

# UNITED STATES INTERNATIONAL TRADE COMMISSION

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In the Matter of: )  
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TRADING PLACES: MOBILITY ) Inv. No. 332-599  
RESPONSES OF NATIVE AND )  
FOREIGN-BORN ADULTS TO THE )  
CHINA TRADE SHOCK )

Pages: 1 through 55  
Place: Washington, D.C.  
Date: November 13, 2023

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## HERITAGE REPORTING CORPORATION

*Official Reporters*  
1220 L Street, N.W., Suite 206  
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Monday,  
 November 13, 2023

Teleconference  
 U.S. International  
 Trade Commission  
 500 E Street, S.W.  
 Washington, D.C.

The seminar commenced, pursuant to notice, at  
 10:00 a.m., before the United States International Trade  
 Commission.

PARTICIPANTS:

USITC:

SAAD AHMAD, Moderator  
 BILL POWERS, Chief Economist, Director, Office of  
 Economics  
 TAMARA GUREVICH

SHARON BELLAMY, Supervisory Hearings and  
 Information Officer  
 TYRELL BURCH, Management Analyst

Seminar #2

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Moderator: Saad Ahmad	

P R O C E E D I N G S

(10:00 a.m.)

1  
2  
3 MR. AHMAD: Well I think we can get started. Thank  
4 you everyone for joining us for our rescheduled seminar. We  
5 especially want to thank Dr. Hanson for rescheduling the  
6 seminar.

7 Before we begin, Bill Powers, the Director of  
8 Office of Economics and Chief Economist at the Commission,  
9 will say a few opening remarks. Bill?

10 MR. POWERS: Thank you very much, Saad.

11 Welcome everyone to our fifth seminar in our series  
12 on the distributional effects of trade. Some of you may have  
13 joined for our seminars last month. If so, thank you for  
14 coming back.

15 For those of you joining us for the first time, the  
16 Commission put out a report last year on the effects of trade  
17 on U.S. workers and under-served communities. The USTR has  
18 since asked for a series of five more reports on this topic  
19 over the next 15 years. The first of these reports will be  
20 due in January 2026, so we are holding a series of annual  
21 outreach events for these reports. This is our fifth  
22 seminar, as I mentioned. We have another seminar later this  
23 week with Florian Dorn, and then next year we will have a  
24 similar series.

25 Please see our website. I'm going to put the URL

1 in the chat, if you have access to the chat, for more details  
2 on the report and the seminars.

3 Before I introduce Dr. Hanson I will go over some  
4 ground rules. Gordon's going to present for 60 minutes and  
5 then following that, Tamara Gurevich our discussant from the  
6 USITC will follow for 10 more minutes. That should leave  
7 about 20 minutes at the end for Q&A. Please put any  
8 questions you have into the chat and we will get to them.

9 Gordon has indicated he is going to take questions  
10 during the presentation as well.

11 If you don't have access to the chat function, not  
12 everyone does, you can raise your hand and also during the  
13 Q&A we'll call on you at that point as well.

14 Know also that we'll have a transcript available of  
15 the seminar on the website after 45 days.

16 Let me now turn to introducing Gordon.

17 Our speaker today is Dr. Gordon Hanson. Gordon is  
18 the Peter Wertheim Professor in Urban Policy at Harvard  
19 Kennedy School. He's also Chair of the Social and Urban  
20 Policy Area at the Harvard Kennedy School, a research  
21 associate at NBER, and a member of the Council on Foreign  
22 Relations.

23 Gordon's studies the labor market consequences of  
24 globalization which is incredibly appropriate to what we're  
25 doing here as well as his work at the Reimagining the Economy

1 Project at the Harvard Kennedy School which he co-directs  
2 with Dani Rodrik.

3 Today Gordon's going to be presenting his paper on  
4 Trading Places, as you see here on the screen. The working  
5 paper came out earlier this year and it's co-authored with  
6 David Dorn and David Autor, as you see there. Gordon's going  
7 to look at whether immigrants are more mobile than  
8 native-born workers and how that movement affects labor  
9 market adjustment to economic shocks.

10 I'm pleased to turn the presentation over to  
11 Gordon. Gordon, would you take it away please?

12 DR. HANSON: Thank you very much, Bill.

13 Everyone is seeing my slides okay? Great.

14 Work I'm going to talk about today relates both to  
15 immigration and to trade. The motivation is one of kind of  
16 the central puzzles that we've uncovered in understanding how  
17 local economies adjust to greater import competition.

18 So the work I've done with David Autor and David  
19 Dorn over the last decade or so has exploited what's come to  
20 be known as the China trade shock, and looking at how  
21 economies have adjusted to the dramatic increase in import  
22 competition they've faced as China joined the global  
23 community of nations.

24 China with its very extreme comparative advantage  
25 in manufacturing and within labor intensive manufacturing in

1 particular, put competitive pressure on places that were  
2 producing furniture and textiles and products that are  
3 similar in terms of their factory usage.

4 The standard models of trade would say okay, we  
5 have a trade shock. What are we going to do? We're going to  
6 reallocate factors from import competing sectors to export  
7 expanding sectors or to other parts of the economy that are  
8 growing.

9 Because of the geographic concentration of  
10 manufacturing production in the U.S., that type of  
11 reallocation really requires spatial mobility of labor. And  
12 to our surprise and lots of other people's surprise, I think,  
13 we haven't found all that much labor mobility in response to  
14 shocks. Younger workers move, more educated workers move,  
15 but in general, the movement out of places that saw greater  
16 import competition wasn't nearly sufficient to accommodate  
17 the magnitude of the manufacturing job loss which resulted in  
18 an overall decline in employment rates in places that have  
19 faced greater import competition where that decline in  
20 employment rates has been persistent all the way out to the  
21 end of the 2010s.

22 So what I'm going to talk about today is the role  
23 of more and more workers in the labor market adjustment  
24 process and whether the presence of foreign-born workers  
25 smooths adjustment to trade shocks.

1           So where this idea comes from is in part from the  
2 work of George Borjas. George put the idea on the table that  
3 immigration might grease the wheels of the U.S. labor market.  
4 The general idea is that with fixed cost migration, labor  
5 might not be sufficiently mobile to eliminate inter-regional  
6 differences in wages or in labor market opportunities.

7           Foreign-born workers offer an advantage here  
8 because newly arriving immigrants already incurred these  
9 costs. They're just kind of figuring out where they want to  
10 be. And this may make them especially responsive to changes  
11 in local economic conditions.

12           So the logic here is that even if native-born  
13 workers by and large aren't that mobile in response to  
14 shocks, foreign-born workers may be and that may smooth  
15 adjustment and allow kind of spatial equilibrium to be  
16 achieved more readily.

17           So this is important because it creates a vehicle  
18 for avoiding kind of spatial misallocation of labor that may  
19 last in the short run into the medium run and even into the  
20 longer run as regions have difficulty figuring out how they  
21 transition from manufacturing or some other declining sector  
22 to something new.

23           So this idea that foreign-born workers play an  
24 important role in labor market adjustment has inspired a  
25 growing body of literature. This literature kind of goes



1 back 100 years in terms of the episodes that it looks at.

2           What I'm going to do to kind of set up our analysis  
3 is two things. One, I'm going to talk about three or four  
4 episodes from economic history in which immigration and  
5 foreign-born workers did play this important role of  
6 smoothing adjustment to shocks, and then we'll take a new  
7 look at the China trade shock and look at how foreign and  
8 native-born workers differed in their mobility responses to a  
9 manufacturing job loss that was the result of greater import  
10 competition.

11           One reason we care about all of this is that in the  
12 U.S. economy what we've seen over time is that labor mobility  
13 between regions has been diminishing. We see diminished  
14 mobility in all dimensions in the United States, reduced  
15 mobility between income levels, reduced mobility between  
16 places, reduced mobility between firms.

