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Hearing in Our Nation of Builders: Powering U.S. Automobile Manufacturing Forward

SUBCOMMITTEE ON COMMERCE, MANUFACTURING AND TRADE

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Executive Summary: Workforce Training is Key to Powering U.S. Automobile Manufacturing Forward

Auto manufacturing is vital to a strong American economy. Our industry directly employs over 1.7 million people and is responsible for eight million jobs nationwide, or about 4.5% of private-sector employment. For more than a half century, Toyota has played an ever-increasing role in contributing to the strength, size and competitiveness of this part of the U.S. economy. From humble beginnings in Hollywood, California – where we sold 288 vehicles in our first year – to debuting as an American manufacturer with the 1986 Corolla, to our current footprint of 10 plants across the U.S., our success has depended on a talented, motivated American workforce.

Our integral role in the American economy grows more robust each year. We are now an exporter of 124,000 vehicles to 21 global markets, a 45% increase over the prior year – in part thanks to trade agreements like those Congress supported with Korea and Russia. This success means that today, Toyota employs over 31,000 people and is directly and indirectly responsible for 365,000 workers – and 70% of what we build in North America, we sell here. We are proud of what we all accomplish together.

Tomorrow, as both a company and as a manufacturing-driven sector, a major challenge is attracting qualified, work-ready applicants with the necessary skill sets to step directly into jobs and contribute. The unfortunate reality is that what were traditionally referred to as "skilled trades" -- today called multi-skilled maintenance positions -- are ever-more difficult to fill. Only 5% of the candidate pool is qualified, in our experience. The root causes of this phenomenon lie in both perception – manufacturing is no longer considered a rewarding career and is not promoted to students – and preparation. U.S. students are falling behind the international talent pool, particularly in STEM fields. As our sector has grown more competitive, job requirements have grown more complex. Most applicants have only a single discipline (welder, or electrician) when multiple ones are needed. And many lack basic skills like reading.

For Toyota's U.S. operations to keep competing and to overcome these issues, we need even greater partnership with other organizations and the government. One type of response that shows the promise of such partnership is our Advanced Manufacturing Technician (AMT) Program, which includes a two-year Associates Degree, technical studies and paid work experience. This initiative is endorsed by the Automotive Manufacturing Technical Education Collaborative (AMTEC) as a best practice – and we have rolled it out at most of our U.S. plants. This kind of local focus is vital to our company and allows Toyota to contribute directly to the education and training of our communities, which in turn reinforces the positive impact our business can have on given regions.

The Federal government can help us help the American worker by focusing resources on education and workforce development programs that result in portable, industry-recognized programs like AMT; emphasize multi-skill technical training; encourage coordination between community colleges and local employers; and strengthen and improve technical education programs in the U.S. In summary, for American industry to successfully compete going forward in the global marketplace, our students – and future workers – need to be ready, willing and able to keep pace with the technical and educational career challenges of an ever-evolving manufacturing base.

Good Morning.

Mr. Chairman and members of the Subcommittee, my name is Chris Nielsen and I am President of Toyota Motor Manufacturing, Texas (TMMTX), in San Antonio where Toyota produces Tundra and Tacoma pickup trucks.

I commend the subcommittee for holding this hearing on auto manufacturing and want to thank you for the opportunity to participate.

Auto manufacturing is vital to a strong American economy. Our industry directly employs over 1.7 million people and is responsible for eight million jobs nationwide, or about 4.5% of private-sector employment. It is a highly competitive industry, with multi-national companies from around the globe, investing in America and providing good paying jobs and terrific value to American consumers.

Toyota in the US

Toyota was established nearly 57 years ago in a former Rambler dealership in Hollywood, California. That first year we sold a grand total of 288 vehicles. Sales grew as Americans became more familiar with our products. In 1986, Toyota made its debut as a US manufacturer with the rollout of a white Corolla FX16.

