



GARDNER
RESEARCH

The World Machine Tool Output & Consumption Survey

2013

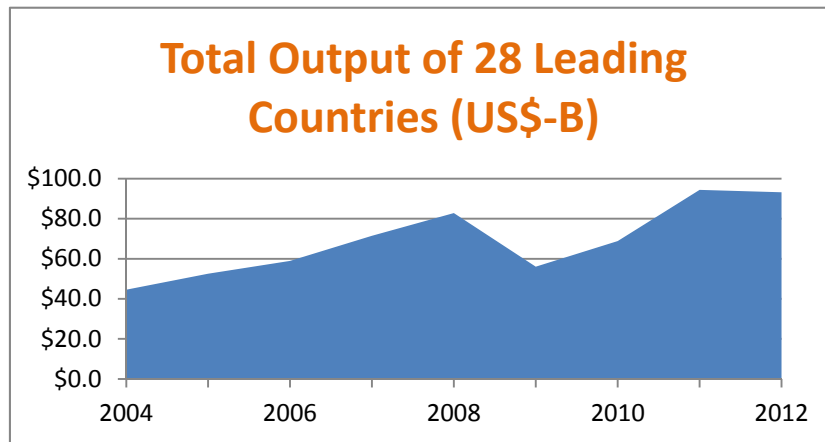
How the major industrialized countries of the world rank in terms of production, trade, and consumption of machine tools.

A Year of
Welcome
Stability in
Output and
Trade



THE WORLD SURVEY AT A GLANCE

Dollar-volume **production** of machine tools around the world during 2012 **dipped by 1%**. Output by the 28 principal producing countries was \$93.2-billion. That represents a decline from 2011's \$94.3-billion, following previous increases of 35% and 25%. So the hole caused by the deep worldwide recession in 2009 has been filled.



Most major producers had relatively small percentage changes in their output. Among the **larger gainers** were Germany with a 10% increase; the United States with a 7% improvement; Austria, +15%; and the Czech Republic, which increased one-quarter over 2011. Other countries declined in production, including Brazil, Belgium, and the United Kingdom.

China saw a slight dip in output in 2012 but remains by far the largest maker of machine tools. **Japan** ranks second, with no change in production from the year before, and it is followed by **Germany**. The **output from those top three** account for 64% of 2012's total world shipments measured in this survey.

The **United States**, still seventh in output, shipped almost \$5-billion. It continues to be a large importer of factory equipment with a whopping 30% gain in 2012, and so total consumption of machine tools increased 19% to \$8.7-billion.

The **largest-consuming country** in the world continues to be **China**, which installed \$38.5-billion worth of machine tools, more than one-third of it in imports. On a **per-capita basis**, consumers **Switzerland, South Korea, and Taiwan** top the list.



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ABOUT THE SURVEY

This is the 48th edition of an independent annual survey that collects statistics from machine-tool-producing countries and compares them in U.S. dollars. It is conducted through the Research Department of Gardner Business Media, Inc., Cincinnati, Ohio USA, by long-time metalworking editor Joe Jablonowski and Nancy Eigel-Miller, Research Manager, Marketing.

Methodology remains constant. Data comes from official sources including trade associations and government ministries. Local currencies are converted to U.S. dollars at average interbank rates for the entire year, not at end-of-year rates.

For a complete description of how the survey was conducted, as well as a listing of the exchange rates used, please refer to page 15.

Release date February 5, 2013



Producers of Machine Tools

	Country	2012 (est.) \$-Millions	% Cut	% Form	2011 (rev.) \$-Millions	Change in local currency	Change in U.S. dollars
1.	China, Peoples Rep.	27,540.0	67%	33%	28,270.0	\$	-3%
2.	Japan	18,252.9	87%	13%	18,326.6	0%	0%
3.	Germany	13,622.9	74%	26%	13,373.7	10%	2%
4.	Korea, Rep. of	5,705.0	73%	27%	5,754.0	\$	-1%
5.	Italy	5,667.7	50%	50%	5,912.6	4%	-4%
6.	Taiwan	5,430.0	84%	16%	5,160.0	5%	5%
7.	United States	4,983.2	74%	26%	4,676.7	\$	7%
8.	Switzerland	3,199.3	85%	15%	3,607.0	-6%	-11%
9.	Spain	1,060.3	65%	35%	1,072.6	7%	-1%
10.	Austria	1,032.0	53%	47%	971.1	15%	6%
11.	France	805.8	64%	36%	855.6	2%	-6%
12.	Czech Republic	728.4	80%	20%	646.0	25%	13%
13.	India	720.7	88%	12%	880.0	-6%	-18%
14.	Canada	c693.0	61%	39%	c639.3	8%	8%
15.	United Kingdom	649.8	66%	34%	731.5	-10%	-11%
16.	Turkey	649.0	24%	76%	659.4	7%	-2%
17.	Brazil	643.2	81%	19%	891.3	\$	-28%
18.	Netherlands	402.3	20%	80%	407.6	7%	-1%
19.	Belgium	296.9	20%	80%	357.5	-10%	-17%
20.	Russia	u263.0	41%	59%	263.0	0%	0%
21.	Sweden	201.8	38%	62%	218.4	0%	-8%
22.	Finland	185.1	20%	80%	196.2	2%	-6%
23.	Australia	155.0	90%	10%	150.0	\$	3%
24.	Mexico	c122.4	58%	42%	c122.4	\$	0%
25.	Denmark	u70.0	40%	60%	76.5	0%	-8%
26.	Portugal	46.3	44%	56%	50.1	0%	-8%
27.	Romania	u42.5	71%	29%	u42.5	\$	0%
28.	Argentina	36.4	53%	47%	32.4	\$	12%
	Total	93,205.4			94,344.1		-1%

u = unrevised from previous year but converted at current rates

c = circa; rough estimate from fragmentary reports

\$ = reported in U.S. dollars

% = ratio of cutting/forming production in some cases estimated from previous reports

Source: Gardner Business Media, Inc.



Producing Countries Show Little Change

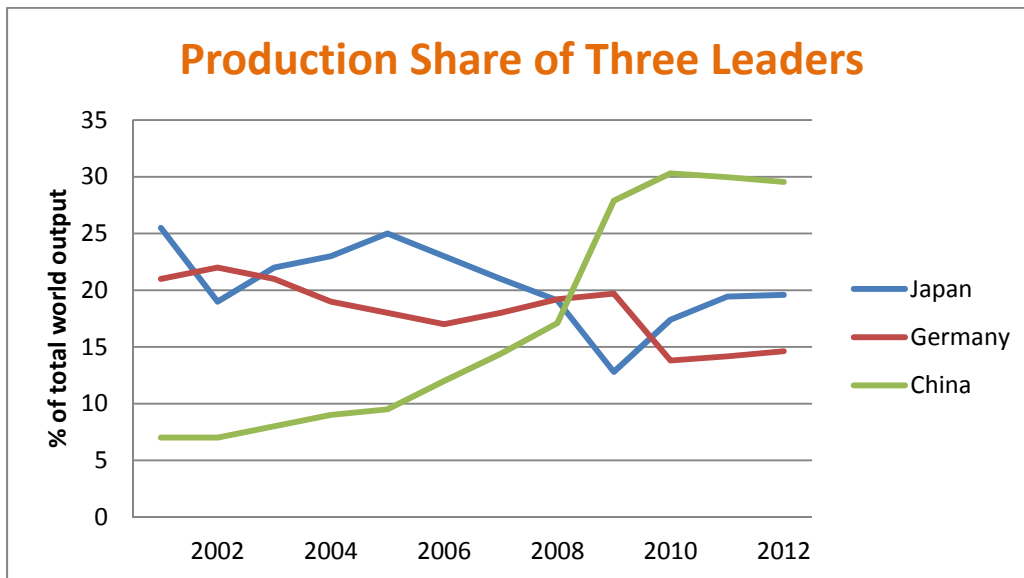
The global machine-tool-producing industry, having finished making its comeback from the precipitous decline of 2009, had a relatively stable 2012 in terms of output.