17           This is something that's kind of come as a big  
18 surprise because I think before 2000 many of us would have  
19 thought of the U.S. as a place in which labor markets were  
20 pretty dynamic, certainly relative to Europe, and that  
21 movement of workers in and out of jobs, between regions,  
22 between industries, between firms meant that dealing with  
23 unemployment is something the U.S. did pretty well. We may  
24 have issues with rising income inequality and differing  
25 economic opportunity that exists across places but we're

1 going to kind of smooth out differences in employment rates.

2 We now since learned that's not really true.

3 There's a really interesting paper by Coate-Mangum from the  
4 Federal Reserve Board that looks at changes in mobility over  
5 time. What they highlight is the fact that we've got a  
6 distorted sense of how geographically mobile American workers  
7 were because in the post-war period the U.S. was still in  
8 effect filling out California and Texas and Florida. As a  
9 consequence, people were moving into these regions. They're  
10 also moving back out.

11 As we settle new places, not everybody likes being  
12 there, so these new places tend to see both high in-migration  
13 rates and high out-migration rates. What Coate-Mangum  
14 identified is that the high mobility we detected across  
15 regions in the United States in the 1970s and 1980s was due  
16 to high rates of in-migration and out-migration in these  
17 places that were still filling themselves out.

18 As we've moved forward in time mobility in those  
19 places like California has converged towards what it looks  
20 like in the rest of the country. And the consequences of  
21 this situation, lowish geographic mobility of workers between  
22 regions in which we find ourselves today.

23 So we give you several examples of the role that  
24 foreign-born workers have played in smoothing that  
25 adjustment.

1           One was to a massive change in immigration policy  
2           itself, which was the rise of barriers on foreign-born  
3           workers, really the first across-the-board barriers the  
4           United States had ever put in place which occurred in 1924.  
5           And what that meant was U.S. cities, in particular on the  
6           East Coast and the Northeast, which had seen decades of  
7           increases in labor supply due to the arrival of foreign-born  
8           workers all of a sudden saw that labor supply shut off. And  
9           the question then is well, how did they adjust?

10           What Abramitzky, Ager, Boustan called an enhance  
11           and do in a recent AHA paper, is to then look at what  
12           happened to labor market outcomes in places that had lost  
13           access to that labor supply growth. What they find is that  
14           migration helped the U.S. adjust to that shock. It was  
15           migration of two types of workers. One were immigrant  
16           workers from countries that weren't subject to these quotas,  
17           the immigration quotas the U.S. put in place in the 1920s did  
18           not apply to the Western Hemisphere. That meant we saw  
19           continuing in-migration from Canada and Mexico which helped  
20           with that labor market adjustment.

21           And we also saw movements of workers out of the  
22           U.S. South. That movement, the great migration of black  
23           workers from the South to the North, but also large-scale  
24           migration of white workers from the 1920s to the 1950s played  
25           an important role in that adjustment process.

1           A second example had to do with what happened when  
2 during the tremendous boom in labor demand that occurred as  
3 California was expanding in the post-war era. California was  
4 growing at much higher rates than the rest of the country  
5 such that its share of the U.S. working-age population was  
6 increasing dramatically. Much of that increase was supplied  
7 by foreign-born workers who were newly arriving in the United  
8 States.

9           We had another kind of boom in immigration that  
10 began in the late 1960s and 1970s and the arrival of those  
11 immigrants helped meet the strong increases in labor demand  
12 that's documented in a Brookings paper by Borjas, Freeman and  
13 Katz.

14           More recently, looking at the Great Recession, the  
15 Great Recession meant a sudden decline in labor demand coming  
16 out of construction since the early 2000's boom was fueled by  
17 housing construction associated in part with a dramatic  
18 increase in sub-prime mortgages when the housing bust  
19 occurred meant construction workers were first to lose their  
20 jobs. Work by Cadena and Kovak find that it was foreign-born  
21 workers who moved out of places that were hit by those  
22 adverse shocks and that helped smooth adjustment to the Great  
23 Recession.

24           I now want to turn to an episode, bring trade into  
25 the story and think about well, did immigration help with

1 adjustment to manufacturing job loss that was the consequence  
2 of greater import competition?

3 I've already mentioned what were some of the major  
4 impacts of increased import competition from China, it was a  
5 loss of manufacturing jobs in the local labor markets that  
6 were specialized in furniture and textiles and other stuff,  
7 and kind of a lack of readjustment of that labor either out  
8 of those places or to other areas, or to other sectors within  
9 those locations.

10 The consequence then of that greater import  
11 competition was an overall decline in employment to  
12 population ratios which has persisted out more or less to the  
13 present day.

14 We're going to ask in this paper, in that overall  
15 scenario in which labor markets adjusted poorly, were there  
16 segments, were there places where immigration helped with  
17 adjustment to those shocks? And then looking forward, we see  
18 another important local labor market shock on the horizon and  
19 that is what will be triggered by the energy transition.

20 The energy transition will mean a decline in  
21 employment in sectors that are intensive in fossil fuels and  
22 an expansion of employment in sectors that use green energy.  
23 And if there's regional differences in where those jobs are  
24 going to take place, then we're going to see a need for  
25 substantial labor market adjustment and we kind of want to

1 know, could the presence of foreign-born workers in the  
2 economy smooth adjustment to that labor market process which  
3 is already ongoing.

4 So that's the motivation.

5 A little bit on literature, I've already kind of  
6 talked about a lot of this. We're documenting limited  
7 geographic mobility of less educated workers and in  
8 particular there's large literature documenting employment  
9 and migration impacts of the China shock, and then work  
10 that's then taken that reduced form analysis and put it in a  
11 general equilibrium setting.

12 I'll pause here for a moment, because this is all  
13 set up in motivation and background, before we go into the  
14 analysis to see if there are any questions.

15 MR. AHMAD: I don't see any questions in the chat.  
16 Does anyone have any questions? If they can raise their  
17 hand.

18 (Pause.)

19 MR. AHMAD: I think we're good.

20 DR. HANSON: Okay, great.

21 What we're going to be doing is using the  
22 machinery, that Autor, Dorn and I have developed to  
23 understand the China trade shock, to now look at differential  
24 impacts of that trade shock on foreign and native-born labor.

25 Kind of what was the China trade shock? It was

1 this tremendous increase in China's export capabilities  
2 associated with its economic opening. So China open to the  
3 rest of the world, and as a result experienced this enormous  
4 increase in its manufacturing production and its  
5 manufacturing exports.

6           You can think of there being kind of three periods  
7 of the China trade shock. The one was when in the 1990s when  
8 things were kind of getting going. During that period, you  
9 go back to 1990, China was a bit player in global  
10 manufacturing. It accounted for just over one percent of  
11 global manufacturing exports. That share kind of  
12 approximately doubled by the end of the 1990s.

13           China's real growth came in period two, which began  
14 with its accession to the World Trade Organization. And by  
15 the end of that period China's share of global exports of  
16 manufactured goods was nearly 20 percent.

17           That period of China's dramatic expansion was  
18 basically a decade long, from 2000 until 2010. And then from  
19 that period forward, the China trade shock has stabilized.  
20 China hasn't diminished its presence in manufacturing or in  
21 most labor intensive sectors, but its market shares stopped  
22 increasing. And this was a consequence both of the  
23 inevitable slow-down in growth as China completed its  
24 economic transition, and also in part because of a reversal  
25 of reforms that began under Hu Jintao and then has continued

1 under Xi Jinping who came into power in 2012.

2 So for purposes of our analysis I'm going to be  
3 focusing on two time periods. The first decade of the 2000's  
4 when the China shock really hits hard and we're seeing a  
5 dramatic increase in import competition; and then what  
6 happens in the 2010's once the shock has stabilized and we  
7 might expect to see an attenuation of shock impacts as  
8 regions then try and reposition themselves, move into new  
9 sectors, or labor moves on to other regions to do different  
10 things.

