

UNITED STATES INTERNATIONAL TRADE COMMISSION

In the Matter of:)
)
ORGANIZED LABOR WHEN THINGS GO) Inv. No. 332-599
SOUTH: UNIONS AND THE LABOR)
MARKET CONSEQUENCES OF NAFTA)
)

Pages: 1 through 67
Place: Washington, D.C.
Date: July 16, 2024

HERITAGE REPORTING CORPORATION

Official Reporters
1220 L Street, N.W., Suite 206
Washington, D.C. 20005
(202) 628-4888
contracts@hrccourtreporters.com

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Remote Hearing
 U.S. International
 Trade Commission
 500 E Street, SW
 Washington, D.C.

Tuesday,
 July 16, 2024

The seminar commenced, pursuant to notice, at
 1:00 p.m., before the United States International Trade
 Commission.

PARTICIPANTS:

USITC:

THERON GRAY, Moderator
 BILL POWERS, Chief Economist, Director, Office of
 Economics
 STEPHANIE FORTUNE-TAYLOR, Economist

SHARON BELLAMY, Supervisory Hearings and
 Information Officer
 TYRELL BURCH, Management Analyst
 PRISCILLA THOMPSON, Program Support Specialist

Seminar #3

PAGE

Organized Labor When things Things Go South:
Unions and the Labor Market Consequences of
NAFTA

Presenter: John Lopresti, William & Mary 6

Discussant: Karen Thome 44

Moderator: Theron Gray

P R O C E E D I N G S

(1:00 p.m.)

1
2
3 MR. GRAY: Okay. It seems like we maybe have
4 plateaued here slowly, so I will go ahead and get started.
5 Good afternoon, everybody, or perhaps evening. Thank you all
6 for joining us today. I want to thank Professor Lopresti of
7 the College of William & Mary for presenting today in our
8 second day and third seminar in the 2024 seminar series as a
9 part of the 332 investigation entitled, "The Distributional
10 Effects of Trade and Trade Policy on U.S. Workers," for the
11 2026 report.

12 As for the run-of-show today, I will first hand it
13 off to Bill Powers, who is the Director of the Office of
14 Economics and our Chief Economist at the U.S. ITC. He will
15 provide a more formal introduction for Professor Lopresti and
16 his research. Following that, Professor Lopresti will speak
17 for approximately 60 minutes, presenting his paper,
18 "Organized Labor When Things Go South: Unions and the Labor
19 Market Consequences of NAFTA," co-authored with Anca Cristea.

20 That will be followed by about a 10-minute comments
21 section from the discussant, Karen Thome from our Country and
22 Regional Analysis Division within the Office of Economics.
23 We will then give Professor Lopresti an opportunity to
24 respond to Karen's discussant comments before opening up the
25 Q&A to the broader audience.

1 And with that, I'll turn it over to Bill.

2 MR. POWERS: Thank you, Theron.

3 And, again, we are very, very happy to have John
4 Lopresti here today. But, before introducing John, I just
5 want to say good afternoon to everyone and to some of you, I
6 think, good evening. Welcome to the third seminar of the
7 Commission's 2024 Distributional Effects Seminar Week, one of
8 the events we are holding in the lead-up to our next report
9 on the distributional effects of trade and trade policy on
10 U.S. workers. So, certainly, the paper we have today is a
11 very good addition to that literature.

12 Some of you joined us this morning or yesterday.
13 Thanks, and welcome back. For those of you who aren't
14 familiar with our series of reports, we put out our first
15 report on this topic in October of 2022. USTR has since
16 asked us for a series of five more reports on the topic over
17 the next 15 years. The next report in this series will come
18 out in January 2026. And then we have a website talking
19 about all of the events this week, as well as more about the
20 report, and you can find that and perhaps we can put the link
21 to that in the chat for this event.

22 All right. So, getting to our speaker, our speaker
23 today is Professor John Lopresti, who's going to be
24 presenting his paper, co-authored with Anca Cristea, on
25 unions and the labor market consequences of NAFTA.

1 John is an Associate Professor of Economics at
2 William & Mary. His research focuses on international trade,
3 with an emphasis on the effects of trade on firms and labor
4 markets. He's published his work in leading economic
5 journals, including *The Journal of International Economics*,
6 *The Review of Economics and Statistics*, and *Economic Inquiry*.

7 John earned his Bachelor's in Economics and
8 Mathematics from Hanover College and got his Ph.D. in
9 Economics at Purdue. John's paper today is going to look at
10 the role played by labor unions in shaping employment
11 outcomes in response to trade. John examines the impact of
12 NAFTA in particular on locations more and less favorable to
13 unions and also looks at the impact by age, education, and
14 gender.

15 And so I think this paper, really happy to have
16 this today, and I think it's a very useful and unusual,
17 perhaps singular -- John, you can tell us if that's true --
18 paper that looks at the confluence between unions, trade, and
19 demographics.

20 Theron pointed out the ground rules, so we would,
21 like, appreciate if folks could hold questions to the end,
22 although, if you have any questions throughout during this
23 talk, please put them into the chat so we can make sure to
24 get to them later. With that, I will turn it on to John.
25 John, you want to take it away?

1 MR. LOPRESTI: Yeah, absolutely. Thank you very
2 much for the introduction. Thank you for the invitation to
3 speak. I'm very excited. And thank you to everyone for
4 coming. I know you've had several of these, so I appreciate
5 you making the time. If you have any clarifying questions,
6 feel free to jump in as we go along.

7 So this is joint work with Anca Cristea, as Bill
8 mentioned. It is still very much a working paper, so
9 suggestions, comments, thoughts are very much still welcome,
10 so please let me know what you think.

11 So, as certainly everyone watching today knows, we
12 have learned a lot about the distributional effects of trade
13 in the past few years, so this is obviously one of the most
14 important topics in all of modern international trade theory
15 and empirical trade research, but it's really taken off in
16 the last 10 to 15 years with this focus on, among other
17 things, local labor market consequences of trade and
18 differential effects across different demographic groups, for
19 instance. So I've cited four papers here of the many
20 thousands that exist in this literature, so it's an enormous
21 body of work. We know much less, though, about how
22 individuals respond, how they adjust in response to those,
23 and, in particular, how institutions shape those responses.

24 So, for instance, a really nice paper by Ben Hyman
25 from 2018 looking at trade adjustment assistance notes that

1 little is known about efforts that deliberately target the
2 adjustment process, and I think you could safely argue that
3 this is still true today. We know much less about how to aid
4 in smoothing out the rough edges of trade than we do about
5 those rough edges themselves, and so that's really what we're
6 trying to get at in this paper: how do the institutions
7 surrounding trade govern the response and, in particular, the
8 labor market response to trade.

9 So the institution, the environment we're
10 particularly going to be interested in is labor unions. So
11 unions, this is, again, an enormous, enormous body of work,
12 and neither Anca nor I are labor historians, to be clear.
13 But there's a huge literature on the way that unions shape
14 labor markets. In particular, probably the most widely
15 studied question is, what do unions do for wages? What is
16 the union wage premium? How large is it? Has it changed
17 over time, et cetera? Other forms of compensation, so other
18 benefits, perks, things like that.

19 There's work looking at firm value, so the response
20 in equity returns, for instance, to unionization; firm
21 productivity levels as a function, for instance, of worker
22 tenure as workers are more or less likely to stay on with
23 firms that are unionized, what does that mean for firm
24 productivity in the long run; lots of interesting work on
25 what unions mean for inequality both at the worker level and

1 in a more aggregate sense; work on job security, so are
2 workers more likely to stay at firms or at locations,
3 employment that is unionized; how does that affect the
4 response to negative shocks like COVID. There's been some
5 recent work on how union workers fared in response to COVID-
6 19. And political processes. So there's some work on, as
7 unions face increased import competition, for instance, what
8 does that mean for the strength of unions and what does that
9 then downstream mean for the political process.

10 And so all of this literature, it's very
11 interesting, and many of these questions don't have a clear
12 consensus. Our point, though, is that all of these things
13 lead us to suspect that unions might govern or might
14 influence the way that trade affects workers and labor
15 markets, and that's going to be the main point of this paper
16 today.

17 Taking sort of a step back at a more macro level,
18 there's a very strong correlation between changes in trade,
19 changes in import competition in the United States over the
20 last 50 years or so, and unionization. So, as, again, I'm
21 sure everyone knows, imports, you have this era of hyper-
22 globalization in the last few decades of the 20th century.

23 Simultaneously, you see this pretty steep decline
24 in union membership, and if we go back farther, you would see
25 this continuing farther, but the point is these are moving in

1 opposite directions, which suggests there potentially is some
2 relationship between them.

3 Individuals -- and I'll talk about a few of these
4 papers in a little bit -- individuals have studied the extent
5 to which these two processes are correlated. Usually, it's
6 done on the flip-side of what we're going to do. So several
7 papers look at what does trade do to the strength of unions.
8 We are going to invert that and say, well, what did the
9 existence of unionization mean for the effects of trade.

10 So, in particular, we're going to look at NAFTA.
11 So there's a sizable body of work looking at labor market
12 consequences of NAFTA that we're going to take as our
13 jumping-off point, and then we're going to explore how
14 union -- variation in union strength across labor markets
15 affects what NAFTA does in those labor markets.

