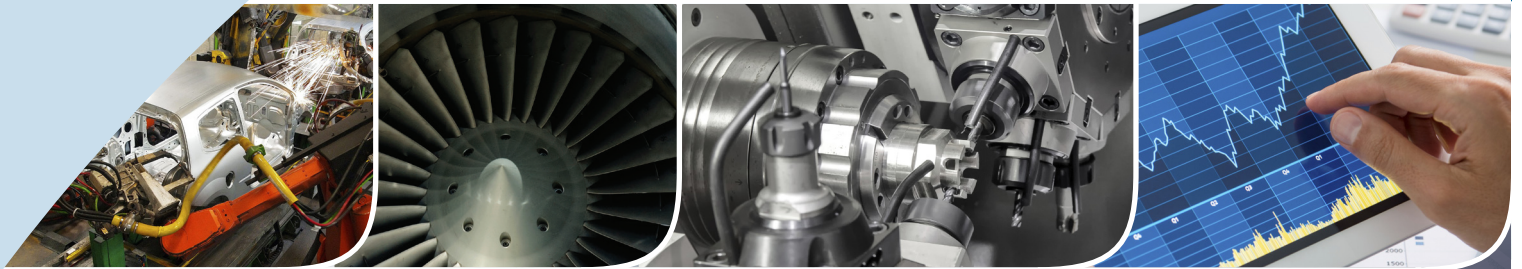




**GARDNER
RESEARCH**

2015 CAPITAL SPENDING SURVEY



MACHINE TOOLS Executive Summary

\$8.822 Billion

According to the 2015 Capital Spending Survey by Gardner Research, U.S. metalworking facilities will spend \$8.822 billion on new metalcutting equipment, an increase of almost 37% compared to our latest estimate for 2014.

2010	\$3.752
2011	\$6.403
2012	\$7.180
2013	\$6.463
2014	\$6.463
2015	\$8.822

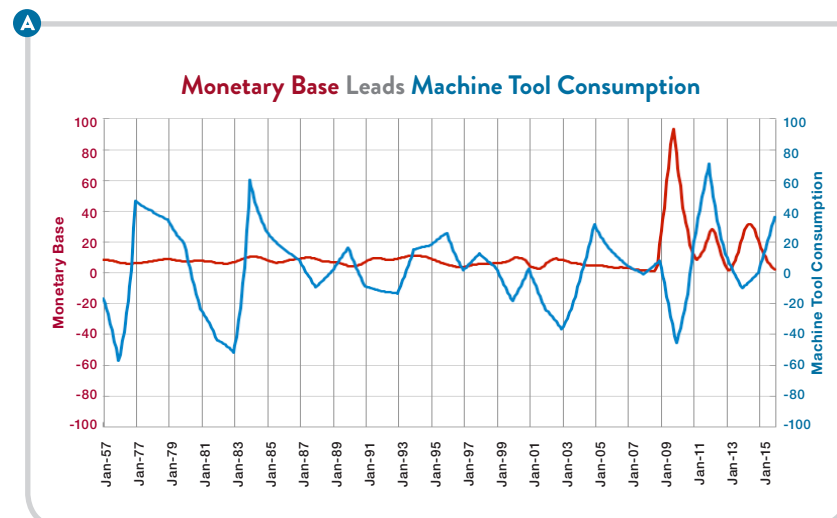
WHY THE INCREASE?

There are four factors that help to explain the forecasted increase in machine tool consumption:

1. **DRAMATIC GROWTH IN MONEY SUPPLY**
2. **HIGH AND RAPIDLY GROWING CAPACITY UTILIZATION**
3. **STRONG AND IMPROVING BUSINESS CONDITIONS**
4. **HISTORICALLY HIGH DURABLE GOODS PRODUCTION**