In 2012, total shipments by the national industries that participate in this World Machine Tool Output & Consumption Survey amounted to an estimated \$93.2-billion, an slight decline of 1% from the revised \$94.2-billion for 2011. The bounce-back from the recent recession had stabilized.

For many producers, 2012's year-to-year stability was welcome, as they remembered the turmoil of the one-third drop in total world output in 2009:

2008	2009	2010	2011	2012
\$82.8-Billion	\$56.0-Billion	\$68.8-Billion	\$94.3-Billion	\$93.2-Billion

Some countries hadn't been hit by the recession as hard as others. China is the classic case in point: between 2008 and 2009, when every other country in the survey saw output decline, China's increased 10%, and its market share thus climbed:



The three leading producers combined shipped a total of \$59.4-billion in 2012. That comes to 64% of the total output of all 28 countries in the Survey.

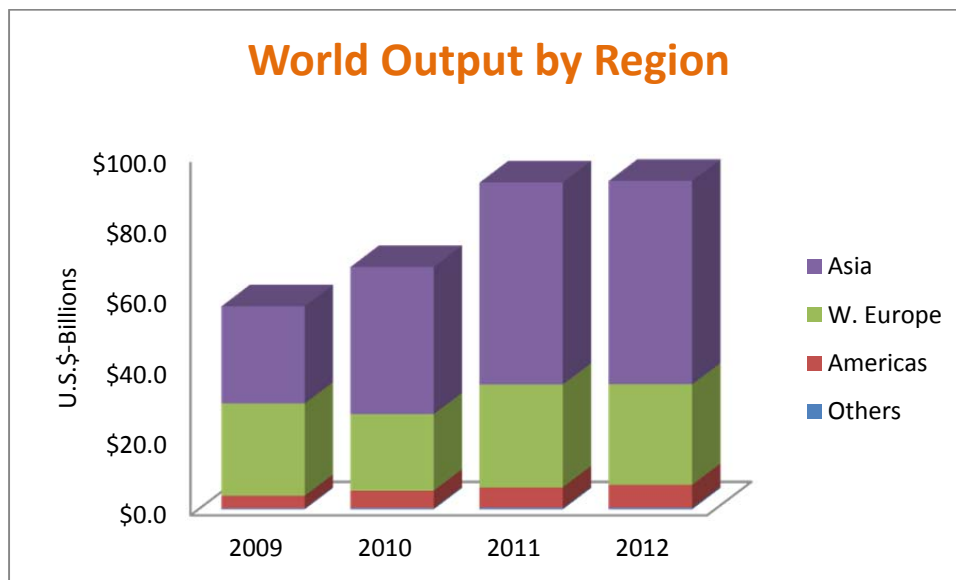


The relative rankings of producing countries changed very little. Among the top ten producers, only South Korea (#4) and Italy (#5) exchanged places compared to the previous year.

That's not to say that there weren't any year-to-year changes among producers. Third-ranked Germany increased its shipments—measured in euros—by 10% and Austria gained 15%. The Czech Republic increased its (koruna-based) production by 25%. Argentine production grew 12%. The United States and Spain each grew their output by 7%.

There were declines, of course. Output by Brazilian machine-tool builders fell 28%. The United Kingdom's shipments declined 10% (in pounds) compared to 2011, and a similar drop (in euros) was seen in Belgium.

The newest Survey reinforces that there's been a geographical shift in where machine-tool production is concentrated. During the recessionary 2009 and for several years prior, Asian countries produced around 48% of total world output while the 15 Western European countries in the CECIMO consortium built around 46%. In 2010 those Asia/Europe production shares shifted to 61% and 32%, respectively, and in 2011 and again in 2012 the same percentages were seen (bar chart).



The China Factor. Much of the shift in world production to Asia has to do with China, the world's biggest consumer of machine tools since 2002. To fill that demand local Chinese builders expanded smaller factories, and builders in Taiwan, Japan and elsewhere opened Chinese facilities. For 2012, Chinese output of machine tools is estimated at \$27.5-billion, or more than the combined shipments of Korea, Italy, Taiwan, the U.S., Switzerland, Spain, and Austria.

Next, Trade



Importers

	<u>Country</u>	<u>\$-Millions 2012 (est.)</u>	<u>\$-Millions 2011 (rev.)</u>	<u>Change in local currency</u>	<u>Change in U.S. dollars</u>	<u>Imports* as % of '12 consumption</u>
1.	China, Peoples Rep.	13,720.0	13,240.0	\$	4%	36%
2.	United States	5,826.8	4,525.9	\$	29%	67%
3.	Germany	3,187.3	2,978.6	16%	7%	50%
4.	India	1,598.7	1,718.7	6%	-7%	70%
5.	Korea, Rep. of	1,492.0	1,791.0	\$	-17%	32%
6.	Brazil	1,435.8	1,647.4	\$	-13%	77%
7.	Mexico	c1,269.1	1,269.1	\$	0%	93%
8.	Turkey	1,172.1	1,100.4	15%	7%	87%
9.	Russia	u1,118.0	1,118.0	0%	0%	85%
10.	France	988.3	1,138.0	-6%	-13%	88%
11.	United Kingdom	950.9	758.3	27%	25%	117%
12.	Italy	938.2	1,121.3	-9%	-16%	43%
13.	Canada	c851.4	770.5	\$	11%	68%
14.	Belgium	812.2	815.2	8%	0%	329%
15.	Japan	774.9	653.5	19%	19%	10%
16.	Taiwan	650.0	829.0	-22%	-22%	35%
17.	Switzerland	607.9	747.8	-14%	-19%	59%
18.	Czech Republic	442.8	480.5	2%	-8%	127%
19.	Austria	388.1	448.0	-6%	-13%	66%
20.	Spain	314.9	321.4	6%	-2%	80%
21.	Sweden	308.4	333.9	0%	-8%	90%
22.	Romania	u285.7	285.7	\$	0%	118%
23.	Netherlands	263.5	265.7	7%	-1%	77%
24.	Argentina	239.0	189.3	\$	26%	91%
25.	Australia	190.0	198.0	\$	-4%	90%
26.	Portugal	150.4	119.6	36%	26%	109%
27.	Finland	114.4	123.8	0%	-8%	82%
28.	Denmark	57.8	62.6	0%	-8%	145%

* = includes machines imported for re-export
u = unrevised from 2011 but converted at current rates
c = circa; rough estimate from fragmentary reports
\$ = reported in U.S. dollars

Source: Gardner Business Media, Inc.



Exporters

	<u>Country</u>	<u>\$-Millions</u> 2012 (est.)	<u>\$-Millions</u> 2011 (rev.)	<u>Change</u> in local currency	<u>Change</u> in U.S. dollars	<u>Exports*</u> as % of 2012 Pdtn
1.	Japan	11,565.0	11,562.5	0%	0%	63%
2.	Germany	10,410.0	9,450.5	19%	10%	76%
3.	Italy	4,433.9	4,271.0	12%	4%	78%
4.	Taiwan	4,236.0	4,000.0	6%	6%	78%
5.	Switzerland	2,772.7	3,080.3	-5%	-10%	87%
6.	China, Peoples Rep.	2,750.0	2,420.0	\$	14%	10%
7.	Korea, Rep. of	2,551.0	2,301.0	\$	11%	45%
8.	United States	2,087.5	1,881.3	\$	11%	42%
9.	Spain	983.2	966.9	10%	2%	93%
10.	Belgium	862.4	880.6	6%	-2%	290%
11.	Austria	834.1	798.6	13%	4%	81%
12.	Czech Republic	822.7	723.3	26%	14%	113%
13.	United Kingdom	784.5	744.0	7%	5%	121%
14.	France	676.0	684.5	7%	-1%	84%
15.	Turkey	476.8	418.8	23%	14%	73%
16.	Netherlands	322.6	326.9	7%	-1%	80%
17.	Canada	c288.8	c266.2	\$	9%	42%
18.	Brazil	211.8	153.0	\$	38%	33%
19.	Sweden	165.8	179.5	0%	-8%	82%
20.	Finland	159.4	169.7	2%	-6%	86%
21.	Australia	135.0	135.0	\$	0%	87%
22.	Denmark	88.7	96.0	0%	-8%	125%
23.	Romania	u85.2	85.2	\$	0%	200%
24.	Russia	u64.0	64.0	\$	0%	24%
25.	Portugal	59.1	51.5	24%	15%	128%
26.	India	33.3	42.2	-10%	-21%	5%
27.	Mexico	u30.6	c30.6	\$	0%	25%
28.	Argentina	14.1	11.6	\$	22%	39%

* = includes re-exported machines

u = unrevised from 2011 but converted at current rates

c = circa; rough estimate from fragmentary reports

\$ = reported in U.S. dollars

Source: Gardner Business Media, Inc.