16 So the empirical approach we're going to take I'm
17 sure is familiar to many of you. We're going to take kind of
18 a standard shift-share approach, measures of local labor
19 market exposure to the tariff liberalization. So, basically,
20 do you work in the industries that had the tall tariff
21 liberalization under NAFTA. This is going to follow more or
22 less directly from work by Hakobyan and McLaren. More
23 recently, Felipe, Benguria, and Choi, et al. have a very
24 recent paper looking at, again, unionization at the local --
25 trade -- NAFTA unionization at the local level and political

1 outcomes downstream of that. So we'll be building on this
2 work.

3 Our primary outcome that we're going to think about
4 is commuting zone local labor market employment outcomes
5 between 1990 and 2000. There will be a couple of cases where
6 we vary from this. But then our main contribution here is
7 going to be to explore how these employment outcomes differ
8 as a function of the preexisting union environment in the
9 local labor markets themselves.

10 So the primary empirical challenge in thinking
11 about this question is that union membership is, of course,
12 an endogenous outcome of many things, including trade shocks,
13 including local economic conditions, and so there's this
14 standard concern that there are omitted variables that are
15 driving union membership at the local level that might govern
16 the response to NAFTA in a correlated fashion but for
17 separate reasons. So we're picking up the effect of some
18 omitted variable rather than the effect of unions themselves.

19 So we're not going to just -- we can't take union
20 membership off the shelf. There are also data issues with
21 the lack of high-quality union membership data at the local
22 level. So what we're going to do is exploit preexisting
23 variation in the existence of right-to-work laws between
24 states.

25 So right-to-work laws -- and, again, I'll discuss

1 this a little bit as we go along -- right-to-work laws have
2 been shown to be correlated with unionization rates.
3 Attractively, for what we're trying to do, most right-to-work
4 laws and all of the right-to-work laws that we'll be
5 exploiting in this paper, right-to-work laws that were in
6 place at the time of NAFTA, were passed decades prior to
7 NAFTA, so this is not, in general, something about
8 anticipating or responding to the passage of NAFTA or even
9 trade agreements in the 1970s or '80s or things like that.

10 And then, at the same time, because we're concerned
11 that right-to-work laws are, of course, correlated with many
12 other characteristics of the local level, we're going to try
13 and validate this approach with other historical measures of
14 union strength that, again, are going to be correlated with
15 union membership but potentially in a way that is different
16 from right-to-work laws, meaning it's less likely that we're
17 picking up some specific omitted variable because that
18 omitted variable would have to be correlated with right-to-
19 work and these other measures that I'll talk about as we go
20 along.

21 Preview of our findings. We are going to find that
22 in response to NAFTA -- so the baseline finding out there, in
23 particular, from Benguria's paper is that increased import
24 exposure through NAFTA, larger trade liberalization at the
25 local level in NAFTA, reduced manufacturing employment.

1 We're going to find that that is true. We're going
2 to find that that is driven entirely by right-to-work
3 locations. So right-to-work locations are going to
4 experience relative declines in manufacturing employment.
5 And I'll say manufacturing employment. What I mean by that
6 is manufacturing employment relative to the working-age
7 population at the commuting-zone level.

8 Right-to-work locations will experience relative
9 declines following NAFTA compared to non-right-to-work
10 locations. So, in particular, if you imagine an
11 interquartile increase in exposure to NAFTA, that's going to
12 correspond to something like a half percentage point
13 reduction in the manufacturing-to-population ratio in right-
14 to-work states relative to non-right-to-work states. So a
15 non-trivial effect.

16 At the same time, we're going to find positive and
17 essentially off-setting effects in the non-manufacturing
18 sector. So what it's going to look like is that, in response
19 to these negative shocks, right-to-work states -- so you can
20 think of that as roughly anti-union states or less unionized
21 states -- are going to see larger reductions in manufacturing
22 but success, workers are able to successfully shift into the
23 non-manufacturing sector as a result such that we're not
24 picking up large differential effects in employment overall.
25 So it's about sectoral transitions, not so much aggregate

1 employment effects.

2 In non-right-to-work labor markets, we're going to
3 find no statistically significant effects, so there is not a
4 large employment response to NAFTA at all in these non-right-
5 to-work labor markets.

6 We're going to explore heterogeneity a little bit,
7 so we'll find that these negative effects in right-to-work
8 states fall on those that are more likely to belong to
9 unions, so you see larger reductions, larger relative
10 reductions in employment among men, among individuals without
11 a college degree.

12 You also, somewhat surprisingly we think, find
13 larger effects among the young, and this was surprising to us
14 because we thought, well, seniority rules would suggest that
15 maybe unions are more protective for older workers, and
16 that's not what we're finding. So we're hypothesizing -- and
17 this is not something we've as yet dug into a lot -- we're
18 hypothesizing that unions are protecting vulnerable workers,
19 so younger workers, potentially with less job tenure, are the
20 ones who end up protected as a result of these unions or non-
21 right-to-work states.

22 So then, for the final part of the paper -- and we
23 may or may not have time to get into the details on this --
24 we're going to dig into the mechanisms a little bit, so how
25 is this happening, why are unions protecting jobs to the

1 extent that they are, and we're going to find support for
2 three different channels.

3 So, one, we're going to find some evidence of
4 concession bargaining, so this idea that as labor market
5 conditions deteriorate, unions might shift their focus from
6 wage gains towards job security, and consistent with this,
7 we're going to find larger negative wage effects in non-
8 right-to-work locations. So wages fall in stronger union
9 locations in response to NAFTA relative to non-union
10 locations, suggesting again that unions are giving up wage
11 growth in exchange for job security potentially.

12 We're going to look at state-level variation in the
13 prevalence of job security provisions, so we'll actually look
14 at collective bargaining agreements by industry and map that
15 onto states using employment labor shares and find that
16 states that tend to specialize in industries that are more
17 likely to have job security provisions in their collective
18 bargaining agreements tend to have lower employment losses,
19 so there's protection in the collective bargaining agreements
20 themselves.

21 And we'll find some evidence that the threat of
22 strikes potentially prevents firms or makes firms less
23 likely, less willing to lay workers off. So states in which
24 there are more strikes in the 1980s tend to see lower
25 reductions in manufacturing employment in response to NAFTA

1 than states with fewer strikes, less common strikes in the
2 1980s.

3 I won't go into the details on this. Most of these
4 are in the paper, but I won't discuss them too much for the
5 sake of time, but real very briefly, we're connecting to
6 several literatures, including this enormous literature on
7 the distributional consequences of trade more generally.

8 There's a literature sizable, not as large as the
9 literature, for instance, on the effects of trade with China
10 on labor markets, but it's certainly sizable and still
11 growing literature on the effects of NAFTA on the U.S.
12 economy, looking at trade, wage outcomes, and employment
13 effects.

14 And as I mentioned earlier, these last two lines
15 here, the wage effects from Hakobyan and McLaren, employment
16 effects from Benguria and Choi and co-authors are really
17 where we're connecting to this literature. Large literature
18 on the effects of unions on labor markets more generally.

19 In particular, this last point here, these de-
20 unionization trends, many of these are trade papers. So
21 there are a number of trade papers, as I mentioned earlier,
22 that ask questions about, given these increases in import
23 exposure, what does that mean for union strength, for union
24 membership, and there's a general result, not universal, but
25 generally that increased import competition has led to some

1 decline in union strength and union membership.

2 And then, finally, a literature on right-to-work
3 laws specifically rather than unions more generally. We'll
4 be connecting to this as well.

5 All right. So where we're going to go is I'll talk
6 a little bit about the policy background both in terms of
7 NAFTA and a little bit about right-to-work states. I'll walk
8 you through our methodology, which is going to be a familiar
9 one, I think, to most of you. I'll go through results and
10 then discuss and conclude with the time we have remaining.

11 So, as I said, neither Anca nor I are labor
12 historians. This is not really a labor history paper, but I
13 wanted to give you a sense of kind of what right-to-work laws
14 are in case you're not overly familiar. So the right of
15 employees to organize, to form unions, collectively bargain,
16 to strike, this was codified by the 1935 National Labor
17 Relations Act, also known as the Wagner Act, and we're going
18 to circle back to that in a little bit.

19 A fundamental problem that unions faced under this
20 and continue to face is that workers within the collective
21 bargaining unit that are not members receive the same
22 benefits of collective bargaining, so there's this free-rider
23 problem where you can receive the wage gains or job security
24 gains or what have you even if you don't join the union.

25 As a result, there are a number of what are called

1 "union security agreements," so attempts to address this via
2 agreements between the union and the firm about restrictions
3 that are placed on hiring. So there are many different forms
4 of this.

5 A closed shop, which you might have heard of, is a
6 case in which only union -- you have to be a union member as
7 a prerequisite of being hired by the firm, by the company.
8 You cannot be employed without previously -- without being a
9 union member prior to hiring. Union shop is similar. You
10 don't have to be hired, you don't have to be a union member
11 prior to being hired, but you have to join the union within a
12 certain amount of time upon being hired. And then an agency
13 shop, you don't have to join the union, but non-union members
14 pay some agency fee, so, essentially, the equivalent of union
15 dues, to defray the costs of collective bargaining and
16 unionization.

17 So, following from this Wagner Act in 1935, in
18 1947, it's amended by the Taft-Hartley Act. The Taft-Hartley
19 Act does several things -- it does many things, but several
20 important things for us. One is closed shops are illegal in
21 the United States under the Taft-Hartley Act, and then more
22 importantly for what we're going to do, the Taft-Hartley Act
23 allows states to pass right-to-work laws on an individual
24 basis, on a state-by-state basis.

