causing the undeniable acceleration of productivity that we've enjoyed. It's the same problem. You gotta base your issue. And so I'd just like to reinforce that connection between the discussions that your base period and productivity are really part of the heart of these difficult-to-interpret results.

STEINSSON: John Haltiwanger.

HALTIWANGER: So one missing piece from the discussion, although you did bring it up in the paper, and I just want to emphasize, I think it's potentially a really important missing piece, is the role of self-employment and gig workers over this period of time.

One thing I would say is we can't trust using the ACS or the CPS to track that. Work I've done with Katherine Abraham and co-authors suggests that's really a weakness of the household surveys. If you look at the non-employer statistics, and they have some limitations too, but particularly in this period of time, they are surging exactly over the period of time you're talking about, and in industries that are connected to other structural changes going on in the economy.

What's one sector with an enormous increase? Couriers and messengers, delivery services. Everybody was going online with both the working from home, but also just the fact that we all went online. So I think this is a big piece of probably what was happening and, is what was happening, you know, were these migrants basically our DoorDash drivers? And an interesting question is, it'd be interesting to ask what was the impact of the natives that used to be doing that? You know, rather than just look at the wage and salary and payroll workers that you're looking at.

STEINSSON: Tara Watson

WATSON: Thank you for writing this. I'm really glad that you did, and it's a question that I've been hoping someone would write about, so I didn't have to figure it out myself. As I was reading it, really wanted to know more about the preexisting immigrant workers, since it

seems that the negative wages that are showing up must be driven by foreign-born populations since they're not showing up in the native-born wages.

And similarly, on the domestic migration, I was wondering whether those are recent surge arrivals leaving, whether they are immigrants who would've otherwise come from elsewhere in the country not coming, or whether it's the US-born population. I think that's also going to be very important for thinking if we could use this type of instrument to look at five-year impacts or ten-year impacts on cities if it's changing who ends up in the city or maybe it-- in five years, the city is exactly what it would have been because there's been so much dispersion relative to the national baseline.

And then another area where I wanted to see a little more was on the housing. So you hear people concerned about immigrants driving up rents. You also hear people making the case that immigrants are construction workers who push down the cost of building new housing. I think it would be great if you could push a little further and think about not just rental housing, but owned housing as well. And I think you had a little bit about this in the paper, but what's happening with the construction, supply of construction workers, and so on. I think that's all I have.

STEINSSON: Katherine Abraham.

ABRAHAM: Thank you. I really enjoyed the paper. I want to pick up on something that Wendy was talking about, which is the role of domestic migration, and I guess I wanted to make what was probably an obvious point, which is get in the presence of changes, effects of the surge on domestic migration, you can't really take these results for cities and say anything about what the effect of immigration at the national level is which for some purposes might be the question that you want to answer.

It is really interesting to know how immigration affected these cities, but if, you know, the fact that there were more immigrants coming into these cities meant that people, other people didn't come and they stayed somewhere else, relative to the counterfactual, there could be a lot of effects in these other places that, that this approach to thinking about things just can't tell you about.

STEINSSON: Johannes Wieland?

WIELAND: I'm gonna touch on a, I think a, a similar point. I think the immigration result is maybe a little puzzling. I'm not an expert in this. My frame of reference, I think is like Blanchard Katz's Brookings paper from 1992, which I believe I first read in Christy's and David's class many years ago. But that's just that the net migration response, you do it because there's a negative shock happening to the area. And I think your calculations suggest there's the native-born population is better off. So it feels a bit puzzling maybe why few of them move in. And so maybe you can just help me reconcile that.

STEINSSON: George Akerlof

AKERLOF: I have a thought. My thought is that the immigration may particularly affect African Americans, and so somehow I feel that's also a major issue. And I don't know how to answer it but it's a thought.

STEINSSON: Janice Eberly.

EBERLY: So we have a guess that part of the, the Denver effect is that you had immigrants going to a community that they didn't choose and they had no connections, and so perhaps their outcomes were worse as a result.

So implicit in that is that in the shift shares, perhaps it could show up that the immigrants who did have a choice about where they were going chose to go to communities where they had similar language, that maybe they had family members or there were longstanding connections and that they could prosper.

So I wanted to ask if you could comment on that because if that's actually true and in your data, then there's policy implications there as well.

STEINSSON: Gerald Cohen.

COHEN: So I love this paper, and Jenny I love the fact that it answers some questions we grappled with ten plus years ago at Treasury.

I want to second Tara's comment or suggestion about the non-native long term immigrants who-- and there are many folks in here that fit that category. Like that when you talk about natives, you're talking about people who are born in the United States, but there's a, given the large share of the population that are immigrants but were not recent immigrants, and I know that the data is really hard to track, but anything we could do to kind of help, help that.

Also following Tara's comment about housing but taking a slightly different tack, my impression is that there's a lot of heterogeneity in, or there is a lot of heterogeneity in the housing stock and that immigrants fit a very different housing stock than, or live in a very different housing stock than many, a lot of the other share of the population, including non-recent immigrants.