Trade Balance

in millions of U.S. dollars*

	<u>Country</u>	<u>2012</u>	<u>2011</u>
1.	Japan	10,790.1	10,908.9
2.	Germany	7,222.7	6,471.9
3.	Taiwan	3,586.0	3,171.0
4.	Italy	3,495.7	3,149.7
5.	Switzerland	2,164.9	2,332.5
6.	Korea, Rep. of	1,059.0	510.0
7.	Spain	668.3	645.5
8.	Austria	446.0	350.6
9.	Czech Republic	379.9	242.7
10.	Netherlands	59.1	61.2
11.	Belgium	50.1	65.4
12.	Finland	45.0	45.9
13.	Denmark	u30.8	33.4
14.	Australia	-55.0	-63.0
15.	Portugal	-91.2	-68.2
16.	Sweden	-142.7	-154.4
17.	United Kingdom	-166.4	-14.3
18.	Romania	u -200.5	-200.5
19.	Argentina	-224.9	-177.7
20.	France	-312.3	-453.5
21.	Canada	-562.6	-504.3
22.	Turkey	-695.3	-681.7
23.	Russia	u -1,054.0	-1,054.0
24.	Brazil	-1,224.0	-1,494.4
25.	Mexico	-1,238.5	-1,238.5
26.	India	-1,565.4	-1,676.4
27.	United States	-3,739.3	-2,644.6
28.	China, Peoples Rep.	-10,970.0	-10,820.0

* = Exports Minus Imports

u = unrevised from previous year

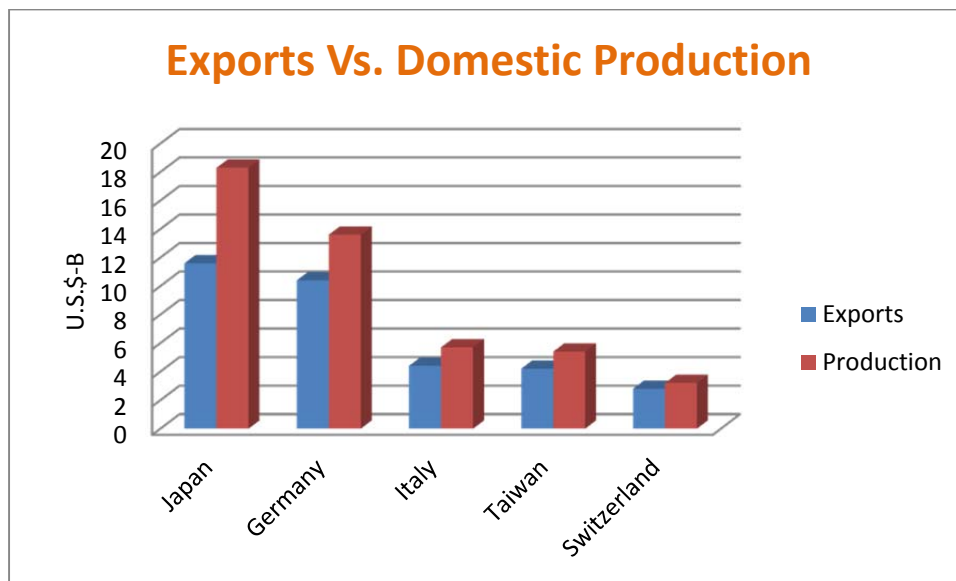
Source: Gardner Business Media, Inc.



An Increased in Trade

The WMT0&C Survey confirms that import and export activities in the past years have regained momentum, as the Importers, Exporters, and Trade Balance tables in the previous three pages show. Eight of the top ten exporting nations increased their 2012 exports compared to 2011.

Japan and Germany continue as the leading exporters of machine tools, with Germany making a 19% increase in exports. Other leaders are Italy, Taiwan, Switzerland, China, South Korea, the U.S., and Spain. American exports grew 11%, following a 20% rise the year before.



The top five countries on the Exporters table all show a very high ratio of exports to production. That metric, the last column in the table two pages back, can provide an interesting perspective on a nation's reputation as a major supplier to outside countries. China, on the other hand, hardly exports at all; despite placing at sixth position with 2012 exports of \$2.75-billion, its shipments outside China are one-tenth of its production.

The ratios must be viewed with caution, though. Some entrepôt nations like Belgium traditionally have exports that are far in excess of their production as they ship out machines that had been taken in for re-export. Similarly, the last column in the Importers table, which tracks imports as a percent of local consumption, can in some cases reflect port activity as much as import penetration. Nevertheless, survey figures provide insight to each country's proclivity toward offshore sourcing.



The United States with its very open market—with an import penetration of 67%—ranks number two in imports behind China. American equipment consumption grew nearly 20% last year, and its 29% change in imports suggests that much of that increased demand was filled from overseas.

High import-penetration rates are also evident in Mexico, Australia, Brazil, and India during 2012. On the other hand, Japan's imports amount to only 10% of its total consumption, suggesting Japanese equipment purchasers don't look to outside suppliers.

American dependence on foreign suppliers for its demand is also seen in its trade balance. The largest exporters typically top the trade-balance rankings, and the largest importers are at the bottom. At a negative -\$3.7-billion for 2012, American trade balance worsened from the minus -\$2.6-billion in 2011. The U.S. has the second-poorest balance after China among countries that have domestic machine-tool-producing industries.

Dollar-volume balance in machine-tool trade for 2012 is seen in the table on Page 9. Compared to 2011, the largest increases in positive trade balance were made South Korea, the Czech Republic, and Austria.

Next, Consumption 



Consumers

	<u>Country</u>	<u>\$-Millions 2012 (est.)</u>	<u>\$-Millions 2011 (rev.)</u>	<u>Change in local currency</u>	<u>Change in U.S. dollars</u>
1.	China, Peoples Rep.	38,510.0	39,090.0	\$	-1%
2.	United States	8,722.5	7,321.3	\$	19%
3.	Japan	7,462.8	7,417.7	1%	1%
4.	Germany	6,400.2	6,901.8	0%	-7%
5.	Korea, Rep. of	4,646.0	5,244.0	\$	-11%
6.	India	2,286.1	2,556.4	2%	-11%
7.	Italy	2,172.0	2,762.9	-15%	-21%
8.	Brazil	1,867.2	2,385.7	\$	-22%
9.	Taiwan	1,844.0	1,989.0	-7%	-7%
10.	Mexico	uc1,360.9	1,360.9	\$	0%
11.	Turkey	1,344.3	1,341.1	\$	0%
12.	Russia	u1,317.0	1,317.0	0%	0%
13.	Canada	c1,255.6	1,143.6	\$	10%
14.	France	1,118.1	1,309.1	-8%	-15%
15.	Switzerland	1,034.4	1,274.5	-14%	-19%
16.	United Kingdom	816.2	745.8	11%	9%
17.	Austria	586.0	620.5	2%	-6%
18.	Spain	392.0	427.1	-1%	-8%
19.	Czech Republic	348.5	403.3	\$	-14%
20.	Sweden	344.4	372.8	0%	-8%
21.	Netherlands	343.1	346.4	7%	-1%
22.	Argentina	261.3	210.1	\$	24%
23.	Belgium	246.8	292.2	-9%	-16%
24.	Romania	u243.0	243.0	0%	0%
25.	Australia	210.0	213.0	\$	-1%
26.	Finland	140.1	150.3	1%	-7%
27.	Portugal	137.5	118.3	26%	16%
28.	Denmark	39.8	43.1	0%	-8%

Apparent Consumption = local Production, less Exports, plus Imports

u = unrevised from 2011 but converted at current rate

c = circa; rough estimate from fragmentary data

\$ = reported in U.S. dollars

Source: Gardner Business Media, Inc.