25 And so what a right-to-work law does is it

1 effectively prohibits union and agency shops so you cannot
2 force workers to pay these agency fees or to join the union.
3 So you can join -- you can work for a firm that is, a
4 workplace that is unionized without paying the costs of that,
5 and so you exacerbate this free-rider problem.

6 In response to the Taft-Hartley Act, many states
7 did more or less immediately pass right-to-work laws, so this
8 is going to be the variation that we'll be exploiting in this
9 paper. So the dark-blue states here are right-to-work states
10 as of 1990. The green states are non-right-to-work states,
11 and several of these have passed right-to-work laws since
12 then.

13 But one thing to notice is that for the vast
14 majority of these, the right-to-work law is passed either
15 immediately following Taft-Hartley or in the years following
16 that. So, by the mid-1950s, all states -- there are 21
17 right-to-work states in our sample -- I believe all states
18 except Idaho, Wyoming, and Louisiana had passed by the mid-
19 1950s. So this is something that's done, again, decades
20 prior to NAFTA. So this is potentially correlated with
21 things that might drive the response to NAFTA, but it is not
22 being done certainly in response to or in anticipation of
23 NAFTA.

24 Right-to-work laws empirically do reduce
25 unionization, so they're theoretically going to do that

1 through several channels, and we're remaining somewhat
2 agnostic about those channels here. But, first of all, by
3 not requiring all employees to join the union or pay these
4 fees, union finances are directly negatively affected, which
5 reduces the ability to organize for their workers.

6 Additionally, as union finances deteriorate,
7 there's a decline in services provided by the unions,
8 potentially a decline in bargaining power, which leads to
9 lower wage gains, which endogenously makes union formation
10 less attractive. All of this is to say right-to-work laws
11 potentially lead to declining unionization, and that's going
12 to be the variation we're exploiting. So we're using right-
13 to-work states as a stand-in for less unionization.

14 Just to give you a sense of some recent empirical
15 work on this, Fortin, Lemieux, and Lloyd have a paper from
16 just a couple years ago now looking at the recent wave -- so
17 in the 2000s, in 2011 through '17, I believe -- new right-to-
18 work states and what that means for unionization rates, and
19 they find something like a four-to-five percentage point
20 reduction in unionization rates in states that become right-
21 to-work states over a period of about five years. So this is
22 what we have in the back of our mind.

23 We're going to combine that with NAFTA. I will not
24 go into the details of NAFTA as I'm sure everyone here is
25 very familiar. Obviously, a very contentious agreement.

1 Uniformly opposed by unions. You have the famous Ross Perot
2 giant sucking sound.

3 The point we want to make here is that this is
4 viewed not just as some kind of negative shock. This is a
5 very negative labor-specific shock, okay, so this is
6 something that unions were well-aware at the time was
7 potentially going to be bad for workers.

8 Empirically, it turns out the sectors most exposed
9 to tariff liberalization under NAFTA are labor-intensive
10 sectors, okay? So this is an empirically correct position to
11 hold if you're worried about trade liberalization.

12 Just to give you a sense of that at the sort of
13 two-digit aggregate sector here, what we have is the average
14 import tariffs prior to NAFTA. So these are all going to
15 zero, so larger here means larger liberalization, more
16 exposed to import growth from Mexico, and then, in these
17 columns, we have labor-to-capital ratios.

18 And what you can see is much more exposure to NAFTA
19 liberalization in sectors like apparel, textiles, leather,
20 tobacco, and food, and these tend to be sectors on average,
21 industries on average, that are more labor intensive. Higher
22 labor-to-capital ratios. Overall, at the four-digit industry
23 level, the correlation between exposure to NAFTA tariff
24 reduction and labor-to-capital ratios is something like .5.
25 So this is a very -- this is tilted towards exposure among

1 labor-intensive industries.

2 Okay. And so then what we're actually going to do
3 with that is we're going to construct a measure of exposure
4 to NAFTA at the commuting-zone level, building on this large
5 local labor market shift-share literature. So we'll have
6 commuting zone I, and there are 722 in the contiguous United
7 States. We're going to construct a tariff level as of 1990,
8 and, again, these are going to zero over a period of 10 to 15
9 years following NAFTA, so that is a measure of the exposure,
10 the forthcoming liberalization.

11 That is a tariff or, excuse me, a commuting-zone
12 level tariff, and we're constructing that by weighting
13 industry J tariffs as of 1990 by the industry's share within
14 the commuting zone. So we are summing over industries J
15 within a commuting zone I, so this is just a local weighted
16 average of industry-level tariffs as of 1990.

17 So one thing I want to highlight here that I'll
18 come back to later if we have time that is a slight
19 distinction from what others have done in the literature, we
20 are summing -- this cap T here we are summing over tradable
21 industries only. So what that means is we're exploiting
22 variation based on how exposed the tradable industries are
23 that you work in, and we are not exploiting any variation in
24 the share of your workforce that is in tradable relative to
25 non-tradable industries. It is all about exposure within the

1 tradable sector. And I'll talk later about robustness to
2 alternative forms of that, where we exploit variation between
3 shares of workers in the tradable sector and non-tradable
4 sector. Okay. Everybody on board? Questions?

5 All right. So this is going to be our measure of
6 NAFTA exposure, our local average tariff rate, and this is
7 what it looks like. So dark blue here corresponds to greater
8 exposure. Lighter green's less exposure. Consistent with
9 the table I showed you earlier, this is a trade agreement
10 that is heavily weighted towards things like textiles,
11 apparel, foodstuffs. These are going to be predominantly
12 concentrated in the South. As a result, much heavier
13 concentration of exposure in commuting zones in Southern
14 states.

15 So one of the things that we have to address and
16 I'll talk about a lot as we go along is, to the extent that
17 this exposure is correlated with right-to-work status, it's
18 also correlated with lots of other stuff. There are a lot of
19 differences between these kinds of states and these kinds of
20 states or California or whatever. So that is kind of the
21 primary identification challenge for us here that I'll circle
22 back to several times.

23 All right. So, given that, our primary empirical
24 specification is going to be looking at a difference, the
25 long difference between 1990 and 2000 commuting-zone level

1 changes in employment where, again, when I say employment
2 here, we're looking at employment relative to the working-age
3 population between 1990 and 2000.

4 We will focus primarily on manufacturing
5 employment, but we'll talk a little bit about non-
6 manufacturing and overall employment. We're then going to
7 look at that as a function of this local exposure, τ_i , so
8 that's the commuting-zone level exposure over 1990. That
9 interacted with right-to-work status, so is there a
10 differential effect of exposure in right-to-work commuting
11 zones relatives to non-right-to-work. And then we'll
12 condition for right-to-work status separately and a host of
13 other commuting-zone level controls that will try and address
14 some of these issues about the South looks different than the
15 North, et cetera.

16 Among other things -- and all specifications
17 include region-fixed, census-region fixed effects -- so we
18 will be comparing a commuting zone in the Southeastern United
19 States that is more exposed to NAFTA relative to one that is
20 less exposed within the Southeastern United States. So we're
21 not ever going to be comparing Michigan to Georgia or
22 anything like that.

23 And then, finally, all specifications are going to
24 be clustered at the state level. So, before I show you
25 results, the empirical pattern here is quite striking.

1 So this is the change in the manufacturing-to-
2 population ratio between 1990 and 2000 at the commuting-zone
3 level, so that's your Y-axis here. The X-axis is that NAFTA
4 exposure measure at the commuting-zone level, and we've
5 separated this by right-to-work and non-right-to-work. And
6 the thing that immediately jumped out at us and hopefully
7 jumps out at you as you look at this is the relationship
8 between NAFTA exposure and changes in manufacturing
9 employment is strong but only in right-to-work states.

10 In non-right-to-work states, there's a very weak
11 negative, essentially no statistically significant
12 relationship between NAFTA and manufacturing employment. A
13 much stronger one in right-to-work status, right-to-work
14 states. In non-manufacturing employment, that actually
15 flips. So, again, you see certainly noisier but still this
16 positive relationship between import exposure or NAFTA
17 exposure at the commuting-zone level and changes in
18 employment and non-manufacturing now, a positive one in
19 right-to-work and, again, weakly, basically zero, in non-
20 right-to-work.

21 So this is kind of the variation that's going to be
22 underpinning, underlying all of our results. Now this is not
23 a regression, right? We haven't controlled for anything.
24 This is just the raw data. But it is certainly suggestive of
25 something different between these locations.

1 Okay. So let me talk about our baseline results.
2 So, as I said, there are papers out there that look at,
3 unconditionally, the effect of NAFTA on labor market
4 outcomes, on manufacturing, non-manufacturing employment, and
5 that's what we're doing in this table.

6 So we're not including anything about right-to-
7 work. This is just you can think of it as a baseline are
8 there employment effects of NAFTA exposure at the commuting-
9 zone level in this type of approach. This is similar, very
10 similar to what Felipe Benguria has done in a recent paper.
11 Columns 1, 3, and 5, the only thing we have is the NAFTA
12 exposure. We're not conditioning on anything, so, really,
13 what you want to focus on is 2, 4, and 6, where we add a host
14 of commuting zone controls.

15 So what we're going to control for at the local
16 level is the share of employment in the manufacturing sector
17 as of 1990, so prior to NAFTA, so we're comparing more
18 manufacturing-based versus less manufacturing-based
19 locations, the share of workers with a college -- the share
20 of individuals with a college degree, share of workers that
21 are foreign-born, non-white, the share of the labor force
22 that is accounted for by females, a measure of the
23 routineness of occupations -- and these come from Autor, Dorn
24 and Hanson's China shock work -- a measure of outsourcing.

