

FEDERAL RESERVE



Industrial Production

INDUSTRIAL PRODUCTION

G.12.3

For release at 9:30 a.m. (EST)
January 14, 1983

Industrial production edged down in December by an estimated 0.1 percent after large declines in the preceding three months. Sizable increases occurred in the output of automotive products and defense and space equipment, but there was continuing weakness in the production of home goods, business equipment, construction supplies, and durable materials. For November the decline in the production index is now estimated at 0.7 percent and for October at 1.1 percent, reflecting downward revisions from the previously published declines of 0.4 and 0.8 percent, respectively. At 134.7 percent of the 1967 average, the December index was 12.5 percent below its latest high in July 1981. Annual industrial output in 1982 was about 8 percent below 1981, putting it at about the same level as in 1977.

Market Groupings

Output of consumer goods increased 0.2 percent in December, reflecting a sharp increase in the production of autos and light trucks. Automobiles were assembled at an annual rate of 5.1 million units--up about 13 percent from November. The auto industry has scheduled a further increase for January in response to improved sales that diminished stocks. However, production of home goods and nondurable consumer goods contracted further in December. Output of business equipment declined 0.3 percent, a smaller reduction than in most months of 1982. There were continued contractions in the output of manufacturing and power equipment, but these were partially offset by an increase in oil and gas well drilling. Output of defense and space equipment, which had been rising moderately during most of 1982, increased significantly for the third consecutive month. Production of intermediate goods--construction and business supplies--fell further during December.

INDUSTRIAL PRODUCTION: MAJOR MARKET GROUPINGS (Seasonally Adjusted)

Indexes, 1967=100	1982		Percentage change					
	Nov.	Dec.	Aug.	Sept.	Oct.	Nov.	Dec.	Dec.
	(p)	(e)	From preceding month					
Total	134.8	134.7	-.3	-.8	-1.1	-.7	-.1	-6.1
Products, total	138.6	138.7	-.4	-.8	-1.0	-.6	.1	-5.1
Final Products	137.7	138.1	-.9	-.9	-1.0	-.7	.3	-5.6
Consumer Goods	141.1	141.4	-1.2	-.5	-.8	-.8	.2	-.4
Durable	124.9	127.3	-3.2	-1.2	-3.4	-1.6	1.9	3.3
Nondurable	147.6	147.0	-.3	-.3	.1	-.5	-.4	-1.7
Business Equipment	144.6	144.1	-.6	-2.2	-2.7	-1.2	-.3	-19.5
Defense and Space	113.6	116.0	.0	.0	2.1	1.6	2.1	8.4
Intermediate Products	141.9	141.0	1.3	-.7	-.9	-.4	-.6	-3.4
Construction Supplies	123.2	122.2	2.4	-1.3	-1.5	-.3	-.8	-3.8
Materials	128.9	128.4	-.2	-.6	-1.3	-1.1	-.4	-7.6

Materials output declined 0.4 percent--a somewhat smaller reduction than occurred in recent months. Production of durable materials decreased 0.6 percent, with continued declines in metals. Output of nondurable materials was unchanged overall and energy materials declined.

Industry Groupings

Manufacturing production edged down in December with little overall change shown in either durable or nondurable manufacturing. Mining activity increased, but output of electric and gas utilities was reduced in part reflecting milder than usual weather in some areas of the country.

INDUSTRIAL PRODUCTION: MAJOR INDUSTRY GROUPINGS
(Seasonally Adjusted)

Indexes, 1967=100	1982		Percentage change					
	Nov.	Dec.	Aug.	Sept.	Oct.	Nov.	Dec.	Dec.
	(p)	(e)	From preceding month					
Manufacturing	134.0	133.9	-.1	-.7	-1.5	-.7	-.1	-5.7
Durable	119.3	119.3	-.8	-1.1	-2.4	-1.0	.0	-9.1
Nondurable	155.2	155.1	.8	-.1	-.4	-.5	-.1	-1.5
Mining	115.9	118.0	-2.7	-1.9	1.5	-.4	1.8	-17.3
Utilities	167.1	165.5	.5	-.6	.2	-.4	-1.0	-1.6

