THE BROOKINGS INSTITUTION

U.S. MANUFACTURING:
POLICIES FOR A NEW ECONOMIC REALITY FIRST ANNUAL JOHN WHITE, JR. FORUM ON PUBLIC POLICY

Washington, D.C.
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PARTICIPANTS:

Welcome and Introduction:

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SOLVING THE CHALLENGES FACING THE MANUFACTURING SECTOR:

Moderator:

DARRELL WEST
Vice President and Director, Governance Studies
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Panelists:

PHILLIP SINGERMAN
Associate Director, Innovation and Industry Service
National Institute of Standards and Technology
U.S. Department of Commerce

THE HONORABLE DON MANZULLO (R-IL)
U.S. House of Representatives

THE HONORABLE DAVID CICILLINE (D-RI)
U.S. House of Representatives

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P R O C E E D I N G S

MR. TALBOTT: Good morning, everybody. I'm Strobe Talbott, and it's my great honor to welcome you all here this morning. It's particularly good of you to come indoors on a beautiful summer day before the temperatures reach a hundred degrees or whatever they're going to.

This is a very important day for Brookings, and I think you're going to find it a very stimulating program for yourselves as well. This is the inaugural and from now on the annual John White, Jr. Forum on Public Policy.

John, who's here in the front row with an extraordinary pink and purple tie, is one of my bosses here at the Brookings Institution, which is to say he is a member of our Board of Trustees. He is also a distinguished leader in the private sector. He is the president of Taco, Inc., which is a leading manufacturer of hydronic systems. I like to think of myself as a reasonably literate guy, but I did have to ask him: what exactly does "hydronic" mean? It means using water either to cool rooms, like this one, in hot weather or warm them up in cold weather. Have I got it or the essence of it, the essence of your business?

MR. WHITE: You absolutely do, as much as I know.

MR. TALBOTT: John, by the way, is, as the CEO of Taco, the third generation of leadership in what is a family business, and it is terrific that his wife, Liz, is here with us this morning and also his two sons, their two sons, John and Ben, who are also part of the company and therefore represent a fourth generation. And that actually establishes a bit of a connection between Taco, Inc., and the Brookings Institution. We like to think of ourselves as being something of a family enterprise ourselves, but we go back even more generations than that, nearly a hundred years, to Mr. and Mrs. Robert S. Brookings, and all of the scholars here are, in some sense, the progeny of their vision for the original think tank. And in that spirit, we have always tried to make Brookings, in many respects, very family friendly, including in the engagement not just of our trustees but of their families as well in the life of the institution.

Now, the topic for today's forum is U.S. manufacturing, and I would suggest that that is a doubly appropriate subject for us to be discussing. First of all, it's a sector of the American economy that Johnny White knows very well, and he has been part of the solution to some of the problems besetting

that sector. And the difficulties that American manufacturing is now having are absolutely key to the larger difficulties besetting our economy.

For the manufacturing sector in the United States to get fully back on its feet is going to be closely related to the health -- or maybe I should say the restoration of the health -- of the U.S. economy, including the health of our workers, which is to say the whole issue of affordable health care. And it obviously also relates very much to our country's ability to compete in a highly competitive, interdependent world with emerging powers exercising great muscle, including in the manufacturing sector.

And then, of course, there is the critical issue -- and I might add politically critical issue -- of jobs, jobs, jobs. The U.S. is in some ways, and I guess we should say hopefully in key ways, at a crossroads, which is to say we are coming out of a period where our country has lost five million jobs over the last decade. There are of course some signs of recovery, but that recovery is far from robust.

We're going to have a number of panels over the next couple of hours. They will bring to bear on the subject of manufacturing a great deal of expertise, a variety of perspectives, and engagement with all of you.

The first panel will be moderated by my friend and colleague, Darrell West, who is the vice president and director of our Governance Studies program. He came to us from Brown University in Providence, Rhode Island, which is the home town of the Whites, and one of his many achievements as the head of our Governance Studies program is bringing Johnny and the other Whites to Brookings.

So, Darrell, I'll turn the program over to you.

MR. WEST: Good morning. I'd like to thank all of you for coming out, and I'd like to add my thanks to what Strobe started with to John; his wife, Liz; and sons, John and Benjamin, for their tremendous generosity in supporting this forum.

Our goal with this annual forum is to use this and other events to raise awareness about manufacturing issues and work towards improving the climate for manufacturing in the United States. As we all know and as Strobe alluded to, it's been a challenging time for American manufacturing, that industry's percentage of the overall employment situation has fallen. The sector has lost more than 5 million jobs over the last decade; unemployment now stands at around 12 million workers.

However, the sector is experiencing a renaissance. According to a new report by Marc Levinson of the Congressional Research Service that just came out a few weeks ago, manufacturing output has actually increased by 19 percent since 2009. But the number of jobs in that sector has risen by only 4 percent. There's been greater adoption of advanced manufacturing techniques and substantial improvements in worker productivity.