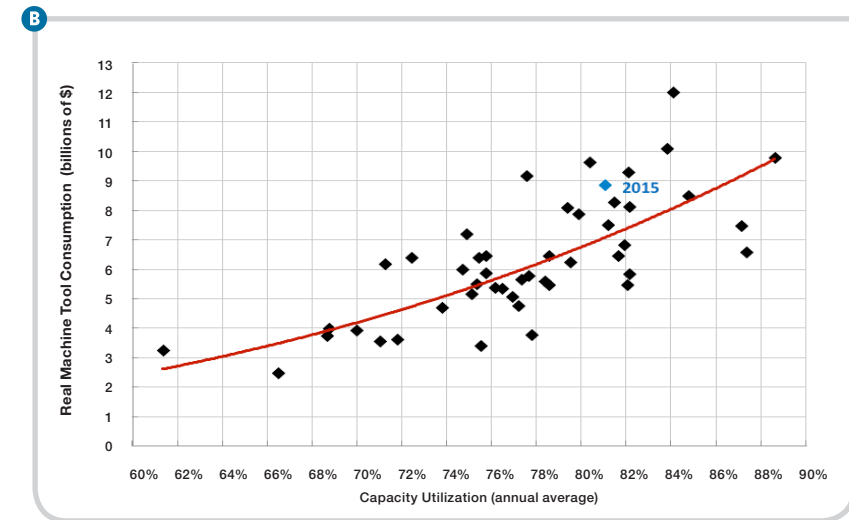
1. MONEY SUPPLY

Since 2009, the growth rate in the money supply has peaked above 25% three separate times. From February 2013 to June 2014, the money supply grew at an accelerating rate. Changes in the U.S. monetary base typically lead changes in machine tool spending by 24 months. Therefore, the trend in the money supply is indicating that machine tool consumption should be quite strong in 2015. The Federal Reserve has pulled back on the amount of quantitative easing it is doing, which will result in significantly slower growth in the money supply in 2015 and likely lead to slower growth in machine tool consumption in 2016. SEE CHART A



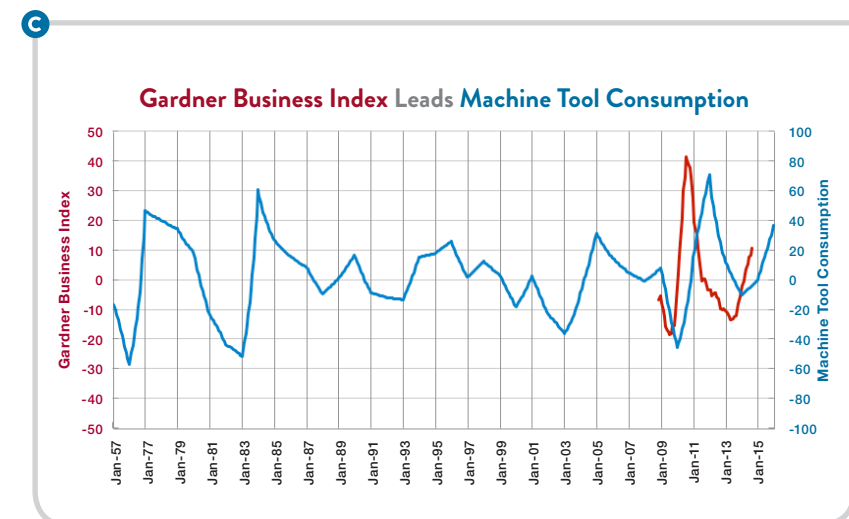
2. CAPACITY UTILIZATION

Durable goods capacity utilization is probably the most important leading indicator for machine tool consumption. As of July 2014, durable goods capacity utilization was 78.6%, which was the highest rate since January 2008. But, durable goods capacity utilization is poised to climb even higher based on the correlation between the Gardner Business Index backlog index and capacity utilization. The combination of relatively high and rapidly increasing capacity utilization should result in significant growth in machine tool consumption in 2015. SEE CHART B



