



ECONOMIC INDICATOR
webinar
SERIES



U.S. Manufacturers' Shipments, Inventories, and Orders (M3)

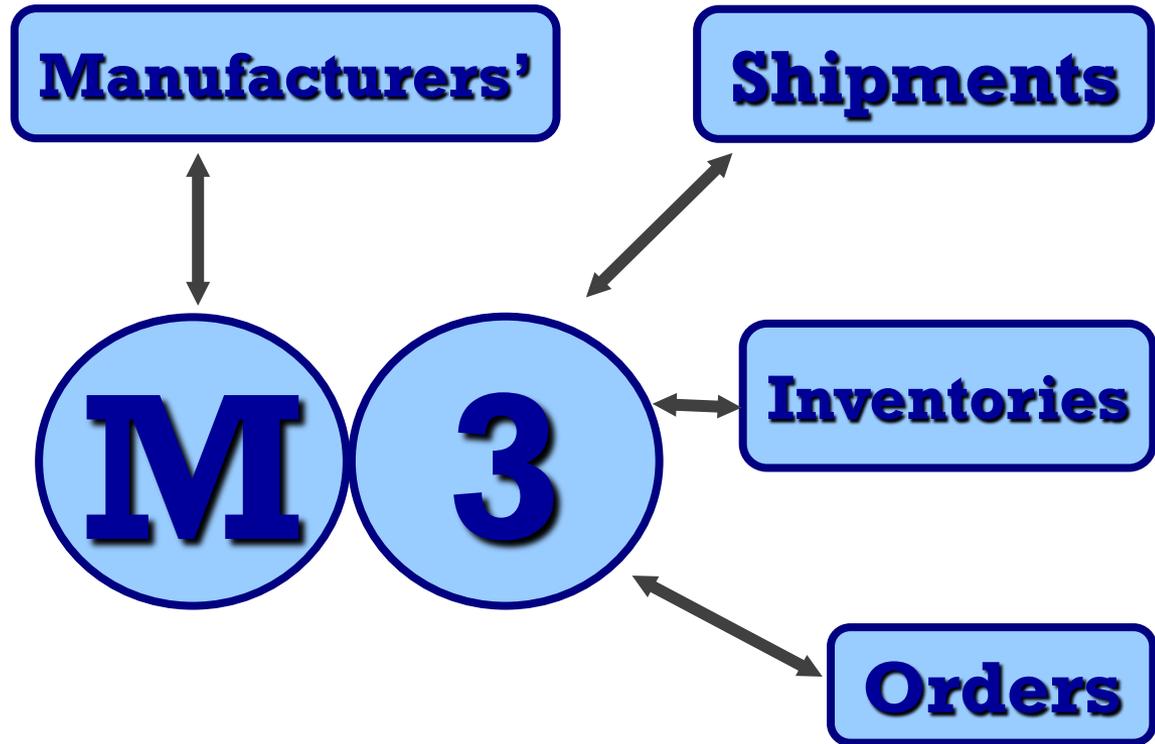
“Providing early broad-based monthly statistical data on current economic conditions and indications of future production commitments in the manufacturing sector”

www.census.gov/M3



Overview

- Introduction
- Data Collection
- Estimation
- M3 Supplements
- Core Products
- Data Users
- Examples
- Live Demo



Introduction to M3: origin and purpose

- Provides broad-based monthly statistical data on current economic conditions and indications of future production commitments in the manufacturing sector.
- To provide measures of both current and future manufacturing activity in current dollars, both seasonally and not seasonally adjusted, during a calendar month.
- The survey has been conducted monthly by the US Census Bureau since 1957.
- Data are collected on manufacturers' value of shipments, new orders, end-of-month order backlog, end-of-month total inventory, materials and supplies, work-in-process, and finished goods inventories



Introduction to M3: respondents

- The M3 includes approximately 4,300 reporting units that represent about 3,000 companies. These companies may be:
 - divisions of diversified large companies
 - large homogeneous companies
 - single unit manufacturers
- Data are collected by an aggregated 6-digit NAICS (North American Industry Classification System).
- There are 66 industry categories collected to estimate total durable goods and 23 industry categories to estimate nondurable goods.

NAICS-based M3 Industry Groups	
11	Food
12	Beverage and Tobacco
13	Textile Mills
14	Textile Products
15	Apparel
16	Leather Products
21	Wood Products
22	Paper Products
23	Printing
24	Petroleum and Coal
25	Chemicals
26	Plastics and Rubbers
27	Nonmetallic Minerals
31	Primary Metals
32	Fabricated Metals
33	Machinery
34	Computers and Electronics
35	Electrical equipment
36	Transportation
37	Furniture
39	Miscellaneous (Medical, Toys, Sporting Goods, Office Supplies, Jewelry etc.)



Introduction to M3: Authorization and Security

- Data collection is authorized by Title 13 of the United States Code
- All information, including names of participating companies, is confidential under both Title 13 and Title 26 of the United States Code
- All staff are trained and abide by Principal Economic Indicator Policies





DATA Collection:

How are participants chosen

- Companies are selected from the quinquennial Economic Census
- Companies are also selected from the Annual Survey of Manufactures (ASM) and the Manufacturers' Unfilled Orders Survey (M3UFO)
- Domestic manufacturing companies with \$500 million or more in annual shipments are chosen.