So, today we're hosting a half-day conference focusing on ways to improve manufacturing and overall economic performance. We're going to look at how to solve the challenges facing the sector; what are labor management doing to strengthen manufacturing; and what are the best ways for the United States to recapture our innovation edge. So, we have several panels this morning, and then we'll be serving you lunch after the last panel.

For our opening session, we have four distinguished speakers. Phillip Singerman is Associate Director for Innovation and Industry Services at the National Institute of Standards and Technology in the U.S. Department of Commerce. In that position, he is responsible for external partnerships such as the Hollings Manufacturing Extension Partnership, the Technology Innovation Program, the Baldrige Performance Excellence Program, and NIS Technology Transfer and Small Business Innovation Research Awards. Prior to joining the Institute, he was senior vice president at BND Consulting, which was a D.C.-based firm providing strategic advice and technical assistance to federal economic development programs.

The Honorable David Cicilline is a Democratic member of the U.S. House of Representatives from Rhode Island. The congressman has been fighting for common sense policies to help small business and manufacturers deal with our challenging economic times. He has introduced legislation to create a made-it-in-America block grant to help small manufacturers retool their factories and retrain workers with the skills they need to compete in a global economy. He has introduced and co-sponsored a series of bills designed to revitalize American manufacturing, including legislation to develop a comprehensive national manufacturing strategy. As a member of the House Committee on Small Business, he was an early supporter of bipartisan legislation that was signed into law to repeal some of the onerous reporting requirements on small businesses in America. In addition, he has worked to free up access to capital for small businesses and fought to maintain funding for the small business

development centers that provide small businesses with the assistance they need to grow their companies.

And, as you've heard, John Hazen White, Jr., is president and CEO of Taco. Taco is a leader in the heating, ventilation, and air-conditioning industry. It's located in Cranston, Rhode Island, and the company is part of the resurgence of manufacturing in America. Under John's leadership, it has invested in state-of-the-art equipment and processes and is committed to growing its international business. The company recently opened a new $20 million facility to help train employees and their families. The Taco Learning Center has been recognized as an outstanding example of progressive employee training, and it offers courses in English as a second language, math, civics, and other subjects.

And in a few moments, the last member of our panel will be joining us, the Honorable Don Manzullo, who's a Republican member of the U.S. House of Representatives from Illinois, and he co-chairs the House of Manufacturing caucus, and I'll introduce him more fully when he arrives.

But I want to start with Phillip in this conversation. I just wonder if you could describe the administration's actions on advanced manufacturing and what your agency is doing to meet the challenges that we face in the manufacturing area.

MR. SINGERMAN: Thank you, Darrell.

And thank you, John, for sponsoring and hosting this.

MR. WHITE: That's great.

MR. SINGERMAN: And thanks to Brookings for inviting us.

I want to start by acknowledging Brookings' excellent work and really helpful work in informing the administration's policy on advanced manufacturing, particularly the connection between manufacturing and geography and the major work that you've done on regional clusters.

The NIST -- you may be surprised or curious as to why the National Institute of Standards and Technology plays a central role in the administration's policy and implementation of advanced manufacturing. This is, of course, an historic role for NIST going back over a century. We are, in a sense, industry's national laboratory.

And for those of you who have an historic memory under George Herbert Walker Bush,

the National Bureau of Standards was reinvented as the National Institute of Standards and Technology and given a number of external partnership programs to respond to the Japanese economic threat of the late 1980s. These included the Baldrige Award; these included the Manufacturing Extension Partnership program, which helps small and mid-sized manufacturing and the very excellent advanced technology program, which invested in high tech projects with industry and academia.

Under our charismatic undersecretary and director of NIST, Patrick Gallagher, the agency has assumed a central role in responding to this generation's economic challenge from overseas. And this has occurred in the context of an interagency process working with the National Science Foundation, the Department of Defense, and the Department of Energy under the guidance of the White House oversight agencies -- the Office of the National Economic Council, the Office of Science and Technology Policy, and the Office of Management and Budget.

I bring a particular perspective to this I think. I've been involved in tech-based economic development for 30 years, my entire career, and I had the privilege of working in the Clinton administration as the U.S. Assistant Secretary of Commerce for Economic Development. And so I have the perspective of comparing the policy development and implementation of that administration with the Obama administration. And I think it's fair to say that no presidential administration has made manufacturing such an explicit and central part of an economic strategy nor pursued it in such a systematic and multilayered manner.

Some of you may recall that in the President's State of the Union message in February he mentioned manufacturing and manufacturers. Does anybody know how many times?

CONGRESSMAN CICILLINE: Twenty-seven?

MR. SINGERMAN: Fifteen. Fifteen times. But who is counting? That's probably 15 more times than it's been mentioned in the past century.

MR. TALBOTT: Sounds like the people in (inaudible) County.

