

EconoFact Chats: Trade And Jobs: Who Loses, Who Adapts and Who Pays?

Kadee Russ, University of California, Davis

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Michael Klein:

I'm Michael Klein, executive editor of EconoFact, a non-partisan web-based publication of The Fletcher School at Tufts University. At EconoFact we bring key facts and incisive analysis to the national debate on economic and social policies, publishing work from leading economists across the country. You can learn more about us and see our work at www.econofact.org.

Michael Klein:

An MIT professor told the story of how in the first day of his international trade course, he asked his students to write why international trade differs from trade among people within a country. He was expecting answers along the line of national differences in productivity or resources. But one of his students wrote, domestic trade is between us and us, while international trade is between us and them. There's a high level of agreement among economists that international trade offers overall benefits to an economy. But economists also recognize that international trade, like the advent of computers or the introduction of new products, or even changing tastes, creates winners and losers.

Michael Klein:

Perhaps for these reasons, the general public is often suspicious of the net benefits of trade, and trade restrictions are a common theme on campaign trails. My guest today is Katheryn Russ of the University of California at Davis. Katie, as she's known to her friends and colleagues is a recognized expert on international trade. She served as senior economist for international trade and finance on the Council of Economic Advisers from 2015 to 2016. Katie, welcome to EconoFact Chats.

Katheryn Russ:

Thanks, Michael. It's lovely to be with you.

Michael Klein:

It's great to have you on the show. Can you start off by making the economist argument for the benefits of international trade?

Katheryn Russ:

Well, if you think about your day so far, I bet you used a smartphone manufactured in China. I bet you drank coffee from beans grown in Columbia, or maybe Guatemala. You're probably wearing clothes made in Vietnam or Bangladesh. And later on, I bet you're looking forward to drinking some wine, which may not be from California, but maybe New Zealand or France or nice Argentine Malbec. So obviously this is all possible because of international trade. And when I'm teaching some of my students are from abroad. So that's actually a U.S. export hosting international students and providing educational services. And that's an advantage of trade for both them and for me and my university, getting to interact with them. There's also evidence that trade spurs competition, which can make our companies innovate and thrive if they can survive the competition, which is really an important danger that we have to think about. Or they might realize other cost savings because when they're able to serve larger markets, then that lowers their average cost of production if they have big upfront costs like big factories to build or something before they start serving customers.

Michael Klein:

So that last point that you make, Katie, if they survive, and that aligns with what I mentioned in the introduction that increasing trade, like many other kinds of economic changes creates winners and people who lose their jobs or their incomes. Some companies do do better through trade because they're spurred to offer more and better products at lower prices. And because trade also offers them new markets, like you, they're also exporters perhaps, but others may be driven out of business. We often hear that trade is responsible for the decline in manufacturing in the United States. Does the evidence bear this out?

Katheryn Russ:

It's not so much the decline in manufacturing, because value added in manufacturing is as high as it's ever been, but it's about decline in manufacturing employment. So I know you know that EconoFact has a memo on this by David Deming of Harvard.

Michael Klein:

One of our best friends, yes.

Katheryn Russ:

But you guys have been on the frontier issue since the beginning. But manufacturing share and overall employment has been declining in the U.S. since 1950. So if we think of manufacturing, not just the number of jobs, those have been declining since 1979 and the absolute levels. But as a share of total civilian employment, it's been declining since 1950. And it's also been declining in recent decades across other rich countries. And some of this may be due to trade and this import competition that we just mentioned, but there are also other important reasons that we have to take into account if we're going to help equip the workforce to be resilient, especially technological innovation like automation.

Katheryn Russ:

And also just the shift in U.S. consumption spending as our population's been aging toward services like healthcare. So for innovation and automation, you might take steel as an example. So steel plants used to have armies of workers, but the move to so-called mini mills has reduced the number of workers needed to produce a given amount of steel. And it's also reduced the carbon footprint. So while this innovation is hard on workers, it sometimes has other positive benefits.

Michael Klein:

So you're talking about sort of a dynamic economy in which things change. And I know you have some interesting work with Jay Shambaugh and how technological progress affects different regions of the United States. Is this related to what economists call the product cycle that has regions or countries develop? They move from producing some things, perhaps goods that require less expertise or less specialization to producing more complex things, or as you suggest moving on to services?

Katheryn Russ:

Yeah, our work is about exactly that. Just to take an example from my own family history. So my father was born and raised in a small city in New York, called Endicott, which I think is not too far from where you grew up, but his grandfather owned a tobacco farm at the turn of the 20th Century. And I recently learned while researching that paper from a book by Ed Leamer, that the tobacco who was probably going towards the production of cigars, because cigars were a big industry in that area in the late 1800s, but then cigarettes became popular and cigarettes could be mechanically rolled. So the cigar industry petered out in that area. But shoe manufacturing took its place. So George Johnson came in and he set up the Endicott-Johnson Shoe factory, Endicott in Binghamton. And that went very strong. So in 1942 they were

producing millions and millions of shoes to outfit the U.S. army in World War II. Not everyone knows that George Johnson actually induced Tom Watson to set up a research and development facility in that area during The Great Depression, so-

Michael Klein:

[inaudible 00:07:49] this IBM thing?