25 And then we're also going to control for if the

1 state-level government is fully controlled by the Democratic
2 Party. So the idea here is you'll have many other policies
3 that are going to vary besides right-to-work status, sort of
4 looking at our right-to-work results, many policies that are
5 going to vary besides that, and we want to try and get at
6 that, so state-level controlled by the Democratic Party.

7 Okay. So Columns 2, 4, and 6, what this suggests
8 is we see unconditional, not as a function of right-to-work,
9 there is a negative effect of exposure to NAFTA on
10 manufacturing employment, as you might suspect, as previous
11 work has found. Import growth, import competition following
12 NAFTA leads to a relative decline in manufacturing employment
13 relative to the size of the population and a largely
14 offsetting effect in non-manufacturing. So we're not
15 finding, again, absent any kind of right-to-work story, we're
16 not finding large aggregate employment effects, but we are
17 finding that people are shifting out of the manufacturing
18 sector and into the non-manufacturing sector.

19 So, to give you a sense of magnitudes there -- so
20 this is the same scale -- an increase -- the mean increase in
21 NAFTA exposure would be something like 2 percent, 2.1 percent
22 here. That's going to map to something like a .3, .33
23 percentage point reduction in the manufacturing-to-population
24 ratio at the commuting-zone level, and, again, that's being
25 more or less one-for-one offset by a shift towards non-

1 manufacturing.

2 Okay. So, with that as the baseline, we then
3 proceed to what is our primary set of results, and that is,
4 how does that vary as a function of right-to-work? If
5 there's some negative effect on manufacturing employment
6 being offset in non-manufacturing, how much of that is right-
7 to-work status versus not?

8 So, really, we want to focus here again -- so
9 Columns 1, 3, 5 are there, no controls, just to show you a
10 baseline. Columns 2, 4, and 6 include all the set of
11 controls I just described on the previous page, and we're now
12 controlling for right-to-work status separately and right-to-
13 work interacted with the tariff.

14 And so what we really want to emphasize here is
15 these differential effects. So this top row here tells you
16 the differential effect of exposure to NAFTA in right-to-work
17 states relative to non-right-to-work states, and what you see
18 is this large strongly significant effect, negative effect in
19 manufacturing and, again, this positive one in non-
20 manufacturing.

21 The magnitudes here imply that an interquartile
22 increase in NAFTA exposure leads to about a half a percentage
23 point reduction in the manufacturing to population --
24 manufacturing employment-to-population ratio in right-to-work
25 states relative to non-right-to-work states. So another way

1 to see this or to say this would be, if you look at this non-
2 interacted effect, that is the effect that is specific to
3 non-right-to-work states, and you see no statistically
4 significant effect of NAFTA. All of this reduction is being
5 driven by right-to-work states.

6 And if you think about a mean increase in exposure,
7 so the average increase, again, something like 2.1 percentage
8 points, that explains approximately one-quarter of the
9 observed decline in the manufacturing to population --
10 manufacturing employment-to-population ratio in right-to-work
11 states during this period, so about a quarter of it. So it's
12 certainly a non-trivial effect that we're picking up here
13 driven, again, exclusively by these right-to-work states.

14 So that's the baseline effect. That's the baseline
15 result. And, again, feel free to jump in with questions or
16 clarifications if need be. The main concern that you might
17 raise here is that right-to-work states look different than
18 non-right-to-work states on many, many dimensions. Some of
19 these things we try to control for in the baseline
20 specification, as I mentioned, these region-fixed effects,
21 all these other characteristics of the local labor markets,
22 but, you know, concerns remain.

23 So there are a couple different sets of concerns
24 for us here. So one is that right-to-work states being
25 systematically different from non-right-to-work states means

1 that right-to-work status might, for instance, capture pro-
2 business policies or some variation in other kinds of
3 policies and it's those policies themselves that drive the
4 response to NAFTA, it's not right-to-work status.

5 Separately, you might worry that there is some
6 omitted correlate of NAFTA and so what we're picking up is a
7 real difference in right-to-work status, as a function of
8 right-to-work status, but it's not the response to NAFTA,
9 it's the response to, for instance, manufacturing declined
10 more generally or what have you.

11 And so we're going to try and run a set of
12 robustness tests to get at these issues. So, first of all,
13 we're going to throw in some additional controls and include
14 some interactions with right-to-work and NAFTA. So we're not
15 just going to control for the share of the population that
16 has a college degree; we're going to allow for variation in
17 response to NAFTA as a function of that. So we're going to
18 interact that with NAFTA as well.

19 We're going to conduct some placebo analysis to see
20 if we pick up this kind of relationship in the years running
21 up to NAFTA, and then we're also going to look at different
22 measures of union strength, as I mentioned earlier. I'll
23 come back to that in a second.

24 Okay. So, robustness table here, we're going to
25 do -- I'll talk about a few of these in more detail. First

1 of all, we're going to include state fixed effects, so that
2 says we are now comparing two commuting zones within a state,
3 one that is more exposed to NAFTA, one that is less exposed
4 to NAFTA. So there's a much tighter variation, we're asking
5 a lot more of the data, and if you remember, the baseline
6 effect I think was somewhere around negative .4. This is not
7 changing our baseline result much, so it's still, even with
8 the state fixed effects, we're picking up this relative
9 reduction in manufacturing employment in right-to-work
10 states.

11 So commuting zones are constructed as local labor
12 markets. They cross state borders in some cases, which
13 means, in some cases, they cross state borders between a non-
14 right-to-work state and a right-to-work state and it's not
15 obvious what that labor market should be called. So we re-
16 run our baseline specification dropping those entirely,
17 dropping those commuting zones entirely -- there are 50 of
18 them -- and it doesn't change anything.

19 The weakest result from all of our robustness tests
20 is this here. So what we have done is we've taken all of
21 these controls from our baseline specification, so you've got
22 the manufacturing share, college share, et cetera, and region
23 fixed effects, and we're interacting those with right-to-work
24 status, okay? So we're allowing for differential behavior in
25 right-to-work states relative to non-right-to-work states as

1 a function of all of these things.

2 When you do that, you do reduce the -- you're
3 asking a lot more of the data, of course. We're wiping out a
4 lot more variation and you do reduce the baseline point
5 estimate by about half, and it's just outside of statistical
6 significance. So that is -- you can push the data too far
7 here, of course.

8 Relatedly, in this column, we're going to interact
9 all of those controls with NAFTA exposure. So, if your
10 concern is that right-to-work status is correlated with
11 manufacturing employment overall, and so what I'm really
12 picking up here is a difference in the response to NAFTA in
13 manufacturing-intensive places relative to non-manufacturing-
14 intensive places, we're controlling for that here, and it,
15 again, does not seem to affect our baseline results.

16 I haven't included it in this table. You can also
17 include an interaction of NAFTA exposure with the share of
18 employment in every two-digit SIC manufacturing sector. So,
19 in particular, we were worried that while textiles look very,
20 very different in terms of their exposure to NAFTA, they also
21 look very different in terms of their unionization rates, and
22 so what if that's driving everything? And it doesn't seem
23 like it is. We can wipe that out as well.

24 So, to try and get at this idea that right-to-work
25 states and non-right-to-work states might look different on a

1 number of dimensions, that might mean they're trending
2 differently for various reasons, to try and get at that
3 directly. And this table, so I put 1980 to 2000. It's
4 really a stacked decade difference. So it's 1980 to 1990,
5 1990 to 2000. And so what we're going to control for here
6 and what we're going to pick up here is variation in right-
7 to-work states relative to non-right-to-work states in their
8 response to NAFTA in the years after NAFTA -- between 1990
9 and 2000 -- relative to their trajectories in the year 1980
10 to 1990, okay?

11 So we have a triple difference here. We're picking
12 up only variation after NAFTA is exposed or after NAFTA is
13 enacted. So, to the extent that there are differences that
14 persist over time in right-to-work relative to non-right-to-
15 work states and those are also correlated with NAFTA, we're
16 controlling for that here. So we're only picking up the
17 variation in the '90s. And our results are very, very
18 similar to the baseline there.

19 And then, finally, we conduct a placebo analysis
20 very similar in spirit to this column. The placebo analysis,
21 so we're going to look at this relation -- so it's the same
22 baseline specification, but our outcome is the change in
23 manufacturing employment between 1980 and 1990 rather than
24 1990 and 2000. So does this measure, does NAFTA exposure
25 interact with right-to-work status? Does it predict

1 employment growth in manufacturing in the years running up to
2 NAFTA? And it does not. We're not seeing any action there.

3 Okay. So I have what, 20 -- 15, 20 minutes left,
4 is that right? Okay. I'll skip a few things here, but I
5 want to talk about another measure of unionization. So,
6 again, we can control for things, do all of this. At the end
7 of the day, there's no way to guarantee that right-to-work
8 isn't correlated with some omitted variable that we haven't
9 wiped out.

10 So an alternative to that is to look at other
11 measures of variation and union strength, and we do two in
12 the paper. One I'll lean into here, it's something called
13 the Wagner shock. So you have the Wagner Act in 1935 that
14 gives unions the right to form and collectively bargain and
15 strike, and in the years immediately following that, there's
16 an enormous uptick in union membership rates, but there's
17 variation across states in the extent of that increase, okay?
18 So some states see very, very rapid increases in union rates,
19 some much more modest. A recent paper by Farber et al.
20 specify what they call the Wagner shock, which is a state-
21 level measure of the number of new union members between 1935
22 and 1938 relative to the 1930 state population.

