



The National Export Initiative and Creating New Jobs

A U.S. Presidential Executive Order released in March created the National Export Initiative. The goal of the initiative is to double U.S. exports and create two million new jobs over the next five years. The policy is expected to promote global economic recovery by boosting American exports, jobs and economic growth. The initiative offers a coordinated government effort to support companies trying to sell overseas and to strengthen U.S. trade relations with other countries. Top leaders from the Departments of Commerce, Agriculture, Treasury and State, the Small Business Administration, the U.S. Trade Representative, and the Export-Import Bank will form an Export Promotion Cabinet. The cabinet will plan strategies to improve market access through education, expansion of trade advocacy and credit, and enforcement of trade, labor and environmental rights.

Details of the initiative include promotional, logistical and financing assistance for small- and medium-sized businesses. Roughly 3.7 million American jobs are supported by exports. In 2009, U.S. exports were estimated at \$1.54 trillion, down from \$1.83 trillion in 2008. Furniture-related exports accounted for more than \$7 billion in 2009, with about \$115 million from Mississippi. Prior to the initiative, the U.S. Chamber of Commerce had been working to double exports in an effort to create 20 million new jobs during the next ten years, replacing seven million full time jobs lost in the current recession and adding 13 million additional jobs needed to achieve

full employment in 2020. Exports are 11 percent of the U.S. gross domestic product compared to 40 percent in China, 36 percent in Canada, and 22 percent in India. A recent study conducted by the National Association of Manufacturers estimated that updating export controls could boost U.S. exports by nearly \$56 billion annually over a 10-year period. It also estimated that international trade is responsible for the financial stability of one in five Americans. The nation's large industrial trade association also stated that policies which open markets around the world to U.S. manufacturers and remove outdated export control laws could create more than 160,000 manufacturing jobs by 2020. This would also require action on three pending free-trade agreements with South Korea, Panama and Columbia.

Export growth creates income opportunities and access to foreign markets, resulting in additional and higher-quality jobs. While the U.S. is a major exporter, many U.S. companies don't export simply because they haven't had the resources to enter markets in other countries. Exporting allows businesses to sell beyond their domestic market and increase production, sales, and jobs. Businesses that export employ almost twice as many workers and produce about twice as much as non-exporting businesses. These global-thinking companies usually pay their employees higher wages. Increased productivity from exporting also makes companies more cost-effective and profitable.

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The Franklin Furniture Institute is an institute of the Forest and Wildlife Research Center, Mississippi State University. The Institute is a collaborative effort involving the College of Forest Resources; College of Business; Bagley College of Engineering; and the College of Architecture, Art and Design. George M. Hopper is Director of the Forest and Wildlife Research Center.

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director's corner

Furniture Highlights

Bill Martin, Director

I am sure that most of you, specifically those in Mississippi, are aware of the short falls in state revenue created by the slow economy and high unemployment. There is little hope that these trends will reverse in the next two years. This lack of revenue has created financial short falls at the State's eight public universities. The Mississippi Board of Trustees of State Institutions of Higher Learning governs the State's public universities, including fund allocation. Legislative appropriations and tuition fund the State's Institution of Higher Learning. Therefore, when State revenues decline, IHL funding declines causing each of the public universities' funding to decline.

So how does this affect Mississippi State? The university receives approximately one-half of its operating budget from State appropriations through the IHL. Beginning in the fall of 2009, Gov. Haley Barbour announced the first of four budget reductions to state agencies, including higher education, totaling 8.6 percent. More cuts are likely. It is projected that revenues will continue to decline in 2011 by an additional 5 percent and another 10 percent in 2012. These cuts represent a cumulative loss to Mississippi State of 23 percent or \$28 million from the funding received in 2009. When all separately budgeted units are considered, the total MSU reduction is \$47 million from the original 2010 appropriation. Under the leadership of President Mark Keenum, a faculty-led Select Committee on Efficiencies and Innovations was created to identify ways to address the budget shortfall. The committee released its report and the recommendations are currently being evaluated.