DATA COLLECTION: How data are collected

- All Electronic data collection
- Internet- “Centurion” – 87%
- Paperless Facsimile Image Reporting System (PFIRS) – 12%
- Secure Messaging Center -- <1%

The screenshot shows a web browser window displaying the login page for the Manufacturers' Shipments, Inventories, and Orders (M3) Survey. The page header includes the U.S. Census Bureau logo and the text "Helping You Make Informed Decisions". The main heading is "Manufacturers' Shipments, Inventories, and Orders (M3 Survey)". Below this, there is a welcome message and a brief description of the survey. The "Login" section contains instructions for users to enter their User ID and Password, with a note that "User ID and Password are case sensitive." There are two input fields for "User ID:" and "Password:", and a "Login" button. A warning section at the bottom states: "** WARNING ** You have accessed a UNITED STATES GOVERNMENT computer. Use of this computer without authorization or for purposes for which authorization has not been extended is a violation of Federal law and can be punished with fines or imprisonment (PUBLIC LAW 99-474). System usage may be monitored, recorded, and subject to audit. Use of this system indicates consent to monitoring and recording." The footer includes the text "Form Number: M3-000", "DMD No.: 0807-0000", "Approval Expires: March 31, 2015", and links for "Burden Statement", "Accessibility", "Privacy", and "Security".

Data Collection: the m3 form

- Value of Shipments
- New Orders (Net of Cancellations)
- Order Backlogs (Unfilled Orders)
- Total Inventory and its stages of fabrication:
 - Materials and Supplies Inventory
 - Work in Process Inventory
 - Finished Goods Inventory

FORM M-3(SD)
(03-23-2012)

U.S. DEPARTMENT OF COMMERCE
Economics and Statistics Administration
U.S. CENSUS BUREAU

MANUFACTURERS' SHIPMENTS, INVENTORIES, AND ORDERS
FORM APPROVED: OMB NO. 0607-0008 EXPIRES MARCH 31, 2015

45029

NOTICE - This report is authorized by law (Title 13, United States Code), §9 Section 9 of the same law. Your report to the Census Bureau is confidential. It may be used only for business surveys to assist the confidentiality of Census Bureau information and may be used only for statistical purposes. The law also provides that copies retained in your files are immune from legal process.

Description:

See instructions on reverse side

CENSUS USE RP MC # F FP AI

Please correct any errors in name, address, and ZIP Code.

PLEASE COMPLETE FORM WITHIN 15 DAYS OF RECEIPT

TO START REPORTING VIA THE INTERNET, use the User ID and Original Password printed below. Go to econhelp.census.gov/m3 to report your data or FAX FORM to 1-800-272-4096

U.S. Census Bureau
4600 Silver Hill Rd, MCDM6
Washington, DC 20233-0400
census.gov/m3

CHANGE IN OPERATIONAL STATUS

Census contact Area Code Number

Your company contact Area Code Number

CEASED OPERATIONS
Sold to another company - Enter name and date in "Remarks"
ACQUIRED ANOTHER MANUFACTURING OPERATION
- Enter name and date in "Remarks"

User ID: _____

Original Password: _____

CFN _____ Industry _____

Description of reporting items (Definitions of terms are provided on the back of the form)

Round figures to THOUSANDS OF DOLLARS.

1	Accounting Period (SHADE ONLY ONE CIRCLE)	P	Cal. Mo.		Other	Cal. Mo.		Other	Cal. Mo.	
			4 week	5 week		4 week	5 week		4 week	5 week
2	Net Shipments, Manufactured in U.S.	S								
3	New Orders (Net of Cancellations) [If applicable]	N								
4	Order Backlog (Unfilled Orders) [If applicable]	U								
5	Total Inventories, Warehoused in U.S. (Current Cost or Market)	I								
6	Materials and Supplies	M								
7	Work-In-Process	W								
8	Finished-Goods	F								

REMARKS:

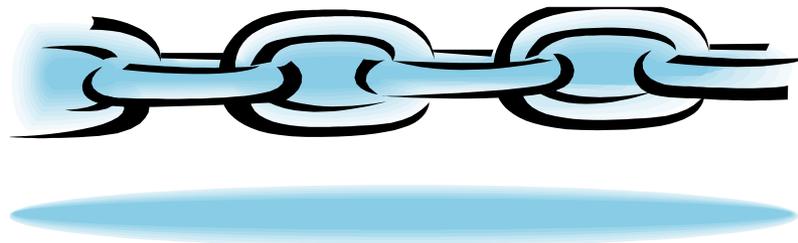
CERTIFICATION This form is substantially accurate and has been prepared in accordance with the instructions.

Title _____ Date _____

Signature of authorized person _____

ESTIMATION: Monthly Estimates

- A link relative procedure derives the monthly universe estimates of shipments, unfilled orders, and total inventories for each industry category.
 - The universe estimate for current month is derived by multiplying the monthly ratio of change, tabulated for reporting companies in the current month, by the universe estimate for the previous month.
- The universe estimate of new orders is derived from the monthly estimate of shipments plus the difference in unfilled orders between the current and prior period.
- A modified procedure also is used to estimate the stages of fabrication inventory. Total inventory estimated data are re-tabulated to their three-digit NAICS level and serve as control totals for the stages of fabrication data.