Per-Capita Consumption

	<u>Country</u>	<u>Consumption</u> \$-Millions	<u>Population</u> 000s	<u>Cnsmptn</u> \$/capita
1.	Switzerland	1,034.4	7,604	\$136.04
2.	Korea, Rep. of	4,646.0	48,508	\$95.78
3.	Taiwan	1,844.0	22,974	\$80.26
4.	Germany	6,400.2	82,329	\$77.74
5.	Austria	586.0	8,215	\$71.34
6.	Japan	7,462.8	127,078	\$58.73
7.	Sweden	344.4	9,059	\$38.02
8.	Canada	1,255.6	33,487	\$37.49
9.	Italy	2,172.0	58,126	\$37.37
10.	Czech Republic	348.5	10,211	\$34.13
11.	China, Peoples Rep.	38,510.0	1,323,591	\$29.10
12.	United States	8,722.5	307,212	\$28.39
13.	Finland	140.1	5,250	\$26.68
14.	Belgium	246.8	10,414	\$23.69
15.	Netherlands	343.1	16,715	\$20.53
16.	Turkey	1,344.3	76,805	\$17.50
17.	France	1,118.1	64,420	\$17.36
18.	United Kingdom	816.2	61,113	\$13.36
19.	Portugal	137.5	10,707	\$12.84
20.	Mexico	1,360.9	111,211	\$12.24
21.	Romania	243.0	22,215	\$10.94
22.	Australia	210.0	21,262	\$9.88
23.	Spain	392.0	40,525	\$9.67
24.	Russia	1,317.0	140,041	\$9.40
25.	Brazil	1,867.2	198,739	\$9.40
26.	Denmark	39.8	5,500	\$7.24
27.	Argentina	261.3	40,913	\$6.39
28.	India	2,286.1	1,156,897	\$1.98

Apparent Consumption = local Production, less Exports, plus Imports

Source: Gardner Business Media, Inc.

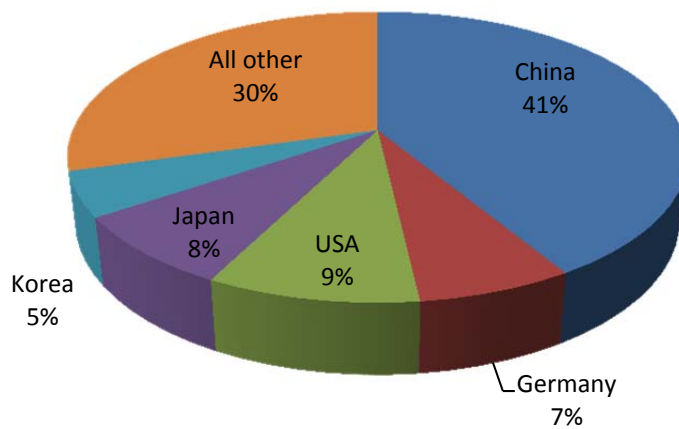


Patterns of Consumption

If machine tools are the basic building blocks of manufacturing-based societies, then the rate at which a country installs new ones ought to say something about its pace of industrialization. For the past decade China has led the world in acquisition of cutting and forming equipment. For 2012 the pattern has continued, and as the pie chart below shows, more than two-fifths of the output by value of the world's machine-tool producers has been put in place on Chinese factory floors.

Another, perhaps more subtle, pattern emerges: one of consolidation—concentration of production into specific pockets. Again in 2012 the top five consumer countries accounted for installing 70% of surveyed world output. By contrast, in 1995 the top five—namely the U.S., Germany, Japan, China, and Italy, in that order—purchased only 55% of total surveyed output.

5 Countries Consume 70% of Output



Next, Methodology 



How the World Machine-Tool Survey Was Taken

Short History. This series of annual reports of world machine-tool production, trade, and consumption was started in 1965 at *American Machinist* magazine. In the early 1980s, [Joe Jablonowski](#), at that time on the staff of that magazine and now contributing editor at Gardner, joined the project. Fifteen years ago, [GARDNER BUSINESS MEDIA, INC.](#) (Cincinnati, Ohio) began annual preparation of the surveys for its publications and Web site.

The methodology has remained constant. Most of the information comes from official sources sent directly to Gardner's research department. Coordination of the data collection is through [Nancy Eigel-Miller](#), Gardner research manager in Cincinnati.

Sources. The revised data for 2011 as well as the estimated data for 2012 is sourced at government agencies or trade associations. Also, special assistance came from the fifteen-member CECIMO consortium (Comité Européen de Coopération des Industries de la Machines-Outil, Brussels, Belgium) and from the American association, AMT – The Association for Manufacturing Technology (McLean, Virginia).

Notes on entries. The reliability of such sources varies somewhat from country to country. When it is necessary, the editors develop an estimate that is based on information from a number of sources, including import and export data from the country's trading partners. When this is done, it is indicated by a "c" (for "circa") next to the particular figure on the Producers table and other tables.

The Survey provides estimates for 2012 and updated figures for 2011. If no estimate for 2012 is available, the 2011 figure is carried forward unrevised and marked with a "u," that is, the same figure is used for 2012 except that it is converted to dollars at the 2012 rate.

Definitions. A machine tool is usually defined as a power-driven machine, not portable by hand, and powered by an external source of energy. It is designed specifically for metalworking either by cutting, forming, physico-chemical processing, or a combination of these techniques.

Machine tools are traditionally broken down into two categories: Metalcutting and metalforming. Metalcutting machines typically cut away chips or swarf and include (but are not limited to) broaching machines, drilling machines, electrical-discharge machines, lasers, gearcutting machines, grinders, machining centers, milling machines, transfer machines, and turning machines such as lathes. Metalforming machines typically squeeze metal into shape and include (but are not limited to) (bending machines, cold-heading machines, presses, shears, coil slitters, and stamping machines.

Data here are solicited for metalcutting machines (codes 8456-8461 under the [Harmonized Tariff System](#)) and for metalforming machines (8462-8463) and are solicited for complete machines only, not including parts or rebuilt machines.



Exchange rates. All local-currency figures are translated into dollars at the *average commercial rate* for the entire, 365-day year (not the end-of-year rate) as reported at www.oanda.com in the historical section.