11 So as in previous work, we will measure the shock  
12 using a measure of import penetration. So take industry J,  
13 think about U.S. furniture production and import penetration  
14 in U.S. furniture production is given by the increase in  
15 imports from China normalized by U.S. industry absorption in  
16 furniture in 1991 where that industry absorption is output Y  
17 plus imports M less exports E.

18 For commuting zone I then, we take a weighted  
19 average of the change in import penetration from China across  
20 sectors where we use as weights the employment share of a  
21 commuting zone in a particular industry at the beginning of  
22 the sample period.

23 To give you a sense of what the geographic  
24 distribution of these shocks look like, we see on the right  
25 just a map of exposure to import competition from China. So



1 this is the weighted average change in import competition  
2 during the most intense period of the China shock, 2000 to  
3 2012. Areas in red were areas that saw substantial increase  
4 in import competition because they were specialized in  
5 industries in which China's exports to the U.S. were rising  
6 the most rapidly.

7 On the left what we see is one of the things we're  
8 trying to explain, and that's the change in manufacturing  
9 employment here shown as a share of the working age  
10 population, and this is looking over the full 20-year period  
11 from 2000 to 2019. You see the areas in red were places in  
12 which manufacturing job loss was most concentrated.

13 There's not a perfect overlap between the map on  
14 the left and the map on the right, but there's a pretty good  
15 overlap. And in previous work what our analysis suggests is  
16 that the differential increase in exposure to import  
17 competition from China between places that were highly  
18 exposed relative to places that were lowly exposed, can  
19 account for about a third of the differential manufacturing  
20 job loss that occurred in those places over a couple of  
21 decade time period.

22 So now the question is we're seeing the areas in  
23 red on the right map. Could the presence of foreign-born  
24 workers in the U.S. economy have helped those places adjust  
25 to manufacturing job loss via those workers relocating to

1       somewhere else? Our concern arises because we know that  
2       manufacturing disproportionately employs workers without a  
3       college education, and we know from work by Chopel, by Bound  
4       and Holzer, by Norwood Digto that less educated workers are  
5       less mobile in response to adverse changes in labor demand.

6               So that raises the question, well where were  
7       foreign-born workers located across the U.S. economy? And  
8       could they have been in a position to help with adjustment to  
9       the China trade shock?

10              What I'm showing you here is a four-panel map which  
11       shows the share of manufacturing workers who are foreign-born  
12       in four years - 1990 to 2019. And what you see is we start  
13       in 1990, foreign-born workers are really concentrated in  
14       border states, in Florida, around New York, and then a little  
15       bit in Chicago. And those were the gateway cities for  
16       immigration and for immigration from Latin America and the  
17       Caribbean in particular.

18              As we go to 2000 and to 2010 what we see is an  
19       expansion of the presence of foreign-born workers across  
20       regions in the U.S., but not really moving that much beyond  
21       the gateway regions of the California, Arizona, Texas border,  
22       the Miami area and the New York area.

23              There is one exception. There's this area of  
24       concentrated immigrant employment that if you look carefully  
25       you'll see kind of extends from Denver, Colorado east into

1 Nebraska and then southeast into Kansas. Those areas are the  
2 meat packing belt of the United States and where processing  
3 of cattle occurs. And that has been one part of the interior  
4 of the United States in which we've seen big increases in  
5 foreign-born presence in manufacturing.

6 But if you look at this kind of map in 2010, and  
7 you then look at this map of the China trade shock on the  
8 right to 2012, you can kind of get a punch line to our story.  
9 Foreign-born workers were not in the right place to help much  
10 in terms of the adjustment to the China trade shock.

11 Now I'll kind of flesh out that story for you.

12 The regression will look across commuting zones and  
13 will look at three different time periods during kind of the  
14 intensification of the China shock from 2000 to 2007, the  
15 2007 was the end period in the original work that Autor, Dorn  
16 and I did.

17 Then looking out to 2012. By this moment in time  
18 the China trade shock has reached full intensity. Then 2000  
19 to 2019, and by extending out to the later time period and  
20 comparing results for the full time period versus earlier  
21 time periods, we can get a sense of whether there's any  
22 attenuation in impacts that occurs as we move out in time.

23 Our regression specification will have on the  
24 left-hand side different measures of changes in labor market  
25 outcomes where we're going to be focused on changes in log

1 population head counts. Log head counts tell us about the  
2 net change in population that's a consequence of in-migration  
3 and out-migration over a given time period.

4 We'll look at the change in log population head  
5 counts for native and foreign-born workers and for workers at  
6 different education levels.

7 So we aren't going to be looking at gross migration  
8 flows, who's moving in and who's moving out. We're looking  
9 at net changes of labor supply as they relate to import  
10 competition from China.

11 We'll then control for a bunch of stuff that's  
12 related to secular changes in labor demand and secular  
13 changes in labor supply. That will load into our variable X.  
14 That includes the initial pattern of specialization across  
15 places, the exposure to shocks related to technological  
16 change of the initial presence of more educated workers in  
17 the population, the initial presence of foreign-born workers  
18 in the population, and then controlling for long lags on  
19 population growth to neutralize trend differences in  
20 population growth rates across time.

21 There's kind of some tricky econometric issues when  
22 studying changes in population over time that I'm happy to  
23 address in the Q&A if folks are interested.

24 What we have, we have our T measure of import  
25 competition from China. That's the measure IT. That's the

1 weighted average change in import competition for a commuting  
2 zone which is a function of increased national import  
3 competition from China in particular industries, then  
4 weighted by initial specialization of commuting zones in  
5 different sectors.

6 We're going to instrument for this in standard  
7 fashion using the increase in import competition in other  
8 high income countries, the justification for which is that we  
9 want to isolate the portion of increased import competition  
10 from China that looks like it's related to an export supply  
11 shock in China associated with its transition from being  
12 closed to being a more open economy. And the increase in  
13 manufacturing employment that occurred as China relaxed  
14 restrictions on its economy that have been associated with  
15 central planning.

16 A bunch of econometric issues associated with the  
17 use of shift-share variables in econometric analysis. Nice  
18 results that have been developed that help us understand the  
19 underlying, what exactly are the exclusion restrictions when  
20 we use shift-sharing instruments like the China trade shock  
21 and we kind of have availed ourselves of the insights of this  
22 literature to make sure that we clarify those exclusion  
23 restrictions and look for threats to identification.

24 We've done this extensively in previous work. I'm  
25 not going to talk a lot about that here. I'm happy to

1 address it in the Q&A.

2           There's a bunch of other stuff we've addressed, in  
3 particular in a Brookings paper we wrote two years ago which  
4 have to do with thinking about the dynamics of the China  
5 trade shock, going through exhaustive analysis of pre-trans  
6 to make sure that our identifying assumptions appear to be  
7 warranted. Then a bunch of issues related to how we get our  
8 standard errors right.

9           Again, I'm not going to talk about this in detail.  
10 I'm happy to address any questions.

11           DR. HANSON: Okay. So now we go back to our  
12 estimating equation here, and the first thing I want to do  
13 before we look at how population head counts adjusted in  
14 response to changes in labor demand shocks is I want to just  
15 validate for you that what happens to employment in  
16 manufacturing for domestic and foreign-born workers in  
17 response to increased import competition from China.

18           We know that overall in commuting zones that were  
19 more exposed to import competition from China saw larger  
20 reductions in manufacturing employment. And Now, I'm just  
21 going to show you those changes in manufacturing employment  
22 for foreign and native-born workers separately. Then we'll  
23 move on to examine impacts on population head counts.

24           Before I dive in to the analysis, any questions on  
25 the regression specification?

1 (Pause.)

2 DR. HANSON: Okay. I will forge ahead then.

3 So the first set of results that I'm going to show  
4 you are for the change in manufacturing employment as a share  
5 of the working-age population and the share of employment in  
6 non-manufacturing as a share of the working-age population.