CONGRESSMAN CICILLINE: That's right. (Laughter)

MR. SINGERMAN: We were. And of course the President and the administration have been publicly advocating the importance of manufacturing ever since, which doesn't always happen after an announcement during a State-of-the-Union message. But the President's announcement really

reflected a broad policy consensus within the administration that has been developing over a number of years. And let me highlight what I think are the eight pillars of that emerging policy:

First, that manufacturing is critical to U.S. industrial productivity and economic competitiveness. And there are a number of reasons why manufacturing is singularly important. First, as Strobe mentioned, jobs, the quality of jobs, and the importance of domestic spillover from manufacturing facilities located in the community. Second, the importance of advanced technology products to our exports. Without a strong manufacturing base and strong technology exports, we can never reduce the deficit in our trade. Third, and importantly, the importance of the defense industrial base to our national security capability, and the Department of Defense has recognized in the last few years that with the hollowing out of our manufacturing base and access to critical materials, we cannot maintain a strong security capability.

But perhaps most interestingly for this audience and for this subject is the recognition that manufacturing is critical to sustain our innovation ecosystem; the recognition that we cannot simply design here and build it there; that there's an extraordinarily strong connection between manufacturing, between the shop floor and the development of new products and technologies. And that's a major theme that has arisen over the last several years.

Second, that the federal government has a role and responsibility to create a supportive environment for manufacturing in a multilayered effort -- technology, of course, but trade, training, taxes, and regulation. And the administration's policies have reflected the administration's recommendations to Congress and its administrative actions have recommended this comprehensive holistic approach.

Third, that a robust research and development regime is critical to technological development. And later this morning you'll hear from my colleague, Greg Tassey, who is the chief economist at NIST who has written extensively about this issue, and so I'm borrowing shamelessly from Gregg's writing.

But Greg identifies, really, three components of research and development:

One, the amount or intensity of public and private research and development funding and the important need to, in the face of international competition, increase the level of our funding through both public funding and leveraging of private funding.

Second, and very importantly, the composition of research ad development funding. There has been, I believe, an imbalance in our federal funding heavily oriented towards biotechnology over the last 15 years and to defense electronics. We need to rebalance that to physical science and engineering.

And, third, the efficiency of research and development funding. Greg writes about the fallacy of the black box model of technology transfer; that is, on one side science and technology goes in and on the other side commercial products come out, and we really don't know what happens in the middle. It's kind of a magic sauce of entrepreneurs and venture capitalists and crossed fingers and university researchers. Obviously, that's not a sophisticated understanding.

Fourth, and flowing from the concept of the importance of the efficiency of R&D, is the notion of public/private partnerships bringing together all sectors of the technology lifecycle to develop technologies in a more seamless and efficient manner. Private/public partnerships in this context are not simply a cliché or a phrase but really of an effective tool to more rapidly and effectively develop new technologies.

Fifth, and in this regard Brookings has played an enormously influential role, the importance of regional innovation clusters, which in a sense is a special case of private/public partnerships. Regional clusters, the research has demonstrated, provide competitive national advantage. So, the linkage of innovation, science, and technology investments with geographic economic development programs is critical to transfer the results of research and development into domestic economic activity.

Sixth, and I would add that EDA, my colleagues at the Department of Commerce, have been the leader within the administration on promoting regional innovation clusters.

Seventh, the importance of small and mid-size manufacturing firms. As they link into the supply chain, one of the sad consequences of the outsourcing of major corporate activities has been the decay of the supply chain in our major industrial sectors. The Manufacturing Extension Partnership has focused on that and focused on it in a particular way, not simply through productivity and efficiency but through innovative technologies, innovation engineering to make these small firms more agile and flexible and responsive to the needs of large corporations.

And, finally, the importance of talent of workforce. It's well known that there are hundreds of thousands of skilled manufacturing jobs for which there are no qualified applicants. The administration has proposed a number of initiatives in that area, particularly and most recently recognizing the skills that veterans develop within the military and using those as a gateway to certification.

In conclusion, the takeaway that I would provide that kind of captures all of this is, first, that innovation is not a black box -- it can and must be consciously supported, and there's an important role for government because of market failures; second, that manufacturing matters for innovation; and third, that geography matters for manufacturing.

Thank you.

MR. WEST: Okay, thank you very much.

Congressman Cicilline, manufacturing is an important part of the Rhode Island economy. What do you think would make the biggest difference for American companies in the manufacturing area?

CONGRESSMAN CICILLINE: First, thank you, again, for convening this. Thank you to Brookings, and the only thing more wonderful than being at Brookings is being at Brookings with the White family, so this is a great pleasure.

You know, Rhode Island has, I think, like many communities, a very rich history in manufacturing and was the birthplace of the industrial revolution, so it's part of our DNA, and I think this is an area in which public opinion was well ahead of the policy leaders in our country. So, the public understood that if we're going to maintain our position as a great economic power we need to make things in this country and export American-made goods, not American jobs. And so the people knew that instinctively, and I think we're coming through a decade in which people thought for a long time oh, you know, we're not going manufacture, manufacturing's dirty, someone else is going to do that. And so people thought about manufacturing in a very negative way, and if a parent had a child who raised his hand in school and said I want to be manufacturer, there was "uuh," and I think we have to change that attitude.