Estimation: REVISIONS AND Benchmarking

- Monthly Revisions
- With each monthly release, the prior month data are revised based on receipt of late or revised data provided by respondents
- Annual Benchmarking
- Benchmark Press Release contains monthly data revised for the current year based on new benchmark levels
- Is published in May of each year , except for years ending in “4” or “9”, due to the unavailability of new source data
- Is published 5 months after the benchmark source data are available
 - Source Data:
 - The Annual Survey of Manufactures (ASM)
 - The Economic Census with DOD/Non DOD splits
 - The Manufacturers’ Unfilled Orders Survey



Estimation: Trading day & Seasonality

- For shipments, unfilled orders, and total inventories, two years of data are forecasted at the end of each series, after adjusting for:
 - different number of trading days in each month
 - moving holidays
 - outliers
- The combined effects of trading day and seasonality can then be estimated and removed by producing adjusted estimates.
- Estimates are not adjusted for inflation



Estimation: Combined ADJUSTMENTS

- The adjusted estimates for shipments, unfilled orders, and total inventories are calculated by dividing the unadjusted estimates by combined adjustment factors
- The combined factors are computed by the **X-13ARIMA-SEATS** seasonal adjustment program.
- Adjusted new orders are computed by adding the difference between current and prior adjusted unfilled orders to the current month's adjusted shipments.
- The inventory by stage of fabrication data are seasonally adjusted at the three-digit NAICS subsector level for each stage.
- Staff calculate combined factors concurrently and include the current period observation in the calculation of the combined factors for that month.
- For information on specific measures used in the combined adjustment analysis, as well as the selection of options within the X-13ARIMA-SEATS program, call **301-763-7630**.

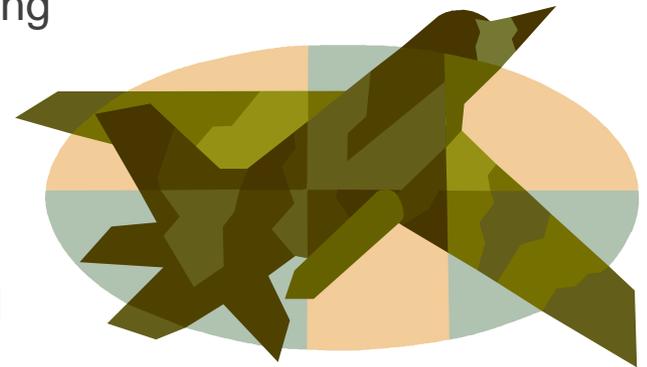


M3 supplements

- Manufacturers' Unfilled Orders Survey (M3UFO)
- The Manufacturers' Unfilled Orders Survey (M3UFO) is a mandatory survey with a sample of approximately 6,000 companies
- Since 2010, the M3UFO has been conducted annually. Prior to 2010, the survey was conducted in 1976, 1986, 1999
- The M3UFO survey provides the annual benchmark for M3's unfilled orders data. The ASM and Economic Census serve as the annual benchmarks for M3's shipments and inventory data
- The survey collects 41 industry categories of the 83 M3 industry categories (not accounting for the defense/nondefense industry break-outs)
- 48% of M3UFO respondents report via Centurion
- The survey is necessary to ensure future accuracy of the new orders data in the M3 and to determine which NAICS industries continue to report unfilled orders

M3 supplements

- Department Of Defense (DOD) / Non-DOD Splits
- M3 publishes DOD and Non-DOD data for splits for the following industries:
 - Small arms, ordnance, and accessories
 - Communications equipment manufacturing
 - Search and navigation equipment manufacturing
 - Aircraft manufacturing
 - Aircraft engine and parts manufacturing
 - Ship and boat building
- Economists prefer to examine M3 data with and without DOD figures.
- Based on results of a special inquiry on select industries in the Economic Census, M3 will Benchmark the split between these DOD and Non-DOD industries in 2015.



Core products:

- **The Advance Report on Durable Goods Principal Economic Indicator**
 - Available about 18 working days after each month.
 - Data available on the Internet and America's Economy App.
- **The Full Report Economic Indicator**
 - Durable and Nondurable Goods
 - Available about 23 working days after each month
 - Data available on the Internet, CIDR and America's Economy App.
- **Manufacturing and Trade Inventories and Sales (MTIS) Report**
 - Data on total manufacturing from the Full Report are included in a joint monthly indicator press release on Manufacturing, Retail and Wholesale Trade.



core products:

U.S. Census Bureau News

U.S. Department of Commerce - Washington, D.C. 20233

FOR IMMEDIATE RELEASE
TUESDAY, JANUARY 28, 2014, AT 8:30 A.M. EST

Chris Savage or Adriana Stoica
Manufacturing and Construction Division
(301) 763-4832

M3-1 (13)-12
CB14-15

Advance Report on Durable Goods Manufacturers' Shipments, Inventories and Orders December 2013

New Orders

New orders for manufactured durable goods in December decreased \$10.3 billion or 4.3 percent to \$229.3 billion, the U.S. Census Bureau announced today. This decrease, down two of the last three months, followed a 2.6 percent November increase. Excluding transportation, new orders decreased 1.6 percent. Excluding defense, new orders decreased 3.7 percent.