7 And I'm going to do this separately for the native-  
8 born on the left and the foreign-born on the right. So look  
9 at the left panel and the left part of the left panel first,  
10 and what do we see?

11 These are familiar results in which we see that  
12 native-born workers who are in commuting zones, that were  
13 exposed to larger increases import competition from China,  
14 saw larger reductions in manufacturing employment.

15 The blue circle shows you impacts over the 2000 to  
16 2007 horizon when shock impacts were most intense. Then the  
17 red squares show you impacts over 2000 to 2012. By this  
18 point, the China shock is at its full expression. And then  
19 the green triangles show you impacts over 2000 to 2018. So  
20 these are the long-run effects.

21 And so, what you see is that impacts are most  
22 intense over the 2000 to 2007 period. And then, over time,  
23 as manufacturing is able to adjust a bit, there's some  
24 attenuation in those impact effects. But even all the way  
25 out to 2018, commuting zones that were more exposed to the

1 China trade shock have larger reductions in manufacturing  
2 employment over that full period. That's for native-born  
3 workers.

4 Now, jump to Panel B and look at the left part of  
5 Panel B. What you see is something qualitatively similar for  
6 foreign-born workers. For foreign-born workers, what we see  
7 is a long-run decline in manufacturing employment in  
8 commuting zones that were more exposed to import competition  
9 from China.

10 Now, how might workers adjust to those shocks? One  
11 possibility is that you move in to non-manufacturing  
12 activity. So if, as a result of the rise of China, regions  
13 lose their comparative advantage in manufacturing, we then  
14 expect them to kind of either shed those factors to move on  
15 to somewhere else or to take up employment in new sectors in  
16 which they now have a new-found comparative advantage given a  
17 loss of comparative damage in manufacturing.

18 So, look in Panel A, in the right part of Panel A,  
19 what do we see in terms of employment of the native-born in  
20 non-manufacturing? Initially, we see this absorption of some  
21 of those native-born workers in non-manufacturing, but over  
22 the long-term, that absorption is pretty close to zero.

23 So, what that means is if I take the green  
24 triangles and I add them together, I'm going to get a net  
25 negative effect. And that is, places that were more exposed



1 to import competition from China saw a long-run decrease in  
2 employment rates for the native-born, that is, a persistent  
3 increase in joblessness.

4 When I look at the foreign-born, I see something  
5 that is kind of qualitatively similar. My estimates for the  
6 foreign-born are noisier. That's because we're dealing with  
7 much smaller samples here. The foreign-born are about 10 to  
8 15 percent of the labor force in these places. So I get  
9 wider spanned air bounds on the coefficient estimates. But  
10 I'm also seeing with the foreign-born, a lack of a systematic  
11 increase in non-manufacturing employment that's able to  
12 absorb workers who had been pushed out on non-manufacturing.

13 So now, let's say, okay, non-manufacturing is not  
14 doing its job of fully absorbing the workers who had been  
15 pushed out of manufacturing. Did we then see net migration  
16 playing a role in that adjustment process?

17 So here, we'll begin by looking at what happens to  
18 population head counts and population head counts capture the  
19 change in net migration, inflows minus outflows, of people in  
20 a place over time. And throughout, we're looking at the  
21 population head counts for the working age.

22 So, what we see for either all workers in the left  
23 panel, less-educated workers in the middle panel or more-  
24 educated workers in the right panel, are smallish negative  
25 effects. For all workers, the effects are imprecisely

1 estimated. You see that for less-educated workers we're  
2 actually seeing stronger net migration adjustments. But I  
3 want to highlight -- and these effects are small in the sense  
4 that they aren't sufficient to compensate for the declining  
5 manufacturing employment such that we're seeing this overall  
6 decline in employment rates.

7           So what let's do now is to break apart foreign and  
8 native-born workers and see who is moving in response to the  
9 China trade shock. So, I'm now going to separate the native-  
10 born and the foreign-born and the native-born left of the  
11 dash vertical line. I'm looking strictly at native-born  
12 workers. Right of the dashed vertical line I'm looking  
13 strictly at foreign-born workers.

14           So, to begin before we kind of break things into  
15 education levels, let's just focus on all native-born.  
16 That's the very first panel, and then all foreign-born,  
17 that's the first panel to the right of the vertical dashed  
18 line.

19           For all native-born, what are we seeing? We're  
20 basically seeing close to zero impacts on population  
21 headcounts as a result of increased exposure to import  
22 competition from China.

23           So this is consistent with this decline in  
24 employment rates overall. Workers are seeing, native-born  
25 workers saw this negative shock to labor demand coming from

1 manufacturing. They tried to move in to non-manufacturing.  
2 It didn't fully absorb them, and surprisingly, we're not  
3 seeing substantial movements of these workers on net out of  
4 these places.

5 For the foreign-born, we're seeing larger  
6 movements. And so, foreign-born mobility responses are  
7 substantially larger than native-born mobility responses. We  
8 get larger standard air bounds. But for the foreign-born,  
9 the impact coefficient for the full time period is 4.2 -- I'm  
10 going to interpret this for you in the next slide -- whereas  
11 it's .9 for the native-born. That means a difference of  
12 mobility responsiveness of a factor of 4. So consistent with  
13 other evidence, foreign-born workers are much more mobile in  
14 response to adverse labor demand shocks than are the native-  
15 born.

16 We'll now turn to the question of asking, well, did  
17 this greater mobility of the foreign-born matter materially  
18 for how locations adjusted in response to the China trade  
19 shock?

20 So, to do that, what I want to do is then take this  
21 coefficient, the coefficient of 4.2. So this is telling us  
22 about the change in population headcounts for the foreign-  
23 born in response to a decatalized one log point increase in  
24 import competition from China over this time period.

25 Just for interpretation purposes, a one log point

1 increase in import competition from China is approximately  
2 equal to the interquartile difference in China exposure.  
3 That is, that one log point is about the difference in  
4 increase in import competition for a commuting zone at the  
5 75th percentile of exposure versus a commuting zone at the  
6 25th percentile of exposure.

7           So what that coefficient of 4.2 means is that we  
8 would have seen a 4.2 log point larger reduction in foreign-  
9 born headcounts in places at the 75th percentile of exposure  
10 to the China trade shock versus places at the 25th percentile  
11 of exposure to the China trade shock.

12           So now let's use that coefficient estimate to tell  
13 us about how important immigration was to adjustment to the  
14 China trade shock because what matters is not just the  
15 migration elasticity of the foreign-born, it also matters how  
16 important the foreign-born were as a source of labor supply  
17 to manufacturing in places that were exposed to the China  
18 trade shock.

19           Okay. So now what let's do is take that 4.2  
20 coefficient and let's look at the differential reduction in  
21 foreign labor supply between places that are at the 75th  
22 versus 25th percentile of exposure, and that gives us this  
23 2.8 percentage point larger reduction in labor supply.

24           Now, to get at the impact on the total working-age  
25 population in more versus less exposed commuting zones, I

1 need to account for, well, what fraction were the foreign-  
2 born of manufacturing employment in more versus less exposed  
3 commuting zones. And, here, what we find is that, one,  
4 foreign-born workers were just a pretty small share of  
5 manufacturing employment overall, and they were actually a  
6 smaller share of manufacturing employment in the most exposed  
7 places.

8           So there's actually, and as a consequence, when I  
9 combine the differential exposure of places to the China  
10 trade shock based on their weighted average import  
11 penetration ratio and I account for the differential presence  
12 of the foreign and native-born in these places, I get close  
13 to zero contribution of the foreign-born to labor market  
14 adjustment to the China trade shock. That is, foreign-born  
15 workers were in the wrong places in order to be able to help  
16 by migrating out of commuting zones as there was job loss  
17 induced by import competition from China.