So how does this affect the Franklin Furniture Institute? At this time, the Institute does not receive state appropriations through the IHL, so we do not foresee drastic operational changes in the near future. We will continue to apply for grant funding through federal and state agencies. While federal stimulus money seems to be plentiful, these funding opportunities are extremely competitive and are targeted toward specific federal policy initiatives including green jobs, carbon emissions and health care.

So, what will help increase revenues in the State, which will in turn help the economic picture for all state agencies, including higher education? By far, the largest economic stimulant would be job creation and the Mississippi furniture industry is doing its part! In the March issue of the Mississippi Business Journal, the article "Furniture Industry Making a Comeback?" stated that over 1,000 workers have been hired in the industry since August 2009. The Institute also conducted research and industry interviews and found that since March 2009, and projected through February 2011, more than 1,500 jobs will have been created. What does this mean to the State? By running an EMSI economic impact model on this 1,500 worker job creation, an additional 1,200 indirect jobs should be created totaling over 2,700 new jobs, resulting in new personal income of over \$101 million annually. Annual state tax revenues would increase by over \$5.9 million.

The Franklin Furniture Institute says thank you furniture industry!
Remember, Working Together, WE Can Make it Happen!



Engineering Assistance and Training

CAVS-E isn't just for cars anymore! Originally developed as a sister facility of Mississippi State University's on-campus Center for Advanced Vehicular Systems, the Canton-based extension center was built to serve the state's automobile manufacturing industry by reducing product development time, improving efficiency and increasing safety. However, the broader mission of CAVS-E includes extending technology to a variety of other industries, allowing Mississippi to become a competitive player in the global marketplace. The CAVS-E research and outreach program assists manufacturing-based industries through training and implementation of quality and productivity improvement methods and programs. Since 2006, CAVS-E's economic impact to Mississippi industry totals \$4.2 billion, based on client responses to third party surveys conducted on behalf of the U.S. Department of Commerce's Manufacturing Extension Partnership.

The CAVS-E Team is headed by Clay Walden, a graduate of Mississippi State's industrial engineering program. Walden provides leadership for implementing the program's strategic plan which includes the provision of:

- business and industry best practices, education, training and professional development programs;
- access to advanced engineering tools and concepts related to product design, manufacturing, and assembly processes; and
- proven experience and knowledge-based concepts in effective plant layout, manufacturing plans, and business and industrial systems.

A number of Mississippi furniture industry participants have graduated from the lean certification program offered through a partnership between CAVS-E and MSU's Industrial Outreach Service. Two-day sessions are scheduled each month for a total of four months to teach participants the skills needed to become lean. These include elimination of waste and improved flow in operations. Each participant is required to implement techniques and tools on an approved project that targets substantial benefits to their respective organizations. Participants receive consulting support both inside and outside the classroom to assist with the successful completion of their project. Furniture industry reported impact from this training on company bottom lines is estimated to be \$800,000 annually.

Another quality-focused program taught by CAVS-E is Introduction to Six Sigma Methodology. Like lean certification, this training consists of two-day sessions each month for a total of 64 hours of class time. Participants are also required to implement techniques and tools on an approved

project that provides potential benefits to their company. The goal of each participant is to develop project results that fulfill the project requirements of American Society for Quality's Black Belt Certification.

A program that is specifically designed for the furniture industry is the Simulating Lean Transformation in the Furniture Industry workshop. The purpose of this workshop is to improve intuition about the implementation of lean manufacturing within the furniture industry. This is accomplished by reviewing basic principles of lean manufacturing, providing the user with the ability to "experiment" with a simulated plant (manufacturing flight simulator), and enhancing the understanding about relationships between key plant decision variables and performance measures. This workshop is taught as needed at the request of industry.

Other training of interest includes Fundamentals of Welding for Engineers, Dimensional Metrology, and Gage Calibration.

In addition to providing education and training, the CAVS-E team works directly with companies to assist with operational processes such as production flow, factory flow, and mechanical type projects. A plant "master plan" was developed for transforming a large furniture manufacturer into a lean production system. This was accomplished by assessing the current system and recommending the steps to proceed in the training of personnel and transformation of the plant to lean production. CAVS-E recently provided an upholstered manufacturer with a plant layout analysis for a new production facility. The engineers on staff at CAVS-E utilize the disciplines of finite element analysis, simulation modeling, welding engineering, ergonomics, and materials science to assist companies.

