

## EconoFact Chats: Can Manufacturing Still Provide Inclusive Growth?

**Robert Lawrence, Harvard Kennedy School**

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### **Michael Klein**

I'm Michael Klein, executive editor of EconoFact, a nonpartisan, 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](http://www.econofact.org).

### **Michael Klein**

The Bruce Springsteen song, *My Hometown*, from the 1984 album *Born in the USA*, has the lines: "They're closing down the textile mill across the railroad tracks. Foreman says the jobs are goin' boys, and they ain't coming back." Springsteen sings of a post-industrial landscape, where jobs that had been providing a middle-class life are disappearing, and the human cost of that loss. Manufacturing employment has been declining in the United States as a share of total employment. But this has been happening in other so-called industrial countries as well. What are the sources of this decline? Trade? Automation? Changing patterns of demand? Does this represent a natural progression as an economy evolves? What are its implications for people, especially for those without a college education? In previous decades, well before Springsteen wrote his song, people without a college education could look to a factory job as a stable, well-paying means of employment. Would today's manufacturing jobs offer similar opportunities? To discuss these issues, I'm pleased to have as my guest today on Econofact Chats, Robert Lawrence. He is the Albert L. Williams Professor of International Trade and Investment at the Harvard Kennedy School. Robert served as a member of the President's Council of Economic Advisors from 1998 to 2000. Our discussion today will draw from his teaching, research, experience, and especially from his 2024 book, *Behind the Curve: Can Manufacturing Still Provide Inclusive Growth?* Robert, welcome to Econofact Chats. It's good to have you on the program.

### **Robert Lawrence**

Thank you, Michael. It's good to be here.

### **Michael Klein**

To begin, does the title of your book, *Behind the Curve*, refer to what has been happening to manufacturing employment in the United States over the past 75 years?

### **Robert Lawrence**

Yes. Actually, it's designed to emphasize this idea that manufacturing follows a curve in terms of its share in total employment, and the book explores why this has occurred, how pervasive this

has been across many, many different countries, and in particular, its consequences for inclusive growth.

**Michael Klein**

As you mentioned, it's not just something that's happening in America, but it's happening across what we sometimes call the industrial world.

**Robert Lawrence**

Yes. You know, every country thinks it's unique and explores its own problems and tends to ascribe what's happened in its manufacturing sector to some defect in its policies or its approach to manufacturing. But when you look at the big picture, you see that even dynamic economies like Singapore and even China, more developed countries like Japan and Germany, they've all experienced this hump-shaped curve and are all on the downward slope of the curve.

**Michael Klein**

What I thought was a really interesting point that you make in the book is that a similar thing happened more than a century ago with agriculture. A very large proportion of the working population was in agriculture at the turn of the 20th century, but then this declined as people moved to manufacturing. So this gives the share of employment in manufacturing over a long horizon an inverted U-shape as it first grows as people move from agriculture and then in more recent times declines. Are there any lessons from the steep decline in the share of workers in agriculture more than a century ago that are similar to what we've been seeing in manufacturing over the past four decades or so?

**Robert Lawrence**

Yes, I think there are lots of similarities. The first is that, you know, there was a decline in employment in agriculture, but our food output increased rapidly. Indeed, it was because productivity growth was so rapid in agriculture that the price of food declined and people responded to cheaper food prices by taking the money they saved and purchased manufactured goods and services. So in a very analogous way today, manufactured goods have become relatively cheaper and people are reacting by spending more of their money purchasing services. And so I think there's a very strong similarity in the process. I would also say what's very interesting is if you go back to the time, even of Thomas Jefferson, people believed that all wealth, he believed that all wealth came from the land and that this newfangled manufacturing activity wasn't really true wealth. And today, people believe that real wealth will only come from manufacturing and they discount the fact that so much of our economy is in services.

**Michael Klein**

Yeah, when I read the biography of Hamilton, there was that interesting debate between Hamilton who favored manufacturing and Jefferson who favored agriculture. And there are a lot of echoes of that in today's world. Robert, when people moved from working in agriculture to working in factories, they got higher pay and perhaps better living conditions. So it seems to be the case that manufacturing in the period up until the 1970s did in fact help people achieve what some call inclusive growth.

**Robert Lawrence**

Absolutely. Manufacturing was a powerful driver. I was very interested as I looked at the data to see it didn't just include more people and give them opportunities. Almost as late as 1970, about 35 percent of men who didn't have college degrees were working in manufacturing. And it served to provide their careers with a ladder in which they gained higher and higher wages. And that, in turn, allowed them to be members of the middle class. But also, it allowed places like the South and parts of the West to attract firms. And what you also saw in the U.S. was not only a convergence towards greater income inequality among workers, but also between places.

**Michael Klein**

And it especially helped minorities, right?

**Robert Lawrence**

Absolutely. Minorities primarily got their opportunities earlier. They moved from the South, especially to the Midwest, and got good jobs in places like Detroit and Chicago.

**Michael Klein**

The Great Migration.

**Robert Lawrence**

Yeah.