18           There is a good historical reason for why this was  
19 the case. Look on the right panel here in terms of red  
20 areas. These were areas that were most exposed to the China  
21 trade shock. They were areas that were most specialized in  
22 furniture, textiles, and other labor-intensive manufacturing  
23 activities in  
24 19 -- by around 1990 or 2000.

25           What were these places? These were not the places

1 that were responsible for U.S. industrialization in the early  
2 -- in the late 1800s and early 1990s. Industrialization in  
3 the United States in its first wave occurred in major cities  
4 in the U.S. Northeast: in Boston, in New York, in Buffalo,  
5 in Rochester, in Detroit, in Chicago, in Milwaukee.

6 After that first wave of industrialization,  
7 industry got priced out of those big expensive cities and  
8 began to move into the hinterland. So, if you look at the  
9 red areas in the right map that are kind of in the northern  
10 part of the U.S., those are smaller towns in the U.S. Rust  
11 Belt.

12 The place they also moved was to the U.S. South.  
13 The South pulled manufacturing out of the United States in  
14 the 1950s and 1960s and 1970s as industry was leaving larger  
15 northern cities.

16 So the places where manufacturing established  
17 itself over the middle of the 20th Century were places that  
18 were smaller towns in the Rust Belt and smaller towns in the  
19 U.S. Northeast.

20 Manufacturing was building itself up in these  
21 locations during precisely the four decades in which U.S.  
22 immigration was at an all-time low. That means, as these  
23 industries developed their manufacturing labor forces, they  
24 didn't pull in many immigrant workers, and, as a consequence,  
25 there weren't that many immigrant workers who were in

1 position to then migrate out when those places were hit by  
2 the China trade shock in the 1990s and 2000s.

3           And that's really the bottom line of our paper.  
4 There's a bunch of other stuff we do in terms of kind of  
5 extending the econometric framework to look at your exposure  
6 not just to trade shocks in your own commuting zone but to  
7 trade shocks in other commuting zones and then a bunch of  
8 other extensions and checks on robustness that we perform  
9 that I'm happy to talk about in the Q&A if there's interest.

10           So then, to think about what all this means, did  
11 immigration ease native -- the adjustment of native-born  
12 workers to the China trade shock? Well, the answer is kind  
13 of because foreign-born populations were much more responsive  
14 to trade-induced manufacturing job loss than were native-born  
15 populations. But foreign-born workers were concentrated in  
16 gateway cities, not in the cities in the U.S. Industrial Belt  
17 that were most exposed to manufacturing job loss, and the  
18 consequence was they provided little insulation to native-  
19 born workers as those commuting zones saw substantial  
20 declines in manufacturing employment.

21           All of this matters as we think about what will be  
22 likely the next pattern of localized job loss in response to  
23 big changes in the national and global economy, and that's  
24 the job loss that's going to be brought about by the energy  
25 transition.

1           The United States and other countries are in the  
2 process of transitioning away from the use of fossil fuels to  
3 renewable energy sources, and because renewable energy is  
4 produced in different places than fossil fuel, fossil fuels  
5 are found and processed and refined, we could see substantial  
6 changes in the pattern of labor demand across locations.

7           So, in other work, what I've done is to try and  
8 gauge, well, where are -- where is employment in fossil fuel-  
9 related industries concentrated? And if there's interest,  
10 I'm happy to explain to you in the Q&A exactly what I mean by  
11 those industries.

12           It's not just extraction and refining. It's also  
13 power generation, but also manufacturing employment in  
14 energy-intensive sectors which have co-located near coal and  
15 gas-fired power plants. And you see in the right map where  
16 jobs in fossil fuel-intensive industries were concentrated as  
17 of 2019.

18           Then you see on the left panel where foreign-born  
19 workers are a substantial share of the working age population  
20 as of 2019. So how does the overlap here look?

21           Well, if you're one of the areas that's likely to  
22 see substantial disruption from the shift away from fossil  
23 fuels is west Texas. West Texas has a lot of oil and gas, as  
24 well as the panhandle of Texas and Oklahoma, areas with lots  
25 of oil and gas.



1           As it turns out, those are areas that also are  
2 pretty good for generating electricity from wind. So they  
3 are one of the few parts of the country where their  
4 competitive advantage in fossil fuel-related activities is  
5 comparable to their competitive advantage in renewable  
6 activities.

7           They're also one of the few parts of the country  
8 that currently specialize in fossil fuels in which there's a  
9 substantial share of foreign-born workers. What does that  
10 mean if we look ahead to the disrupting local labor market  
11 effects of the energy transition? We're probably least  
12 worried about adjustment in west Texas, the Texas panhandle,  
13 and Oklahoma.

14           But we see other areas in which there is  
15 substantial fossil fuel employment and not many foreign-born  
16 workers. That includes Louisiana. It includes Alabama and  
17 Mississippi. It includes Appalachia, and it includes North  
18 Dakota and Wyoming.

19           So what this means is that as we look ahead to  
20 local labor market adjustment to the next big wave of  
21 localized shocks, we shouldn't expect foreign-born workers to  
22 provide all that much insulation in terms of migration  
23 adjustment during that episode.

24           So I've talked for 50 minutes. I'm happy to open  
25 things up to discussion now. I'm going to go off of full-

1 screen mode so I can see people's faces and not just stare at  
2 my screen. Thanks very much. Happy to turn things back over  
3 to you all.

4 MR. AHMED: Thank you. I don't see anything in the  
5 chat. Any questions for Gordon, or do people want to wait  
6 after Tamara's discussant, discussion?

7 MR. POWERS: Saad, I've got a question, but I'm  
8 happy to wait.

9 MR. AHMED: Okay. Let's get Tamara's slides, and  
10 then we can have a full discussion. Does that work, Dr.  
11 Hanson?

12 DR. HANSON: Okay.

13 MR. AHMED: Excellent. Tamara, do you want to  
14 upload your slides?

15 MS. GUREVICH: Can you see the slides now?

16 MR. AHMED: Yes, yes.

17 MS. GUREVICH: Excellent.

18 MR. AHMED: They're not full screen.

19 MS. GUREVICH: They are not full screen? Let's  
20 see. Okay. There we go. It should be good now. Yes?

21 MR. AHMED: Yes.

22 MS. GUREVICH: Okay. Perfect. So I only have a  
23 few slides. Thank you so much, Dr. Hanson, for your  
24 presentation. It's a fascinating paper. I absolutely love  
25 this area of research and this paper and it's great.

1           I just want to give a very quick overview and then  
2 share some thoughts that I had and maybe sort of like the  
3 extensions that I personally had questions about and  
4 something that I think we will find every useful as we work  
5 on this strand of literature on distributional effects in  
6 particular going further with the Commission reports. As  
7 Bill mentioned earlier, we have a series of five coming out  
8 every three years.

9           So I'm going to start with basically describing the  
10 model, right? So it builds upon the very famous Autor, Dorn  
11 and Hanson 2013 paper. And so the model is very famous and  
12 well-detailed in the literature and followed by a lot of  
13 people.

14           So the mechanism in this paper is that, and as well  
15 as in others, is we have the initial composition of the labor  
16 force and a redistribution of workers in commuting zones and  
17 how this has been propelled forward by the trade -- by the  
18 China accession to the WTO and the great increase of imports  
19 of manufacturing goods from China.

20           So, here, we have mature manufacturing industries  
21 that are most exposed to the China shock that are  
22 predominantly in the Midwest and the Southeast. But the  
23 majority of immigrants in the U.S., in fact, about half of  
24 the immigrant labor force in the U.S., are from Latin  
25 America, and they happen to live either on the Mexican

1 border, south Florida, or in several large cities that Dr.  
2 Hanson mentioned earlier in his presentation. All of those  
3 are driven a lot by history of how migration happens, right?  
4 You want to move to where your compatriots already live. It  
5 sort of gives you access to more information, more resources,  
6 right? It's a little easier to adjust where you move to  
7 where you have a community already, right?