You know, manufacturing is central to our identity as a country; it's central to our success as a world economic power; and it's critical to rebuilding the economy today. And I think there are a number of things we can do. First and foremost is the development of a national manufacturing strategy -

- you know, Congressman Manzullo is one of the sponsors of that legislation -- you know, to really set out in a smart, strategic way benchmarks and bring together the right people to set out a manufacturing strategy. Then we have to, again, correct some of our tax policies so that we're not creating incentives to ship American jobs overseas and instead create incentives to keep manufacturing here in our own country.

I think we need to be sure that in our trade relationships we are not allowing our trading partners to have an unfair advantage in manufacturing by manipulating their currency. We have legislation to fix that, which some estimates project will create between a half million to two million jobs, and will cost the American taxpayers nothing but simply prevent trading partners from manipulating their currency.

I think we have to make investments in infrastructure so manufacturers who rely on their ability to move goods and services and information successfully in a highly competitive global economy can do that, and so rebuilding our country, and there are some good models, like the National Infrastructure Bank, that will allow that to happen.

I think we have to be very serious about our investments in talent and understand that manufacturing that we're growing in this country is growing out of innovative entrepreneurial companies and individuals that are finding new solutions and new technologies and that, in the end, the country that preserves and nurtures its best talent is going to lead the world in manufacturing. And so that is everything from Head Start to Pell Grants to vocational and technical education to workforce development to be sure that we have those skills, the skilled workforce necessary to do this work.

And I think the other piece of it is that we've got to understand that we need to make things like the research and development tax code and other tax policies permanent and more generous, and I think part of this is really about also recognizing we have to make investments. There have to be investments in manufacturing. You know, sometimes you'll say oh, you know, the government should be investing in private activities. We hear that all the time. We've done it for decades in oil and gas and in tax policies and subsidies. We've done it with agricultural corporations. We've done it in a million different places. If we're serious about reinvigorating American manufacturing, we have to be willing to make investments in what are good jobs and what are essential to rebuilding our economy.

One idea is to make an America Block Grant, which is my legislation decision, which will actually be a competitive regional grant process that will allow companies to invest in rebuilding their factories, retraining workers, buying new equipment, improving their exports. But we have to be willing to make those investments. These are good jobs which pay above non-manufacturing jobs nationally. They help build the middle class of this country. And we have examples all throughout our history. We've made investments in certain sectors of our economy because it's good for America and good for economic growth. It's time to do that in manufacturing.

MR. WEST: Okay, thank you very much.

Congressman Don Manzullo. Welcome to Brookings.

The Congressman is a Republican member of the U.S. House of Representatives from Illinois. He co-chairs the 80-member House Manufacturing caucus, which he founded in 2003. He also co-chairs the House Auto caucus.

As chairman of the Foreign Affairs Subcommittee on Asia and the Pacific, he has focused his efforts on increasing export opportunities for American business owners while pressuring other nations to play by the rules of fair trade. And as chairman of the U.S. House Committee on Small Business from 2001 to 2006, he held more than 60 hearings on the state of manufacturing in America.

He helped win enactment of a 6-percent tax deduction for manufacturing production the United States.

So, Congressman, what do you see as the top priorities for improving manufacturing in America?

CONGRESSMAN MANZULLO: Well, you can have all the programs you want, you could have all the tax breaks you want, but if you can't get skilled workers, we're going to lose those jobs. I think -- and Dave, we agree on a lot of things -- the problem is there's too much government involved in manufacturing. There's a difference between setting goals and setting priorities in a national manufacturing policy.

Now, I know you don't believe in manufacturing policies, but we do agree there should be more discussion going on.

I was in Switzerland two years ago studying the education system there. At age 15, the

students in high school make a decision whether they go into manufacturing or into other areas of non-manufacturing. It's not a matter of what we see today where the kids who go to college, who go to the regular high school campus, then the buses pull up and take the kids to a "Vo-Tech center" that are not going to college and they both look at each other and there's this class warfare that starts at age 16. That's not the way it is in Switzerland, because the people that do the skills with their hands are respected as much as those who are not involved in manufacturing. That's the biggest problem, because 70 years ago somebody said in America everybody should go to college, that there's something wrong with going to machine shop, your dad worked there, your grandfather worked there, you deserve something better. And so unfortunately in America, manufacturing becomes a default job. And that's the problem with the entire educational system. That's the problem with government.

Second of all, there are 44 federal programs involved in job training. And the job training programs become job training programs for job trainers. One person after the other -- if you look at the workforce development that's associated with unemployment compensation, in Illinois you can apply for unemployment over the Internet and you'd never have to show up for job skill certification or to get into the pool to go and find a job.

So, what you're seeing is innovative people like John Hazen White, Jr., who just opened the Innovation and Development Center at his headquarters in Cranston, Rhode Island -- people like John and all over the nation where the private entrepreneurs are realizing that government is not the solution. If you want to create people, you do it yourself at your own facility, or you can team and go to community colleges, which serve as the best resource for training people.

