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Aerospace Execs Say Budget Cuts Imperil Health Of Industrial Base

The U.S. defense industrial base is on the verge of being irretrievably harmed if the Department of Defense budget is cut by any more than already planned, according to top executives of U.S. defense and aerospace companies. The industry is on the cusp of losing the ability to design and produce future weapons and space systems, due to $480 billion in cuts that have already been approved. "This is simply more than we can sustain," says Marion Blakey, President and CEO of the Aerospace Industries Association (AIA). "Our position is no more cuts. No more. We believe that defense has been cut into the bone with the Budget Control Act" signed by President Obama on August 2, 2011. "We cannot have that continue."

If the congressional super committee can't agree on a deficit reduction plan by Nov. 23, the Pentagon's budget will be automatically reduced by another $600 billion over 10 years. Such a cut would result in the loss of one million jobs in the defense sector, increase the unemployment rate by one percentage point and reduce GDP growth by 25 percent, according to AIA.

"You cannot assume the defense industrial base will be there if there is no investment in R&D and no significant investment going forward in acquisitions and new programs," says Blakey.

If the Pentagon's budget is severely cut, there will be no peace dividend, say aerospace industry executives. "Not to be too black and white about it, but is a healthy industrial base critical to the security of the U.S. and the economic viability of the country?" asks Boeing CEO James Albaugh. "That is a question that the super committee has to answer."

Defense contractors are currently laying off employees and have stopped investing in R&D and new production equipment, according to industry executives. "If we had additional cuts of $600 billion over the next 10 years, I would question whether or not we have a fighting force that was capable or an industrial base left," says Albaugh. "We will wake up one morning having not addressed the indusial base issue and call for a capability and find that the contractors do not have the ability to provide the capability."

Boeing knows all about this problem. The company experienced serious problems gearing up production of its new Dreamliner 787. "One of the reasons we had issues with that airplane was the fact that we hadn't designed an airplane since the 777, and we lost the ability to do design," says Albaugh. Boeing had not been engaged in a new aircraft development program since the

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China Takes Nanotech Lead

China has surpassed the United States in the annual number of research papers published covering the subject of nanotechnology. According to the Georgia Institute of Technology, China surpassed the United States in nanotechnology research output in 2009. The trend for 2011 shows that the difference between the United States and Chinese nanotechnology output "will become quite pronounced," says research conducted by Ronald Kostoff, a Research Affiliate at the Georgia Tech's School of Public Policy. This year, China is expected to produce 20 percent more nanotechnology research papers than the United States.

China's rapid growth in nanotechnology research publications in journals such as *Applied Physics Letters* and the *Journal of Applied Physics* "continues unabated," says Kostoff. A number of Chinese

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China Nanotech... *(Continued from page one)*

papers are becoming "heavy hitters," as indicated by a substantial increase in the number of citations they are receiving over time.

"This result coincides with the findings of our 2005 / 2007 assessments of China's R&D outputs, which showed that much of their increase in publication quantity was in relatively low impact factor journals, but there was a small and growing core that was increasingly making its presence known in the higher impact factor journals," says Kostoff. The growth of widely cited papers "is quite impressive," Kostoff adds.

In the *Journal of Applied Physics*, "China started from small ratio [as compared to U.S. papers] in the early 1990s, grew steadily but slowly and has increased dramatically since mid-decade," Kostoff reports. "China is presently at about 70 percent of USA publications in the *Journal of Applied Physics*, with no signs of abating its dramatic growth."

China's dominance over the United States in the Science Citation Index could be even more pronounced, according to Kostoff. In the important nanotechnology subtopic of nanocomposites, China's research output has increased at twice the rate as its research output in the broad discipline of nanotechnology. This growth "shows no sign of abating," according to Kostoff. There are other sub-disciplines "where the trend rates are even higher than nanocomposites. At this level of detail, the [analysis] can examine specific [Chinese] investment spikes, such as nanocomposites, and start to connect the dots to identify the investment strategy priorities on an integrated basis."

The number of nanotechnology papers "have to be viewed in a larger context," according to Kostoff. "For technology and engineering development, it is very important to have a trained cadre of researchers available to address the research issues that inevitably arise in the course of development. It is not necessary for these researchers to all be highly cited authors in order for them to have substantial value for supporting and accelerating technology and engineering development. If researchers are of the caliber to publish in the high quality journals typically accessed by the Science Citation Index, they can offer expert assessment of what is being produced globally, and can exploit this cutting-edge research in the development process.

"Thus, if China is increasing the numbers of nanotechnology researchers rapidly, and if their participation in highly cited papers is increasing at the same time, this rapid and increasing quality growth translates into a powerful foundation for accelerated growth in the industrial capability of their national development in the future. They are building a strong foundation not only for enhanced research quantity and quality capability, but for the more commercially and militarily important industrial capability as well."

Aspen Institute Enters Mfg. Debate

The Aspen Institute is gearing up a manufacturing study campaign. It has recently hired Tom Duesterberg, former CEO of the Manufacturers Alliance/MAPI, to help map out a strategic document for the U.S. manufacturing sector. Duesterberg, executive director of the Aspen Institute's Manufacturing and Society in the 21st Century project, will be hosting a luncheon meeting at the organization's Washington, D.C., offices on November 30, to discuss the subject of whether the United States needs a national manufacturing strategy. Panelists include Douglas Holtz-Eakin, President of the American Action Forum, Ron Blackwell, Chief Economist at the AFL-CIO, and Clyde Prestowitz, President of the Economic Strategy Institute.