To learn more about the assistance and training available to the furniture industry through CAVS-E, contact Dr. Clay Walden at walden@CAVS-E.msstate.edu or 601-407-2713.



industry spotlight

La-Z-Boy Continues Tradition of Innovation

La-Z-Boy has a long history of innovation. The company, started by cousins Edward M. Knabusch and Edwin J. Shoemaker in 1928, is credited with creating the world's first "recliner." The product was a reclining wood-slat porch chair that followed the contour of a person's body when sitting up and leaning back. The two Eds, as they were called, created the reclining mechanism that allowed for easy movement of the chair from a sitting to reclining position. The chair was very popular in the Monroe, Mich. area, where the company began, but needed an added level of comfort and year-round usefulness to gain wider distribution. The cousins quickly took to the task of creating the first upholstered reclining chair and revolutionizing the seating industry. The furniture company, first known as Floral City Furniture, after the nickname for Monroe, held a contest to name the reclining chair and "The La-Z-Boy Recliner" was created. The company survived the Great Depression, expanded into the retail business by upgrading their facility to include a retail store, and joined with the Michigan Chair Company in Grand Rapids to produce more chairs.

The company may have promoted the first "Furniture Show" by hosting elaborate entertainment programs for customers and their families with which included games, contests, and carnival rides. This promotional strategy proved successful. In 1941, the owners decided to separate the reclining chair factory from Floral City Furniture and the La-Z-Boy Chair Company was born. La-Z-Boy continued to lead the industry by introducing the world's first rocker recliner in 1961, increasing sales from 1.1 million to 52.7 million during the next ten years. Other innovations included the La-Z-Lounger, which incorporated a reclining mechanism and footrest in the chair, leather recliners, and the Comfort Selector, with a 3-position headrest. In the 1960s, La-Z-Boy built its reputation on comfort and quality and this winning combination continues to provide customers with well-designed, durable, and stylish products at an affordable price.

In 1969, the company expanded its motion line to include reclining sofas, sleep sofas and modular groups. And then in 1983, La-Z-Boy once again expanded its product offerings to include a line of stationary furniture featuring sofas and occasional chairs. During the 1990's, the company acquired several furniture brands including England Furniture, Hammary, Kincaid, and the LADD group, adding new customers and new niches. Currently, La-Z-Boy has plants in Redlands, Calif., Siloam Springs, Ark., Neosho, Mo., Newton, Miss., Dayton, Tenn., a

cutting and sewing plant in Ramos Arizpe, Mexico along with the corporate headquarters in Monroe, Mich.

Around the year 2000, La-Z-Boy was enjoying continued success with its broadened product line, a proprietary distribution network dedicated exclusively to selling La-Z-Boy products and brands, and more than 300 dedicated in-store galleries in the U.S.

As the domestic industry became threatened by the rapid increase of inexpensive imported furniture from low-wage countries, La-Z-Boy became proactive in improving their manufacturing efficiencies. The company turned to a strategy of outsourcing covers and began to use a network of international suppliers for a limited set of parts including handles and swivel bases. By using a mix of imported and vertically-produced raw materials, the company was able to improve cost efficiencies while continuing to offer choice and value. Most of the coverings for La-Z-Boy furniture are now produced in a company-owned factory located in Mexico.

La-Z-Boy then focused on a massive reorganization of their production system, turning away from the commonly used production line method of making furniture, to the Toyota-system inspired cellular production system. While many furniture companies were dipping their toes into lean manufacturing at the time, it was, and still is, rare to find a company the size of La-Z-Boy so committed to the lean production system. The company converted all of their production facilities to lean at the same time.