Today Toyota operates 14 vehicle and parts plants in North America – 10 of which are in the U.S. Together these plants produce 12 models, which represent over 70% of what we sell in the U.S., in addition to engines, transmissions and other critical parts. Purchases of parts, components, goods and services from roughly 500 suppliers now exceed $25 billion annually. And we are continuing to grow.

Last year we reached full production at our new $800 million plant in Mississippi, where we hired 2,000 team members. This year we are in the process of investing nearly $750 million in various locations, which will result in an additional 1,500 jobs. Together, our sales, design, engineering, research and development and manufacturing operations employ more than 31,000 people in the U.S. and we are directly and indirectly responsible for creating 365,000 jobs.

Beyond manufacturing and sales, Toyota Technical Center (TTC), celebrated its 35th Anniversary last year. Through TTC in particular, Toyota's

North American operations have made great strides in recent years, gaining more responsibility for designing and developing vehicles that are primarily sold in the U.S. market. This means Americans are now taking the lead in design and development in order to better reflect consumer tastes.

With locations in Michigan, Arizona and California, TTC has major vehicle development responsibilities. The 2012 RAV4 Electric Vehicle and the 2013 Avalon and Tundra are the latest vehicles engineered at TTC. And there's more to come as we seek to localize additional production to better serve our customers.

Our new Tundra pickup truck, which is built by 3,000 Toyota team members and another 3,000 supplier team members at my plant in San Antonio, Texas, is a good example. Product planning was managed by our sales headquarters in California. All engineering development was directed by Chief Engineer Mike Sweers in Michigan. Styling was the work of Toyota's Calty Research and Design Centers in California and Michigan. The result: our best Tundra yet, one that will be a solid competitor in the marketplace when it launches in August, 2013. And it's worth mentioning that along with the Tundra, the Camry and Sienna are the most American cars in their segments.

Having just gone through a next generation model launch, I can tell you it takes time and it takes money. New or next generation vehicles generally take between five to seven years to bring to market. When considering new policies, it is important to keep this lead time in mind. To pass laws that fail to provide adequate lead time or effectively require mid-model-life vehicle changes imposes an economic drain on companies and, maybe more importantly, a strain on critical manpower resources.

Providing legislative and regulatory certainty also is important to manufacturers. Knowing what to expect and when is important for planning purposes. A quick example is the uncertainty created by the on-again, off-again renewals of the federal tax credit for qualified research activities at our U.S. manufacturing plants. The expiration of the research credit on December 31, 2013, and the uncertain prospects for renewal of the credit, makes long-term after-tax planning for research at our U.S. manufacturing plants next to impossible.

Exports

We also want to point out another benefit of increasingly-US domiciled manufacturing growth: Toyota's rising U.S. export business. Last year we exported a record 124,000 vehicles to 21 global markets from the US, which represented a 45% increase over the previous year. The Korean and Russian trade agreements were important elements in our decision to export US-built vehicles to those countries. We want to applaud Congress for supporting those two trade pacts.

Earlier this year we announced that the Venza, a crossover vehicle produced at our Georgetown, Kentucky plant, will be exported to Russia and the Ukraine this year. We expect Venza exports to build on last year's record and to help further solidify and grow our U.S. manufacturing base.

Workforce Training

However, we want to focus Congress' attention on a larger issue that directly impacts U.S. manufacturing competitiveness. We, and in fact our entire sector, struggle to attract qualified, "work ready" applicants who have the necessary skill sets to step into jobs and begin contributing at a high level.

As employers, we need to provide specific company training and methodology, but too often we find we must level up more basic skills to assure success. Each of our plants require team members to have a broad range of skill sets -- from basic foundations in reading, math, and science; to problem solving, communication and strong interpersonal maturity; to the technical skill sets necessary to perform at peak efficiency in their chosen career.

However, after 25 years of strong growth and development, Toyota and our suppliers still face acute challenges replacing what was traditionally referred to as "skilled trades" positions in the US. Today these are called multi-skilled maintenance positions.