OSTP's Spat With Congress Over China Will Cost $

The Obama administration's Office of Science and Technology Policy has not made many friends in Congress, and now it looks like it will pay for its intransigence. The House and Senate have approved a spending bill that would cut the agency's funding in 2012 to $4.5 million, down from $6.6 million in 2011, a 32 percent cut. Congress ordered OSTP not to spend any of its appropriated money in 2011 on activities involving the People's Republic of China. But OSTP's use of appropriated funds to participate in the U.S.-China Strategic and Economic Dialogue in May 2011 was found by the Government Accountability Office to have "violated the prohibition" that was included in OSTP's appropriations' legislation.

That bill specifically stated that "none of the funds made available [by Congress] may be used for the National Aeronautics and Space Administration or the Office of Science and Technology Policy to develop, design, plan, promulgate, implement, or execute a bilateral policy, program, order, or contract of any kind to participate, collaborate, or coordinate bilaterally in any way with China or any Chinese-owned company unless such activities are specifically authorized by a law enacted after the date of enactment of this division."

The GAO noted in an October 2011 report that "OSTP informed us that it incurred costs of approximately $3,500 to participate" in week-long meetings with the Chinese in Washington, "including the cost of staff time for nine employees preparing for and participating in the discussions, as well as the cost of the dinner OSTP hosted on May 8."

OSTP argued that the law represented "an unconstitutional infringement on the President's constitutional prerogatives in foreign affairs."

The General Counsel for GAO said the fact that OSTP spent appropriated money to work with the Chinese is a violation of the Antideficiency Act. "Under the Antideficiency Act, an officer or employee of the U.S. Government may not make or authorize an expenditure or obligation exceeding an amount available in an appropriation. . . Accordingly, OSTP should report the violation as required by the act."

GUEST EDITORIAL

Are Women The Answer To The Shortage Of Skilled Workers In Manufacturing?

BY GRETCHEN ZIERICK

Manufacturing is one of the few bright spots in the U.S. economy today, with economic activity in the manufacturing sector expanding in September for the 26th consecutive month, according to the Institute for Supply Management. Ironically, as the manufacturing sector continues to help lead this country's economic recovery, companies are reporting that they are having trouble finding qualified workers. A recent study from the Manufacturing Institute reported that almost 80 percent of American manufacturers are reporting trouble filling open positions despite a national 9 percent unemployment rate in the United States. In addition, 25 percent of the current manufacturing work force is over age 55, with few young skilled workers available to replace them as these longtime employees near retirement. The lack of skilled workers is one of the largest impediments to growth for manufacturing companies.

One way to address this problem would be to attract more women to manufacturing careers and mentor them so that they encourage other women to look at this sector for a career. Unfortunately, this country is doing the opposite: steering away millions of young Americans from manufacturing based on their gender.

Only 30 percent of the 14 million Americans employed in manufacturing are women. However, this represents 4 million American workers, which is not insignificant. As Sara Manzano-Diaz, director of the U.S. Department of Labor's Women's Bureau, stated: "Think of it this way: More women work in the manufacturing industry across this country than the total population of 21 states." Still, given the acute shortage of skilled workers, the manufacturing sector should be a very attractive option for women looking for employment.

A recent survey by Bayer showed that some of the top reasons women are underrepresented in manufacturing include the lack of quality science and math education programs and the presence of persistent stereotypes that say careers in science, technology, engineering and math are not for women. This despite the fact that elementary school girls are earning higher grades in math and science than are boys.

The problem of attracting more women to manufacturing is tied to the sector's overall perception problem. Manufacturers are working to educate young workers that this is not the old manufacturing world of low pay and dirty work. Today's manufacturing, in fact, offers competitive wages and benefits, often significantly better than the service sector, and is high tech, with clean and modern facilities.

The Cleveland-based Precision Metalforming Association has decided to take a leadership role in encouraging the growth of women in manufacturing and combating gender bias. PMA hosted the first annual "Women in Manufacturing" symposium in Cleveland from Oct. 25-26. The event was designed exclusively for women who have chosen a career in manufacturing, and it attracted more than 100 women leaders from around the country.

One topic that received much attention was workplace flexibility. There are certainly challenges in the manufacturing sector to both attract and retain women employees, including developing an approach to flexibility that will work in manufacturing. Without formal workplace flexibility policies adapted to fit the various manufacturing work places, women and men alike will continue to struggle with balancing work and family. In addition, the discussion showed that women in the manufacturing industry are hungry for advice, and formal and informal mentoring programs are essential in order to develop the next generation of women leaders in manufacturing.

The latest report from the U.S. Labor Department listed 240,000 open jobs in manufacturing in August 2011. This acute talent shortage, which threatens the manufacturing sector's recovery — a sector that accounts for about 12 percent of the U.S. gross domestic product — could be solved by encouraging young, talented workers, regardless of gender, to pursue careers in a thriving industry. That was the message at the "Women in Manufacturing" symposium, and that's the message we need to send to the next generation of women in order for manufacturing to grow in this country.

— Gretchen Zierick is President of Zierick Manufacturing in Mount Kisco, N.Y., and a former chairwoman of the Precision Metalforming Association. Her e-mail is gretchen@zierick.com.