**Michael Klein**

So, Robert, what has happened since the 1970s? People talk about trade or automation as sources of the decline in manufacturing employment. And in your book, you also discuss how the demand for manufacturing goods has affected the share of workers in that sector. How important do you think each of these factors has been in the decline of manufacturing employment share?

**Robert Lawrence**

I would say in ranking the causes, first, there was a dramatic change to a digital economy somewhere around 1980, where we went from a mechanized manufacturing system to the use of computers in many of the things we produce. And this technology increased the demand for

more educated workers. And so I would say technological change was very, very important, probably the most important. The second is demand patterns. As people get richer, they tend to consume fewer and fewer goods and increase their demand for services. Poor people, they need shoes, clothes, a bicycle, a motorbike. Rich people, they need tax consultants, psychiatrists, and personal trainers. So there's this change in the pattern of demand. If you go back, almost 60% of what people spent on consumption in 1950 was on goods. Today, it's barely a third. So that's a second big driver, which is ignored. And a third is international trade, where the United States tended to have more of a comparative advantage in services, and lost some of its competitive advantages in the production of goods. So it contributed to the declines. It was especially pronounced in the 1980s when the Japanese produced first steel and then automobiles. And later, after 2000, particularly when the Chinese started to increase products that were imported by the United States.

### **Michael Klein**

Going back to something you alluded to before, and which I talked about when I quoted the Springsteen song in the introduction, there's been a geographic dimension to this as well. The term Rust Belt was coined in the 1980s to describe parts of the Northeast and Midwest, and I guess Freehold, New Jersey, while other regions like the West and the South did much better. Did the decline in manufacturing employment play an important role in the creation of the Rust Belt and in the closing of factories in places like Freehold?

### **Robert Lawrence**

I think very definitely. It was the combination of more opportunities and lower wages in the South that led firms to move out of the Midwest, and the increased competition that I alluded to earlier from Japan and other Asian countries in addition to these advances in productivity. So it was this whole combination of forces that led to factories closing in the Midwest, and gave rise for quite a period to depressed economies. What's interesting, though, is that the response to Japanese imports into the United States was actually relatively...I wouldn't all say it's painless...but the places were able to...because people migrated away from those places, those who remained were able to find jobs and unemployment rates returned to their previous levels. By contrast, in the more recent period, workers and people have become much less mobile, much less able to move. Part of it is they're less willing to move. But a major factor is that the growth areas in the United States have occurred in superstar cities like Seattle, San Francisco, New York, Washington, D.C., and Boston, centered on technology. And these places have become very expensive places to live. This makes it very difficult for those who lost jobs more recently to move to these places to find new opportunities.

**Michael Klein**

Going back to the comparison with the decline in the number of agricultural workers, that wasn't the case then. It was that cities really grew, and more rural areas shrunk at the beginning of the 20th century, right?

**Robert Lawrence**

Yes. So, people could move to cities. There were jobs in industry, there were jobs in services, and they earned higher wages in those activities. So, although the adjustment looks relatively painless today, if you just stand back and look at the data, underlying that was a huge disruption in people's lives, particularly those who remained in the smaller towns and rural areas.

**Michael Klein**

That still holds today. In a lot of these rural areas, they've never recovered population. So a lot of things that demand a certain level of population, like having services and schools and things like that, they've just not recovered, right?

**Robert Lawrence**

Absolutely.

**Michael Klein**

So, Robert, national employment might not show much of an effect of the decline in manufacturing, but there can be strong effects for particular locations, as we've been discussing. You can think of the downward path of cities like Flint, Michigan, or even where I come from, a small town in upstate New York that had been a center of tanning and glove making. What do we know about these local effects and the difference between places where the effects were more adverse, compared to places where there was less of an impact?

**Robert Lawrence**

I think that's very important. Because towns often depended on one or two major plants to provide the growth impulses. And when those plants shut, it was devastating for many towns. It was difficult for them to recover. Larger cities tended to be more diversified. And they, although experiencing considerable adjustment difficulty, tended to do much better. If you looked at Pittsburgh, what you saw was steel was dominant earlier on. Today, the University of Pittsburgh's medical center is the biggest provider of employment. So they've been able to make that transition. If you look at the Garment Districts in New York, you see they've been replaced by finance and other commercial activities. But the smaller towns are the place where the greatest difficulties have been experienced. And what we've seen more recently is that rather than migrate or seek employment, many, many people, especially men, have withdrawn from the labor force. And these difficulties have been associated with a lot of social problems. Drugs, death from opioids, etc.

**Michael Klein**

Robert, I'd like to go back to the example of the transition from agriculture to manufacturing more than a century ago. It's easy to romanticize agricultural work, but in fact, it's a very difficult life. If the government were more involved in the economy at that time, can you imagine policies that tried to shore up agricultural employment? And is there a similar thing going on with manufacturing now? Is there a nostalgia for these types of jobs? And do policies that try to stem the tide against falling manufacturing employment, are they just pushing against the inevitable?