23 So the idea here is that larger values of a Wagner
24 shock suggest a historical predisposition towards unions 60
25 years prior to NAFTA, okay? So we're going to use that

1 measure in place of right-to-work status and re-run all of
2 our baseline specifications. I won't talk about it in detail
3 here for the sake of time, but we also look at voting on the
4 Taft-Hartley Act in 1947. So this is something that, again,
5 is going to allow for right-to-work states. It's going to
6 outlaw closed shops, so this is an anti-union law, and as a
7 result, we're going to take a no vote -- so, if you live in a
8 commuting zone that overlaps with a congressional district
9 where the representative voted no on Taft-Hartley, we're
10 taking that as indicative, again, of pro-union historical
11 leanings, okay?

12 So one of the nice things about these measures is
13 they are going to -- while they're certainly correlated with
14 right-to-work status, right, they're still about unions, at
15 the end of the day, the variation is different, the
16 geographical variation is different. So, to the extent that
17 there's some omitted variable that we're not capturing with
18 right-to-work, if we're also capturing it here, it has to be
19 that it's correlated with both of these coincidentally, which
20 is certainly possible, but it's ruling out certain things for
21 certain, we think.

22 And so this is our variation, okay, for the Wagner
23 shock. Again, you can see the darker blues here would mean
24 larger increases in membership in the 1930s, so places where
25 you might expect are seeing increases, much smaller

1 increases, again, in the South, but there's going to be
2 variation here, right?

3 So these are all right-to-work states, but we have
4 variation now between them in terms of this Wagner measure.
5 It's not just a block of the South versus the North. There's
6 even more variation in Taft-Hartley. So no votes here are
7 spread throughout the country. And one of the nice things
8 about the Taft-Hartley measure for us is that it's not a
9 state-level measure. We have an actual local measure of
10 exposure there.

11 So the Wagner shock. So this is our baseline set
12 of results again. So it's the same thing. So we have our
13 baseline which has all of these controls I mentioned earlier.
14 We include state fixed effects. We interact our controls
15 with the Wagner shock itself, we interact our controls with
16 NAFTA exposure, we run our triple-difference specification,
17 and we run our placebo, and what you can see is we're finding
18 the same story throughout all of this.

19 So the Wagner shock -- now, so remember, right-to-
20 work would say lower union membership. The Wagner shock,
21 higher values mean higher union membership, so the sign is
22 flipped, but we're still interested in this differential
23 effect as a function of union strength.

24 And to give you a sense of what the magnitudes look
25 like here, if you look at this baseline specification, so the

1 Wagner shock is constructed to be mean-zero and it's
2 standardized, so "1" means one standard deviation. So, if
3 you were to consider an interquartile increase in NAFTA
4 exposure across commuting zones, for the commuting zone one
5 standard deviation below the Wagner mean, okay, so that would
6 be lower union membership rates, one standard deviation below
7 the mean, you see a .22 percentage point reduction in the
8 manufacturing employment-to-population ratio.

9 Conversely, one standard deviation above the mean,
10 you see a weakly positive effect. So, again, non-trivial
11 differences in the response to NAFTA as a function of
12 underlying union strength with this very different metric.

13 Okay. So, in the time that I have left, we have
14 some Taft-Hartley results. I want to skip those. Let me
15 skip ahead to the demographic results that I discussed, that
16 I mentioned briefly earlier, and I'm happy if anyone wants to
17 talk about any of the other things we're doing. That's fine.

18 So we have this baseline effect or this
19 differential effect on manufacturing or this baseline result
20 with differential effects for manufacturing employment. We
21 wanted to see if that corresponded to what you might expect
22 based on underlying unionization rates, okay, and so we've
23 run this where it's the same outcome, it's still
24 manufacturing employment relative to population, but the
25 manufacturing employment and the population is now for

1 specific demographic groups. So we've run this for men,
2 women, white, black, college, non-college, under 35, and over
3 50.

4 And a couple of things we think really stand out
5 here. One is you see a stronger effect for men than for
6 women. So there is a larger mitigating effect of union
7 strength on the negative effects, the relative negative
8 effects of manufacturing for men than for women. This is
9 consistent with the fact that union membership is
10 historically and continues throughout the time period we're
11 looking at to be higher for men than for women. So, if this
12 is unions protecting jobs, you would assume, you would
13 suspect that unions would be protecting jobs more for the
14 kind of person who is more likely to work for a union, and so
15 that's consistent with what we're finding here.

16 As I mentioned earlier, somewhat surprising to us
17 based on that argument that the effect is larger for under 35
18 than for over 50. Unions, famously, seniority rules would
19 tend to predict individuals who have been union workers
20 longer, and it doesn't seem like that's what we're finding
21 here.

22 We don't have a great story for that, frankly,
23 other than, as I mentioned earlier, potentially younger
24 workers are more vulnerable to layoffs during this period,
25 and as a result, unions are protecting workers similarly, and

1 it just happens to be the case that younger workers would
2 have been more likely to be laid off absent the union's
3 strength, but we don't have an overwhelmingly strong case for
4 that.

5 Okay. Then, with the time I have, let me -- I want
6 to talk about mechanisms a little bit. So we go through a
7 bunch of robustness exercises and this idea, the main finding
8 we're emphasizing here is that the relative decline in
9 manufacturing employment in response to NAFTA is much
10 stronger, much larger in right-to-work relative to non-right-
11 to-work states. It seems like unions might be protecting
12 jobs. How is that happening? What is the actual mechanism,
13 or why are they able to do that?

14 So the first thing we're going to do to look at
15 that is look at wages, okay? So Hakobyan and McLaren, in
16 2016, have a paper looking at the wage response to NAFTA and
17 find negative wage effects of NAFTA using a local labor
18 market approach similar to this. So we are going to run a
19 version of their specification where this is now being run at
20 the individual level. So we have three-and-a-half million
21 individuals where each individual is tied to a commuting
22 zone, and so the shock is the same, right-to-work status, all
23 of that is exactly the same. We're just looking at
24 individual outcomes, which means we can control for
25 individual demographic characteristics, education, things

1 like that.

2 These are going to be run in levels, so what we're
3 interested in now is the 2000 average wage for individuals in
4 more exposed NAFTA locations relative to the 1990 wage for
5 those individuals in more NAFTA-exposed locations, and then
6 we're going to interact that again with right-to-work status.

7 So the baseline interaction effect that I want you
8 to focus on is this column right here. So what this says --
9 these top two rows, what those say is that individuals who
10 lived in commuting zones more exposed to NAFTA saw larger
11 declines in wages if they were in non-right-to-work states
12 than if they were in right-to-work states. So this positive
13 effect here on the interaction between commuting-zone
14 exposure, right-to-work in post-2000 says the negative effect
15 of exposure to NAFTA, following NAFTA, on wages is mitigated
16 in right-to-work states.

17 So an increase, to give you a sense of the
18 magnitude, it's an interquartile increase in exposure, at
19 least something like a 1.8 log-point decline in wages in non-
20 right-to-work states, is what it should say. There is a
21 larger wage decline in union states, union commuting zones.
22 So this is the opposite direction of what we're finding
23 earlier in terms of employment, so what this is consistent
24 with is a story where unions are trading off employment for
25 wage growth. They are accepting lower wage gains than they

1 might otherwise have had, and they're doing so in order to
2 protect jobs.

3 Anecdotally, you see discussions, like, in BLS
4 summaries of collective bargaining agreements during this
5 period, you see mention that job security is really the focus
6 now. These agreements are not about wage gains right now;
7 they are about job security. So we have not done any actual
8 analysis systematically of collective bargaining agreements,
9 but you do see this and there is discussion of, for instance,
10 1980s wage give-backs by unions, so this is consistent with
11 that as well.

12 Second, we look at the collective bargaining
13 agreements files from the BLS, and they have summaries by
14 sector. So, for 1980, we went through and we calculated the
15 share of workers covered by collective bargaining agreements
16 at the two-digit SIC sector, the share of workers covered by
17 those agreements that included advance notice shares, so you
18 have to receive advance notice about layoffs due to
19 technological advancements, declining demand, things like
20 that.

21 We then map that onto the state by weighting this
22 share. So this is the share of workers covered by collective
23 bargaining agreements that have these advance notice
24 provisions. We weight that to the state level using
25 employment shares within the sector, so what share of total

1 employment in the state comes from that two-digit SIC sector.
2 That's our advance notice share. So this is going to be
3 higher in states where more workers are covered by agreements
4 that have these advance notice shares, that have these job-
5 security provisions encoded in them.

6 Again, there's going to be substantial variation a
7 lot in ways that you might suspect. So this too is going to
8 be correlated with union strength more generally, so we're
9 not just picking up something completely orthogonal to that,
10 but, again, more variation than you're getting in, for
11 instance, right-to-work states. So variation throughout the
12 South. Variation throughout non-right-to-work states in the
13 North. And so dark-blue here would say workers have stronger
14 job security protections.

15 So what we would expect then is to see diminished
16 employment effects in these dark-blue places relative to the
17 light-green or light-blue places, and that's exactly what
18 we're finding. So we re-run all of those baseline set of
19 results, interacting NAFTA exposure with this advance share
20 measure rather than right-to-work status. And, again, you
21 see this reduced effect of NAFTA exposure on manufacturing
22 employment in places that have more advanced job security
23 notices.

24 So, to give you a sense again of the magnitudes,
25 interquartile increase in NAFTA exposure at the 25th

1 percentile, something like a 12 percentage point or .12
2 percentage point reduction in manufacturing-to-population
3 ratios, 75th percentile a positive effect of .14. So we're
4 not really leaning into this positive effect too much. The
5 point is the relative effect. Again, states that had more
6 workers covered by these advance notice provisions tended to
7 see less negative manufacturing employment effects.