8           And so we have this sort of discrepancy between  
9 where the immigrants are and where the impacted industries  
10 are, right, and because of that, what we see in the results  
11 is that even though foreign-born workers are, in fact, more  
12 sensitive to labor demand shocks and are more responsive and  
13 more mobile, they happen to be in less exposed areas.

14           Therefore, there, you know, on aggregate, what we  
15 see is that immigration doesn't really impact labor market  
16 adjustment to China trade shock, in particular, simply  
17 because of this where -- not simply because, but, of course,  
18 you know, like, where the workers are and where the jobs are  
19 moving away from, right?

20           So one thing that I found very important here is  
21 and very interesting is that we can use, we can think of  
22 immigration as a tool to ease more cyclical shocks, right?  
23 So it takes a while to see the change when workers leave the  
24 trade-exposed regions, right? But, when things are more  
25 expected and more cyclical, we can try to promote certain

1 policies maybe that will help ease those shocks with trying  
2 to encourage immigrant workers to move to certain areas.

3 So, in my next slide, I'm going to talk a little  
4 bit about what I call limitations. They are, of course, not  
5 the limitations of this paper. It's just the general  
6 thoughts on this literature as a whole and how it applies to  
7 what we're trying to do.

8 So this chunk of literature considers only  
9 manufacturing employment. This is, of course, quite natural  
10 because we're looking at the import competition to  
11 manufacturing industries.

12 However, one thing that is newer in this literature  
13 that's not yet fully developed is, what are the implications  
14 of services? What are the spill-overs, right? We know from  
15 some papers that workers who leave manufacturing end up in  
16 lower paid services sectors, right? How does that sort of  
17 the second order impact and what happens to the workers who  
18 leave manufacturing, right?

19 Another question that I want to pose sort of for  
20 thinking is, as manufacturing is changing and as it's  
21 responding sort of to these demand shocks, is it becoming  
22 less intensive in sort of like lower-skilled labor that we  
23 used to think of as manufacturing worker in the '50s, '60s,  
24 and '70s, right? Do we need fewer workers, but those are  
25 much higher skilled workers? So the composition of labor

1 force again needs to change and adjust, and there is room for  
2 policy measure there, right?

3 And there will be implications for both foreign and  
4 native-born workers from this kind of move. So one example  
5 would be if we want to, let's say, re-shore jobs back,  
6 manufacturing jobs back to the United States, are we re-  
7 shoring the same jobs that left, right? And, in fact,  
8 probably we're not because, you know, time has gone by,  
9 technology has changed.

10 So, in this paper, I want to really highlight this  
11 important extension that I don't think Dr. Hanson mentioned.  
12 There is this measure of relative attractiveness of  
13 destinations, right? So there are two ways that in this  
14 paper the authors discuss how to think of what destinations  
15 are relatively attractive to migrants both native and  
16 foreign-born. So there are a couple of things that are going  
17 on there.

18 One is, okay, how far do you have to move for, you  
19 know, the next best job, right? And so what is the  
20 relationship between how far you have to move and where the  
21 jobs are and your willingness to move and attractiveness of  
22 this destination, right?

23 And that's quite a strong assumption. So the  
24 authors then depart from that and say, okay, let's see if we  
25 can also correct for the presence of immigrants, right? So

1 the idea that the community matters. Where you go matters,  
2 right? So your initial determination of where you want to  
3 move like if you are moving from Latin America and you  
4 relocate to Florida or relocate in the Mexican border on the  
5 American South or large cities. For example, a huge Puerto  
6 Rican community in New York City, right? Do this also  
7 matter? And they do, but in the end, actually, none of it  
8 really matters.

9 And so my question here really is, why does it not  
10 matter, right? Is it because we're just talking about a very  
11 small sort of sub-population of migrant workers, foreign-born  
12 workers in general, employed in manufacturing industries,  
13 right?

14 And so I want to end my discussion with posing this  
15 like starting our discussion with a bigger group, posing  
16 these couple of questions, right? One is, can this be  
17 extended, and to what extent can it be extended to non-  
18 manufacturing, right?

19 So I looked at some data, and I looked at the share  
20 of foreign-born workers who are employed in the U.S., and  
21 there are a number of industries that employ a higher share  
22 of foreign-born workers than manufacturing does, right? Do  
23 those results that we find from manufacturing, do they also  
24 apply to, you know, these other services or agriculture or  
25 construction, right?

1                   And sort of a more broad philosophical question  
2                   that I want to pose here is, do we want to continue focusing  
3                   on in this piece or do we want to bring occupations in,  
4                   right? Is it that foreign-born workers congregate in certain  
5                   areas because of, you know, the presence of their compatriots  
6                   or the presence of jobs? And if those are jobs, are those  
7                   jobs and occupations and not necessarily industry, right?

8                   So the quote I have here is from a BLS Economic  
9                   News release earlier this year which says that "in services  
10                  occupations and natural resources and construction and  
11                  maintenance, foreign-born workers were more likely to be  
12                  employed than the native-born workers, but the foreign-born  
13                  workers also are less likely to be employed in management,  
14                  professional, and related occupations." Right?

15                  So we have this whole other, not even the approach,  
16                  but rather philosophy of thinking of things, right? So are  
17                  we better off with, you know, industries or occupations which  
18                  gives us more of -- like, I'm thinking more in the long run,  
19                  right? If I'm losing a job in an office, am I going to look  
20                  for a job in an office that is in the same exact industry, or  
21                  am I going to apply my skills in any industry as long as it's  
22                  applicable, right?

23                  So those sort, of like two big philosophical  
24                  questions that I want to start with, and I'm sure there will  
25                  be more questions to follow on. Again, thank you so much for



1 this fascinating presentation and the paper. I really  
2 enjoyed reading it. And I hope to see it come to life soon.  
3 All right, I'm going to stop sharing now.

4 MR. AHMAD: Thanks, Tamara.

5 Dr. Hanson, do you want to respond a little bit to  
6 Tamara's comments or questions?

7 DR. HANSON: I'll just give a quick response. I  
8 think it's a great idea to think about the occupational  
9 angle. You know, we're looking at pretty crude measures of  
10 labor market adjustment, you know, breaking workers down by  
11 education level, by gender. And what we really care about is  
12 understanding where the barriers to mobility are the  
13 strongest.

14 That's because we need to do something to improve  
15 the way in which labor markets adjust. We don't really know  
16 which groups of workers should be at the top of the list in  
17 terms of health, except for people who just lost their jobs  
18 in a mass layoff event. So getting at the occupation part is  
19 hard.

20 So we're doing a bunch of stuff with the LAHD right  
21 now and that's great. I can look at how workers adjust over  
22 time. And we can do things with a great deal of granularity.  
23 But the LAHD doesn't tell you about occupation. And from a  
24 policymaker's perspective, those occupational transition  
25 matrices are really, really important because they'd help you

1     prioritize, oh, as as a region is undergoing stress, which  
2     are the places that are kind of in occupations that have a  
3     hardest time transitioning to something worthwhile. So I  
4     think it's a really good suggestion, really important  
5     suggestion and I would really encourage folks to go take a  
6     look at that.

7             MR. AHMAD: So I think we can open the floor and  
8     see if others have questions. Bill, you mentioned you had a  
9     question. Do you want to jump in?

10            MR. POWERS: Sure. So I'll pick up where Tamara  
11     mentioned enclaves. And, Gordon, in your paper, you also  
12     talk about enclaves and of course, so what you presented here  
13     is that foreign born are substantially more mobile. And then  
14     the paper mentioned that enclaves also attract the recent  
15     arrivals, who may also be more mobile. But there's also a  
16     good bit of evidence that these foreign born put a lot of  
17     energy and efforts into these enclaves to keep their  
18     communities together.