**Robert Lawrence**

Yes. I mean, there's some very interesting recent polls which show that I think something like 80% of Americans say that the U.S. should have more manufacturing jobs, but only 10 or 20% of them would like to have those jobs. Manufacturing jobs also are often, particularly production line work, is very hard work, can be very tedious work. And similarly, obviously, working in the fields can be very hard on people. You see they age much more rapidly, they have more injuries, and so on. So I think there is a similarity in the two types of transitions. And nonetheless, those jobs are really important for the people who have them. And we do see that although it has shrunk, if you control for people's other attributes — their education and other aspects of their demographics — they tend to earn somewhat higher wages in manufacturing today. So there is some implicit compensation for the difficulties of working on the line.

**Michael Klein**

And another point along these lines, who will be employed in modern factories? Will it still be a ladder to the middle class for those without a college education? The Biden administration promoted the creation of fabricating plants for semiconductors, but these wouldn't actually have many jobs for people without higher levels of education. The subtitle of your book, Robert, is *Can Manufacturing Still Provide Inclusive Growth*. Can it?

**Robert Lawrence**

Yes. So there are two forces at work. The first is the share of jobs has shrunk to the point where only 8% of Americans, around 8% or 8.5%, can actually get a job in manufacturing. And the second is, within that, more and more of the jobs require college educations. And so the share of college-educated workers has increased. If you think about the difference in an automobile, a traditional mechanically driven automobile, and then you look at the cars we drive today, which are effectively computers on wheels, you can understand this bias towards employing more and more skilled workers, software engineers, the kind of people who are demanded. In addition, what we have are much more sophisticated robots, and their diffusion is likely to increase. In China today, they have factories where there are barely any workers left. So the prospects for actually giving large opportunities for people to work in manufacturing, I think, are pretty bleak. There would be some employment opportunities in building the factories. Construction jobs are of a different type. But once the factories are built, the employment numbers are rather small.

We've seen that despite the policies of protection and the industrial policies of the Biden administration, we basically have had flat or declining manufacturing employment. And today, it's no higher than it was before COVID.

**Michael Klein**

Robert, what about other arguments for promoting manufacturing, such as national defense or vital industries or concerns about international supply chains? Do these concerns merit greater support by the government for manufacturing?

**Robert Lawrence**

I think some of these are, of course. Manufacturing products are still very, very important. Manufacturing plays a vital role in allowing us to decarbonize the economy, for instance. We need wind turbines, we need solar panels, and we need to produce those. Manufacturing is very important in the digital economy. We need semiconductors. If we're going to have artificial intelligence, if we're going to do genome sequencing, we need very sophisticated types of machines. So...there are many...and then for national defense, we need drones and other kinds of weapons. So, yes, I do think in some cases where these are of national imperative, there is a case for assisting and doing research in the production of goods. It's simply that when it comes to...and by the way, a lot of what I've been talking about illustrates that most of these are technologically sophisticated products, and so that, again, underscores the kind of people you're going to be employing. So it's a combination of automation and this bias towards employing more skilled people. So I think even if we were to have dramatically increased these industrial policies, and it's not only in the United States, they're all geared towards employing more and more technologically sophisticated workers.

**Michael Klein**

So what you're saying is that manufacturing can't play the role it used to play in helping people without a college education to advance to the middle class. So, Robert, what policies would you advocate, not just for supporting manufacturing, or not even for supporting manufacturing, but for helping people without a college education either transition from manufacturing, or start down another career path that would offer a good middle class life?

**Robert Lawrence**

Well, I think there's a whole range of policies that need to be stressed. There are a lot of jobs that actually don't really require a college degree. And there are employers who use the college degree as a screening device rather than as an indication that workers have particular skills. There are opportunities now, for instance, for workers to get training. Amazon, Google, and other companies offer remote courses. In six weeks, you can be qualified as an operator of web services. You can then use the diploma you get to signal that you have skills of a particular type. And that can also allow you to get a job, which actually does lead to promotions and

advancements in your earnings. I think training is very, very critical. I think assistance in mobility is something we have to think about. We need to rethink our housing policies. The zoning which makes houses, especially in those superstar cities, so expensive needs to be reexamined. I also believe that those who lose their jobs...we should have a broad program of wage loss insurance in which we compensate some of those, particularly older workers, who lose their jobs and don't have the opportunity to earn wages that are similar to those they once earned. It's going to take a lot of different approaches. Community colleges can play a major role in providing workers with the skills they need, but where they're effective, they work with firms and other social partners to provide opportunities in locations. I also think in the United States in particular, we at the federal level have committed very few resources to place-based policies, to take the places that have been left behind but may still have promise, and promote them. There was a lot of talk, when we were implementing climate policies, about climate justice. But I don't think those policies, as they stood, were very effective in creating opportunities for those places, for instance, where fossil fuels were no longer being produced.

**Michael Klein**

Well, Robert, thanks for taking the time to discuss these issues that have important economic, but also political and social consequences. And congratulations on the publication of *Behind the Curve*. I really enjoyed the book and found it very interesting.

**Robert Lawrence**

Thank you very much, Michael. It's a pleasure to talk to you.