Currencies Used

Rate (Units of Local Currency to \$)

	<u>Country</u>	<u>Reporting Currency</u>	<u>2012</u>	<u>2011</u>	<u>Change</u>
1.	Argentina	U.S. \$	1.0000	1.0000	0%
2.	Australia	U.S. \$	1.0000	1.0000	0%
3.	Austria ‡	Euros	0.7781	0.7188	8%
4.	Belgium ‡	Euros	0.7781	0.7188	8%
5.	Brazil	U.S.\$	1.0000	1.0000	0%
6.	Canada	U.S \$	1.0000	1.0000	0%
7.	China, Peoples Rep.	U.S.\$	1.0000	1.0000	0%
8.	Czech Republic ‡	Czech Koruna	19.5461	17.6153	11%
9.	Denmark ‡	Euros	0.7781	0.7188	8%
10.	Finland ‡	Euros	0.7781	0.7188	8%
11.	France ‡	Euros	0.7781	0.7188	8%
12.	Germany ‡	Euros	0.7781	0.7188	8%
13.	India	Rupees	53.4631	46.7352	14%
14.	Italy ‡	Euros	0.7781	0.7188	8%
15.	Japan	Yen	79.7900	79.7000	0%
16.	Korea, Rep. of	U.S. \$	1.0000	1.0000	0%
17.	Mexico	U.S. \$	1.0000	1.0000	0%
18.	Netherlands ‡	Euros	0.7781	0.7188	8%
19.	Portugal ‡	Euros	0.7781	0.7188	8%
20.	Romania	U.S. \$	1.0000	1.0000	0%
21.	Russia	U.S. \$	1.0000	1.0000	0%
22.	Spain ‡	Euros	0.7781	0.7188	8%
23.	Sweden ‡	Euros	0.7781	0.7188	8%
24.	Switzerland ‡	Swiss francs	0.9377	0.8866	6%
25.	Taiwan	U.S. \$	1.0000	1.0000	0%
26.	Turkey ‡	Euros	0.7781	0.7188	8%
27.	United Kingdom ‡	Pounds	0.6310	0.6231	1%
28.	United States	U.S. \$	1.0000	1.0000	0%

‡ = CECIMO member

Exchange Rates are average daily commercial interbank rates for the entire year, from www.oanda.com

Effect of Currency Fluctuations. Percentage changes discussed in the Country Reports and in the Analysis are in the original local currency and are the true measure of a nation's machine-tool industry. Year-to-year variations in exchange rates caused by inflation, etc., can distort those percentage changes somewhat after they are converted to dollars. Some countries report their production in U.S. dollars, and this is noted above and on the Producers table.



Scope. Information from the 28 countries represented in the survey does not include all the machine-tool production and trade activity in the world, but it is thought to encompass more than 95%. In some cases like Thailand or South Africa a measurable machine-tool *market* exists, but data on *production* are not compiled locally, and the country cannot be included in the survey tables. Please see the Country Reports section for contacts within some of these non-reporting countries.

'Shipments' vs. 'Orders.' Many countries, in addition to contributing statistics to this Survey, also track orders for new machine tools. These are—by their nature—different sets of numbers, and they may or may not be related.

This *WMTO&C Survey* is based on actual *shipments* of new machine tools from the factories in which they are produced. In contrast, the various order compilations in individual countries around the world are based on *bookings* for machines that will be shipped in the future. The time lag between those two events varies greatly: An in-stock lathe might be shipped one day after the order is placed; whereas a complex engine-machining line might take a year to be completed.

Additional Data. For more detailed statistics, we recommend the Web site published by AMT – The Association for Manufacturing Technology, McLean, Virginia, USA, <http://www.amtonline.org/>. The trade group has offered a CD version of its 2010-2011 book, *The Economic Handbook of the Machine Tool Industry*, for \$295. For 2013, that content and more is being offered in a subscription online service called www.MTinsight.org.

Next, Country Reports





Country Reports

Countries below are listed alphabetically. In each Country Report, production means actual shipments, not orders for future shipment. When discussing percentage changes year to year, those percentages are based in local currencies unless stated otherwise, as in the case of some countries that report in U.S. dollars. Some countries described here are not ranked in the tables above because statistics are not available and/or not deemed reliable for 2012, although some have been included in previous Surveys.

Many listings below include information on significant trade fairs that feature machine tools. The German machine-tool-builders' organization known as VDW also does a good job in compiling a [list](#) of such shows.

Argentina



The country is a heavy importer, and consumption is often four times domestic production.

The AAFMHA - Asociación Argentina de Fabricantes de Máquinas-Herramienta, Accesorios y Afines supplies statistical data for this survey. It maintains a Web site at www.aafmha.org.ar/. The trade group is the primary sponsor of the one of the country's international machine-tool shows called EMAQH (Exposición de la Máquina Herramienta) (<http://www.emagh.com/>), which

runs in Buenos Aires in the Spring in odd-numbered years.

Another biennial show, [FIMAQH](#), next planned for mid-2014, has been directly competitive in the same city. It is organized by CARMAHE – Cámara Argentina de la Máquina Herramienta, Bienes de Capital y Servicios para la Producción. The machine-tool and capital goods association has a Web site at www.carmahe.com.

Australia



The Australian Manufacturing Technology Institute Ltd., in Wantirna (suburb of Melbourne, Victoria), was established in 1999 and combines the Institute of Machine Tools Australasia (est. 1961) and the Australian Machine Tool Association in Sydney (est. 1954). Estimates of production and trade (in Australian dollars) are sourced from AMTIL.

AMTIL is a sponsor of [Austech](#), an annual (generally mid-May) technology show that alternates between Sydney and Melbourne. Get more information about the trade association at www.amtil.com.au/.



Austria



Trade in machine tools is important for this [CECIMO](#) member. As one of those economies characterized as “entrepôt,” Austria’s exports in some years has exceed 100% of production. Figures for this survey are reported in euros and exclude the value of parts and accessories plus related services.

Primary contact for the machine-tool industry is through the larger machinery and metalware industries trade group known as FMMI, or Fachverband Maschinen & Metallwaren Industrie in Vienna. The trade association maintains a Web site at www.fmmi.at/.

A privately staged biennial show run by Reed Exhibitions called Intertool runs as part of an umbrella trade fair called [Vienna-Tec](#).

Belgium



The Brussels-based machine-tool organization in Belgium belongs to [CECIMO](#). It is supported by the Mechanical Engineering sector of Agoria, the federation of trade groups in a number of industries.

True to its Benelux traditions, entrepôt Belgium is a very active trader in machinery, so the ratio (see Export table) of exports as a percentage of local production often approaches 200%, because figures include re-exported machines.

For further organizational information, click www.agoria.be/.

Brazil



Brazilian production and trade is reported in U.S. dollars by the São Paulo-based builders group, Associação Brasileira da Indústria de Máquinas e Equipamentos. Contact the trade association through its Web site at www.abimaq.org.br/.

ABIMAQ reports only the results of responding member companies, or about 35% of the total number of enterprises. However, these represent the most significant part of the industry, and figures here are projected for the entire sector. The major machine-tool show is FEIMAFE, the Feira Internacional de Máquinas-ferramenta e Sistemas Integrados de Manufatura (<http://www.feimafe.com.br/>). The biennial fair runs in São Paulo, usually in June. Another trade fair, Mecânica (<http://www.mecanica.com.br/en/>), for general machinery including machine tools, runs in alternating years, also in São Paulo. A privately run [Usinagem](#) exhibition runs in São Paulo in October.



Canada



Historically, the top suppliers of machine tools to Canada are the U.S., Japan, Germany, Italy, and Switzerland. The top destination for Canadian machine-tool exports is the United States, which accounts for around 80% of exports.

Canadian production in the Survey represents a rough estimate with input from the Ottawa ministry, Industry Canada (www.ic.gc.ca), from the distributors' group, and from neighboring traders in the U.S. The 60/40 split between metalcutting and metalforming machinery output is based on historical trends. Statistical information about the country's industry is available online through Statistics Canada at www.statcan.ca. Trade data is current.

The Canadian Machine Tool Distributors' Assn. (www.cmtda.com) and the Canadian Tooling & Machining Assn. (www.ctma.com) both are sponsors of the [Montreal Manufacturing Technology Show](#) in May. There is also the Toronto-based [CMTS](#) (Canadian Manufacturing Technology Show, October), traditionally the largest forum for machine tools in the country; it, too, is produced by SME.