The next problem that we see is we talk about advanced manufacturing. I was just at the Argon National Labs outside of Chicago, and some of the most incredible, innovative technologies are taking place in laboratories that the private sector can come nowhere near paying for, and so there is a role for government in terms of those jobs. But I was at a seminar just about two weeks ago sponsored by the E.U. dealing with advanced manufacturing. The problem is that no one here tries to define what advanced manufacturing is. The E.U. actually came up with a definition from the European Commission Enterprise Industry Committee that is broken down into five areas: Nanotechnology, micro/nanoelectronics, photonics, advanced materials, and biotechnology.

Now, they've identified those areas into which manufacturing will move into the next generation. And what I see taking place here in this country, number one, is a complete lack of understanding as to the importance of manufacturing. Alan Greenspan said himself -- he said what we lose in manufacturing jobs will more than compensate for in value-added white collar jobs, and at least five different times as a member of the Financial Services Committee I asked him to give me a definition of one value-added white collar job, and he couldn't because the five minutes ran out. (Laughter) So, that's why Tim Ryan and I formed the -- he's a Democrat from Ohio. He had a great manufacturing area. I'm from Rockford, Illinois. We have over 2,000 manufacturing facilities in our congressional district. We founded the Manufacturing Caucus for the purpose of saving the domestic titanium industry. Eight years ago, it was under siege where most of the sponge or a good part of it was coming from the Ukraine. And we worked together, had a massive meeting, brought together every single major player in the titanium industry, including the defense industry, and we helped put together the basket that ended up saving the titanium industry here in America.

So, there are a lot of things that we have to do. I've made available -- I'll make available -- an eight-point American jobs agenda, which talks about job retraining, favorable tax schedules, et cetera. But let me just leave it at that point and finish.

If you can give me 30 more seconds, I got a call from a constituent who makes injection molding. Very, very complicated tool and die system. And he wanted to get in the aircraft industry. So, I said I'm with them, got him lined up to get his AS 9001 certification, and said you got to do two other things: Join the local Economic Development Council and, number two, the era of people going to the green Thomas books looking for the best industry in the world are gone, you can no longer depend upon a reputation and quality to sell your product. Fire your webmaster, because today quality is weighed by the quality of the web.

MR. WEST: Okay, interesting. Thank you.

CONGRESSMAN MANZULLO: All right.

MR. WEST: So, John, your company is on the front lines of manufacturing, so can you tell us about your new innovation and development center and also the learning center?

CONGRESSMAN MANZULLO: Well, that's a good segue, isn't it. MR.

WEST: It is perfect. He's a great warm-up act for you, by the way.

MR. WHITE: Thank you.

MR. WEST: And what you're doing to train manufacturing workers.

MR. WHITE: Yeah.

Thank you, first of all, for doing this. I'm still pinching myself that I'm actually here. This is --

CONGRESSMAN MANZULLO: Thank you for making it possible.

MR. WHITE: -- one of the greatest things I've ever done in my life, to be part of Brookings.

MR. WEST: Thank you.

MR. WHITE: I truly appreciate it.

I look at this from a bit of a street-level perspective, because I live it and breathe it every day as do all of us. So, I would say this. Our advancement, our growth, our development -- in fact, I think our survival has happened not as a result of any brilliance or super smarts but as a result of survival instinct. And policies are great. Government funding and tax issues being dealt with progressively and whatnot are beneficial, but those of us living and breathing this every day can't wait for that, you know. We must proceed or fail.

In the early '90s, my company, Taco, was in very, very difficult financial condition. In fact, probably very lucky that the banks weren't being very carefully watched over and were quite lenient at the time, because we were about a 35 or $40 million company then with a $15 million short-term debt. Do the math on that. It's not very healthy.

MR. WEST: Sounds like Greece.

MR. WHITE: Losing several hundred thousand dollars a month, I might add, so it was headed right for the beach. We were confronted with either selling it or fixing it, and we opted, my father and I, who is alive and still actually running the business at the time, opted to fix it as opposed to give up a great heritage and legacy.

The way we went about that was to focus very fundamentally and very directly on the people, the people in the business. It brings to the education and learning facility.

You see, I do not subscribe, personally, to the thought that manufacturing is leaving this country due to the fact that we don't we have skilled workers. I believe that's true, but I don't think it's necessary, and I think it's foolish. I think it's cowardly actually, because people are people, and all of us have some unique ability to do something good, because we all generally want to.

I believe strongly in training -- training people -- for several reasons. Number one, it allows them to grow and prosper, and if we do this right, which is what we've done at Taco, I think, or we're trying to -- it allows them and their families, people in their families, to grow and prosper, to be safe and happy and work in a clean environment.

David, you know, you're right about the image that's been projected about manufacturing and that's why so few people actually want to go into it.

I think we can provide some place that's quite different from that. Education in the workplace -- our education program starts with surely English as a second language and CNC machine programming, all of the work-related things -- gauge reading, blueprint reading, all of those things. But we have elevated this program up now to, you know, art and music, gardening, literature, you know, right up through an MBA program for folks onsite.