The transition to lean, although very successful, was not without concerns for the La-Z-Boy Company. The decision



to go lean was made by the CEO, the board of directors and top management, and required the full support of everyone in the company. Because lean requires commitment at every level of operation, more than a few managers who could not fully support the vision left the company. Because of all the changes required to go from line operation to cellular operation, employees had to truly become team (or cell) members and had to develop skills in team building, team dynamics, and team selection. During the transformation to lean, La-Z-Boy learned the importance of training. Not only was training paramount, human resources policies were changed to support a team culture. For a time, absenteeism and turnover became more prevalent in cells because of the drastic change in the work environment. The change from individual incentive pay to compensation based on team output was also a concern and acceptance of this change by employees required time, patience, coaching and training. Don Mather, General Manager, of the La-Z-Boy South plant in Newton, MS said that the most difficult part of the transition was convincing the employees that it was a good idea and that the changes would improve production efficiencies without having a negative impact on their compensation.

Mather was one of the first La-Z-Boy managers to fully support lean and his facility is a model of efficiency. The lean transformation took over two years and was challenging. Mather said that when all the pieces were in place and the changeover occurred, it was like magic, the system began to work immediately with an instant increase in efficiencies and decrease in costs. Today, every piece of the nearly 200 styles of furniture produced at Newton is triggered by orders placed. Time from the order to movement to warehouse for shipping is less than one day, down from over three days. With the new cellular system, 350 employees on one shift produce more furniture than 600 employees on two shifts using the old system. The Newton facility has 27 operational cells and is in the process of setting up another one. Each cell houses teams of 6-7 people, depending on the product being made, and each cell produces about 45-60 individual pieces per day. Mather estimates that direct costs have decreased from 25-35 percent since implementation of the La-Z-Boy Production System.



A 37-year veteran of the furniture industry, Mather believes that the key to success is continuous improvement—always finding ways to do things better and utilizing every means available, including innovative new technologies. He also believes that a good mix of managers with experience in the furniture industry, as well as those with expertise in other disciplines outside of the furniture industry, can contribute to developing new and innovative processes, which leads to continuous improvement.

The La-Z-Boy Production System has provided employees with increased job satisfaction and ownership of their products. The system has drastically reduced production time and allows for the fastest delivery of custom-order furniture products delivered to the consumer. This system has also allowed La-Z-Boy to weather one of the most difficult economic downturns since the Great Depression. According to a 2009 Home Furnishings New Brand Survey, the La-Z-Boy brand is the strongest brand in the furniture industry, with consumer awareness at nearly 100%. Furthermore, the La-Z-Boy brand was in the top ten of all brands in the home, jumping to number seven from number nine, and was the only furniture brand in the top 10. Clearly, La-Z-Boy's history of product development and manufacturing innovations, and the company's dedication to continuous improvement has made them a leader in the furniture industry.

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Clay Walden

staff profile

What do automobile manufacturers and furniture manufacturers have in common? They can both call on Clay Walden to help improve productivity and implement quality improvement programs. Walden leads the engineering outreach effort of Mississippi State University's Bagley College of Engineering as the director of the Center for Advanced Vehicular Systems Extension located in Canton.

Walden's academic background includes a bachelor's, master's and doctoral degree in industrial engineering, all from Mississippi State. In addition, he has more than 20 years of experience in successfully implementing and training others in quality improvement programs and systems in various manufacturing industries. Some of the companies for which Walden has worked include Nissan, Tower Automotive, Faurecia, Mueller Industries, Dover Elevators, Herman Miller, Navistar Defense and Northrop Grumman Ship Systems.

Walden is certified as a Six Sigma Black Belt from the American Society for Quality and as a Jonah expert

from the Goldratt Institute. As the lead developer and instructor of the Introduction to Six Sigma Methodology workshop, he has taught over 100 engineering professionals the principles of Six Sigma. Walden was recognized by the national Manufacturing Extension Partnership as the 2007 co-practitioner of the year. The award is in recognition of his substantial national impacts on the automotive industry.

Married to the former Marsha Hunter of Macon, the Walden's are the proud parents of two daughters, Susannah and Sarah. The Walden family are active members of Pear Orchard Presbyterian Church. Walden's hobbies include basketball, history, and reading.

For more information on the quality and training programs offered by CAVS-E, please contact Dr. Walden at walden@cavse.msstate.edu or (601)407-2713.