Peoples Republic of China



Chinese factories have led the world in consumption of new manufacturing equipment for more than a decade, satisfying demand in much of the early 21st Century with imports. In recent years the country's domestic machine-tool-producing industry has been catching up with local appetite by growing to be the world's largest industry by volume.

Several of the largest machine tool building companies in China are wholly or partially state-owned, and financial information on individual entities is notoriously difficult to obtain in a country that does not have a tradition of capitalism. The machine tool builders' association reports aggregate Chinese production and trade for this survey in U.S. dollars rather than yuan.

The biennial CIMT, China International Machine Tool Show (<http://www.cimtshow.com/>), runs in April of odd-numbered years in Beijing. The CIMT has joined the European EMO, the American IMTS, and the Japanese JIMToF as the four major machine-tool trade shows in the world.

The China CNC Machine Tool Fair (<http://www.ccmtshow.com/>), also sponsored by the country's trade association, runs in even-numbered years in April in Nanjing; (it had been in Shanghai and Beijing).

Sponsor of both trade shows is the Beijing-based China Machine Tool builders' Association (www.cmtba.org.cn), which includes subsidiary organizations for producers of different machine tools, tooling, abrasives, and accessories.



Czech Republic



The Association of Engineering Technology, which also represents the interests of Slovak Republic organizations, is at www.sst.cz/. The SST, Svaz Strojírenské Technologie, is located in Prague and is a member of [CECIMO](#).

For the past several years, as local machine-tool factories have pursued production agreements with builders in other countries, the Czech Republic has become an entrepôt in the commodity, with exports exceeding 100% of production. Most exports are to Germany (35%).

[IMT](#), the biennial International Machine Tools Exhibition, runs in September in Brno, and typically draws 70,000 visitors.

Denmark



A trade show dubbed the gateway to the Scandinavian market called [Metal](#), the biennial international trade fair for machine tools and tooling, runs in April in the Fredericia exhibition center (<http://www.fagmesser.dk/>).

The show's organizer, the Association of Danish Machine Tool Manufacturers is called FDVV, Foreningen af Danske Værktøjs- og Værktøjsmaskinfabrikanter, and is a member of [CECIMO](#), through which it reports statistics.

Like some of its neighbors, Denmark sees a certain amount of trans-shipment of machines, and so indicators like "exports as a percentage of production" run more than 100%.

Finland



A machine-tool builders' [group](#) started in 1986 and including nine members is part of the Federation of Finnish Technology Industries (www.teknologiateollisuus.fi); it also is a member of the [CECIMO](#) consortium of Western European machine tool manufacturers' organizations. National output is heavily weighted toward metalforming machines. Main export destinations are Russia, Italy, the U.S., China, and Germany.

A trade show that includes manufacturing technology, FinnTec, runs in April in Helsinki in conjunction with a tooling show, ToolTec. (www.finnexpo.fi).



France



The French market for machine tools is led by big customers in the aerospace and automotive industries and thus is often subject to large swings due to the timing of major programs.

Statistical data comes from Paris-based Symop, the Association for Manufacturing Technologies, whose French name derives from a predecessor Syndicate for Machine Tools (machines-outil) Producers. The association, which operates www.symop.com, was reorganized in 2005 to include importers and distributors, and it is now a member of both the builders' European consortium, [CECIMO](http://www.cecimo.com), and that of the distributors, [CELIMO](http://www.celimo.com).

Symop sponsors the biennial machine-tool trade show formerly called Machine Outil in Paris in non-EMO years (that is, even-numbered years), now held as part of IndustrieParis in March. Organizers have also conducted a similar show in Lyon during EMO years; details at www.industrie-expo.com. Also, a biennial specialty machine-tool show called [SIMODEC](http://www.simodec.com) (Salon International de la Machine-Outil de Décolletage) for screw-machine technology at LaRoche-sur-Foron.]

Germany



Statistics are compiled by Germany's machine-tool builders' group, Verein Deutscher Werkzeugmaschinenfabriken (VDW, Frankfurt), which maintains www.vdw.de, and does an excellent job of providing statistics and detailed information.

The German machine tool industry during 2012 a saw production even stronger than anticipated, with an increase of 10% overall as output progressively rose during the year. The increased in shipments were assisted by a rise in exports, which were 19% higher in 2012.

Bookings for new machine tools remained at a steady, high pace during the end of 2012, and order backlogs were, on average, eight months. Capacity utilization within German customer industries showed no signs of deteriorating, leading to expectations for stability.

For 2013 the VDW expects a continuous mid-single-digit decrease of incoming orders during the first half, and forecasts a positive consolidation of demand during the second half, according to the group's economic- and statistical-department head Gerhard Hein.

The trade association, the largest member of [CECIMO](http://www.cecimo.com), traditionally sponsors the biennial [Metav](http://www.metav.com) German national show in Düsseldorf, which runs in non-EMO years to avoid conflicts. It runs in early March.

VDW is the organizer of the next giant pan-European [EMO](http://www.emo.com), that runs in odd-numbered years and will be staged next in Hannover, Germany, September 16-21, 2013. (Italy presents the show in [2015](http://www.imo.com).) For the Hannover event, EMO general commissioner Carl Martin Welcker reports that at the beginning of the year more than 1,600 companies from 34 different countries had signed up to exhibit



A privately organized show, the biennial [AMB](#), runs in Stuttgart in September 2014 with the VDW organization as a sponsor. Stuttgart also hosts the sheetmetal-fabrication-specific fair called [Blechexpo](#) in November of odd-numbered years; VDW is also a sponsor of Blechexpo. A manufacturing and tooling show called [Intec](#) runs every other odd-numbered year in Leipzig. And Stuttgart hosts a biennial laser-systems fair, [LASYS](#), in June.

The private German corporation that operates the VDW-hosted EMO, [Deutsche Messe A.G.](#) (Hanover, Germany) also operates the annual Hannover Messe event in April that combines several industrial-oriented themes into a giant exhibition. In addition Deutsche Messe also operates specialized trade shows around the world, some in conjunction with machine-tool shows like the American IMTS.

India



The [Indian Machine Tool Manufacturers' Association](#) in Bangalore is composed of around 475 member companies, including a small group that produces the majority of Indian output. The trade association reports an estimate of the country's total output—including non-members—in rupees.

The new estimates for 2012 put production at \$720-million, reflecting a (rupee-based) decline of around 6% from 2011. Exports declined, also, but not enough to make a substantial difference in domestic consumption, which gained 2%.

The main metalworking show has been the traditionally triennial [IMTEX](#) in Bangalore, dubbed the Indian Machine Tool Exhibition with International Participation. Set for Jan., 2013 to run in concert with a tooling and accessories exhibition called Tooltech; it has evolved into a metalcutting-machine show. A spin-off exhibition, IMTEX Forming 2010, ran in Bangalore in January 2012. A newer event series, [Modern Machine Shop](#), runs near New Delhi, then Mumbai, then Chennai in sequential months, and it attempts to draw a wider range of factory equipment and automation.

Italy



With just a few exceptions, Italy's machine-tool producers tend to be small- or medium-sized companies under family ownership. The Italian machine-tool trade group is named [UCIMU- Sistemi Per Produrre](#). Originally UCIMU, for "Unione Costruttore Italiana Macchine Utensili" or "association of builders of Italian machine tools," it has, like other builders' groups, expanded its purview to embrace makers of associated factory automation or "systems of production." The Milan-based trade association traditionally takes an active role in lobbying Rome in the interests of its members on matters like trade policy and investment incentives.

Italian production in 2012 is estimated to have gained a small percentage (in euros). UCIMU officials like president Luigi Galbadini are not bullish about 2013, however, as they see the main export markets slowing down while Italian investments in capital goods are "still at a standstill."



UCIMU recently unveiled a program for “certification of competencies” of personnel that operate machine tools. Run by a training consultancy, the plan is aimed at aiding recruitment, outplacement, and engaging temporary staff.