19            Now, in this paper, it doesn't look like -- I  
20     looked at, you know, like, Dearborn, Michigan, where, you  
21     know, we have a substantial -- the largest population of  
22     Muslims. They're not a manufacturing area, perhaps. So it  
23     might be that these current enclaves are not manufacturing  
24     focused. And so they haven't -- it doesn't really affect  
25     your your paper in any way. But perhaps I just wonder if we

1 looked at them, perhaps we wouldn't see -- in these areas,  
2 perhaps we wouldn't see this difference in mobility that  
3 you're talking about. And it might actually have impacts for  
4 future shocks, maybe the energy shocks you talked about, or  
5 maybe some of the more recent trade shocks, or a lot of other  
6 economic effects, which might lie outside manufacturing or be  
7 different areas of manufacturing.

8 So I don't know if there's any, if it's able, if  
9 you're able to if you've looked at that, or you wouldn't be  
10 able to look at that or had any thoughts about it?

11 DR. HANSON: Yeah, so it's -- I think -- so you  
12 have -- when immigrants are kind of newly arrived in a place,  
13 they don't have personal connections to a particular place,  
14 but they might have cultural connections to a place because  
15 you've got a group of compatriots somewhere, and that  
16 provides you potential for friendship, restaurants, job  
17 opportunities, sort of housing that you would look for,  
18 people you can worship with. And so it creates this tension.  
19 Despite that tension, what you see is this mobility,  
20 especially early on, in part, because migrants are moving to  
21 take jobs, they aren't moving in. And so what you often see  
22 is during that first 10 years of residence, lots of movement  
23 from one place to another.

24 This is before people then settle down. So you get  
25 people who've been here 10, 15 years, the enclave effect is

1 going to be a lot more important for that group than it is in  
2 folks who were -- first 10 years, what are they trying to do?  
3 Trying to earn money and send it home. That's their primary  
4 job.

5 Now, it's also true over time, that the US does a  
6 very good job in Americanizing people. So this really comes  
7 out of work by Ran Abramitzky and Leah Boustan and their  
8 historical analysis of enclaves and how population spreads  
9 over time. It takes a while. It takes a generation or two,  
10 but kind of two generations in, this is what's kind of what's  
11 different about the US and almost any other high income  
12 country, you're pretty American. You know, you only speak  
13 English, pretty American tastes, rates of intermarriage or  
14 high educational attainment looks really similar. And so,  
15 that enclave effect is really important, but it's a  
16 transitory thing, if we're thinking about kind of, on a  
17 generational scale.

18 MR. AHMAD: Alan and Tamara.

19 Tamara, do you want to go first? And then we'll go  
20 to Alan.

21 MS. GUREVICH: Sure, I just wanted to elaborate a  
22 little bit on what Bill has said. So, migrants, they're not  
23 random, right? Migration is not random. Migrants are a  
24 select sample. And they come and they're very driven, right?  
25 And they're much more willing to take risks on that bridge.

1 At least that's what I think the literature says.

2 But at the same time, so I'm curious, what do you  
3 see in the data when they move from, you know, away from this  
4 enclaves? Do they move far, or is it like, I came to New  
5 York City I got established, I got a job and I moved to like  
6 a suburb or something, right? Or is it I moved over to  
7 Chicago because that's where the other place is? Do they,  
8 like, are there similar places where they go, similar jobs,  
9 similar communities? Or is it you know, I'm going to move  
10 because there's a job and I don't care if there's a community  
11 there? So that was my question.

12 DR. HANSON: Yeah, so think about kind of four big  
13 groups of the foreign born. One are folks from Mexico and  
14 Central America; a very big share of recent immigration. You  
15 have communities of Mexicans and Central Americans that are  
16 in a bunch of different parts of the US. And so what that  
17 means is, even if you're moving between places where you know  
18 people, you have a fair number of options, and that mobility  
19 is a big deal.

20 Next, think about college-educated Indian and  
21 Chinese immigrants. It's kind of the same. So now they're  
22 moving between a set of a dozen cities, a set of maybe 20  
23 cities at the outside, but there's enough of a base there.  
24 So that, you know, there mobility between places is kind of  
25 doing what immigration does in terms of adjustment to shocks,

1 but you can still do that within the confines of being with  
2 people that you want to be around.

3 So then when we get into other populations, to be  
4 honest, we don't know a lot. So think about the Iranian  
5 population in Beverly Hills. Think about the Armenian  
6 population that first came a century ago and populated my  
7 hometown of Fresno, and Watertown, Massachusetts, and  
8 Glendale, California, or the Arab population that's  
9 concentrated in the greater Detroit area. You know, these  
10 are communities that were established in response to a very  
11 specific historic event. Not the ongoing flows, like we see  
12 from Mexico or India or China, and things could look quite  
13 different for those communities.

14 The Abramitzky, Boustan message is give them two  
15 generations. Two generations, you know, America wears you  
16 down and in turns you -- you know, it'll happen. And I don't  
17 -- but I am not aware of research about that particular case.  
18 And it's important because there's a lot of these communities  
19 around, and we're creating new community versions of those  
20 communities right now, with immigration from Venezuela in  
21 particular.

22 MS. GUREVICH: Thank you.

23 MR. AHMAD: Alan?

24 MR. FOX: Hi. So my question kind of goes back to  
25 the -- maybe, that the estimation is kind of set up or the

1 way we're thinking about the experiment, because you're  
2 looking at the relative effects on two sort of distinct  
3 bodies of employees, right? You're looking at the domestic  
4 born and the foreign born and looking at their relative  
5 response. As I think about what might be going on in any  
6 individual community, and I mean, it's it's kind of, I guess,  
7 my question is, is it -- is the covariance very high or not?  
8 That is, do you see the proportion of foreign born to  
9 domestic born fall in the face of the shock? So are they --  
10 which would suggest, you know, the first ones to go out --  
11 the first ones to leave are going to be the foreign born, or  
12 the first to be fired and perhaps because they have less a  
13 shorter tenure? Or did I miss that? Was that already in the  
14 presentation and I'm not paying close enough attention? But  
15 that was kind of the one thing that sprung to mind for me.

16 DR. HANSON: Yeah, I mean, I showed you the results  
17 side by side, but didn't do it in a single regression to just  
18 kind of show you what the standard errors look like on that.  
19 But you do see the shift and relative labor supply away from  
20 the foreign born to the native born as a consequence of those  
21 outflows --

22 MR. FOX: Okay, so you're reliably seeing a fall in  
23 the ratio of foreign to native born in the adversely-affected  
24 communities?

25 DR. HANSON: Yep.

1 MR. FOX: Got it. Okay, very good.

2 MR. AHMAD: Sir, I would like to ask a question as  
3 well. So I know that the focus is, you know, on immigration  
4 in the US. One thing that's interesting with the China shock,  
5 is that other countries were also somewhat negatively  
6 affected, especially thinking about, like, Mexico.

7 You know, I think there's some evidence that Mexico  
8 on the Chinese shock was like -- because a lot of exports  
9 were competing, you know, Chinese exports, were competing  
10 with Mexican exports to the US. And so could there be like,  
11 any, like, you know, I work in Mexico and I get displaced,  
12 and then I tried to immigrate to the US, maybe I have a bias  
13 to start to do manufacturing, is there something to be said  
14 about that, or -- just curious to hear your thoughts on that  
15 aspect of, you know, the China shock.

16 DR. HANSON: There has been work looking at the  
17 China shock on Mexico, which finds qualitatively similar  
18 impacts; the shift out of specific manufacturing sectors.  
19 There's kind of two pieces of that. One is, there is a good  
20 chunk of Mexican manufacturing that's still dedicated  
21 primarily for the domestic market and not for export. They  
22 were quite vulnerable to say increases in imports of apparel  
23 and textiles and furniture and that kind of thing. Then  
24 there were the assembly operations set up to export to the  
25 United States. And so the China shock to the US essentially



1 gets transmitted to Mexico because you're undermining those  
2 operations.