A Good Year For Farm Exports

U.S. farm exports surged by $22.5 billion in the fiscal year ending October 31, setting a new record of $137.4 billion. The U.S. trade surplus in agricultural products also reached a new high of $43 billion. "Next year looks equally strong for the U.S. agricultural economy, thanks in part to President Obama signing new trade agreements with South Korea, Colombia and Panama, which will add an additional $2.3 billion to our export total and support nearly 20,000 American jobs," according to Agricultural Secretary Tom Vilsack. The U.S. agricultural sector "continues to be a bright spot in America's economy and a driving force behind export growth, job creation and our nation's competitiveness." China was the country's largest export destination, purchasing $20 billion worth of soybeans, cotton, nuts and hides.

Defense Industrial Base...

(Continued from page one)

early 1990s. "We forgot how," says Albaugh.

Without new program starts, the Department of Defense and its contractors will be engaged in sustaining equipment already in the field. This was Boeing's role between the 777 and the 787. "Doing sustaining engineering is very different from development engineering, where you have to take the requirements, decompose those down to the smallest element of work and the smallest piece part and then you validate and verify that and build it up to the finished product," says Albaugh. "We were too busy doing sustaining engineering. For me to be a viable [defense] contractor, you have to do R&D and detailed design. You have to transition detailed design into production. You need to do production, and you need to support the products in the field. If you lose any point on that continuum, you will have a very difficult time reconstituting it. Right now, there are very few new starts and active design teams supporting our United States Department of Defense." A number of companies are building military aircraft, "but that doesn't mean they have the capability to develop a new airplane if they are called upon to do it," says Albaugh.

The defense industry is in a more difficult situation today than when the Cold War ended in 1989. When DOD's budget began to drop in the 1990s, a lot of military equipment was new: F-16, F-15, the B-1 bomber and Abrams tank. More than 700,000 military personnel retired from service. Today, the United States is fighting wars in Iraq and Afghanistan, along with dealing with cyber warfare and terrorism. The country is not taking people out of uniform. Equipment is old and needs to be reset.

"It's a very different time," says Albaugh. Without cuts in personnel, health care and benefits, it means that most cuts to the military will be made in R&D and procurement. "In my mind, it's ironic right now that there is not enough talk about the industrial base," says Albaugh. "There has to be more. It really is the arsenal of freedom, and the first question we have to ask is: Is it strategic to the economic viability of our country? The answer is yes. I know the answer to that in the Pentagon is yes. I'm not sure what it is on Capitol Hill."

The industry is also different from the one described by President Eisenhower in the late 1950s, adds Blakey of AIA. "It is very fragile," she says. The industry has already consolidated from 130 major companies to only seven, notes David Hess, President of Pratt & Whitney, a division of United Technologies Corp. "Rather than having four or five or six suppliers that might have a technical capability, there might be one that has that capability. If they elect to pursue other markets because defense isn't viable, we will lose that capability altogether. We have shrunk to the point where there is little margin in these key technologies."

"Rather than having four or five or six suppliers that might have a technical capability, there might be one that has that capability."

Hess says: "It's the first time in history that we haven't had a new start on any kind on a helicopter or a fixed-wing program. As that capability atrophies, it is very hard to reconstitute and get it back. This is not a discussion about the commercial viability of the companies involved here. It's really a discussion about being able to maintain the industrial base that is absolutely critical to our national security."

The issue of de-industrialization is even more pronounced in the space sector. For the first time since the space era began, the United States does not have ability to put men into orbit. The country now relies on the Russians for all manned launches, at a cost of $60 million per launch. A new launch program is still not underway. When the Apollo program was ending, the Space Shuttle program had already been funded. "There may have been a gap in launches but there was no gap in the

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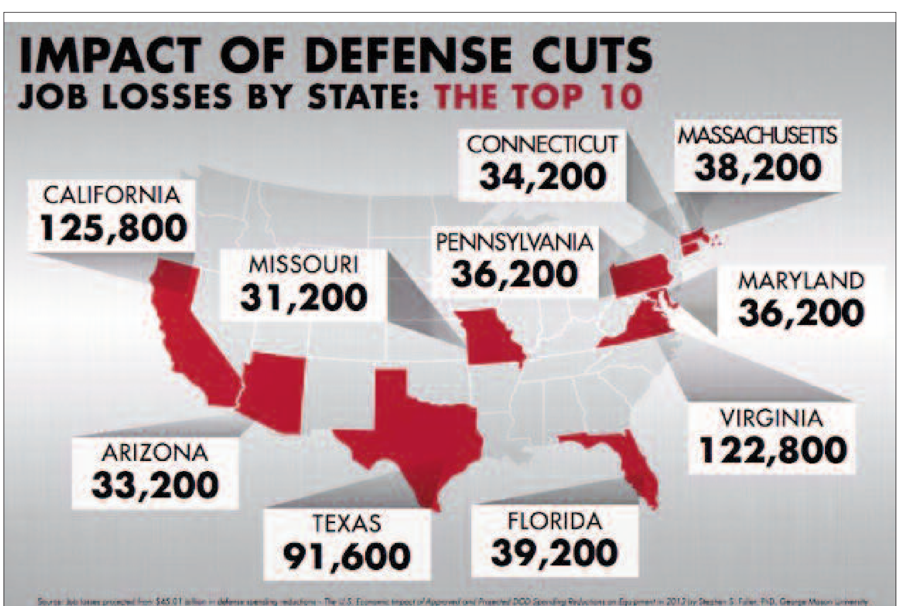

Federal Government Assumes Liability For Hundreds More Private Pensions

The Pension Benefit Guaranty Corp. posted a deficit of $26 billion at the end of its fiscal year on October 31, up from a $23 billion deficit in 2010. "This is the largest deficit in PBGC's 37-year history," says the federal agency that is now responsible for paying the retirement benefits of 1.5 million Americans. Its pension liability now totals $107 billion.

