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From the Desk of Jack Healy

## Celebrating Manufacturing

By Jack Healy, Director, MassMEP

First impressions, for most of us, are hard to change. Impressions formed by years of negative media messages, such as the "Decline of US Manufacturing," are difficult to change both in our own minds and in the minds of the public. That is why, after years of not so benign neglect, the new initiative to recognize manufacturing by the Patrick Administration, through the Secretary of Housing and Economic Development, is a most welcomed effort.

This recognition comes just as our general economy is dealing with a correction from the over reliance on home asset inflation and rising indebtedness that has fueled our country's growth since the 1980's. As the economy seeks adjustments from these excesses and tries to find a new way forward that can curb the trade deficit and restore the link between wages and productivity, now is a good time to look at the new manufacturing model that is emerging in Massachusetts.

### **Increase in Gross Manufacturing Sales**

Despite the shedding of manufacturing jobs that have been so well documented in the media, Massachusetts's manufacturers have slightly increased their gross sales since 2001, to the point that the dollar value added per employee has increased to \$156,065, or plus 32.3% between 2001-2005. The size of this increase is even more impressive when you realize that this growth in productivity comes predominantly from the 92% of the state's manufacturers who have less than 100 employees. One of the state's real assets is that a majority of its manufacturing firms are small, science-based, locally owned, high value-add enterprises.

This change is also reflected in the composition of the workforce. We now have 36.2% of the total Massachusetts manufacturing workforce engaged in management and professional level positions as compared to 38.2% engaged in actual production. This change in structure is also reflected in the Commonwealth's labor statistics that indicate 56.7% of the personnel working in manufacturing have some college education.

The increase in productivity along with the overall change in industry structure has allowed manufacturing to remain a major industry player with respect to its overall ranking in terms of total compensation.

<b>Mass Compensation by Industry Sector</b>	<b>Total</b>	<b>Share of Total</b>
(2006)	(000's)	
Professional and Technical Services	\$25,715,716	12.2%
Manufacturing	\$25,379,901	12.0%
Health and Social Services	\$24,753,491	11.7%
Finance and Insurance	\$23,255,276	11.0%
Wholesale Trade	\$11,942,229	5.6%

The state is fortunate to have such a sizeable and active manufacturing community and their **payrolls are more than two times higher than the entire retail sector**, and **three times higher than the educational sector**. It is unfortunate that so few people realize this.

### **Manufacturing Exports Increase by 47%**

Despite general perceptions of decline, manufacturing has not moved offshore and is a significant part of the state's overall economy. In fact, manufacturing is the main driver of the state's exports.

Massachusetts manufacturing exports for 2007 exceeded \$25 billion and represent a 47% increase over 2001. The nature of the exports during this period also reflect the nature of the changing manufacturing structure as indicated in the following four sectors that accounted for close to 70% of the state's 2007 exports in goods:

- \$5.1 billion in optic, photo, medical, surgical instruments
- \$4.6 billion in electrical machinery and parts
- \$4.3 billion in industrial machinery including computers
- \$2.5 billion in pharmaceutical products

The importance of exports, besides the creation of wealth and the reduction of the trade deficit, has a direct bearing on job creation. Past studies from the Dept. of Commerce have shown that exports in 2005 accounted for approximately 160,000 jobs in Massachusetts (78,000 direct and 83,000 in non-manufacturing employment).

However the biggest celebration for the manufacturing community within the state rests with its Research and Development (R&D) sector. R&D is the driving force for economic growth. R&D, as has been accomplished in the past, fuels the innovation that leads to tomorrow's products, services, new industries, and new jobs.

In absolute dollars, Massachusetts at \$122,022,000 is ranked sixth nationally for annual industry-funded R&D. This funding is primarily in the following universities and colleges, which account

for over 90% of the total industry-funded R&D in the state.

<b>University/ College</b>	<b>Amount</b>
MIT	\$72,121,000
Harvard University	\$9,132,000
Boston University	\$8,592,000
Northeastern	\$8,424,000
Tufts University	\$8,149,000
UMass Worcester	\$8,018,000

The capacity for R&D that currently exists in the above six entities and the capacity that will be built through the state's new economic stimulus bill will collectively become an even more important asset to our economy...and one necessary to our future. *BusinessWeek* magazine recently announced that this "Decade of Innovation," while in its infancy, is growing rapidly. *BusinessWeek* noted that it took a generation for the US manufacturing culture to accept the changes brought by the "quality movement" and that we will not have that luxury of time with respect to accepting and implementing innovation.

Fortunately, Massachusetts manufacturers are well positioned for such changes. This is an opportunity for the state to celebrate and recognize the manufacturing community's contributions. This could be a good start in changing at least some of the perceptions about manufacturing in Massachusetts and where it is going. Our congratulations go out to the state's Dept. of Housing and Economic Development for undertaking this endeavor.

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