3 Now was migration to the US part of the adjustment  
4 mechanism? It's a really interesting question, and I just  
5 haven't seen work on it. It's plausible, because the more  
6 China shocked places were in the northern half of Mexico.  
7 Northern half of Mexico historically has higher migration  
8 rates to the United States for reasons that are due to just a  
9 much different set of historical factors. And so it's  
10 entirely plausible, I just haven't seen work that's nailed it  
11 down.

12 MR. AHMAD: We also have a question in the chat,  
13 I'll just read it: What is the correlation between English  
14 proficiency, proficiency and mobility, labor market outcomes  
15 for foreign born workers?

16 DR. HANSON: So we know a lot about kind of the  
17 cross sectional relationship between English proficiency and  
18 labor market outcomes. And that is, the better you speak  
19 English, the higher wages you earn.

20 There's really nice work by Blakely and Amy Chin,  
21 which looks at the difference in labor market outcomes for  
22 individuals based on whether they arrived in the US before  
23 age 14, or after age 14. Age 14 mattering because puberty  
24 rots your brain and makes it harder for you to learn new  
25 languages. And so you see better English proficiency and

1 better labor market outcomes, and among the younger relative  
2 to the older arrivals.

3 Now, how does that figure into mobility? Well, I  
4 don't know; really interesting question. You know, what  
5 we're talking about here is a segment of the labor force  
6 which is non college educated. I'm expecting English  
7 language skills to be on the weaker side, that these are  
8 folks who arrived in those jobs because of recruiting  
9 networks and other things. And as a consequence, there were  
10 mechanisms developed to insulate folks from you know, having  
11 more of a penalty but that's pure speculation on my part.

12 MR. AHMAD: Tamar, I see your hand up and then  
13 we're going to go to Bill.

14 MS. KHACHATARIAN: Hi, thanks for --

15 MR. AHAMD: Tamar, I think you're muted.

16 MS. KHACHATARIAN: Oh --

17 MR. AHMAD: We can hear you.

18 MS. KHACHATARIAN: Okay, perfect. Gordon, I just  
19 wanted to say thank you for presenting today. And thank you  
20 for the Armenian shout out and the shout out to Fresno as  
21 well, where I have immediate family.

22 I have a really general question sort of circling  
23 back to something that Tamara mentioned about extensions to  
24 other industries. I work in the office within the USITC that  
25 focuses on services trade. And I guess, you know, thinking

1 about services, where, you know, if we wanted to do  
2 sub-national analysis, whether it was at the state level, or,  
3 you know, commuting zones or other sort of, you know, urban  
4 versus rural, the data for on trade, at least the official  
5 statistics are not there.

6 So, I just wanted to know, in a very, very general  
7 sense, if, you know, one word to look at subnet sub national  
8 services, effects, what type of outcomes do you think would  
9 be interesting to look at? Would it be employment effects?  
10 Would it be inequality? You know, I don't think there's a  
11 shock, per se, that's analogous to manufacturing, but there  
12 has been a really rapid rise of services trade generally,  
13 just because of, you know, technology improvements. So it's  
14 a, you know, not a fine tuned question, just sort of  
15 generally, have you thought about extensions? Or if you were  
16 to do them, what would be the focus? You know, considering  
17 all that data challenges that there are?

18 DR. HANSON: Yeah, I've thought about this a lot  
19 because it's a very important part of the labor market;  
20 consequences of globalization for the US is what's happened  
21 through service trade. And but as you suggest, it's a very  
22 hard question to answer because of all the things we don't  
23 see.

24 And so I think there would be two approaches that  
25 you could take to try and get at this. One is, we know kind

1 of what the national sectors that are doing the exporting  
2 are. And what I would then think about is a transmission  
3 mechanism that works through the occupations that those  
4 sectors employ. We have work, and I've exploited this in  
5 work I've done with Ariel Burstein, Lin Tian and John Vogel,  
6 on labor market impacts of immigration, kind of adapting the  
7 tradability classifications by occupation that Blinder and  
8 Krueger developed.

9           You can then think about national shocks to  
10 occupations, then transmitting down to the local level based  
11 on your occupational composition. You could make that  
12 connection a little bit more fine if you were then to bring  
13 in individual firm level data, in which you said, well, we  
14 think the firm -- we know these occupations are exposed to  
15 new opportunities to export, who are the workers that are  
16 going to be exposed? They're going to be the ones that are  
17 in the bigger, more productive firms that are set up to take  
18 advantage of this. So you could think about a filter, which  
19 says, where our big firms and services located, and then who  
20 are the workers in the most tradable occupations in those  
21 locations. And I would think they would have been the  
22 primary beneficiaries of this.

23           It's a little indirect, but I actually think it  
24 would work because I think the patterns here are so stark,  
25 because the US has increased service exports so strongly in

1 certain areas.

2 The other approach you could take is one of those  
3 ones, where you're really going to get into the data on some  
4 big multinational companies in which we're going to count  
5 their exports, not as their exports, but as their -- the  
6 accumulation of intangible capital in offshore tax havens.

7 Apple's exports of services, the in the income for  
8 which -- I know I shouldn't say a company's name -- big  
9 technology companies, service exports, often end up in patent  
10 boxes somewhere. So there again, knowing kind of what the  
11 occupational composition of the firms that are generating  
12 that you can -- it's knowable it takes a fair bit of work  
13 because you got to bring in data on US multinationals and  
14 then data on the US series of those companies, but it's  
15 knowable.

16 MS. KHACHATARIAN: Okay. That's so helpful. Thank  
17 you so much for sharing your thoughts.

18 MR. AHMAD: Bill?

19 MR. POWELL: All right, thanks. Just jumping back  
20 to where you sort of were going in response to Stephanie's  
21 question in the chat. You mentioned the less educated. And  
22 if I could refer back to your slide where you're showing that  
23 the foreign born mobility responses are four times larger  
24 than the native born. And there's something really  
25 interesting there about those foreign born with high school

1 education or less. Now, I know it's not statistically  
2 different from zero, but it seems big, and it seems that they  
3 have a positive trade shock impact on population head counts.  
4 Is that noise? Is that something we should think about? Any  
5 thoughts you have on that?

6 DR. HANSON: Positive? No, they were they were the  
7 most responsive the most likely to leave on net in response  
8 to the trade --

9 MR. POWELL: Oh, okay. They had the opposite sign  
10 of many. Okay.

11 DR. HANSON: No, that was with -- just with the  
12 take up of non-manufacturing jobs.

13 MR. POWELL: Okay, okay.

14 DR. HANSON: There was prior movement in the  
15 non-manufacturing.

16 MR. AHMAD: Okay, I don't see anything else in the  
17 chat. We're kind of nearing the end. Is there anyone with  
18 some last questions or thoughts, ideas, comments, feedback?  
19 I don't see anything. So I think we could call it to an end  
20 to this presentation.

21 We want to thank Dr. Hansen, again, for taking time  
22 to talk to us. And you know, as Bill mentioned, this is part  
23 of our kind of recurring investigation, are we going to be  
24 holding more kind of these seminars, this kind of academic  
25 style symposiums so we'll be happy to reach out more if you

1 have more work and other ideas of how we can look at this  
2 issue. But other than that, we want to thank you again.

3 DR. HANSON: Thank you very much.

4 (Chorus of thank-yous.)

5 DR. HANSON: Great to see you, Bill and Alan been a  
6 long time.

7 MR. POWELL: Absolutely.

8 MR. FOX: Indeed

9 DR. HANSON: Go Blue.

10 MR. FOX: Thanks for joining us and appreciate it.

11 (Whereupon, at 11:23 a.m., the conference in the  
12 above-entitled matter was concluded.)

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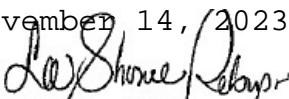
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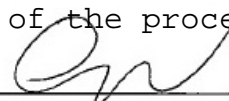
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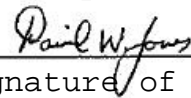
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