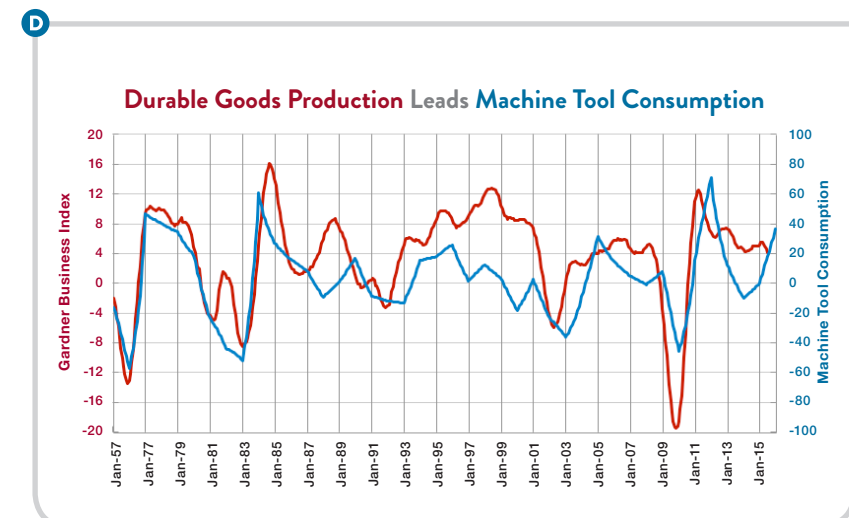
3. IMPROVING BUSINESS CONDITIONS

Since the Gardner Business Index began in December 2006, it has been a reliable leading indicator for machine tool consumption. The metalworking industry has grown every month but one from October 2013 to August 2014. The annual rate of change in the index has grown at an accelerating rate from March to August 2014. The industry is growing at its fastest annual rate since April 2011. Typically, changes in the Gardner Business Index lead changes in machine tool consumption by 10 months. This leading indicator also is pointing to significantly higher machine tool consumption. SEE CHART C



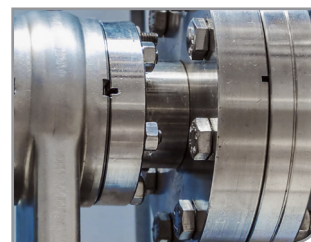
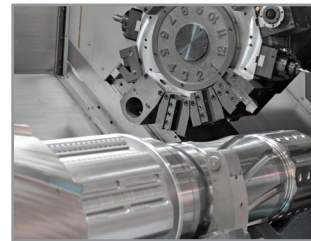
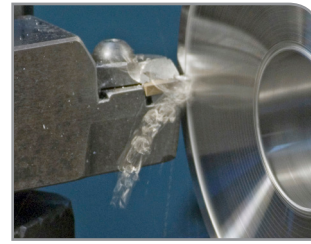
4. DURABLE GOODS PRODUCTION

The durable goods industrial production index reached its highest level ever in June 2014. In addition, the index has set a record for that month every month since December 2012. That trend looks like it will continue through the first half of 2015. The rate of growth in durable goods production should remain fairly consistent through the first quarter of 2015. If durable goods production remains near its present rate of growth, then it will be supportive of higher machine tool consumption. SEE CHART D



Top Industries

Spending by Industry	2009	2014	2015
Metalcutting Job Shops	882.8	2,233.4	2,469.7
Machinery/Equipment Manufacturing	387.3	713.0	1,216.3
Automotive	399.9	561.1	759.3
Pumps/Valves/Plumbing Products	161.0	364.4	688.3
Forming/Fabricating (non-auto)	184.0	244.4	493.6
Industrial Motors/Hydraulic/Mechanical Components	95.3	146.6	461.2
Electronics/Computers/Telecommunications	172.1	383.4	351.4
Other Manufacturing	75.8	137.7	333.1
Custom Processors	0.0	116.2	327.9
Aerospace	192.0	167.4	307.4
Primary Metals	6.5	230.0	290.2
Non-Manufacturing	0.0	298.3	242.6
Medical	126.0	264.1	207.4
Oil/Gas Field/Mining Machinery	179.5	235.1	165.8
Off-Road/Construction Machinery	89.6	122.8	163.3
Hardware	61.9	7.3	88.4
Plastic/Rubber Products	0.0	25.0	77.3
Military	16.3	67.8	51.3
HVAC	41.8	51.0	42.8
Power Generation	126.7	12.3	34.8
Furniture Manufacturing	8.6	2.5	23.5
Ship Building	35.9	0.6	17.7
Petrochemical Processors	0.0	59.2	0.5



Growth Areas

REGION

More than 50% of projected spending will occur in the North Central regions in 2015. The East North Central remains the largest spending region. The South Central is the only region forecasted to decline in 2015.