p--preliminary e--estimate

FEDERAL RESERVE

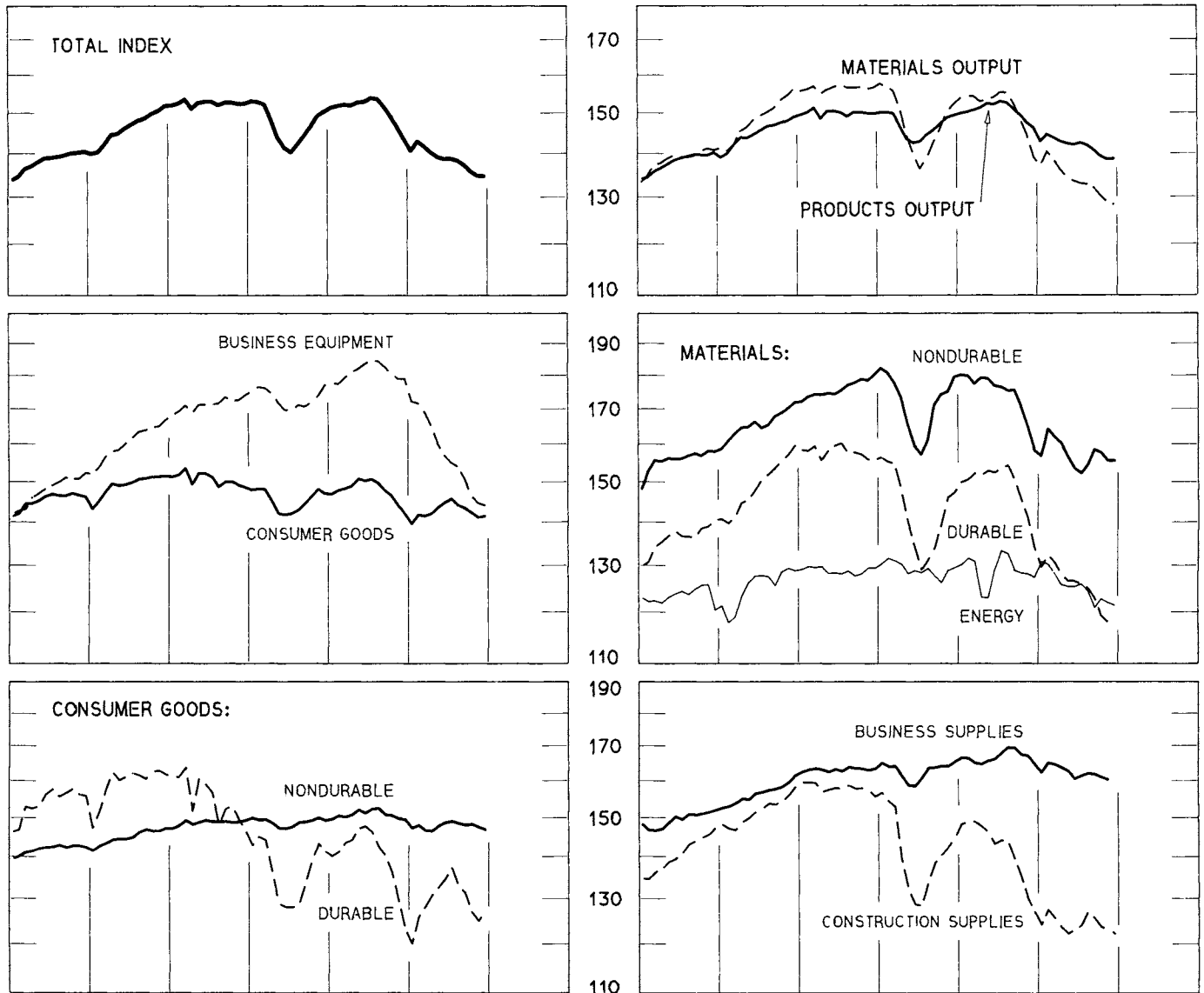


Industrial Production

INDUSTRIAL PRODUCTION

DECEMBER DATA

SEASONALLY ADJUSTED, RATIO SCALE, 1967=100



1969-70=100

ANNUAL RATE, MILLIONS OF UNITS

1967=100

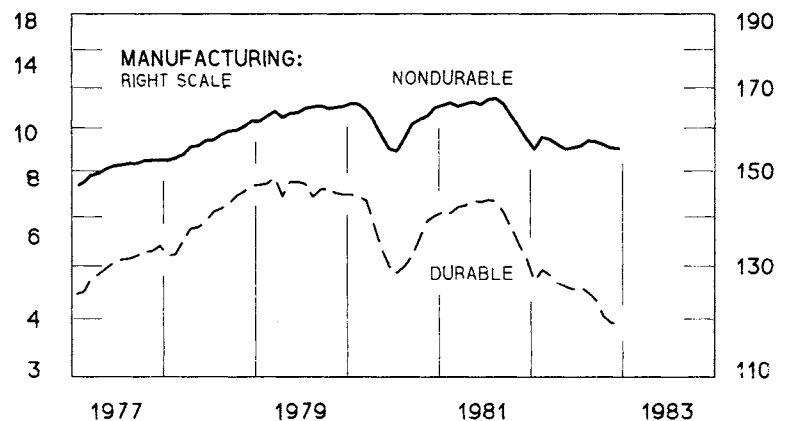
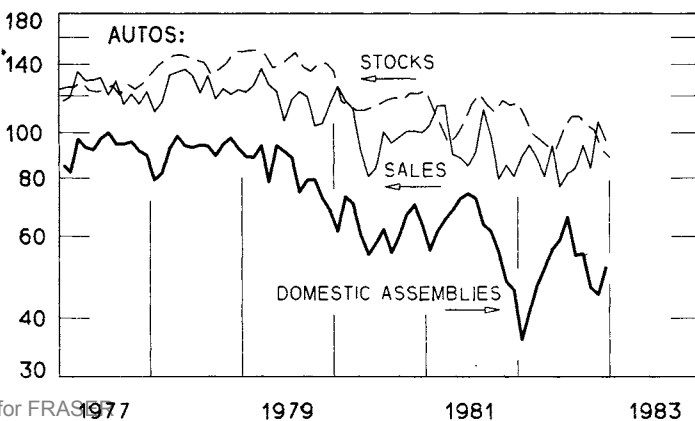