Driving the agency's deficits was an increase in exposure due to failed manufacturing companies. In 2011, the amount of liability "for the present value of non-recoverable future financial assistance for single employer plans" from manufacturing companies totaled $121 million, up from $102 million in 2009. The next closest industries were less than half that amount: transportation, communications and utilities at $50 million, followed by services at $26 million, and wholesale and retail trade at $12 million. "In addition, PBGC currently estimates that it is reasonably possible that other multiemployer plans may require future financial assistance in the amount of $23 billion," says the agency in its annual report released on November 14.

PBGC has $81 billion in assets on hand to cover its obligations, "the bulk of which are benefits to be paid over many years," says the agency. It currently insures private-sector pension benefits for 44 million American workers and retirees.

Last year, the agency paid almost $5.5 billion in benefits to 873,000 retirees who were involved in 4,300 failed plans. There are another 628,000 future retirees who will start receiving benefits from the federal agency when they become eligible.

In 2011, the agency assumed responsibility for the benefits of 57,000 people in newly failed plans. Its "early warning" system identified almost 1,000 companies that "pose significant risks to underfunded plans." It is trying to arrange sponsors "to protect those plans."

It entered into "major agreements to strengthen plans and protect participants' benefits" with Motorola Solutions, which agreed to add $100 million to strengthen the pensions of 87,000 employees and retirees, and with Tomkins Corp., an auto parts and building materials producer, which agreed to add $44 million to strengthen the pensions of 13,000 workers and retirees.

PBGC assumed responsibility for 152 company plans last year, including for Woverine Tube Inc., Harry & David, Alabama Aircraft Industries and Johnson Memorial Hospital.

It opened 56 new bankruptcy cases in which it "fights hard to preserve pension plans in bankruptcy."

It worked with 19 companies in bankruptcy to continue their pension plans after reorganization or after a new owner assumed operations. These plans covered 74,000 people, who will continue to receive their full promised benefits. "This also kept more than $2 billion in unfunded pension liabilities off PBGC's books," says PBGC. Two companies that continued their plans following bankruptcy in 2011 were Chemtura Corp., with 15,000 participants and Visteon Corp. with 23,000. "We do not always succeed," says the PBGC. "We fought to preserve the Harry & David Pension Plan for its 2,500 participants, but the bankruptcy court supported the company's move to terminate the plan over our objection."

With these additional obligations, PBGC's total obligations rose to nearly $107 billion. "Since our obligations are paid out over decades, we have sufficient funds to pay benefits for the foreseeable future," states the agency. "Nonetheless, PBGC's obligations are clearly greater than its resources. We cannot ignore PBGC's future financial condition any more than we would that of the pension plans we insure."

The agency wants to set higher premiums on the plans it insures. If it is not able to do so, "the PBGC's deficit will increase and we may face, for the first time, the need for taxpayer funds."

The agency says that a "staggering" 83 percent of Americans have concerns over whether they will have enough money in retirement. "Unfortunately, many employers are abandoning" their pension programs, putting tens of millions of Americans at risk of living in poverty during their old age.

To Solve The Deficit: Sell Off America

The Competitive Enterprise Institute has a plan that Congress can adopt in order to avoid raising the $300 billion in taxes that Republicans are having a hard time stomaching. The idea: sell off federal land and assets, something "companies and families [have to] do when they get into financial trouble," says the organization. Additional money can be raised by increasing oil and gas production on federal property, increasing timber and coal production from federal land; and auctioning broadband spectrum.

The federal government owns 30 percent of the land in the United States, much of which has commercial potential, says the Competitive Enterprise Institute. "Selling some federal lands and buildings will put money in the federal treasury and put unproductive assets to use, thereby increasing local property taxes as well as corporate and personal income taxes." The organization recommends that the federal government increase the amount of timber harvested on federal lands from two billion board feet per year to the "sustainable" level of 12 billion board feet per year.

U.S. Opens Foreign Tourism Marketing Shop

The United States has entered into the business of attracting foreign tourists with a $200 million overseas marketing program. The newly created "BrandUSA," a joint public-private partnership, is trying to reverse a deep slide in international visitors to the United States. The U.S. share of international arrivals declined by 37 percent between 2000 and 2010, from 17 percent to 12 percent.

"Between 2000 and 2010, the global travel market grew by more than 60 million travelers annually, yet U.S. visitation stayed virtually flat," says BrandUSA CEO Jim Evans. The cost to the United States of lost global share was 78 million visitors who would have spent $606 billion.

Yet the global travel market is booming. Long haul arrivals increased by 40 percent between 2000 and 2010 (to 213 million) and are forecast to increase by another 40 percent to 300 million arrivals by 2020. Global travel spending is expected to double to $2.1 trillion over the next eight years.