Spending by Region	2009	2014	2015
North Central - East	696.4	1,972.4	2,663.4
North Central - West	624.2	1,422.0	2,299.9
Northeast	638.8	980.2	1,407.5
Southeast	322.2	481.0	810.3
South Central	472.1	798.4	660.1
West	490.3	803.2	980.8
All (+)	3,244.0	6,457.2	8,822.0

East North Central

IN, KY, MI, OH, TN

West North Central

IA, IL, KS, MN, MO, ND, NE, SD, WI

Northeast

CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT, WV

Southeast

AL, DC, FL, GA, MS, NC, SC, VA

South Central

AR, LA, NM, OK, TX

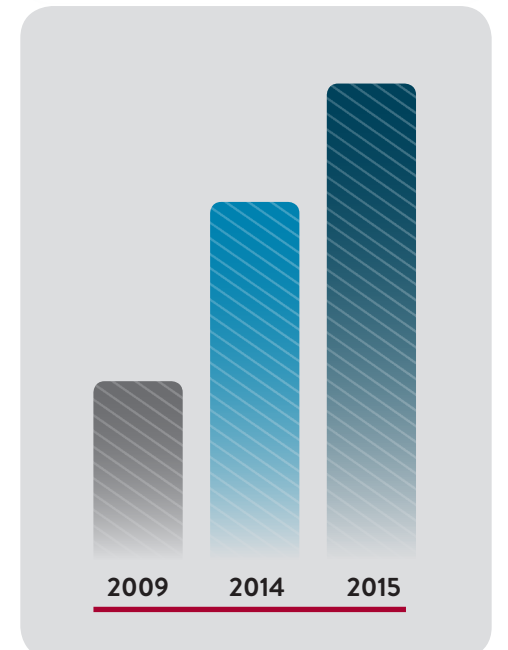
West

AK, AZ, CA, CO, HI, ID, NV, OR, UT, WA, WY

PLANT SIZE

Projected spending is up across all plant sizes. According to the Gardner Business Index, facilities with more than 20 employees have been growing significantly in 2014. While the smallest shops are still contracting, business conditions have improved compared to 2013.

Spending by Plant Size	2009	2014	2015
1-19	455.7	1,086.6	1,628.3
20-49	620.7	1,142.7	1,600.4
50-99	487.8	852.5	1,077.9
100-249	681.5	1,191.5	1,540.5
250+	998.2	2,183.9	2,974.9
All (+)	3,244.0	6,457.2	8,822.0