As to shows, under the schedule adopted by sponsoring [CECIMO](#) consortium of Western European machine tool associations, the pan-European world expo called EMO is staged at fairgrounds outside Hanover and Milan under a scheme of twice in Hanover then once in Milan. The Italians last hosted the huge biennial show in 2009, which means that it will return to Italy as [EMO Milano 2015](#).

UCIMU stages a series of shows including the biennial Italian national machine-tool show called [Bi-MU](#) (October), which runs in conjunction with a subcontracting expo, SFORTEC. There’s also a less-frequent Southern-Italy exhibition called Bi-MU Mediterranea in Bari, a biennial mecatronics and automation event known as Bi-Mec, plus an annual metalforming-equipment show called Lamiera in Bologna. A regional show in Pordenone called [Samumetal](#) includes subcontracting.

Japan



Unlike the situation in other leading machine-tool-building countries, most Japanese builders—with just a few notable exceptions—are publicly held and are listed on the Tokyo or Osaka exchanges. This makes for a very vibrant and competitive industry, one in which spirited investors demand and get excellence.

Combined statistics here come from both the [Japan Machine Tool Builders' Assn.](#) (metalcutting machine tools) and the separate [Japan Forming Machinery Assn.](#) (presses and other metalforming machine tools). For metalcutting machine tools, JMTBA estimates production totals starting with statistics from the Ministry of Economy, Trade & Industry, which does not include companies employing less than 50 workers, and adjusts them according to its own surveys. For trade data, JMTBA excludes semiconductor-fabrication equipment, which is included in data from the Ministry of Finance. JFMA uses member statistics for production and export and Finance Ministry stats for exports.

The major machine-tool show is the JMTBA-organized biennial Japan International Machine Tool Fair (JIMToF) ([www.jimtof.org](#)) in Tokyo in November of even-numbered years, sponsored by a variety of trade organizations. Since 2009, the forming-machine trade association has run its own biennial [MetalForming & Fabricating Fair Tokyo](#), in July or August of odd-numbered years.

Japan's machine-tool distributors' group lists information at [www.nikkohan.or.jp/e/index.htm](#). Additionally, the Japan Machine Tool Importers' Assn. maintains [www.jmtia.gr.jp](#).

Korea



Giant industrial conglomerates whose other endeavors range from shipyards to automobiles dominate the list of companies in the Republic of Korea that operate machine-tool plants.



The Seoul-based [Korea Machine Tool Manufacturers' Association](#) provides online information. Statistics for this report have been based in the National Statistical Office (production) and the Korea Customs Service (exports and imports) and the KoMMA Web site contains extensive tables on the machine tool industry there.

KoMMA is the main sponsor of the biennial (even-numbered year) fair SIMTOS, the Seoul International Manufacturing Technology Show (<http://www.simtos.org/>), which runs in April. The show dates back to 1984 and since 2006 has been at the Kintex Seoul expo center in Gyeonggi with 53,000 square meters of space available.

Mexico



Mexico imports more than 90% of its consumption of machine tools, and there are virtually no companies that produce machine tools. In past surveys, local production had been estimated from fragmentary data, those sources became unreliable, and the country had been necessarily dropped from this survey's tables. Recently however, sources outside Mexico were able to produce a very rough estimate for production (based on a formula derived from trade). About one-third of imports come from the U.S.; other main sources are Germany and Japan, each with about one-fifth.

A generalized machinery-importers group that includes distributors of construction and agricultural machines, the [AMDM](#), Asociación Mexicana de Distribuidores Maquinaria (Mexico City) sponsors the [TECMA](#) Mexico City show in March, which alternates years with the biennial [Expomag](#) in Santiago de Queretaro.

The Netherlands



Like other entrepôt countries heavily engaged in trade into and then out of the country, Holland often posts exports that are in excess of total domestic production and imports that are larger than local consumption.

Machine-tool builders in the Netherlands traditionally lean toward producing presses and other metalforming machines rather than cutting machine tools. They are represented by [VIMAG](#), (Vereniging van Importeurs van Machines en Gereedschappen) the 70-member group that also represents importers and manufacturers of tooling and accessories. VIMAG is one of the affiliated sector organizations in the 2600-member-company engineering-industry association in Zoetermeer known as FME-CWM (www.fme.nl). VIMAG is affiliated with the [CECIMO](#) consortium based in Belgium.

The biennial (usually March) [Techni-Show](#) is billed as the largest manufacturing-oriented trade exhibition in Benelux countries; it's held in Utrecht, The Netherlands.



Portugal



EMAF (Exposição Internacional de Máquinas - Ferramentas), the International Machine Tool & Accessories Exhibition, runs in Porto in November of non-EMO years (www.emaf.exponor.pt/).

The machine-tool industry association, once separately known as CIMAF (Centro de Cooperação dos Industriais de Máquinas e Ferramentas) in Porto is now a division of AIMMAP (Associação dos Industriais Metalúrgicos Metalomecânicos e Afins de Portugal), the metal and mechanical engineering industry group (<http://www.aimmap.pt/>). It is a member of [CECIMO](#) in Brussels, Belgium.

Romania



The Bucharest-headquartered trade association CROMUS (Union of the Romanian Center for Machine Tools & Tools, www.cromus.ro) has provided data for the Survey. Most imports come from Germany, Italy, Japan, and France. Exports—three-quarters of which are cutting machines—go to a variety of countries ranging from Mexico to Germany to Ukraine. CROMUS is located at the headquarters of Masinexport Trading S.A., once the communist state agency for all machine tool production and trade.

Production statistics in this survey for 2012 are unrevised from previous years.

The Bucharest International Technical Fair called [TIB](#) runs in October alongside shows for inventions and energy production.

Russia



The Russian machine tool industry has been making slow but continuous progress since its collapse at the end of the Soviet era two decades ago. The domestic market is characterized by a high import penetration.

An exhibition, the International Exhibition Mashinostroenie or [MashEx](#), is held at the relatively new [Crocus Exhibition Center](#) outside Moscow in late October. It is organized by MVK/ITE Group, a show-production company, and it carries the support of several organizations, including the Union of Russian Machine Builders

Another show, the two-decade-old biennial [Metallo Obrabotka](#), concentrates on foreign machines and runs in the central [Moscow Expocentre](#) in late May. An organizer is Stankoinstrument. Other trade shows include [MashEx Siberia](#), a metals and machinery even organized by the Siberian tradeshow authority in Novosibirsk.

Russian production and trade for this *World Machine Tool Output & Consumption Survey* is reported in U.S. dollars. Statistics come from the Moscow-based [Stankoinstrument Association of Machine & Tool Manufacturers](#), which represents more than 200 machine-tool and instrument factories, research organizations, and design bureaus. In



addition, the more generalized [Union of Machine Builders](#) in Moscow provides a broader scale of coordination for member companies.

South Africa



Not a major producer, South Africa has no indigenous builders of metalcutting machine tools and only a few producers of forming equipment, mostly press brakes. Virtually all equipment is imported, and most is sold through the 22 corporate members of the Johannesburg-area [Machine Tool Merchants Assn. of South Africa](#), estimated to represent two-thirds of new-machine importers.

MTMA chairman Ian Simpson estimates total consumption in 2011 at 1-billion rand or about U.S.\$140-million. Installations in 2012 rose to \$146-million, with the majority of sales in the category that includes lathes, mills, and machining centers.

Spain



The machine-tool-building industry, centered in the Basque region of northeast Spain, consistently ranks among the world's top ten producers and is a net exporter of equipment. The domestic market continues to grow but still shows signs of a recovering situation. Export markets are strong, both in traditional European markets (Germany, Italy, France) and in the Brazil, Russia, India, China group.