Katheryn Russ:

Yeah, so IBM really became a huge employer in the area. So when the shoe industry petered out in the 1960s, this higher tech industry, along with other kind of satellite industries took its place. But then we know that IBM not so long ago sold its production business, so it's laptops and stuff like that, that manufacturing business to Lenovo in China and became more of a service oriented organization. Right now if you go to Endicott, well, I guess when I was a kid, if you go to Endicott or Binghamton, you would see these abandoned shoe factories. And I've learned that some of them are being converted to elder and healthcare facilities. And then there are also some other industries like quite high tech popping up there, like for aviation simulators. So you see this sweep of technology through a place and you can see the product cycle. And also in this chapter that Ed Leamer wrote for his book sweeping through Broome County, New York, basically.

Michael Klein:

So you talk about, where I come from is not that far from Endicott. I come from a small town called Gloversville, New York, which used to produce gloves, my father worked in the tannery, but unlike Endicott, when the glove industry left, nothing really came in to replace it. And so Gloversville, which had a population of 25,000 when I was a kid now has a population of something more around 15,000. So this speaks to the issue of, are regions able to adapt to changing conditions, including changes due to trade? So for Gloversville we started to see a decline when Brazil was selling more leather, and there are also changes in taste. So women stopped wearing gloves as sort of the rigor part of their fashion. What did you and Jay find about the ability of regions to adapt to changing conditions, including changes to the trade?

Katheryn Russ:

So we looked at this evolution of the geography of manufactured goods that were affected by what's called the China shock. So the China shock is what many people call this surge in imports in particular industries from China starting in the 1990s.

Michael Klein:

And that's gotten a lot of attention, David Autor and his co-authors have written about this. And it's really in part of the common theme of what's been going on due to China, right?

Katheryn Russ:

I think Autor, Dorn, and Hanson's work has really helped shift the focus back onto workers in mainstream discussions of trade policy. So, that work has been highly influential showing the impacts of the China shock. And so our paper was trying to put that in historical context. And what we were showing is that, suppose the China shock had hit in 1910. It would have hit the Northeast where a lot of the innovation spawning these products was occurring. But these products had moved over the course of the 20th Century. So they spread across, especially after 1940 into lower wage areas in the south and west. And many of these areas also had lower levels of education. So what we find is that ... So we find a couple of

things. First areas with lower education were less able to kind of absorb this employment shock. They had a bigger hit in the form of unemployed.

Michael Klein:

They were less adapted.

Katheryn Russ:

Yes. And we also see some relationship between this movement and innovative capacity measured by patents per person in an area. Other authors have found that some industries were very successful at innovating away from the China shock industries. And so firms were able to thrive in places with high levels of human capital or high levels of education, because they are able to innovate a way into say services industries, so other types of product areas. We also found something interesting in that, so thinking about the product cycle, it's all about this movement, right? We found that where these industries already had been leaving, there were much more severe impacts on the labor market, the local labor market. So bigger increases in unemployment, more detachment from the labor force in these areas.

Katheryn Russ:

So it seems that this shock kind of accelerated something that was already happening. So these industries were already progressing as they standardized, as they routinized, like moving to lower wage areas far from their innovative centers. But in addition to that, this sudden increased competition with low wage countries seem to cause a kind of disorderly unwinding. So really sped up that process. And not every labor market was able to withstand that shock. The ones with a high proportion of educated workers, like high school and college degrees, they did better in absorbing it.

Michael Klein:

So that speaks to the importance of education and what economists call human capital. But I guess it also points to the fact that the China shock sort of sped up as you said, something that was going on otherwise in any event. And so the counterfactual is not that these places wouldn't have changed, but it might have taken a little bit longer. Is that more or less correct?

Katheryn Russ:

Yeah. And it may have given them time to do so without these big transitional shocks to people whose jobs were displaced. So instead of people losing their jobs, you may have seen a reduction in hiring occurring over time. So a reduction in job growth, at work cutbacks as people retired or something like that, that would have caused less personal displacement. Which we know from the Autor, Dorn, and Hanson's papers and other literature that sprung up from that can have really significant human costs and costs to the community.

Michael Klein:

I'd like to shift a little bit now to another set of research things that you've done. One of our most popular EconoFact memos. The one you co-wrote with Lydia Cox is about how restrictions on trade can have very wide ranging consequences. You mentioned the smartphone at the beginning of our discussion. In fact, the smartphone, even though it's imported from China, the component parts come from all over and that speaks to international supply chains. And what you looked at with Lydia was the way in which steel imports into the United States don't only affect the people who work in steel mills, but also people work in a wide range of manufacturing because steel is used as an input in making so many things. And you come up with a really striking statistic, this 80 to one statistic. Could you talk a little bit more about that?