With the advancements in manufacturing technology and techniques, the required skill sets of these manufacturing careers are changing too. This is a systemic problem for all automakers and suppliers and for manufacturing in general.

Products can be made and sold anywhere. To sustain our manufacturing in the U.S. we must be competitive in the global manufacturing market, not only against our direct competitors but against other countries with Toyota facilities.

Nationally, 600,000 skilled training jobs are currently unfilled, as manufacturers across America comb the countryside for qualified workers. In part, this is because of a perception problem. Manufacturing is not considered a rewarding and valued career. It is not promoted to students, so they are not fully aware of the opportunity or reality of today's advanced manufacturing operations and careers.

It is also a preparation problem. The preparation of our K-12 students is declining compared to other countries. School systems are struggling to develop globally competitive talent, particularly in the STEM fields. Global rankings show our students declining – now ranking 17th overall, 14th in reading, 17th in science, and 27th in math. In addition, traditional community college systems are failing to fully provide graduates with the manufacturing skills necessary to integrate into the workplace.

Our experience shows that only 5% of the candidate pool is qualified in the skilled maintenance positions. Most applicants have only a single discipline (electrician, welder, programmer, etc.) and many applicants simply have basic educational deficiencies. For instance, national testing shows that only 35% of 12th graders are proficient in reading.

At Toyota, we recognize that it takes partnerships to embrace and create change. And we are working with willing partners to identify best practices in education that will help close the achievement gap and provide better prepared candidates for careers in manufacturing and other fields. In 2010, Toyota developed an Advanced Manufacturing Technician (AMT) Program.

This cutting-edge program has been endorsed by the Automotive Manufacturing Technical Education Collaborative (AMTEC) as a best practice in the industry. It includes a two-year Associates Degree that combines a next generation technical curriculum and paid real-world working experience with the development of the non-technical skills required of world-class advanced manufacturing technicians.

An Advanced Manufacturing Technician skill set includes:

- Multi skilled (electric/fluid power/mechanics/fabrication)
- Math Skills (top 1/3 nationally)
- Reading (minimum 12th grade equivalency)
- Fast Technical Learner
- Use/learn with Digital Media
- Problem Solver; Effective Written/Verbal Communicator (One-on-one and in group settings; develops materials)
- Interpersonal Skills (can resolve conflict)
- Teamwork
- Qualified to work at the next level

First implemented at Toyota's Georgetown, Kentucky plant in coordination with the Bluegrass Community and Technical College, this model has been duplicated at most of our plants. I'm proud to report that just last Friday, it was announced that my plant has introduced the AMT program and will be working with Alamo College. We will support graduating high school seniors with an advanced learning methodology with hands on experience resulting in highly skilled job ready candidates for San Antonio's workforce.

The key to any sustainable program like AMT is to develop the k-12 pipeline of students so they are prepared and aware of this career pathway to manufacturing.

POLICY RECOMMENDATIONS

In order to address this skilled worker crisis throughout the country, we need to:

- Intensify cooperation between government, academia, and the private sector to improve K-12 STEM education. Further, we need to recruit and train additional qualified K-12 STEM teachers throughout the United States.

- Support innovative STEM education programs in middle school and high school, such as Project Lead the Way (PLTW), which engage students in hands-on, project-based learning and to expose them to STEM fields through local industry professionals and real-world workplace experiences.

- Focus Federal resources on education and workforce development programs that:

  • result in a nationally portable, industry-recognized credentialed program (such as Toyota's AMT program); and,

  • emphasize the development of the next-generation skilled worker through multi-skill technical training, as well as non-technical competencies, such as verbal and written communication; and,

  • encourage coordination between community colleges and local employers to help ensure that the curriculum meets the local employment needs; and,

  • strengthen and improve career and technical education programs in the U.S. so that they produce graduates with world-class skills and capabilities and who do not require extensive "up-skilling" when hired.