The loyalty, which is instilled through learning, is probably as great a benefit as watching people grow and develop. And this is a manufacturing company, now, with a national average in my particular type of industry, which I call metal bashing -- with like a 16 percent average national turnover rate, we have less than half a percent. Our tenure at Taco is an average of 20 years. And this has allowed us to grow the company with people contributing, being a part of that growth.

I believe -- and I was the general foreman in the plant for a while back in the late '80s, and that was not due to my ability mechanically or manufacturing as much as it was that we had some agitation problems at the time and they threw me out there to just love the people I guess, so -- and it worked out very well. But what I learned -- I think it's very significant -- is that people, all of us in this room, no particular segment, no particular job, but people, I learned, have really -- no matter what we do, people generally have forgotten more about what they do than the rest of us will ever know. And I learned that when in trouble or when in need for improvement or change to ask those that do to fix is very effective.

So, through all of those thoughts -- I mean, I could spend an hour and a half on this and not even scratch the surface --

MR. WEST: But don't do that.

MR. WHITE: No, no, no, no, no, I -- (laughter) you do know me, don't you, Darrell.

MR. WEST: I do.

MR. WHITE: Yes, I -- yes. Notice I have no notes, by the way, so that's what gets me into trouble I think.

But having learned that I was able to -- we were able at Taco to really capitalize on what I call the human capital side of the business. And so I think education -- I think it's all about education. That's my own personal philosophy.

MR. WEST: Okay, great, no, that's been very helpful.

We'd like this event to be interactive and to have a dialogue between us and the audience, so I'd like to open the floor to questions. So, if you'd just raise your hand, we have people with microphones. Right here is a gentleman with his hand up. So, if you could give us your name and your organization and keep your question brief so we can get to as many people as possible.

MR. LAKIN: Is this --

MR. WEST: Yep, you're on.

MR. LAKIN: Hi, my name is Sam Lakin from Prosperity Projects.

Mr. White, I am the graduate of a $6,000 machinist apprenticeship program from the General Electric Company in Lynn, Massachusetts -- I won't say how many years ago. It no longer exists. G.E. closed it. You are a much smaller outfit. How is it that you can afford or are willing to invest in employee training when a company like G.E. is closing its stuff down?

MR. WHITE: Well, I think, you know, I feel badly about that when I see that happen because I just do believe that it's the best investment we can make. The difference probably is the fact that we are small, and I've kept this company small. The way it's structured and managed is in buckets, you know, so to speak -- divisions, units -- so that no part is bigger than the manager can handle. I want to be sure that the manager of any particular segment of my business knows the employees and knows their families. That's a difference with a company like mine and G.E., because when you have 6,000 --

how many people? 6,000 people?

MR. LAKIN: Oh, that -- 13,000.

MR. WHITE: Oh, yeah, that's hard to get really well acquainted with them, you know, on a personal basis. (Laughter) So, you see the difference. I mean, I think it's easier to take a quick attitude and move than it is to try to really get into it.

CONGRESSMAN MANZULLO: Can I say -- let me, Darrell -- I mean, I think -- and because I visited Taco I feel like I can speak to this really directly. That statistic of turnover of less than half of 1 percent as compared to 16 percent of the national average is extraordinary, and it speaks to the loyalty and the kind of respect that John and the whole company has for its employees.

But it also is a cost saver, a tremendous cost saver when you talk about retraining and the loss of productivity of a new worker. So what Johnny I think has brilliantly figured out is, and his dad was the same, is invest in your people, keep them there at less than ½ of 1 percent and you save 15½ percent turnover, you translate that into real money. And so I think that's a really unusual model. You don't go to very many manufacturing facilities that have MBA programs and art programs. But, I'll tell you what, you go to Taco and the employees love working there. They love the company, they are incredibly loyal, and they don't leave. And that's an unusual model which I think is worth thinking about.

CONGRESSMAN CICILLINE: I visited a facility in my district that ironically also makes insert injection molds, and there are nine employees. Three of the fellas were under age 25. And I said what did you do? And the owner said I recruited these kids when they were 16 years old. I went into the high schools, and I said anybody here who's interested in becoming a tool and die maker, using his hands to create art, you come and visit me, I'll give you a part-time job, I'll train you, and put you through the first two years of college to get your basic skills certification. And so here's this tiny shop, went directly into the high school, changing people's minds about manufacturing, elevating manufacturing to an art form, which it is. And that's how he was able to bring people in.

And, John, I'll be you do the same thing on your recruiting.

MR. WHITE: Absolutely.

MR. WEST: Okay, we have another question right here.

MS. WERTHEIM: I'm loving this. I'm Mitzi Wertheim with the Naval Postgraduate

School.

I joined IBM in ’81, and one of the first things I learned was they were giving $20 million to universities to set up manufacturing courses, because nobody was training anybody to go into manufacturing.