And so it would be-- I think that differentiating that would be important. And then touching on what Bob Gordon is saying on productivity, I wonder if I-- while I think there's a very strong literature, the benefits of productivity or benefits of immigrants on productivity, at least higher skilled I wonder if the gain in productivity is really just a reflection of stronger demand in the short term rather than kind of a long-term impact on productivity.

Again, I'd like to, well, it'd be nice to tease that out

STEINSSON: Okay. Let me bring you back to the authors.

HUNT: We are not studying the effect of people who came outside legal channels. It's legal to apply for asylum. The Ukrainians came legally, so did the people who were paroled in from Cuba and so forth. So I think that's an inaccurate description of what was mostly going on in this period. There are people who came outside legal channels who aren't in our data, and I think that Wendy's point about whether there should be a factor to adjust for them is a very interesting one.

I think it's a little bit tricky to deal with because since we have no data, we don't know if they would have the same impact, and we don't know if they went to the same places, and we don't know if a simple adjustment factor would be enough. But I think that's an important thing to think about. perhaps I'll work backwards with the other comments.

So the question of the internal migration it would seem as though if all of the arrival of the surge migrants is offset that there shouldn't be any effects at all. So it comes to exactly what was just mentioned by Gerald, that there's, that there must be heterogeneity, which we tried to get at to some degree by looking by education groups, and we couldn't manage.

But it must be that although there might be almost one for one replacement of bodies, but it's either not with the same people or not the same type of worker, or that even if it is it allows the people in the cities to specialize more in what they're best at, and so you can get, in fact, productivity effects despite despite having sort of similar people replacing.

In terms of the existing workers, so, so I think we have some slight disagreement amongst the co-authors about the importance of the negative effect on the aggregate wage. If one wants to believe it, then there's-- it's definitely in contradiction to the ACS data. So I, what I did show you was the positive results on the native-born. We do have in the appendix, the regressions for all immigrants, most of whom would not be the surge 'cause the ACS missed most of them. The results are statistically insignificant, but the coefficients on wages are positive there also. So it's actually not reconcilable with the ACS data that there's a negative effect in the payroll data. So, so that's why my interpretation is, well, there's a huge standard error, so who knows what's happening in the aggregate with those data. But the ACS data strongly imply that that wages are going up.

So those, those points John Haltwanger's point about the, the couriers and so forth is very well taken. So is Bob Gordon's point about there being such a special year, 2021, we would really prefer if the surge people had waited at least one more year before arriving but we can't exactly drop 2021 given how few how few people we actually, few years we actually have. With with Jan's comments yes, we - a possibility is that the reason for the difference between the bus and the shift share is that the shift share people themselves are doing better. You need another step in the story, though, of why they're doing better makes other people, makes the impact better. I think that's not a completely self-evident step but yes that's one, one possibility that that when you do better makes everything more efficient and the impact is actually better. I, I should say that for that specific set of cities and time, the shift share impact is actually zero, or even I think it actually has a negative sign on the wage, but it's much smaller point estimate than for the bus.

Sort of skipping back to the beginning now with Michael's comments, I think the the best thing to say is just they're all great comments and we agree with them and we think that his synthetic control method does bring into question a little bit the bus instrument. My first reaction when he did that was to think, "Oh, well, he's looking at the reduced form, so it's not surprising that the effects are smaller and, but firstly, you should see them, but more importantly, in the first stage, the coefficient is actually about one, so it won't be any smaller in the in the reduced form, or it shouldn't be."

So I already mentioned that point of Jan's. I think maybe I've covered most of the things. Do you have anything? Yeah. Oh, and we agree with Katherine of course. Yeah, I think that's most of the points.

ORRENIUS: There, I can there was a comment about you know, what else do we know or understand, or one policy implication could be, you know, do people go where they have networks versus where they're bused to, and what does that mean about how people integrate? And just anecdotally we heard not really to do with the paper, but just anecdotally, you know, in Chicago, for example, we've talked to nonprofits about how the Venezuelan inflow was accommodated, which was with great difficulty and a lot of resentment and pushback from the community. And the, you know, the city and the state had to come to the rescue and pay for shelter and so forth, and this was a process that took, you know, year and a half to try to get these people settled. And that may have been 50,000 Venezuelans total.

Meanwhile, you know, 30,000 you know, Ukrainians showed up, and within one month you didn't know where they were. I mean, they were just really absorbed into the community. There's a Ukrainian village, I think, in Chicago, which, you know. So lots of networks. So that's just kind of anecdotal evidence of how this different process and how much harder it was for the cities when they were subject to the bus lift.

STEINSSON: Okay. So if we don't have any more questions, then I just have a few things to say at the end before we adjourn. So first of all for those of you that registered for the cocktail and dinner tonight, that's gonna start at six o'clock, with dinner starting at six thirty over at the Dupont Circle Hotel.

And then we're gonna start up again tomorrow morning with breakfast at eight thirty and the conference starting at nine. And then the final thing I wanna say is that one of the things that makes this BPEA conference series so great is we have a lot of loyal participants that are fabulous scholars, and one of those is Bob Gordon.

And I'm gonna embarrass him a little bit by saying that I think I'm getting these numbers right, that this is the 118th BPEA conference. And how many do you think he's gone to?

112. Thank you, Bob, for your participation