Table 2B

INDUSTRIAL PRODUCTION: INDUSTRY GROUPINGS

Not seasonally adjusted, 1967=100

MAJOR INDUSTRY GROUPINGS	SIC CODE	1967	1981	1981	1982											
		PRO- TON	POR- TON	AVG.	DEC.	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEP.	OCT.	NOV.
MINING AND UTILITIES		12.05	155.0	155.2	164.3	159.7	152.7	146.7	142.4	143.9	144.6	146.8	140.1	136.9	136.4	141.4
MINING		6.36	142.2	141.9	141.6	141.3	138.1	134.5	129.9	124.3	117.2	117.2	115.6	118.6	117.1	117.4
UTILITIES		5.69	169.1	169.9	189.8	180.6	169.1	160.3	156.5	165.7	175.2	179.7	167.3	157.4	157.8	168.0
MANUFACTURING		87.95	150.4	137.0	133.1	140.7	140.7	138.4	138.0	141.6	135.1	139.3	141.2	138.9	134.5	129.1
NONDURABLE		35.97	164.8	149.4	147.1	156.6	156.6	154.7	154.5	159.9	152.9	161.9	164.1	162.0	155.8	147.3
DURABLE		51.98	140.5	128.4	123.4	129.7	129.7	127.1	126.6	128.9	122.7	123.7	125.4	122.8	119.8	116.6
MINING																
METAL MINING	10	.51	123.1	102.0	113.2	113.2	106.1	108.8	94.5	76.8	58.6	56.5	59.0	66.7	66.6	
COAL	11,12	.69	141.3	134.2	137.8	157.4	166.0	155.5	157.4	151.4	119.8	135.6	130.1	150.2	131.9	119.8
OIL AND GAS EXTRACTION	13	4.40	146.8	152.1	151.0	147.2	141.3	136.7	131.8	128.1	125.9	123.2	121.1	120.4	121.4	124.4
STONE AND EARTH MINERALS	14	.75	129.4	115.8	108.9	111.1	116.1	120.1	117.5	109.8	103.4	106.8	109.1	114.5	113.0	
NONDURABLE MANUFACTURES																
FOODS	20	8.75	152.1	148.3	144.0	147.1	146.5	145.8	147.7	152.6	149.6	157.7	159.9	160.3		
TOBACCO PRODUCTS	21	.67	122.2	91.2	115.9	136.0	130.3	108.2	113.3	128.7	106.0	127.8	122.4	118.0		
TEXTILE MILL PRODUCTS	22	2.68	135.7	112.7	110.4	122.7	125.6	127.3	126.4	130.5	113.3	132.6	132.7	135.1	126.5	
APPAREL PRODUCTS	25	3.31	120.4	98.3												
PAPER AND PRODUCTS	26	3.21	155.0	131.8	146.3	157.7	158.9	153.2	148.9	152.5	136.7	154.1	153.6	159.1	152.0	137.6
PRINTING AND PUBLISHING	27	4.72	144.2	138.5	131.5	138.0	137.8	138.2	141.1	147.3	152.1	158.5	157.5	149.2	143.0	137.7
CHEMICALS AND PRODUCTS	28	7.74	215.6	191.8	188.1	198.4	199.1	198.7	195.1	200.4	195.9	197.9	203.2	196.3	192.1	
PETROLEUM PRODUCTS	29	1.79	129.7	130.8	120.5	116.1	116.2	116.1	120.3	127.2	128.0	123.9	125.3	123.9	123.1	120.6
RUBBER & PLASTICS PRODUCTS	30	2.24	274.0	240.9	234.5	264.9	261.9	257.3	253.9	261.7	238.7	258.3	265.6	262.8	257.0	