I have a request for Brookings, which is could you make a list of all of the tax items he thinks needs to be done so the general public can understand it? I think the story that I’ve heard here is an amazing narrative. I haven’t heard it anywhere else. And the question is how do we get the stories out so the general public understands it? It is so important to educate the voters as to what can be done, what is being done, and the models that we need to basically explain. So, I give this to you as a responsibility. Educate us and find these fabulous models. But we also have to know about the barrier, such as the tax laws. But it has to be done in a way that I don’t have to read 25 pages and pull it out. And academic institutions write lots of words. I brought with -- I just bought all of the data bacology -- you guys from Rhode Island must know who he is --

SPEAKER: We all do.

MS. WERTHEIM: -- *How Things Work*. He does what I call children’s books for adults.

MR. WHITE: Right.

MS. WERTHEIM: You need to do children’s books for adults. Academics don’t teach. They write for each other, and they don’t educate the general public. The media’s not educating us. I think the academic field has to start writing things in a form -- they can do it for each other, but they need to do it in a form that the rest of us can learn what we’ve paid for.

MR. WEST: Okay, this is exactly what we’re trying to do in this series to really --

MR. WHITE: That’s great -- increase awareness.

MS. WERTHEIM: But you need to -- I want it spread out. (Laughter)

CONGRESSMAN MANZULLO: If you want to go to my website, manzullu.gov. It’s called American Jobs Agenda. And it’s eight or nine points, and the first point talks about the various tax issues that have to be done. The biggest problem that Dave and I have is that probably only about 60 members of Congress have a significant manufacturing base --

MR. WEST: Right.

CONGRESSMAN MANZULLO: -- where we bathe ourselves in manufacturing. And the rest of congressional districts don't have that concentration, so the members of Congress know very little about manufacturing.

MR. WHITE: So, that's, like, 15 percent of districts basically have manufacturing.

We have another question over here.

MR. McCREA: My name is Christian McCrea at Norman McCrea Foundation. Building on what the last lady said, my own quest would be to -- both Brookings and NIST to develop a sort of unseen wealth. Baldrige -- now, in 2000, end of 2000, Brookings published a report on unseen wealth basically saying the system is broken in terms of valuing anything that is longer than 90 days, whether that's investing in training of people or advanced manufacturing if that's something which takes more than 90 days to invest it. And Baldrige 25 years ago, or you know the time, was the best ever chain system popularization process that this country has ever had, well, in my 40 years of looking at it. So, if you put those two together and then you could go visit these extraordinary facilities, which are leading edge, a lot like Taco appears to be, with learning facilities, and you could sort of popularize it and hopefully get it on TV as well as getting businessmen and investors to go and see it.

MR. WEST: Okay, Phil.

MR. SINGERMAN: So, just on your comment about the publicizing these issues. There's a website -- we have a website, too, manufacturing.gov, so it's easy to remember: manufacturing.gov. It's hosted at NIST, the Manufacturing Extension Partnership Program, and it has a wealth of information about policies and programs and examples. But I think the Baldrige reference, the Baldrige National Quality Award, is an important illustration of how the education process needs to work, because one of the requirements of being Baldrige winner is that the private sector companies have to go out and proselytize --

MS. WERTHEIM: They discovered that that was very expensive.

MR. SINGERMAN: Well, they continued to do it. They -- the Baldrige community is a very large community, and it's a very committed community. And my point -- the point from that example is the education must be led by the private sector. There's very broad, I would say, consensus. There's a bipartisan consensus on the importance of manufacturing. There may -- differs perhaps on some of the

specifics, but I think across the board there is a general feeling that manufacturing matters, and it matters importantly; but to get that message across, to change the image of manufacturing, to encourage young people to go into manufacturing spaces -- that requires the leadership of the private sector to proselytize and educate in their communities and their elected officials.

MR. SINGERMAN: Can I make one quick comment. There's another thought that occurs to me. It's something that I think is often overlooked whether it's a manufacturing or other segment of employment, but I think manufacturing -- I don't know of a greater wealth creater than manufacturing and for a whole host of reasons -- but that's another subject. But, you know, so much -- back to the question about why G.E. moved out of Lynn, Mass., you know. So many things in business, particularly, I think, industry, are driven by profitability, you know, and --

MR. WEST: And short-term profitability.

MR. SINGERMAN: Yeah, yeah, short-term profitability, right.

But, you know, what occurs to me and I think is really important is that running a business is largely revolving around employing people; and employing people, ladies and gentleman, is a social responsibility, and it carries huge responsibility with it. Everybody really should be able to achieve a status in life in which they feel good about themselves, and that, to me, is a large part of driving more job creation, and it takes us away from -- look, I'll tell you, we're a profitable company. We really are. And a healthy company. But that's a result of people being loyal and honest and hardworking and happy, not me cutting jobs and letting people go and sending things to China, you know. It's about doing things right and about -- and I just think if we can do more of that in this country, we'll quit -- we could in time come back to where we were at one point in history.

MR. WEST: Okay, we have time for a couple more questions. Right here on the aisle is one.

MS. CLINE: Hi, Andrea Cline. I'm a development consultant working in nonprofit America, particularly in workforce development.