Transportation equipment, also down two of the last three months, led the decrease, \$7.7 billion or 9.5 percent to \$73.1 billion. This was led by nondefense aircraft and parts, which decreased \$3.8 billion.

Shipments

Shipments of manufactured durable goods in December, down following four consecutive monthly increases, decreased \$4.5 billion or 1.9 percent to \$232.8 billion. This followed a 1.3 percent November increase.

Transportation equipment, also down following four consecutive monthly increases, led the decrease, \$4.1 billion or 5.7 percent to \$68.3 billion.

Unfilled Orders

Unfilled orders for manufactured durable goods in December, up ten of the last eleven months, increased \$3.9 billion or 0.4 percent to \$1,061.5 billion. This was at the highest level since the series was first published on a NAICS basis in 1992, and followed a 0.9 percent November increase.

Transportation equipment, up four consecutive months, drove the increase, \$4.8 billion or 0.7 percent to \$659.1 billion.

Inventories

Inventories of manufactured durable goods in December, up eight of the last nine months, increased \$3.0 billion or 0.8 percent to \$387.8 billion. This was at the highest level since the series was first published on a NAICS basis, and followed a 0.3 percent November increase.

Transportation equipment, up nineteen of the last twenty months, led the increase, \$1.3 billion or 1.1 percent to \$122.1 billion.

Capital Goods

Nondefense new orders for capital goods in December decreased \$4.3 billion or 5.0 percent to \$82.5 billion. Shipments increased \$0.6 billion or 0.8 percent to \$75.4 billion. Unfilled orders increased \$7.1 billion or 1.1 percent to \$642.7 billion. Inventories increased \$1.2 billion or 0.7 percent to \$176.7 billion.

Defense new orders for capital goods in December decreased \$1.9 billion or 21.5 percent to \$6.8 billion. Shipments decreased \$1.3 billion or 11.5 percent to \$9.6 billion. Unfilled orders decreased \$2.8 billion or 1.7 percent to \$161.9 billion. Inventories increased \$0.5 billion or 2.1 percent to \$22.9 billion.

Revised November Data

Revised seasonally adjusted November figures for all manufacturing industries were: new orders, \$495.9 billion (revised from \$497.9 billion); shipments, \$493.6 billion (revised from \$494.6 billion); unfilled orders, \$1,057.6 billion (revised from \$1,058.5 billion); and total inventories \$633.8 billion (revised from \$633.4 billion).

Figures in text are adjusted for seasonality, but not for inflation. Figures on new and unfilled orders exclude data for semiconductor manufacturing. For data, call (301) 763-4832 or go to <http://www.census.gov/mcs/>. Revised and more detailed estimates, plus nondurable goods data, will be published on February 4, 2014, at 10:00 a.m. EST. The Advance Report on durable goods for January is scheduled for release on February 27, 2014, at 8:30 a.m. EST. See back page for survey description. To receive the latest updates on the Nation's key economic indicators, download the America's Economy app for Apple and Android smartphones and tablets. Discover the U.S. Census Bureau's economic statistics through the Economic Indicator Webinar Series. Each of the 13 economic indicators in this webinar series will provide an in-depth description of how the critical economic indicator data are collected and how you can access and use these statistics. Sessions include construction, housing, international trade, retail trade and more. For more information go to www.census.gov/econ/webinar.



BREAKING NEWS
U.S. DURABLES EX-DEFENSE
▲ 2.3% (MARCH) VS. ▲ 2.0% (FEB.)

DOW FUTURES
+31.00 +0.25%
12,549.00

FIRST IN BUSINESS WORLDWIDE

Core products: Full Report

U.S. Census Bureau News

U.S. Department of Commerce • Washington, D.C. 20233

FOR IMMEDIATE RELEASE
MONDAY, JANUARY 6, 2014, AT 10:00 A.M. EST

Chris Savage or Adriana Stoica
Manufacturing and Construction Division
(301) 763-4832

M3-2 (13)-11
CB14-03

Full Report on Manufacturers' Shipments, Inventories and Orders November 2013

Summary

New orders for manufactured goods in November, up two of the last three months, increased \$8.8 billion or 1.8 percent to \$497.9 billion, the U.S. Census Bureau reported today. This was at the highest level since the series was first published on a NAICS basis in 1992 and followed a 0.5 percent October decrease. Excluding transportation, new orders increased 0.6 percent.

Shipments, up six of the last seven months, increased \$4.9 billion or 1.0 percent to \$494.6 billion. This was also at the highest level since the series was first published on a NAICS basis and followed a 0.1 percent October increase.

Unfilled orders, up nine of the last ten months, increased \$10.4 billion or 1.0 percent to \$1,058.5 billion. This was also at the highest level since the series was first published on a NAICS basis and followed a 0.6 percent October increase. The unfilled orders-to-shipments ratio was 6.42, up from 6.39 in October.

Inventories, up eleven of the last twelve months, increased \$0.2 billion to \$633.4 billion. This was also at the highest level since the series was first published on a NAICS basis and followed a slight October increase. The inventories-to-shipments ratio was 1.28, down from 1.29 in October.