We clearly recognize the budget challenges facing our nation. However, we believe many of these recommendations can be accomplished by a shift in emphasis among existing workforce development funds. Simply put, America's focus for some time now has been on the idea that everyone needs to go to college and get a generalist four-year degree. The benefits of this focus, as great as they are, do not necessarily accrue to the manufacturing sector. Our talent pool of skilled technicians has declined precipitously and it needs to be replaced if America is going to compete in the global manufacturing marketplace. Four-year degrees per se are not the issue – and we need skilled Bachelor's graduates as well. But the balance of technical and other training is critical. That is why, for example, the Toyota AMT program provides for a 2 year Associate Degree, with a defined pathway to continue, if desired to get a 4 yr. Bachelor's Degree in Engineering from the State College or University.

But at Toyota, we are also looking upstream in the education pipeline to help assure students have a solid foundation in preK-4 programs. On a local level, we also get involved in other programs such as the Pre-K 4 SA initiative, to which we donated funding in Texas. This provides universal pre-K education and helps assure that all participating students remain on track with the appropriate grade levels by 3rd grade – which in turn reduces dropout rates, for example.

In summary, for manufacturing to compete in the global market place, our students need to be ready, willing and able to take on the manufacturing career challenges in the future that will keep U.S. Manufacturing as a global leader.

Market Variables

Toyota looks at a host of variables when deciding where to locate production facilities. One of those variables is proximity to suppliers. Ironically, my plant in San Antonio is an exception to that rule.

We located in Texas because it is the biggest truck market in the U.S. But in doing so, we had to find ways to get closer to our supply base in order to fully take advantage of our just-in-time system. So we decided to allow those suppliers who wanted to locate on our property to do so. Today, there are 21 on-site suppliers in San Antonio; some even have operations in the plant itself. About a one-third of these suppliers are minority owned and two-thirds of our workforce is Hispanic.

The decision to locate where the buyers are was a good one. Currently, Texans purchase 20 percent of the Tundra's sold in the U.S.

Toyota Production System Support Center (TSSC)

Toyota believes we need to produce where we sell and that we have an obligation to contribute to the societies in which we operate. One unique example of that philosophy is the way we share the Toyota Production System (TPS) in the U.S. We originally began sharing TPS at the direction of then-global President Dr. Shoichiro Toyoda in an effort to help our U.S. supply base address operational issues.

Over the years we received many requests from non-automotive companies who tried on their own, or with the help of consultants, to copy TPS. Most struggle with this. To help overcome this challenge, we recently established the Toyota Production System Support Center (TSSC) as a not-for-profit division of our company.

We are helping small-to-mid-size companies solve operational issues, enabling them to retain or grow their U.S. businesses, thereby retaining or growing U.S. jobs as opposed to off-shoring or losing their business to low-wage countries.

Our production engineers approach this work by first assuring top management buy-in and participation. We then go straight to the plant floor to tackle a problem and work directly with the people who do the work. At the same time, we teach plant floor leaders how to problem-solve so that they can sustain continuous improvement throughout their company when Toyota leaves.

We've also discovered that charities are in dire need of improved efficiency, especially in a tough economy when the need is greatest. But most of these charities cannot afford consultants. We provide TPS support just like we do for companies, except we freely donate our time and expenses.

For example, we helped the St. Bernard Project – a non-profit rebuilder of homes destroyed or damaged in the Lower Ninth Ward of New Orleans by Hurricane Katrina – rebuild homes 50 percent faster. We are doing the same in Joplin, Missouri, following the devastating tornado there nearly two years ago.

We are also helping food banks in New York City and San Antonio improves the efficiency of meal and pantry distribution. And we have just begun work with the Red Cross to help it improve its response time following disasters.

Mr. Chairman and members of Subcommittee, I appreciate this opportunity to testify today and am happy to answer any questions.

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