Katheryn Russ:

Sure. So we use the Bureau of Economic Analysis input-output tables, which tells you how much of a huge array of inputs different industries use to produce a dollar's worth of output. And we look at total requirements related to steel. So this includes not just steel that companies might buy directly as a material to shape into a product, but also steel that they use indirectly through equipment and machinery that they use that may contain steel. So we find that about 12 million firms have at least 1% of their input requirements related to steel. And two million firms actually use steel what we call intensively. So 5% or more of their total input requirements are steel-based.

Michael Klein:

And so when you looked at the effect of a tariff for every job that's saved in the steel industry, or every job is affected in the steel making industry, 80 jobs in other manufacturing industries are affected by raising the price of steel through imposing tariffs.

Katheryn Russ:

Yeah, so it affects the costs at companies that employ 80 workers for every worker in a steel industry. So that's exactly right. And I think we could file this under the unintended consequences of tariffs. So it seems like, we talked about this China shock. It seems like a natural response would be just to put tariffs on things and keep the imports out that are causing this competition that may have a big shock on local communities. But then when we do that, we may threaten other jobs in other sectors that are actually benefiting from this trade in the form of lower cost inputs. So it gets very complicated, very quickly.

Katheryn Russ:

There's a study by some economists at the Federal Reserve Board of Governors that actually pieces out how many jobs were lost. What we were able to say was just generally, "Okay, how many workers are in industries that are likely to be affected by that higher cost of steel in terms of their profit margins?" They went and looked at employment attributable to the steel and aluminum tariffs under Section 232, put in place in 2018. And they find that there are 75,000 less manufacturing jobs out there directly attributable to these tariffs. And I would say that's probably a conservative estimate.

Michael Klein:

So that's very striking that these tariffs that are supposed to save jobs actually cost jobs. And then you have another EconoFact memo where you survey sort of broad literature on tariffs and the effects of tariffs. And basically you find that they're quite costly, which is in line with what economists think from their both theoretical models, but also the empirical work that's done.

Katheryn Russ:

Yeah, and economists, we're academics. So we like to express things in all kinds of different ways that make sense to us from a theoretical perspective or an empirical perspective. So what we did in that memo was just to take all the estimates, which again are expressed in these different units, different contexts, and try to translate them to the same unit in their results, which is dollars per household. And what we found is that the tariffs put on in the tariff war, because they were put on in such, I guess the only word I can use is confusing manner. I can say haphazard, but it would be speculative, so. But I can say confusing. So if you just, if you try to look through the federal registers even to see what tariffs are going into place after any given announcement, they're referring back across other federal registers and then they're adding annexes and some of the annexes aren't good and sometimes detract.

Katheryn Russ:

So it's really hard to even map which tariffs are going into place at any given time, unless you're very, very careful and spend a lot of time on that. But because of this uncertainty generated by the way that the tariffs were put in place, the costs of using tariffs as a economic policy tool were much higher to the American economy. And so one estimate, again, coming out of research by the Federal Reserve Board of Governors is that they cost \$1,700 per household in one year.

Michael Klein:

Yeah, that's effectively a very high tax has been placed on households for an outcome that as you're mentioning is really uncertain in terms of saving jobs. In fact, it could very well cost jobs.

Katheryn Russ:

The other study I mentioned on the steel jobs. So they also looked at the total number of manufacturing jobs affected by the trade war generally. And this includes retaliatory tariffs and so forth. And the result is that there are 150,000 fewer manufacturing jobs out there, directly due to this trade war.

Michael Klein:

So that's really striking too that when we think about tariffs, you have to think not only about the raising the price of steel, which would then perhaps help steel manufacturers, but then you point out in your memo with Lydia that it affects people who use steel, but then there's this whole other layer as well of retaliation, which of course is what we saw. So something that on the surface to somebody who hasn't thought about this a lot, or is not an expert might seem like maybe it's a good idea to help out jobs. Your work, your very careful work that you have published on EconoFact and of course in scholarly journals and such have shown that these have really important real world consequences, well beyond sort of the most simple ideas of what the consequences might be. So Katie, thank you very much for talking with me today, and illuminating this really important issue that is affecting all of us in many ways and perhaps in ways that are more subtle than people first realize.

Katheryn Russ:

It's a pleasure chatting with you, Michael. Thanks, and yeah, this is a tough issue. I really appreciate EconoFact elevating it.

Michael Klein:

We really appreciate all the contributions that you've made to the site with your excellent memos.

Katheryn Russ:

Thanks.

Michael Klein: Take care. Bye.

Katheryn Russ: You too.

Michael Klein:

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