BrandUSA notes that other governments are actively promoting their countries to foreign travelers. Mexico's government spends $174 million on international promotional efforts; United Kingdom spends $160 million and Australia spends $107 million.

At least half of BrandUSA's budget will be funded by investment from the private sector. The remainder will come from the federal government's Electronic System for Travel Authorization, which assesses a $14 fee on visitors traveling to the United States from countries that do not require a visa.

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work on the manned space flight program," says Hess. "All the intellectual capital that was working on Apollo naturally moved to the Shuttle program. But today, we have a gap in manned U.S. launches now that the Shuttle program has ended. That is why we have seen hundreds of layoffs at Pratt Whitney Rocketdyne as well as other companies across the industry and across the country."

NASA has announced a new space launch system, but funding is not assured. "This tremendous intellectual capital that took decades to develop and took us to the moon and back, once it is dissolved it will be extremely hard to reconstitute if and when we decide to return to space," says Hess.

Funding for the Next Generation Air Transportation system is also in jeopardy. The country is still dependent on radar and radio technology deployed in the 1960s. Completing NextGen by 2025 would generate $320 billion in benefits to the U.S. economy, according to an AIA study conducted by Deloitte Touch. It would increase the number of flights by 20 percent and cut fuel burn and CO_2 emissions by 12 percent. Yet, it is another aerospace program that is threatened.

AIA President Blakey says the debate over the national debt needs to take these issues into consideration. The U.S. aerospace industry is now competing with well-financed programs in Russia, China, Brazil, Canada, Europe and Japan. All are pushing to topple U.S. dominance in the sector. "It is our duty now to speak out," says Blakey.

AIA has started a "Second to None" campaign (www.secondtonone.org) aimed at educating "anyone who will listen" on the importance of keeping the military, space and aviation budgets at viable levels. This campaign "represents one of the most important actions in the history of the Aerospace Industries Association — a 92-year-old trade association," she says. "The national debt threatens to overwhelm all other priorities. Our message for the administration and Congress is: Slow down. Take a very long look at the national security risks as they have been noted by everyone from Secretary of Defense Panetta, who said they are devastating, to General Patreaus, who has reason to know, and that is on top of many other national security experts. We ask the Congress and our leadership in the White House to consider whether eliminating hundreds of thousands of jobs over the next decade is at all consistent with the national imperative to create jobs. It just doesn't make any sense. As an industry that is responsible to both supplying the warfighter and contributing significantly to the health of our economy, we believe it is our duty now to speak out."

QUOTABLE:

"Our Rocketdyne business is 50 years old. Every astronaut who has gone up into space has gone up on a Pratt and Whitney engine. We have had 100 percent mission success. But it took 50 years to develop the capability — the intellectual capital and the technology we have today.

"Every generation has learned from the last one behind it. We learned from Mercury and applied it to Gemini. We applied that to Apollo, which got us to the moon and we extended it to the Shuttle program. But in May of this year with the Shuttle program ending and no clear direction or vision beyond it, we started letting go hundreds of our engineers from Rocketdyne who had the knowledge, who worked on the Apollo programs, who will go off and retire and move out of the industry.

"Over time, those reductions will have to continue unless there is something that succeeds the Shuttle program. Maybe there is a vision going forward that will allow us to continue this great legacy but this is not something you learn in school. You don't graduate from university with knowledge on how to develop a rocket engine. It's in the heads of people and who have developed it over a 20- or 30-year career.

"There may be only one company that has the capability that we have. We are the world's leader in liquid rocket propulsion. We are the only people in the United States who can do what we do. If Rocketdyne doesn't have that capability you have to start to question the U.S. capability to develop new liquid rocket propulsion."

— David Hess, President of Pratt & Whitney, which purchased Rocketdyne from Boeing in 2005.

Congressmen Want Review Of GE's China Avionics Venture

Two senior Republican members of the House of Representatives have called on the Department of Defense to initiate a National Security Review and a Committee on Foreign Investment in the United States (CFIUS) review of the joint venture between General Electric Corp. and China Aviation Industry Corp. (AVIC), a Chinese government-owned enterprise. The two companies signed an agreement this summer to jointly develop avionics systems for Chinese-made jetliners.

"It is my understanding that the technology that GE intends to share with the Chinese was originally developed for the U.S. military," writes Frank Wolf (R-Va.), chairman of a House Appropriations subcommittee that funds the FBI. "The GE-AVIC joint venture could provide the Chinese with years, if not decades, worth of U.S. avionics technology that will fuel their aeronautics capabilities, potentially at great expense to our national and economic security."

Wolf's letter to Defense Secretary Leon Panetta follows a similar request made in October from Rep. Randy Forbes (R-Va.) chairman of the House Armed Services subcommittee on readiness. Both members of Congress say they are concerned that U.S.-developed technology will end up the hands of the People's Liberation Army Air Force, "which is even now at work developing its J-20 fifth generation fighter that appears to be intended to threaten U.S. air supremacy in East Asia," according to Forbes.

Wolf says that the FBI's recent report on Chinese industrial espionage should be taken seriously by the Department of Defense. "Given the breadth and scope of this espionage, GE's assertions that they will be able to fully protect sensitive technology lacks credibility," writes Wolf. "Should the GE-AVIC joint venture proceed, there is no question that all of the sensitive technology involved will be completely compromised by the PLA. This joint venture could have serious consequences for U.S. national and economic security for decades to come."