A two-part question. With regard to the national strategy, how are you using technology -- primarily remote educational distance training -- in facilitating those that are considered the underserved or in transition in that educational process, especially in the basic skills so that they can move forward,

integrating it with small businesses? And then, second, how do we go about educating shareholders on the importance of instead of that immediate gain making an investment in bringing our country in a more competitive but much more sustainable position with regard to the global economy?

CONGRESSMAN CICILLINE: Well, there was a -- and Darrell will remember this -- there was a Brown University study that was recently released, I think, that said that nearly two-thirds of the workers for the next decade are going to require a post-secondary education, and so this question of our ability to provide these career pathways, which may not necessarily mean a four-year college degree but some post-secondary education, particularly for manufacturing. You go into a manufacturing facility today, and it's not your grandmother or grandfather's manufacturer. It's a different facility with different kinds of technology and different kinds of equipment. So, I think critically we have to maintain our investments in a whole range of workforce training opportunities and be sure they're aligned with what actually is needed in the manufacturing sector. But I think it gets back, in many ways, to this woman's point, and that is we have to continue to build a national momentum or national movement on this issue. We've put together a very comprehensive agenda and the Democratic Caucus called Make it in America. It's not -- it's about making things as manufacturing, but it's also about, you know, another message of this is how you make it in America is you make things and how you build success for your family and for yourself. And there's a whole comprehensive, really robust set of strategies and policy that we can implement. We're not powerless to fix this, and we're not powerless to grow manufacturing in this country. We just have to enact these. But I think workforce training is a very key part of that for all the reasons that we've discussed this morning.

MR. WEST: Go ahead.

CONGRESSMAN MANZULLO: A lot of that's already done. There are 44 federal government programs on workforce training. I've had it. You know, I'm sorry. I've had it with that. I've visited hundreds of factories in my district and throughout the United States and Europe and Asia.

Emily Stover de Rocco, used to be in charge of workforce development for George Bush, went over to the Manufacturing Institute, just left there --

CONGRESSMAN CICILLINE: Right.

CONGRESSMAN MANZULLO: -- and she worked for five years. She consolidated over

300 programs to come out with this manufacturing skills certification. It's done.

CONGRESSMAN CICILLINE: Right.

CONGRESSMAN MANZULLO: It's already done. It's a five-step program that can be easily incorporated into any community college and get people with the basic certifications on machine. So, move on to something else.

CONGRESSMAN CICILLINE: But it has to be funded. I mean, you're right, it's done, but there's been efforts to eliminate funding for programs like that.

CONGRESSMAN MANZULLO: Stop the funding, Dave. You're looking at money all the time.

CONGRESSMAN CICILLINE: I know. What I'm saying, you design the workforce training program --

CONGRESSMAN MANZULLO: This isn't money --

CONGRESSMAN CICILLINE: -- but if there's not money for it, it's a great idea but there's not much impact.

CONGRESSMAN MANZULLO: The curriculum is done. Community colleges are supported on the local level with very few federal grants. It's not an issue of money; it's an issue of knowledge.

That's an interesting statement, isn't it?

MR. WEST: We have time for one more question right here, then we'll move to our next panel. But stick around, because we'll be continuing this part of the conversation.

MR. SALINGER: Good morning, I'm Gearhardt Salinger. I work at the National Science Foundation and for the last almost 20 years I've been head of the program on advanced technological education and not training. And we have centers in all the centers that Mr. Silverman mentioned *(sic)* in all the areas -- biomanufacturing, microsystems, nanotechnology, big and auto, and additive manufacturing. So, my question really is what are some opportunities for businesses to work with community colleges more? All of our centers and all of our projects are industry driven, but rather than have an industry program why not pay employees to go to the community college and get similar -- and work with the college to get the types of courses to educate your workforce.

MR. SINGERMAN: So, not a program that requires funding but they -- and actually a program that was mandated in the America Competes Act in 2010 to link the needs of small manufacturers with a curriculum developed at community colleges, and this is, again, run by the Manufacturing Extension Partnership at NIST. So this is -- which is also actually involved in Emily's program on school certification. So, that's an example of the role of government as a supporter and a convener of private sector-led initiatives, in the case of the skills certification, and local initiatives, such as the community college relationships, and connecting those to the needs of small- and mid-size manufacturers. So, not everybody has the vision to do what you've been able to do, and so a number of those, particularly the smaller firms, have to be connected to the right partners. So, that's a way that that's happening.

CONGRESSMAN MANZULLO: Well, Phil, to add to you, the Manufacturing Extension Partnership, which NIST runs, works on a 50/50 basis.

MR. SINGERMAN: Right.

CONGRESSMAN MANZULLO: It's 50 percent government money, and the company puts up the other half, and when I had to work with this company to get the AS 9001 certified, we got a hold of an MEP. They came in and within four phenomenal months they put together a program, got this company certified, and actually MEP got an increase in their budget, which is most unusual, because --

MR. SINGERMAN: Right; and we're very grateful. Thank you.

CONGRESSMAN MANZULLO: Well, it works. It works.

MR. SINGERMAN: How odd.

MR. WEST: Okay, please join me in thanking John, Phillip, Congressman Manzullo, and Congressman Cicilline.

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