Spending by Equipment Types

	2009	2014	2015
Machining Centers	1,404.9	3,147.0	3,226.1
Machining Centers, Horizontal, 400-800-mm Pallet	479.0	789.1	743.8
Machining Centers, Horizontal, >800-mm Pallet	0.0	708.6	224.5
Machining Centers, Horizontal, <400-mm Pallet	336.6	495.1	705.8
Machining Centers, Vertical, >20-in Y	271.9	603.4	817.2
Machining Centers, Vertical, <20-in Y	317.4	550.8	734.8
Turning Centers	466.6	1,128.9	1,582.1
Turning Centers, Horizontal, >10-in Chuck	163.8	465.0	477.3
Turning Centers, Horizontal, <10-in Chuck	231.4	566.2	1,052.3
Turning Centers, Vertical	71.4	97.7	52.5
Lathes	720.6	968.7	1,475.8
Lathes, Horizontal, >10-in Chuck	273.7	239.9	387.0
Lathes, Horizontal, <10-in Chuck	243.7	595.3	823.2
Lathes, Manual	54.0	34.4	64.4
Lathes, Vertical	149.2	99.1	201.2
Grinding	189.4	455.6	697.0
Grinding, Centerless	14.3	28.9	149.1
Grinding, Creep Feed	1.6	46.3	42.6
Grinding, Cylindrical/External	42.9	67.5	151.2
Grinding, Flat/Surface	41.8	66.9	124.3
Grinding, ID/OD	50.2	73.8	54.7
Grinding, Internal	6.9	27.0	25.4
Grinding, Other	31.8	145.2	149.7
Additive	0.0	37.0	267.4
Additive, Other	0.0	0.0	113.7
Additive, Laser/Electron Beam Melting	0.0	12.3	22.3
Additive, Laser Sintering	0.0	24.7	29.6
Milling/Laser Sintering	0.0	0.0	101.8
EDM	30.5	133.3	204.6
EDM, Ram Type	5.4	35.4	61.4
EDM, Small Hole	8.0	18.9	25.9
EDM, Wire Type	17.1	79.0	117.3
Screw Machines	68.5	151.8	182.0
Screw Machines, Multi-Spindle CAM	0.0	10.4	2.9
Screw Machines, Multi-Spindle CNC	0.0	29.4	53.3
Screw Machines, Single-Spindle CAM	45.0	0.1	0.2
Screw Machines, Single-Spindle CNC	23.5	11.2	19.7
Screw Machines, Swiss-Type Automatic	0.0	17.1	21.2
Screw Machines, Swiss-Type CNC	0.0	83.6	84.7
Other Metalworking Equipment	363.5	434.9	1,187.0
Boring	181.0	4.1	348.2
Broaching	1.6	4.6	12.4
Drilling/Tapping	56.6	151.6	288.3
Gearcutting	12.9	5.4	0.0
Laser Cutting	15.8	57.4	109.9
Rotary Transfer Machines	0.6	1.2	11.5
Sawing/Cutoff	67.8	87.0	186.0
Transfer and Other Special Machines	22.9	111.9	217.4
Waterjet Machines	4.2	11.7	13.3

*In 2014, boring machines were included in horizontal machining centers
 *In 2009, screw machine categories were only broken down by CAM or CNC regardless of spindles or type

Tools for Manufacturing Forecasting and Analysis

GARDNER RESEARCH WEBSITE

Gardner Research is the preeminent source of economic information for anyone concerned with durable goods manufacturing. Here you'll find a variety of tools for forecasting and trend analysis, precisely focused for the people who sell and consume capital equipment. Besides Gardner's well known reports, this site includes interactive tools to dig deeply into the data that matter most to you and your business.

Manufacturing Forecaster

View up-to-date data on the main economic indicators that impact capital equipment spending in the major durable goods manufacturing industries in countries around the world.

Gardner Business Index

Much like the Purchasing Managers Index, the Gardner Business Index monitors the current health of major manufacturing sectors, sortable by region of the US and by plant size.