8 And then, finally, we look at idle worker shares.
9 So, from FMCS, we calculate the total number of idle workers,
10 workers on strike, between 1984 and 1990 relative to 1988
11 manufacturing employment. The idea here is that there is
12 substantial variation across locations in the frequency of
13 strikes. And to the extent that firms would hesitate to lay
14 off workers if remaining workers are more likely to strike or
15 workers are able to keep jobs secure by threatening to strike
16 or by actually striking, we would expect to observe
17 differential effects as a function of this preexisting
18 predisposition to striking. And, again, that's exactly what
19 we're finding.

20 So interquartile increase in NAFTA exposure at the
21 25th percentile sees double the reduction in manufacturing
22 employment relative to the 75 percentile. So states in which
23 workers had historically been more likely to strike saw
24 smaller reductions in manufacturing employment in response to
25 NAFTA.

1 Okay. So I will wrap up quickly then. So this
2 paper builds on this really large and still very active
3 literature looking at the distributional consequences of
4 trade shocks. NAFTA in particular you can certainly imagine
5 doing something in a different setting, and we're trying to
6 take that a step forward by asking how do the things
7 surrounding trade itself, how do the policies, how do the
8 institutions surrounding trade, affect the relationship
9 between trade and labor market outcomes.

10 And we find that it seems like the relative decline
11 in manufacturing employment following NAFTA is driven almost
12 exclusively by right-to-work locations. We find some
13 evidence that that's being driven by potential wage
14 concessions or job security provisions that are actually
15 negotiated and placed into these collective bargaining
16 agreements or the implicit threat of labor stoppages.

17 All right. That is it. Thank you very much.

18 MR. POWERS: Thank you very much, Professor. And
19 with that, I'll turn it over to our discussant for this
20 presentation, Karen Thome of the U.S. ITC's Office of
21 Economics.

22 MS. THOME: Thanks, Theron. And, John, thank you
23 for a really detailed presentation. I enjoyed the paper.
24 I'm going to pull my slides up. Can you see the slides?

25 MR. LOPRESTI: I can, yeah.

1 MS. THOME: Okay. So I just need to put them into
2 the presentation mode, is that correct? Okay. Look at that.
3 I don't often get these right on the first try.

4 Okay. So I'm going to start by quickly -- I know
5 there's a lot of information here -- quickly summarizing the
6 research question, findings, method, and then all the
7 robustness checks and all the additional detail that John and
8 his co-author put into this paper.

9 Like, one thing that I think really stands out is
10 just the thought that has to go into coming up with some of
11 these alternative measures and checks, so I will spend a
12 little of the time highlighting that.

13 Okay. So this paper investigates the role of
14 organized labor in shaping these employment responses to
15 trade shocks, and it's an application to this post-NAFTA
16 local labor market outcomes. So, like other papers that look
17 at these local labor market outcomes, they do find that
18 there's lower growth in the manufacturing employment in these
19 labor markets that are more exposed to NAFTA.

20 Further, they show that this effect is driven
21 exclusively in non-right-to-work states, so workers in
22 locations that have weaker unions are going to be more likely
23 to be displaced by trade.

24 When they look at the mechanisms, they also find
25 some evidence that's suggesting that these unions might

1 either negotiate between wage growth and job security or that
2 there's some other security functions being provided by the
3 union.

4 In terms of distributional effects since this is a
5 distributional effects seminar, they find that this right-to-
6 work or non-right-to-work mitigating effect is stronger for
7 these groups that are disproportionately belonging to a
8 union. So this includes men and then less-educated workers.
9 And they also find some evidence that younger workers also
10 experience more of this mitigating effect.

11 Okay. In terms of the model, this is a model that
12 we have seen a lot in this space and we will probably see
13 more this week. So they're modeling this local labor market
14 effect at the commuting zone level using these long
15 difference regressions. So the important variables are the
16 labor market outcome, which is the change in manufacturing
17 employment; a measure of exposure to NAFTA; and then a
18 measure of this union strength.

19 So, importantly, this measure of union strength,
20 right, doesn't start out with, like, a theoretical
21 prediction. The theoretical prediction about what it's going
22 to look like and what its interaction with NAFTA is going to
23 look like is ambiguous. So it's really important that
24 they've done all these extra tests to kind of tease out not
25 only what's happening but why it might be happening.

1 In terms of big challenges, right, identification
2 for the model is going to be tricky. We don't have a lot of
3 data on union membership at a disaggregate level. And then
4 the union membership is also going to be endogenous. So
5 they're working with this right-to-work state variable as a
6 proxy for this weak rating in presence. But, again, there's
7 concerns that it might be correlated with other things going
8 on in the state, which is why we have this amount of
9 attention paid to some of these robustness tests and
10 different measures.

11 So, in terms of mechanism of this effect and
12 robustness, the authors look at robustness to the measure and
13 the specification of exposure to NAFTA. They also look at
14 robustness of measures and specifications of how they're
15 modeling this union strength variable. So, in addition, yes,
16 I guess John mostly covered all of these.

17 And then, finally, to summarize, in mechanism,
18 they're looking at this wage effect, so the wage decreases in
19 manufacturing in these non-right-to-work states, so the union
20 states are having a lower wage. And then, in terms of job
21 security provisions in the union contracts and also the
22 strike of threat, which is another kind of -- you didn't call
23 it a provision of unions -- this reduced this NAFTA impact on
24 manufacturing employment growth. So places where you had
25 these union provisions in place, they were experiencing less

1 of an impact on manufacturing growth than other states.

2 Okay. So I'm going to get into discussion
3 questions. I had a lot of discussion questions, mostly
4 because I think this is a really interesting paper and I can
5 imagine in my head a lot of different ways that you can take
6 this in the future. So I'm going to break them down into two
7 groups. One is kind of about data and distributional
8 effects, and then the other one is kind of more about
9 generalizability and looking forward into new policies that
10 are happening in the future.

11 Okay. So, as far as distributional effects and, I
12 guess, data questions, because I feel like a lot of times
13 we're limited in what we can do here just because of data,
14 one thing that struck me in the table that you showed with
15 the heterogeneity analysis is that we didn't have this race
16 effect like we had for other groups, and that struck me just
17 because you showed that, you know, in populations that
18 historically have higher union membership, they were less
19 impacted by NAFTA when they had this union presence, but that
20 wasn't true for race.

21 And I'm not sure how this has changed over time. I
22 know currently there are racial differences in union
23 membership, and so I was a little bit surprised that we
24 didn't see that effect, and I'm wondering if it's just a
25 question of, you know, having data and having enough power to

1 actually capture that.

2 And I guess, on a similar train of thought, like,
3 in your paper, you mention, you know, interest in the union
4 impact at a worker level. And I wonder, can you extend what
5 you did with a wage regression? Are you having challenges
6 with identification, challenges with data? Like, what is the
7 challenge to actually doing more of that kind of analysis?

8 And then, similarly, when you think about the
9 channels of union impact, how much have you looked into other
10 types of compensation? Because I think we hear a lot now
11 about not "quality" jobs really but, like, women's ability to
12 work in the workplace conditional on having these other, you
13 know, flexibilities in schedule or other provisions from
14 jobs, so I'm just kind of curious if there's anything going
15 on in that space or if anything in this framework could be
16 extended to look at that.

17 And then, finally, I wonder how much you've
18 considered exposure by occupation versus industry, and that's
19 just because we see that the men and the lower-educated
20 workers are more -- are impacted in different ways, and so I
21 wonder if that matters by occupational category.

22 So those are my DE and data questions. I'll move
23 forward to the generalizability questions. I feel like
24 you're probably going to hear these everywhere, but -- so
25 you've chosen to focus on NAFTA, and I wonder, just when we

1 think about more recent trade shocks, would you expect
2 similar impacts, and if you were going to do that study,
3 would you have different challenges in implementing this kind
4 of framework to do that?

5 And then, similarly, do you think this union effect
6 or right-to-work effect persists and is there a way that you
7 could look at that empirically? I think, you know, it
8 becomes more challenging as you stack these successive
9 periods on top of each other, so I'm just curious if you
10 thought about ways that you could kind of disentangle that or
11 if you think it's better captured in kind of analyses of
12 specific policies or policy eras.

13 And then I guess the last question, which is maybe
14 a little bit less relevant. You actually have a really -- I
15 really enjoyed the literature review because I think it lays
16 out really clearly in, you know, specific topic areas, but
17 you did cite some literature showing that, you know, there
18 are some things about unionized firms that are maybe
19 different than other firms: they're larger, they're more
20 capital-intensive and productive according to, you know,
21 literature, and in some cases, they're producing -- I
22 wouldn't say high-quality goods -- a different quality of
23 goods.

24 You did some robustness tests showing that at least
25 the differentiated industries are experiencing the same

1 mitigating effects whereas, you know, you might expect, you
2 know, if they don't experience the same competition that
3 undifferentiated industries experience, then you might not
4 see that.

5 But I do wonder, like, you know, taken together, if
6 you're doing this longer-term analysis, how might some of
7 these characteristics of unionized firms interact with
8 technological change, and is that a question that you think
9 might be worth studying?

10 Okay. So that's all I have. I am going to un-
11 share.

12 MR. GRAY: Thank you, Karen. I appreciate it. Of
13 course, I will give Professor Lopresti a chance to respond,
14 but I wanted to remind the broader audience that we will be
15 going to the Q&A afterwards, so please feel free to drop your
16 questions in the chat or raise your hand after Professor
17 Lopresti has a chance to speak.