Asociación Española de Fabricantes de Máquinas-herramienta ([AFM](#)), the 80-member Spanish machine-tool builders' association, located in San Sebastian, contributes statistical information for this *Survey*. AFM now includes AMT, the 60-member trade association of machine-tool accessories, component parts, and tools manufacturers; they completed a two-year merger in late 2011. A separate machine-tool-importers' association, [AIMHE](#), is headquartered in Bilbao.

AFM's biennial national machine-tool show, [BIEHM](#) (Bienal Española de la Máquina-Herramienta), runs in Bilbao in late May and usually draws 50,000+ visitors. Since Spain is a [CECIMO](#) member, the BIEHM is not presented in odd-number years, which are reserved for CECIMO's pan-European EMO. Another show, one that emphasizes imports, [Maquitec](#), runs in Barcelona.



Sweden



The 30-member [Machine and Tool Association of Sweden](#) in Stockholm is a member of the [CECIMO](#). Secretariat for the association is the Assn. of Swedish Engineering Industries (V.I.).

Trade shows include [M·A·X](#), the Manufacturing & Automation Expo in March 2014 at the [Stockholmsmässan Exhibition Center](#).

Switzerland



On a per-capita basis, Switzerland's consumption of \$1.0-billion means that more than \$136 was spent on this class of production equipment for every person in the country. The Swiss have always had a very high per-capita consumption rate, usually ranking number one.

Around half of Swiss imports typically come from Germany. Germany also leads the list of Swiss export destinations, followed by the U.S. and Italy.

Output and trade is reported in Swiss francs, and in 2012 production declined 6%. Industry officials have been reporting that changes in the value of the Swiss franc along with other global uncertainties, stalled the recovery somewhat.

Machine tool builders are organized into the 75-member machine-tools and manufacturing technology group within [SwissMEM](#), the umbrella organization of mechanical and electrical-engineering industries in Zurich. It in turn is a member of the Western European consortium [CECIMO](#).

A biennial trade show for machine tools and production technology, [Prodex](#), runs in Basel, November in even-numbered years.

Taiwan



Taiwan continues to have a very high per-capita rate of consumption, with more than \$80 worth of new machine tools installed for each person. Its domestic machine-tool-producing industry consistently ranks in the top ten among builder nations, and several of its manufacturers have established production facilities in China.

Major trade shows include Manufacturing Taipei, the expanded successor to Taipei Automat, which is now known as [MT Duo](#) (for 'Machine Tools' and 'Manufacturing Technology'); it runs in May, organized by the Taiwan External Trade Development Council, TAITRA. Also there's been the biennial [TIMTOS](#), the Taipei International Machine Tool Show, which runs in odd-numbered years in March.



In 2007, the [Taiwan Machine Tool & Accessory Builders' Assn.](#) in Taichung, was set up as an independent, not-for-profit organization. Its chartered purposes include promoting internal industrial cooperation projects and global machine tool shows. It runs [TMTS](#), the Taiwan International Machine Tool Show in even-numbered years in November at the Greater Taichung International Expo Center.

Data for this survey continues to come from the Taipei-headquartered broad trade group, [Taiwan Association of Machinery Industry](#), whose membership also represents builders of a wide range of machinery. It publishes the Taiwan Machine Tools Directory and promotes the TIMTOS and MT Duo trade fairs.

Turkey



The Turkish machinery companies' trade association [MIB](#) (Makýna Ýmalatçıları Býrlýgy, is the newest member of the [CECIMO](#) consortium, joining in 1999 as its 15th member. It provides statistics for this *Survey* in euros. MIB general secretary M. Nail Türker comments that postponed investments seem to have abated and that 2012 data shows the market is more or less back to normal.

Two biennial metalworking-oriented fairs run in Istanbul in alternating years: [TATEF](#), run at the CNR Expo Center by the ITE Group in October of even-numbered years; and [TIME](#) Manufacturing Technologies Exhibition held in November of odd-numbered years. In addition, [Turkey Maktek Eurasia](#) a machinery-oriented event organized by [TÜYAP Group](#) runs in October.

United Kingdom



Statistics for this *World Machine Tool Survey* are provided in British pounds by [MTA](#), the London-based Manufacturing Technologies Association whose members include both builders and distributors

The MTA trade association, as a [CECIMO](#) member, participates in the pan-European EMO exhibition and thus is restrained from running its national trade fair in odd-number years. So the MTA's nearly century-old machine-tool show, [Mach](#), runs in April at the National Exhibition Centre in Birmingham and is part of a combined exposition that also includes drives & controls, fluid-power technology, plant management, etc.



United States



American machine-tool factories in 2012 had another gain in production, 7%, following a 25% boost the year before. Consumption grew at an even faster pace, up 7%, as imports also increased. The U.S. currently ranks second in the world in consumption, behind only China.

The two main trade associations, AMT and AMTDA, both located outside Washington, D.C., combined their operations in 2012. The larger, [AMT – The Association for Manufacturing Technology](#), traces back to the National Machine Tool Builders' Association founded in 1902, and it represents providers of manufacturing machinery and equipment, with emphasis on technical and economic issues. AMTDA, the American Machine Tool Distributors' Association, launched in 1925, has concentrated on advancing sales and marketing through various distribution channels. AMTDA has become the Distribution Working Group of AMT.

The superlative trade show *by far* is [IMTS](#), the International Manufacturing Technology Show that's held in the McCormick Place complex in Chicago, Illinois, every even-numbered year.

A different, invitation-only exhibition that's more like a combined intimate open house, called [IMX](#) (for Interactive Manufacturing Experience) launched in Las Vegas, Nevada, in November 2011 and now runs in odd-numbered years.

A professional society based in Dearborn, Michigan, [SME](#), the Society of Manufacturing Engineers, over the years has developed a stable of events including regional trade shows like [Westec](#) and [Eastec](#) plus exhibitions that target certain manufacturing technologies like [NanoManufacturing](#) or [Rapid](#). The society's extensive calendar of events also includes conferences and trade shows that concentrate on equipment-using industries like [AeroDef](#) and Medical Manufacturing Innovations.

CECIMO



[CECIMO](#) is the European Committee for Co-operation of the Machine Tool Industries and is based in Brussels, Belgium. Its market-intelligence department, headed by Maret Veiner, has been instrumental in coordinating survey results from Austria, Belgium, the Czech Republic, Denmark, Finland, France, Germany, Italy, Netherlands, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom.

CECIMO is the official sponsor for the pan-European world machine-tool show called EMO (originally for "Exposition Machine-Outil" but now a self-standing acronym). EMO is run in odd-numbered years by the host country, and by tradition the national machinery shows in separate member countries are held in even-numbered years. The current rotation pattern has the biennial expo run in Hanover, Germany, for two times, then moving to Milan, Italy, for the third, then back to Hanover. So [Hanover hosts the next EMO](#) in 2013. The giant pan-European EMO [returns to Milan](#), Italy, in 2015.

In addition to coordinating statistics and fair calendars, CECIMO has launched a number of machine-security, standardization, and sustainability initiatives like the recent Blue Competence Machine Tools Initiative.



International Trade Centre



International Trade Centre
UNCTAD / WTO

Although it does not provide information about the domestic machine-tool-producing industry in any given country, the [International Trade Centre](#) in Geneva, Switzerland, provides reasonably up-to-date information on imports and exports. The Centre is the technical cooperation agency of the United Nations Conference on Trade & Development (UNCTAD) and the World Trade Organization. When

working with statistics from the ITC, since Production information is missing, the resulting Consumption statistic for any given country cannot be calculated in the same manner as in this survey (Consumption = Domestic Production + Imports and – Exports).

For imports and exports, go to the ITC's [International Trade Statistics](#) page and select by Product Group 8456 through 8463 (Metalworking Machine Tools). The sum of these eight categories are necessary to give an *approximation* of the statistics in this *World Machine Tool Output & Consumption Survey* (definitions of some classes of machine tools vary—e.g., certain lasers or specialized electronics equipment—are not included in this Survey).