Forbes asked for an even broader review of U.S. industry involvement with Chinese companies. He asks Panetta to conduct an audit of all U.S. defense contractors' ventures with Chinese companies. He wants to know "what technologies have been transferred to those joint ventures, whether that technology has been leaked out of the joint venture or is at a considerable risk of doing or being leaked, what enforcement and compliance measures are involved with those joint ventures and whether export control license checks and National Security Reviews of those joint ventures are needed."

U.S. Auto Sector Is Recovering Nicely

The U.S. automobile industry is gaining strength. Total vehicle sales in November are projected to reach 975,600 units, which is 8 percent higher than in November 2010 and represents "the highest monthly selling rate in three and a half years," says J.D. Powers and Associates. Total vehicle sales are projected to reach 12.7 million units this year. JD Powers forecasts sales of 13.8 million units in 2012.

"The upward forecast revision to 2011 represents the first increase to the forecast all year and tempers the cloud of uncertainty that has been over the automotive market for several months," said Jeff Schuster, senior vice president of forecasting at LMC Automotive. "The current recovery pace appears sustainable into 2012. As long as there is not an external shock or economic setback, the selling rate could be stable above the 14-million-unit level during the second half of 2012."

Light-vehicle production volume in North America has increased by 920,000 units, or 9 percent through the first 10 months of 2011 compared with the same period in 2010, according to LMC Automotive. "The Detroit 3 OEMs are seeing nearly a 14 percent increase in year-to-date production through October, while European OEMs are up 38 percent," says the company.

Hyundai Group production is up 48 percent after increased production of existing models and additional localization of models in 2011. Japanese manufacturers, as a group, posted an 8 percent decline year-to-date in October from the same period in 2010. The decline is due to the Japan earthquake disaster and additional setbacks to Honda and Toyota from the flooding in Thailand. "The impact of the flooding is expected to continue through the fourth quarter, causing further downtime to their North American operations," says LMC Automotive. "Toyota is recovering faster than initially anticipated, with lost volume estimated to be 5,000 units in the fourth quarter. The impact to Honda is expected to be more severe due to the location of their Thai plants. Honda's fourth quarter loss in North America is estimated at 35,000 units."

Tire Tariffs Had Big Effect

The decision by the International Trade Commission in 2009 to impose stiff tariffs on imported Chinese tires has resulted in a substantial reduction of tire imports from China. Shortly after the tire remedy was put in place in September 2009 (with 35 percent tariffs imposed the first year), Chinese tire imports declined by 65 percent, from 5.15 million units in September 2009 to 1.78 units million in October 2009, according to the International Trade Administration. "As of January 2011, imports of Chinese tires were still 57 percent below September 2009 levels," says ITA. Imports of Chinese tires in January 2011 were 22 percent below their January 2010 levels. "Overall, imports of tires from China have decreased significantly since the section 421 remedy was imposed," says the Commerce Department agency.

Manufacturing Companies Have A Long Way To Go Before They Are World Class

Most of America's small- and medium-sized manufacturers know what it will take for them to become successful global competitors, but only a fraction of them are implementing best management and manufacturing practices to get there.

Small- and medium-sized manufacturers "have trouble implementing next generation manufacturing strategies" that focus on the development of talent, innovation, process improvements, sustainable manufacturing practices, supply chain management and exports, according to John Brandt, CEO of the Manufacturing Performance Institute (MPI).

In one of the most comprehensive surveys ever conducted of U.S. manufacturers, MPI found that most manufacturing executives understand what is required, but there remains a "significant execution gap," according to Brandt. For example, three-quarters of manufactures say supply chain management is important or highly important to the success of their operation, but only 29 percent are at or near world-class levels. The same is true of developing leadership capabilities, attracting talent and installing automated production equipment. "Only a small percentage of manufacturers have state-of-the-art equipment or are ready to move forward into the next generation," says Brandt. The survey notes that the execution gap "represents a substantial barrier to long-term success for U.S. manufacturing."

The Performance Management Institute's "2001 Next Generation Manufacturing Study" updates research conducted in 2009. It finds that most U.S. manufacturers "lack key success factors — talented people, business systems and equipment, company-specific strategy — and face competitive disadvantage." Many manufactures "haven't yet recognized the critical importance of NGM strategies."

Thirty-two percent of American manufacturers have no strategy for global engagement. Twenty-five percent have no strategy for sustainable production. And 15 percent have no strategy for human-capital management.

Carrie Hines, Executive Director of the American Small Manufacturers Coalition, the trade group representing the nation's Manufacturing Extension Partnership (MEP) enters, says the study "reinforces how critical it is for U.S. leaders to put and keep in place existing support resources for small manufacturers as they assess whether they have the workforce, business systems, equipment and strategies in place to successfully compete in the future. Small businesses that don't have deep pockets like large corporations can benefit from additional resources that can help them compete in today's economy."

Others agree. Mary Isbister, president of GenMet Corp. has used the Wisconsin MEP to implement a series of performance improvement strategies. "We have measurable quantifiable results that demonstrate that they have transformed our business to be truly competitive in today's market," says Isbister. The metal fabrication company's sustainable continuous improvement (lean) program, has enabled GenMet to increase inventory turns from nine to 12 per year to 33 to 39 per year. The company has cut its lead times for delivering contract manufactured products in half, allowing it to effectively compete with offshore competitors that have longer lead times and lower quality. It has reduced its finished goods inventory by 90 percent.