18 Professor?

19 MR. LOPRESTI: Great. Yeah, thank you so much,
20 Karen, for the great discussion. I really appreciate it.
21 These are great questions.

22 Some of the race outcomes and also the worker-level
23 outcomes, as you suggested, some of it's a power issue, I
24 think. Once you start cutting these down to commuting-zone
25 levels, you get -- because this a sample, we don't see the

1 full-count census or anything like that -- you do start
2 getting into smaller and smaller numbers of individuals.

3 So we could try and do it at a more aggregate
4 level, so there's some work -- in principle, you could run
5 this at the state level, right? So there's nothing
6 preventing us from doing any of the analysis at a state level
7 with right-to-work. We could aggregate the NAFTA shock up to
8 the state instead of the commuting zone, and that would get
9 around some of these power issues.

10 The tradeoff, of course, is then the shock is not
11 as well-specified, the trade shock's not as well-specified,
12 but it's something we could look into. We could also look
13 into, in terms of worker-level things, I think we could look
14 at linked data sets. So, like the CPS, you can link workers
15 over time. Here, it's repeated cross-sections, right?

16 So we're using IPUMS data, so you see 1990 and
17 2000, it's different people. So trying to get at worker-
18 level stories, we could actually try and follow workers
19 through time. And, again, there are issues related to power,
20 and you can't identify the commuting zone in the CPS data,
21 but there are tradeoffs there I think that might be worth us
22 looking into.

23 So the occupation industry, so when you mentioned
24 exposure, did you mean -- I'm not sure I followed entirely.
25 So you were thinking about the NAFTA shock based on

1 occupation or --

2 MS. THOME: I think, at first, I was thinking about
3 the NAFTA shock, but then I think I was thinking about just
4 in general, like, what can you say about the occupation
5 instead of, you know, just the industry.

6 MR. LOPRESTI: Yeah. So, like, heterogeneity or
7 something by that?

8 MS. THOME: Yeah.

9 MR. LOPRESTI: Okay, that's a good idea. We could
10 do that. We haven't, but, yeah, we could. And so all the
11 union membership data and things like that, it's equally easy
12 to do either way.

13 In terms of does right-to-work persist and similar
14 shocks, so these are, I think, really terrific questions that
15 this literature -- the broader, like, trade and local labor
16 markets literature hasn't grappled with in a great way. So
17 NAFTA doesn't happen in isolation, right? NAFTA happens on
18 the back of the Tokyo round, on the back of rising trade with
19 Japan. The China shock happens on the back of the Uruguay
20 round and just all these things are happening in succession.

21 And I agree it's not clear, stacking one after
22 another, how to do that or what that means. And I think it
23 is, in terms of right-to-work -- so, like, one question you
24 could imagine asking is, if these places that were protected
25 to some extent from the effects of NAFTA by unions, what did

1 that mean for how they responded to the China shock? Are
2 these jobs that were going to go away at some point anyway
3 and unions delayed it? But, I mean, you could imagine a
4 world where that makes the China shock worse because these
5 jobs that could have been lost earlier aren't -- I don't
6 know. That's just purely hypothetical. But it is, I think,
7 an interesting question.

8 In terms of actually looking at these other shocks,
9 we chose NAFTA to try and kind of find the sweet spot
10 between -- so the natural one I think would have been to look
11 at China just because there's so much work done on that.
12 Obviously, the later you go in time, the less unions have
13 power and are potentially relevant, and so we thought moving
14 back in time even a half-decade or a decade would help in
15 terms of having variation there. But there is a paper by
16 Alquist and Downey that looks at -- their main interest is
17 kind of this flip-side that I mentioned, what does trade do
18 to unionization, and they're looking at the China shock.

19 But one of their tables does look at something like
20 our baseline, where what are the manufacturing employment
21 effects in right-to-work relative to non-right-to-work, and
22 they find something very similar to what we're finding here
23 in terms of directionally at least.

24 But I agree. I think looking at similar shocks.
25 There's been some work done on the Japan shock by Batistich

1 and Bond, and so I think going back in time answering
2 questions like this could be valuable just because the union
3 environment is so different in the 1970s or prior than it is
4 now.

5 And so technological change, so I absolutely think
6 that would be interesting to study. So did you have in mind
7 there technological change, like, in response, like, unions
8 drive technological change, or --

9 MS. THOME: Well, I mean, it seems like unionized
10 firms might make different kinds of investments in their
11 labor force and, you know, development, and so, yeah, I just
12 wonder what that interaction might be, especially in the face
13 of competition and then some of the more policies towards
14 globalization and then, like, the near-shoring China shock
15 stuff.

16 MR. LOPRESTI: Yeah. Yeah. Yeah. No, absolutely.
17 That's something that we haven't looked into at all, but it's
18 a great suggestion. But thank you again for the great
19 discussion.

20 MR. GRAY: I'm not seeing any hands or questions in
21 the chat as of yet. I don't know if anyone's ready to jump
22 in? Go ahead, Bill.

23 MR. POWERS: Thank you. All right. So very happy
24 I have a moment to ask some questions following that, and
25 really appreciated the presentation. I had two questions --

1 and we have one of our Commissioners online, so I'll ask one
2 of my two questions to make sure we have time for Jason's.
3 You kind of talked about -- so I'll pick my favorite question
4 then.

5 So you point out interestingly that the impact is
6 largely sectoral and it's not a prominent message about
7 overall employment, and it only happens, you know, in one of
8 these two types of states. If every state was the same, if
9 every state had strong union protection, would we find
10 different implications about union protection?

11 You know, again, just like you said about China,
12 maybe these impacts had to happen and what the union
13 protections did was shift the impact onto the other states.
14 So I'm trying to think of, like, what, if I were a
15 policymaker and wanted to think about what the impact should
16 be for policy, you know, assuming I wanted to protect these
17 kinds of things, or perhaps assuming I wanted to avoid a
18 sectoral shift, could I do that by actually getting the whole
19 country to move to the same strong labor protection regime,
20 or would that actually be in some sense self-defeating?

21 MR. GRAY: Yeah, so I guess what's the -- what is
22 the mechanism you have in mind where it forces -- where the
23 non-right-to-work states are pushing this onto right-to-work
24 states, I guess?

25 MR. POWERS: I think this is probably too

1 simplistic, but I'm assuming that, you know, some change in
2 industrial structure has to happen as a measure of this after
3 we've reduced the tariffs and so if it has to happen and we
4 just shifted it to different locations.

5 MR. LOPRESTI: Yeah. Right, right. No, it's a
6 terrific question. I guess one of the limitations of this
7 kind of dif and dif approach is going to be how everything
8 has to be relative.

9 MR. POWERS: Mm-hmm, mm-hmm.

10 MR. LOPRESTI: I'll need to think about it. I
11 mean, in terms of -- one of the big things that we're not
12 really answering or able to answer here is what does it mean
13 for policy, is this a good thing, right? Like, one of the
14 takeaways is unions are good, and I don't think that is -- I
15 don't think we're pushing that point, I would say.

16 MR. POWERS: Mm-hmm, mm-hmm.

17 MR. LOPRESTI: But it's an excellent question that
18 I will ponder.

19 MR. GRAY: Commissioner Kearns?

20 COMMISSIONER KEARNS: Bill, do you want to ask your
21 second question? I don't want to interfere. It was probably
22 a better question than the questions I would ask.

23 MR. POWERS: All right. Well, I think I will -- I
24 doubt that is true, but I will throw it out anyway because we
25 seem to have time. So you kind of danced around this as

1 well, but just for those of us who are not union -- aware of,
2 you know, everything about the evolution of the unions, can
3 you just fill us in about the status of RTW since the '90s?
4 Have we seen continued advance in the number of RTW states?

5 You know, is the landscape -- again, because we're
6 always thinking about what -- we might get a question about
7 what the latest trade changes have done to us.

8 MR. LOPRESTI: Mm-hmm. Sure.

9 MR. POWERS: So it's useful to know whether these
10 things continue to be relevant. Has the landscape changed so
11 much that maybe your historical measures -- I loved your
12 Wagner shock, by the way -- maybe have less persistent
13 effects or would be worse instruments? You know, you kind of
14 danced around that -- or not danced around it -- but you kind
15 of started answering some, filling some of that in in your
16 response to Karen. But I'm just curious if there's a little
17 more you could tell us on that.

18 MR. LOPRESTI: Yeah. So there was a string -- so
19 you have a large number immediately, as we said, in the '40s
20 and the '50s, then a period of just a handful, and then the
21 early 2000s there was an uptick again. So Oklahoma had one;
22 Indiana had one in the early 2000s -- or in 2012, I think --
23 and there have been several others. So there was kind of an
24 uptick maybe 15, 20 years after sort of what we're looking at
25 here.

1 MR. POWERS: Mm-hmm, mm-hmm.

2 MR. LOPRESTI: Yeah. So in terms of, I mean, if we
3 were to look at a modern -- certainly, if we were to look at,
4 like, persistence of this, that would complicate things. So
5 the kind of question that Karen raised earlier about what
6 does this look like in the long run, how does this interact
7 in the China shock era, then I think the question has to be
8 in part does that sort of policy respond to trade shocks. So
9 you could imagine that right-to-work policy changes were in
10 response to declining manufacturing sectors or what have you,
11 and so it's possible that trade played a role in that. It's
12 not something that we dig into here, but any kind of long-
13 term or modern thing we want, we'd have to grapple with that.