New Orders

New orders for manufactured durable goods in November, up three of the last four months, increased \$8.1 billion or 3.4 percent to \$241.6 billion, revised from the previously published 3.5 percent increase. This followed a 0.7 percent October decrease.

Transportation equipment, also up three of the last four months, led the increase, up \$6.2 billion or 8.3 percent to \$81.1 billion.

New orders for manufactured nondurable goods increased \$0.8 billion or 0.3 percent to \$256.3 billion.

Shipments

Shipments of manufactured durable goods in November, up four consecutive months, increased \$4.1 billion or 1.8 percent to \$238.3 billion, unchanged from the previously published increase. This was at the highest level since the series was first published on a NAICS basis and followed a 0.6 percent October increase.

Machinery, also up four consecutive months, led the increase, up \$1.4 billion or 4.2 percent to \$35.5 billion.

Shipments of manufactured nondurable goods, up following three consecutive monthly decreases, increased \$0.8 billion or 0.3 percent to \$256.3 billion. This followed a 0.3 percent October decrease. Petroleum and coal products, also up following three consecutive monthly decreases, drove the increase, up \$1.0 billion or 1.4 percent to \$71.6 billion.

Unfilled Orders

Unfilled orders for manufactured durable goods in November, up nine of the last ten months, increased \$10.4 billion or 1.0 percent to \$1,058.5 billion, unchanged from the previously published increase. This was at the highest level since the series was first published on a NAICS basis and followed a 0.6 percent October increase.

Transportation equipment, up three consecutive months, led the increase, up \$8.4 billion or 1.3 percent to \$654.3 billion.

Inventories

Inventories of manufactured durable goods in November, up seven of the last eight months, increased \$0.8 billion or 0.2 percent to \$304.3 billion, revised from the previously published 0.3 percent increase. This was at the highest level since the series was first published on a NAICS basis and followed a 0.3 percent October increase.

Transportation equipment, up eighteen of the last nineteen months, led the increase, up \$0.5 billion or 0.4 percent to \$120.8 billion.

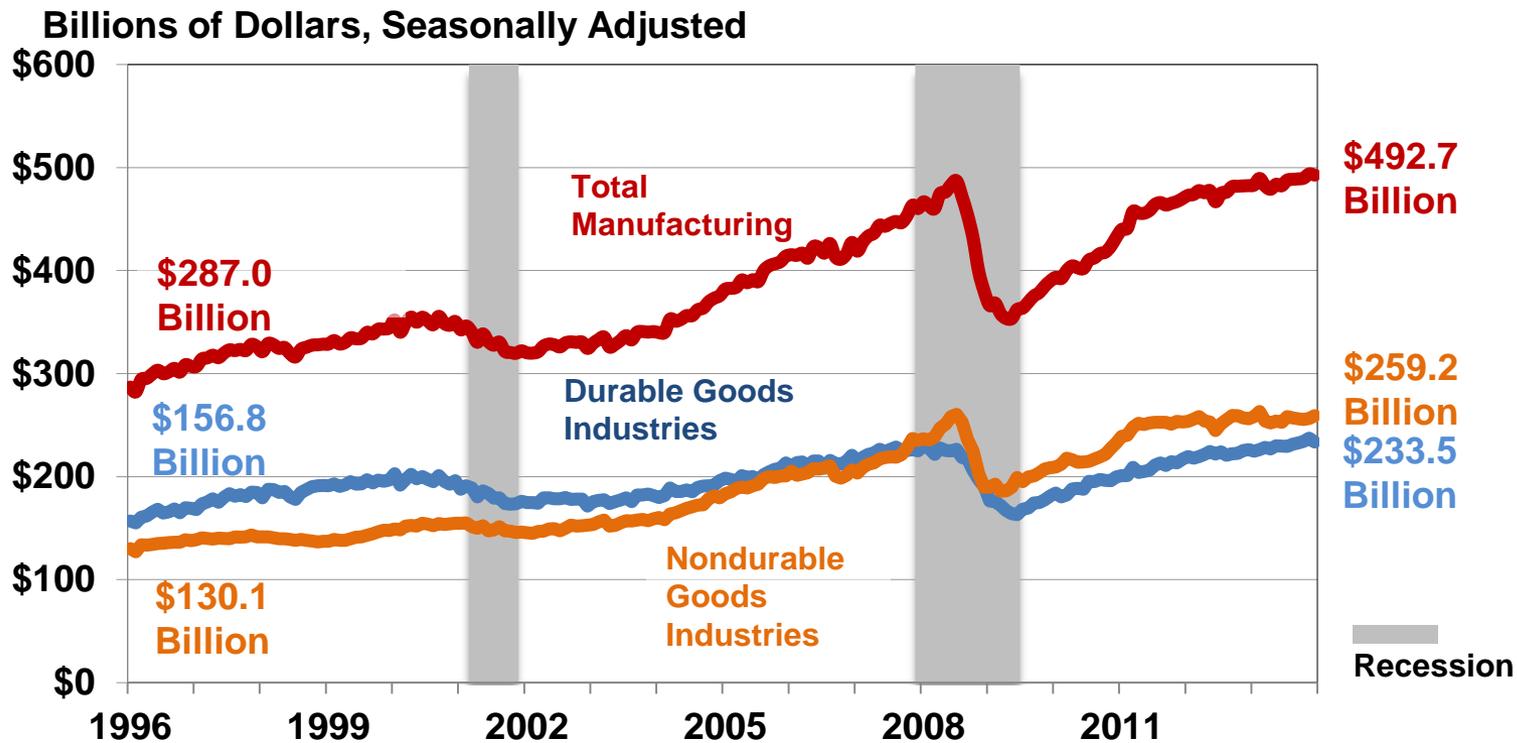
Inventories of manufactured nondurable goods, down three consecutive months, decreased \$0.6 billion or 0.2 percent to \$249.1 billion. This followed a 0.4 percent October decrease. Petroleum and coal products, also down three consecutive months, drove the decrease, down \$0.8 billion or 1.5 percent to \$48.3 billion.