"Because we can manufacture much faster in small quantities we don't have to carry any inventory, that frees up valuable space in our facility," says Isbister. "With the same footprint of 10 years ago, we have more than quadrupled the revenue from our facility."

Implementing lean has changed its relationships with suppliers and its customers. The company is "never more than two days away from our raw material," which helps increase inventory turns. "It's not just how quickly suppliers can deliver the material — it's the expectation that quality and on-time delivery are [essential]," says Isbister. "That is what those suppliers have to bring to the party in order to participate with GenMet, but it's also developing those deeper relationships where they are looking for innovative ideas on how to assist us to be competitive with our customers."

Here are some of the findings from MPI's benchmarking survey:

• 60 percent of manufacturers anticipate a planned leadership succession in the next five years, up five percentage points from 2009.

• 67 percent of manufacturers spend less than 5 percent of sales on capital equipment;

• 91 percent of manufacturers spend less than 5 percent on information technology;

• 43 percent of manufacturers say they are near or at world-class customer-focused innovation;

• 22 percent of manufacturers invest more than 5 percent of sales in new product development and R&D, a drop of 10 percentage points from 2009. "This raises concerns about U.S. manufacturers' ability to meet customer demands for new products faster," says the study.

• 70 percent of manufacturers commercialize less than one-quarter of their R&D expenses;

• 30 percent of manufacturers report that they are near or at world-class with human capital management;

• 9 percent of manufacturers say their business systems and equipment are state of the art;

• 33 percent of manufacturers have either inadequate systems and equipment or none at all;

• 42 percent of manufacturers have established skill standards for training;

• 29 percent of firms still train each employee eight hours or fewer annually; and

• 28 percent of manufacturers report value added per employee of more than $125,000.

The study is located at http://www.smallmanufacturers.org/wp-content/uploads/NGM-Study-Executive-Summary.pdf.

Recent Reports & Studies

MORE JOBS, LESS POLLUTION: GROWING THE RECYCLING ECONOMY IN THE U.S. says that if the United States increased the amount of recycling to 75 percent of all solid waste heading to dumps and incinerators by 2030, the country would create 2.3 million new jobs, according to the National Resources Defense Council report. "This does not include a significant number of indirect jobs associated with suppliers to this growing sector of the economy," says NRDC. Recycling 75 percent of the waste stream would reduce carbon dioxide emissions by 515 million metric tons (equal to 72 coal fired power plants or 50 million automobiles). It would reduce ecological pressures associated with use of non-renewable resources, conserve energy and generate "economic resilience through stable, local employment," says NRDC: http://www.teamster.org/sites/teamster.org/files/11911RecyclingJobsFullReport.pdf.

MORE THAN MEETS THE EYE: THE SOCIAL COST OF CARBON IN U.S. CLIMATE POLICY from the World Resources Institute describes how the cost of carbon emissions is being calculated: http://pdf.wri.org/more_than_meets_the_eye_social_cost_of_carbon.pdf.

SAY ON PAY IN THE 2011 PROXY SEASON: LESSONS LEARNED AND COMING ATTRACTIONS FOR U.S. PUBLIC COMPANIES from the Conference Board describes how shareholders are voting on executive pay packages, as required under the recently passed Dodd-Frank Act. "While only 2 percent of Russell 3,000 companies failed to receive majority approval on their say-on-pay advisory votes, the big stories this proxy season have been the unprecedented number of recommendations by proxy advisers, their influence on vote results, and companies' reactions to those negative recommendations," says the study.

"More than 100 companies challenged their proxy adviser recommendations and methodologies, especially on purported pay for performance disconnects. Some companies changed outstanding agreements or made commitments to prospectively change their compensation policies to reverse native adviser recommendations. This turbulence, the questions raised about proxy adviser policies and methods, the advent of derivative shareholder lawsuits against companies that failed to obtain majority shareholder approval, and the expectation that most companies will hold annual votes, all likely mean that the 2012 proxy season will be even more challenging. Companies should start preparing now."

The report is located on the Conference Board's Website through a registration screen at https://www.conference-board.org/.

WOMEN IN STEM: A GENDER GAP TO INNOVATION from the Commerce Department's Economics and Statistics Administration says that women hold less than 25 percent of STEM jobs, a number that has persisted for a decade "even as college-educated women have increased their share of the overall workforce." Women with STEM jobs earned 33 percent more than women in other careers. "Women hold a disproportionately low share of STEM undergraduate degrees, particularly in engineering," says the study. "Women with a STEM degree are less likely than their male counterparts to work in a STEM occupation; they are more likely to work in education or healthcare." Average hourly earnings for a woman in a STEM job were $31.11 in 2009. For a male, the hourly earnings were $36.34: http://www.esa.doc.gov/sites/default/files/reports/documents/womeninstemagaptoinnovation8311.pdf.

U.S.-CHINA MILITARY CONTACTS: ISSUES FOR CONGRESS from the Congressional Research Service, 68 pages: http://www.fas.org/sgp/crs/natsec/RL32496.pdf.

REVEALED: OPERATION SHADY RAT, AN INVESTIGATION OF TARGETED INTRUSIONS INTO 70-PLUS GLOBAL COMPANIES GOVERNMENTS AND NON-PROFIT ORGANIZATIONS DURING THE LAST FIVE YEARS, from McAfee, a subsidiary of Intel: http://www.mcafee.com/us/resources/white-papers/wp-operation-shady-rat.pdf.