Capital Spending Survey

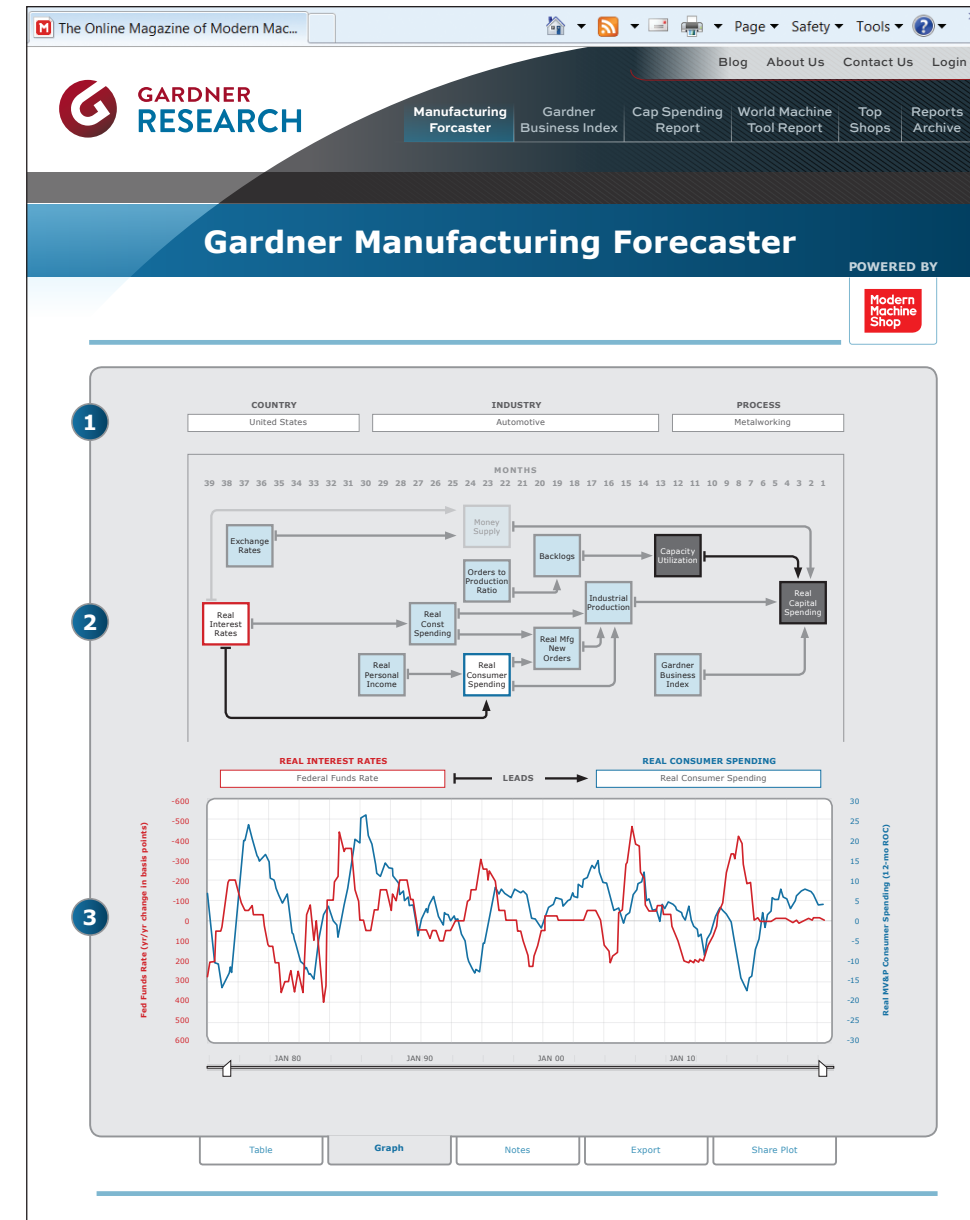
Industry's most comprehensive annual study detailing future spending on capital equipment, tooling, and software.

World Machine Tool Survey

How the major industrialized countries of the world rank in terms of production, trade and consumption of machine tools.

Top Shops Benchmarking Survey

A comprehensive benchmarking program for machine shops of all types and sizes.



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2015 CAPITAL SPENDING SURVEY

Methodology

Gardner Research's 2015 Capital Spending Survey for machine tools was sent to 28,000 subscribers of *Modern Machine Shop*, *Production Machining*, *Moldmaking Technology*, and *Automotive Design & Production* magazines. Surveys were mailed in mid-July, and the survey period was closed in mid-August. Respondents were asked to answer detailed questions about their budgeted spending on machine tools, testing equipment, software, and more. The responses are projected across the metalworking industry based on plant size. The survey has an error factor of +/- \$1,000,000 at a 95% confidence level for the total machine tool spending projection.

Other Gardner Research

Capital Spending Survey for Tooling and Workholding
World Machine Tool Survey
Capital Spending Survey for Plastics Processing
Media Usage in Manufacturing Facilities
Gardner Business Index
Top Shops Benchmarking Survey

View these and other Gardner Research reports at gardnerweb.com

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