By stage of fabrication, November materials and supplies increased 0.1 percent in durable goods and 0.3 percent in nondurable goods. Work in process increased 0.2 percent in durable goods and decreased 1.0 percent in nondurable goods. Finished goods increased 0.4 percent in durable goods and decreased 0.3 percent in nondurable goods.

Figures in text are adjusted for seasonality, but not for inflation. Figures on new and unfilled orders exclude data for semiconductor manufacturing. For data, call (301) 763-4678 or go to www.census.gov/mms. The Advance Report on durable goods for December is scheduled for release on January 28, 2014, at 8:30 a.m. EST, and the Full Report on February 4, 2014, at 10:00 a.m. EST. See back page for survey description. To receive the latest updates on the Nation's key economic indicators, download the America's Economy app for Apple and Android smartphones and tablets. Discover the U.S. Census Bureau's economic statistics through the Economic Indicator Webinar Series. Each of the 13 economic indicators in this webinar series will provide an in-depth description of how the critical economic indicator data are collected and how you can access and use these statistics. Sessions include construction, housing, international trade, retail trade and more.

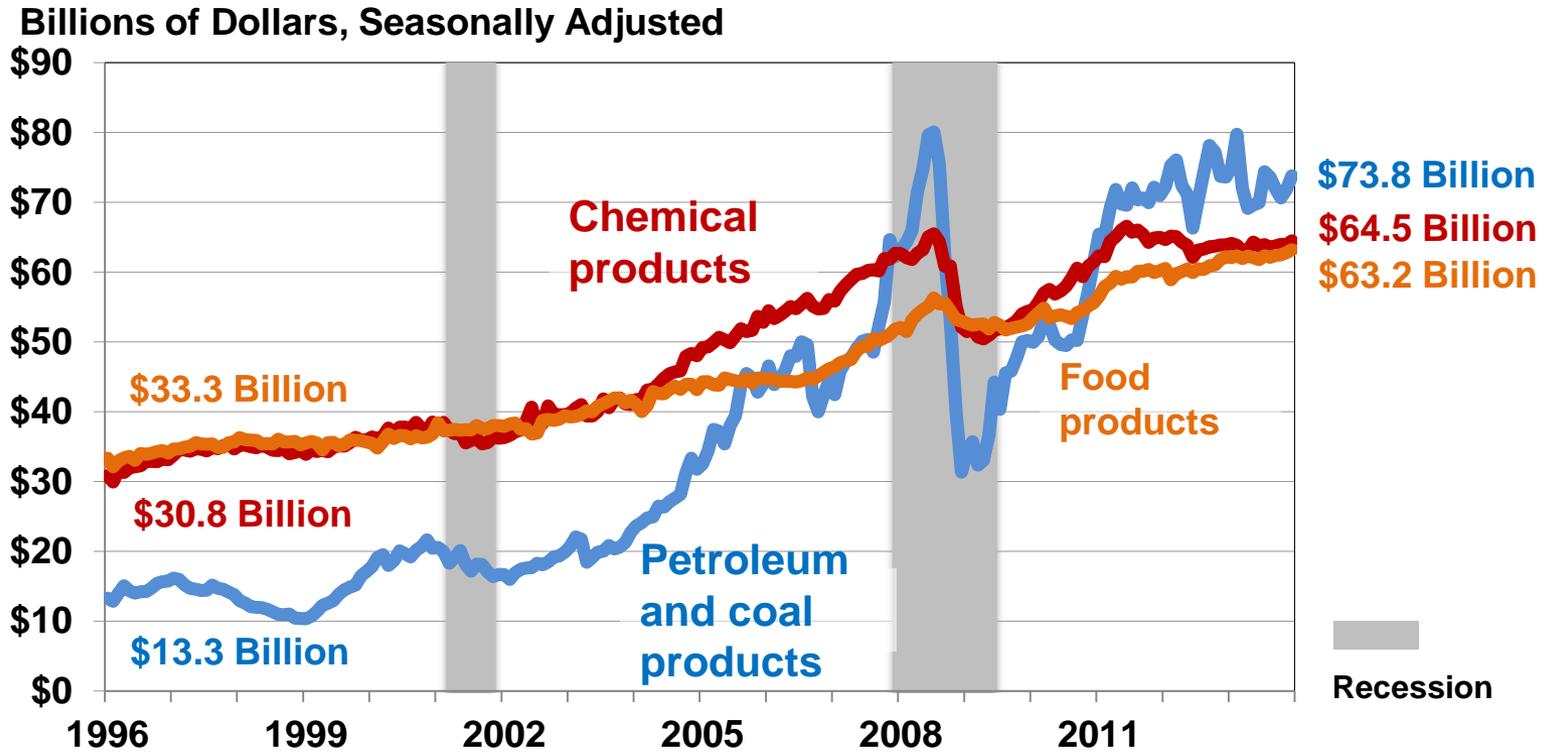
- Table 1-Value of Manufacturers Shipments for Industry Groups
- Table 2-Value of Manufacturers New Orders for Industry Groups
- Table 3-Value of Manufacturers Unfilled Orders for Industry Groups
- Table 4-Value of Manufacturers Total Inventories for Industry Groups
- Table 5- Value of Manufacturers' Shipments, New Orders, Unfilled Orders and Total Inventory for Topical Series
- Table 6- Value of Manufacturers' Inventories, by Stage of Fabrication, by Industry Group