RECOMMENDATIONS FOR ENHANCING REACTOR SAFETY IN THE 21ST CENTURY, THE NEAR-TERM TASK FORCE REVIEW OF INSIGHTS FROM THE FUKUSHIMA DAIICHI ACCIDENT from the Nuclear Regulatory Commission says the accident highlights the need for "a more balanced application of the Commission's defense-in-depth philosophy using risk insights" from the Fukushima accident. Such an accident "is unlikely to occur in the United States," but it does require the development of a new regulatory framework that is "logical, systematic, coherent and better understood. Such a framework would support appropriate requirements for increased capability to address events of low likelihood and high consequence, thus significantly enhancing safety." The U.S. nuclear industry and its regulators, says the report, must strengthen the "defense-in-depth philosophy by including explicit requirements for beyond-design-basis events." The Fukushima accident "provides new insights regarding low-likelihood, high-consequence events that warrant enhancements to defense-in-depth on the basis of redefining the level of protection that is regarded as adequate." It made 12 recommendations: The 83-page report is located at http://pbadupws.nrc.gov/docs/ML1118/ML111861807.pdf.

NATIONAL CENSUS OF FATAL OCCUPATIONAL INJURIES IN 2010 (PRELIMINARY RESULTS) says 4,547 people died on their jobs in 2010, down slightly from the 2009 level of 4,551. The rate of fatal work injuries was 3.5 per 100,000 full-time workers. There were 968 workers killed in car wrecks, 635 killed by falling; 506 homicides; and 402 people killed by getting struck by an object. The occupations with the highest fatal work injury rates were fishing, logging, aircraft pilots and flight engineers, farmers and rangers, mining machine operators, roofers, garbage men, drivers and truck drivers, industrial machinery workers and policemen. The report is located at http://www.bls.gov/news.release/pdf/cfoi.pdf.

New Commerce Secretary, Same Press Release Writers

There might be a new Secretary of Commerce, but there isn't a new group of press release writers in the secretary's office. Upon release of the GDP numbers of 2.5 percent growth for the third quarter, the newly sworn in Commerce Secretary John Bryson issued this statement: "Despite today's encouraging numbers, we must do more to create jobs. That's why it's critical that Congress act to pass the measures in the President's Jobs Act."

That sounds pretty much like what acting Deputy Secretary of Commerce Rebecca Blank said after the fourth quarter 2010 GDP numbers were released: "We expect the economy to continue to improve in 2011 and are particularly heartened by recent improvements in the labor market. However, we realize that much work remains to ensure greater economic growth and job opportunities for the American people."

In the third quarter of 2010, then Commerce Secretary Gary Locke upon release of the GDP numbers said: "It's clear America's economy is turning around, but Americans remain rightly focused on their personal financial situations and jobs. The President is committed to enacting changes that hold Wall Street accountable and provide strong consumer protections. The American people deserve and expect nothing less."

On January 30, 2008, George Bush's Commerce Secretary Carlos Gutierrez stated upon release of the fourth quarter GDP numbers: "The U.S. economy is not growing as fast as we'd like — that's why we need the President's stimulus package as soon as possible because it will boost the economy by putting money into the hands of consumers. It is vital that Congress take quick action to bolster economic growth and job creation this year."

Stepping back to January 2007 before the financial sector collapse, Gutierrez stated that the GDP report for the fourth quarter 2006, which showed 3.5 percent growth, indicated that the U.S. economy "is humming. Twenty-one straight quarters of uninterrupted growth, 40 months of payroll increase and more than seven million new jobs since August 2003 have helped to make the United States the fastest growing major industrial nation in the world. The President's sound pro-growth policies have put America on the path to prosperity and have helped create an environment that enables U.S. businesses to be the most competitive and innovative in the world."

Foreclosure Problem Will Continue

The United States is not yet close to solving its home foreclosure problem, according to the Center for Responsible Lending. So far, 2.7 million mortgages signed between 2004 and 2008 have gone into foreclosure since the housing bubble burst in 2006. But there are at least another 3.6 million mortgages that will be foreclosed upon over the next few years, according to the center. "The foreclosure crisis isn't going away," says the group in a report "Lost Ground, 2011." "Families that could have benefited from homeownership are instead being kicked down the economic ladder, home prices keep falling and economic recovery remains stalled." Of the loans that were made between 2004 and 2008, 6.4 percent have gone into foreclosure, with 8.3 percent more at "immediate or serious risk."

MAPI Seeks Economist

The Manufactures Alliance / MAPI is looking for an economist to analyze the impact of regulations and public policy on the manufacturing industry and U.S. multinational corporations. The job entails being director of MAPI's Tax Council, a group of senior tax executives from MAPI member companies. Anyone interested in the Ph.D.-level position can send a resume to economist@mapi.net.

China Hates Democracy

China will not become a democracy, according to Wu Banguo, a member of the Politburo standing committee. At a national conference on the Chinese legal system earlier this year, Banguo said: "Based on China's national conditions, we solemnly declare that we will not engage in a multi-party political system or in diversity of the guiding ideology. We will not pursue the 'separation of powers' and the bicameral system, or engage in federalism or privatization of property."

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