14 MR. POWERS: All right. Thank you.

15 MR. LOPRESTI: Mm-hmm.

16 COMMISSIONER KEARNS: All right. Well, first of
17 all, thanks very much for being here. This is a very
18 interesting conversation, and you're asking the kind of
19 questions that, you know, I think a lot of the policymakers
20 we respond to really want to have answered.

21 By the way, before working on the Commission, I
22 worked on Capitol Hill for the House of Representatives in
23 the Ways and Means Committee representing a member from
24 Michigan, Sandy Levine, so this is certainly something that
25 he's been very focused on and I have a little bit of

1 experience with as well.

2 So I guess I have kind of two questions that are
3 both kind of, like, you know, what do you make of all this.
4 And the first is I was thinking, you know, first of all, is
5 this sort of intuitive or not? And on the one hand, I
6 thought -- I mean, it is because what I hear you saying is,
7 you know, through a collective bargaining unit, you are just
8 able to communicate with the employer better and say, you
9 know, look, keep our jobs and we won't ask for any increase
10 in wages. So that's kind of intuitive.

11 On the other hand, you know, I think, if you asked
12 your average person what do you think, is NAFTA more likely
13 to cost a union job or a non-union job, I think people would
14 probably say, well, probably a union job because, you know,
15 they have better wages, you know, those jobs are more costly
16 and so they'll be more likely to be offshored and so forth.

17 So anyway, that's one thing I'd like to hear you
18 respond to. And then the other is, you know, again, going
19 back to the idea that this is just helping employees
20 communicate better with their employer, that makes sense to
21 me and that's, like, what a union would do, but it's kind of
22 odd the way this is working for, you know, the right-to-work
23 areas. So what's happening there? Is the employer just
24 saying, you know, we're not even going to communicate, I'm
25 just going to go offshore the jobs? Like, that seems kind of

1 counter-intuitive as well. So any responses to that?

2 MR. LOPRESTI: Yeah, these are all great questions.
3 So I didn't talk about it during the presentation. We
4 highlight this a little bit in the paper, this first point
5 you're making about it doesn't seem -- this is not an obvious
6 result, I don't think, and we did not necessarily come to
7 this with a strong prior about what this would look like
8 because there are all these different mechanisms.

9 So you're exactly right. There's a union wage
10 premium, so why is that not the first job to go? You also,
11 though, with that have to consider that a union wage premium
12 potentially gives some gap where they can concede wages,
13 whereas, if someone else is closer to, I don't know, like,
14 the willingness to accept wage, then that's harder to do.

15 Also, if there are productivity effects driving
16 that union wage premium, then it's not an apples-to-apples
17 comparison, of course. So we didn't have a strong story in
18 mind about how that would go, and so I don't think it's
19 necessarily that we were surprised because there is kind of
20 an intuitive feel to it, but it's an excellent point that
21 this is not obvious theoretically.

22 In terms of what's happening with other jobs, I
23 mean, so it seems to me like there's something about
24 negotiating as a unit that allows for -- and I don't have a
25 specific pinned-down model in the back of my head for this --

1 but there's something about negotiating as a unit that allows
2 you to say we are negotiating over the number of jobs and the
3 wages, right, whereas, if I'm negotiating as an individual, I
4 don't have that first option. And so I'm willing to take
5 these lower wages in order to preserve jobs. And so
6 something about the bargaining power of workers.

7 And so this is something we tried to get at in the
8 mechanism section, trying to think about, well, what would
9 this look like and how would you capture what bargaining
10 power for the union is, how do we measure that. And so that
11 was the idea with the strikes measure, maybe a location or a
12 group of unions or sectors that are more willing to strike
13 potentially have more leverage.

14 If there are other better ways to measure that,
15 we'd certainly be open to that as well. I don't know if that
16 answered your question or not.

17 COMMISSIONER KEARNS: It does, yes. Thanks very
18 much.

19 MR. LOPRESTI: Okay.

20 MR. GRAY: Saad?

21 MR. AHMAD: Yeah, I had a question on kind of the
22 mechanism side just kind of thinking of NAFTA and, you know,
23 like, the union world. Like, was there, like, some, like,
24 logging done during NAFTA where the unions were trying to
25 protect some industries and maybe that could explain some of

1 the results or maybe have more of a phase-out period, you
2 know? Is there some way to kind of think about that, that,
3 you know, they were like, okay, you know, we are more
4 unionized in the car industry, so protect the car industry,
5 but we don't care about the textile industry? Something
6 along those lines, I would love to hear what your thoughts
7 are about that.

8 MR. LOPRESTI: Yeah. So, for sure, that's
9 possible. We were in particular -- I mean, they're all going
10 to zero, so the actual cut is not endogenous, but the phase-
11 out timing, of course, is. So one of things we do -- I
12 didn't talk about it here -- is we tried to look at -- that's
13 one of the reasons we use tariff levels first rather than
14 changes, right?

15 So, if you were to look at 1990 to 2000 changes in
16 tariffs, then that is going to be a function of this kind of
17 story. So the tariff cut's going to be smaller for stronger
18 unions, presumably, that have been able to delay the phase-
19 out. So we're using levels and exploiting just the total
20 change, not the particular period.

21 The results don't change, it turns out, if you
22 actually look at the changes. I mean, the magnitudes
23 obviously changed because the value's different, but the
24 actual punchline of this relative decline in manufacturing
25 looking different in these two places is not.

1 So it doesn't seem like there's a lot happening at
2 least in an important way for manufacturing outcomes in terms
3 of the endogenous phase-outs, but it is something that we
4 were trying to be mindful of.

5 MR. AHMAD: Another thing on the labor concessions,
6 you know, is there, like, some, like, prominent example
7 during this time that, you know, some unions, like, actually
8 had these concessions? Is that something that, you know, you
9 could look at or give us examples that, you know, like --
10 because that, I think, is your main kind of way of thinking
11 about it, right, that there were some, you know, concessions
12 on the wayside.

13 MR. LOPRESTI: Yeah.

14 MR. AHMAD: But, if there are some prominent
15 examples out there, you know, that might help your case a
16 little bit, right?

17 MR. LOPRESTI: Yeah. Okay. Yeah. We haven't -- I
18 mean, collective bargaining agreement data back that far is
19 spotty, but it's something we could definitely look into and
20 could certainly look into large, like, you know, if UAW or
21 something is negotiating, we'd be able to get information on
22 that kind of thing. Yeah, that's a good idea.

23 MR. GRAY: We do have a question in the chat from
24 Stephanie about union member mobility and the ability of
25 labor to move between right-to-work states and non-right-to-

1 work states. I don't know if you'd like to come on and
2 elaborate, Stephanie?

3 MS. FORTUNE-TAYLOR: Well, I can start off by
4 coming on and saying your paper is so exciting and I agree
5 with Karen. All of the different robustness checks and
6 mechanisms that you pursued were just so lovely, so thank you
7 so much for doing such great work.

8 MR. LOPRESTI: Thank you.

9 MS. FORTUNE-TAYLOR: I just was asking about just,
10 you know, the bigger question that we always think about, you
11 know, in local labor market effect work about the ability,
12 especially, you know, when you're looking at cross-sectional
13 work, to maintain, like, this hope that everybody's kind of
14 staying put. I mean not this hope, but this assumption that
15 everybody's kind of staying put, you know, from 1990 to 2000.

16 And I was just wondering about whether union
17 membership -- like, say, for example, a union member is,
18 like, in a non-right-to-work state and, like, things are
19 shutting down, you know, and then, you know, I know
20 sometimes, like, for example, if GM is closing down a plant,
21 they'll say, okay, we're closing down this plant, but, you
22 know, if you want to, you can move to this plant in this
23 other area. And I'm just wondering if that could be anything
24 that could potentially make the right-to-work states more of
25 a fertile ground for landing if maybe you've been displaced.

1 Just wondering if you've thought about that and just
2 wondering what you think about that. Thanks.

3 MR. LOPRESTI: It's a really terrific question. So
4 we have thought about migration in a more aggregate sense,
5 and you don't see large -- empirically, it doesn't seem like
6 large migration responses to this shock. But the kind of
7 story you're telling at a more micro level, it seems
8 plausible to me. It's not something we've looked at, but we
9 could try.

10 So we could think about, for instance, variation in
11 population among groups that are more or less likely to work
12 in these kinds of jobs. So, even if there's not an aggregate
13 population change, maybe there is among certain groups. And
14 we could try again, I think, maybe in the CPS data to
15 actually follow people and look for mobility. Again, it
16 would be more aggregate, but it's a really terrific question
17 and something we can certainly look into.

18 MR. GRAY: With that, it looks like we're just
19 about at time, so I want to take the opportunity to thank
20 Professor Lopresti for presenting your compelling research.
21 I want to thank Bill and Karen.

22 And I want to remind the audience that the seminar
23 series continues the rest of this week, with a seminar
24 tomorrow morning at 9 a.m. where Professor Ariu will be
25 presenting on Service Imports, Workforce Composition, and

1 Firm Performance Evidence from Finnish Data. We hope to see
2 you all for the rest of the week. Thank you.

3 (Whereupon, at 2:30 p.m., the seminar in the
4 above-entitled matter was adjourned.)

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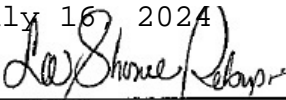
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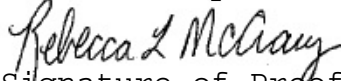
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