Value of Shipments of Manufacturing Industries: January 1996 - December 2013



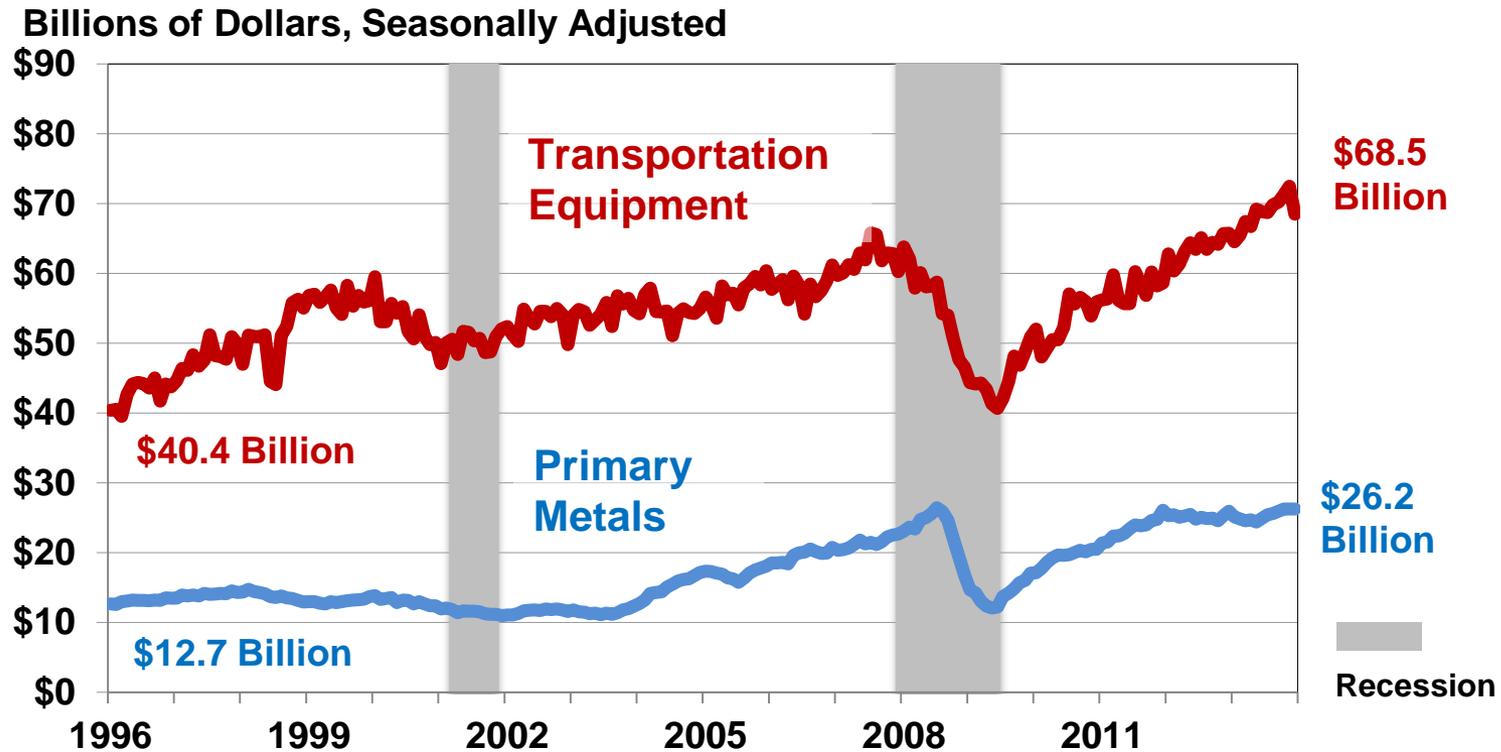
Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders Survey, 1996-2013

Shipments of Food products, Petroleum and Coal Products, and Chemical Products: January 1996 – December 2013



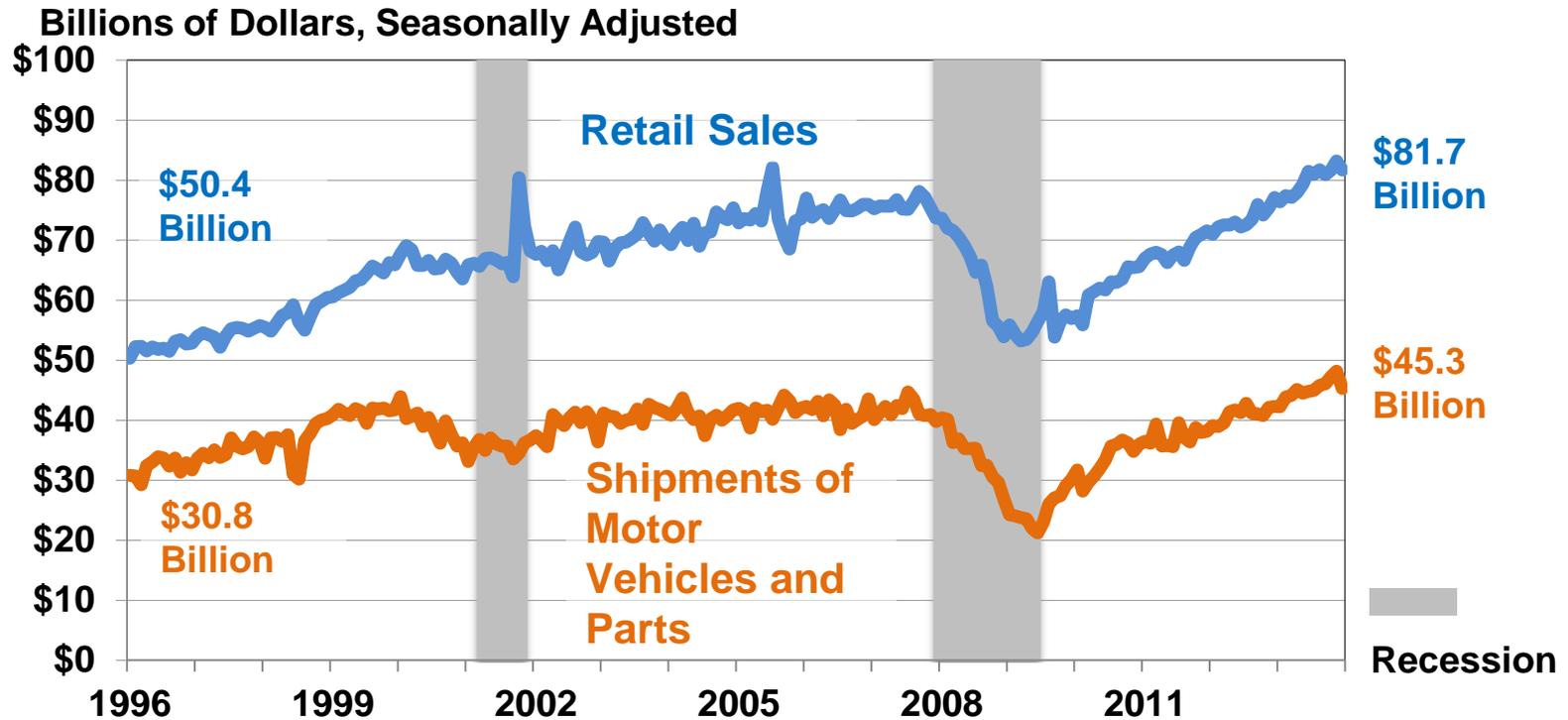
Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders Survey, 1996-2013

Shipments of Primary Metals and Transportation Equipment: January 1996 – December 2013



Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders Survey, 1996-2013

Retail Sales and Manufacturing Shipments of Motor Vehicles and Parts: January 1996 - December 2013



Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders Survey, 1996-2013; U.S. Census Bureau, Monthly Retail Trade Survey, 1996 -2013

Shipments and New Orders of Machinery: January 1996 – December 2013



Source: U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders Survey, 1996-2013

Data Users

- Federal Government for developing economic policy:
 - Federal Reserve Board (monetary policy)
 - Council of Economic Advisers (Presidential advisers)
 - Bureau of Economic Analysis (primary component of the Gross Domestic Product)
- Conference Board for preparing the Index of Leading Economic Indicators
- Trade Associations, Corporate Economists, and Academia
- Stock market and other members of the business community



America's Economy: Mobile App

Indicators Available:

- Advance Monthly Retail Sales
- Advance Report Durable Goods
- Business Inventories
- Construction Spending
- Consumer Price Index
- Homeownership Rate
- International Trade
- Manufacturers' Goods
- Monthly Wholesale
- New Residential Construction
- New Residential Sales
- Nonfarm Payroll
- Personal Income
- Producer Price Index
- QFR–Manufacturing
- QFR–Retail Trade
- Quarterly Services Survey
- Real Gross Domestic Product
- Unemployment Rate



www.census.gov/mobile

Available for iPhone, iPad,
and Android devices

For More Information

Manufacturers' Shipments, Inventories and Orders (M3) Branch

U.S. Census Bureau – Economic Statistics

Phone: 301-763-4832

Fax: 301-763-8841

Web site: www.census.gov/M3