LEATHER AND PRODUCTS	31	.86	69.3	62.1	61.7	66.2	64.0	60.8	64.6	62.5	54.4	60.9	61.8	62.5	59.2	
DURABLE MANUFACTURES																
ORDNANCE, PVT & GOVT	19,91	3.64	81.1	85.3	84.3	84.3	84.8	85.1	86.6	86.9	86.3	86.3	86.7	88.6	91.8	93.6
LUMBER AND PRODUCTS	24	1.64	119.1	96.4	93.2	105.2	104.9	107.2	111.1	116.2	114.6	123.8	123.0	121.7	119.1	
FURNITURE AND FIXTURES	25	1.37	157.2	149.7	142.1	156.6	153.2	151.2	146.4	151.3	140.6	158.3	160.1	155.3	152.7	
CLAY, GLASS, STONE PROD	32	2.74	147.9	125.2	117.7	127.3	127.1	128.0	126.2	133.7	127.9	134.1	134.9	132.7	128.5	
PRIMARY METALS	33	6.57	107.9	83.4	87.7	89.8	88.7	82.1	80.2	76.9	68.0	69.9	72.4	68.3	64.0	61.5
IRON AND STEEL	331,2	4.21	99.8	73.1	77.3	78.2	78.1	70.7	67.5	61.8	55.8	54.8	54.8	52.7	48.4	
FABRICATED METAL PROD	34	5.93	136.4	124.8	117.1	123.3	122.5	118.5	115.1	116.7	112.2	114.1	113.9	110.3	108.4	105.4
NONELECTRICAL MACHINERY	35	9.15	171.2	162.9	154.9	160.8	157.7	151.9	147.7	151.5	148.2	147.8	150.3	142.9	137.5	132.1
ELECTRICAL MACHINERY	36	8.05	178.4	170.1	165.3	173.6	172.5	170.6	170.1	173.3	166.0	168.2	169.3	170.7	167.1	163.4
TRANSPORTATION EQUIP	37	9.27	116.1	101.9	95.2	102.9	108.0	108.8	113.3	116.2	105.6	99.4	103.4	103.5	101.6	101.2
MOTOR VEHICLES & PTS	371	4.50	122.3	95.2	88.9	100.5	111.7	116.4	125.6	132.2	114.8	103.6	108.9	108.4	104.1	102.2
AEROSPACE & MISC	372-9	4.77	110.2	108.3	101.1	105.0	104.4	101.7	101.7	101.1	97.0	95.5	98.1	98.9	99.2	100.3
INSTRUMENTS	38	2.11	170.3	166.8	157.1	162.2	161.6	160.2	163.0	168.1	165.5	166.1	165.9	159.1	156.3	155.5
MISCELLANEOUS MFRS	39	1.51	154.7	141.1	135.6	142.0	144.6	140.5	139.6	138.2	131.8	140.3	141.2	135.9	130.8	126.5
UTILITIES																
ELECTRIC		3.88	190.9	189.4	214.7	200.6	186.1	176.2	174.2	190.0	204.8	210.6	192.2	176.9	174.7	186.6

Table 8

INDUSTRIAL PRODUCTION: DIFFUSION INDEXES

Percent of component series higher than in earlier months

	ONE MONTH EARLIER	THREE MONTHS EARLIER	SIX MONTHS EARLIER
1967-81			
AVERAGE	54.3	57.0	59.2
HIGH	71.7	78.7	82.8
LOW	22.6	15.7	14.7
1980			
NOVEMBER	70.0	74.5	65.7
DECEMBER	65.5	70.6	71.5
1981			
JANUARY	58.1	69.4	78.1
FEBRUARY	52.8	63.0	76.6
MARCH	53.4	61.7	75.7
APRIL	44.5	47.4	67.7
MAY	50.9	52.8	57.0
JUNE	50.4	48.3	52.1
JULY	67.4	59.1	56.0
AUGUST	46.6	58.9	53.2
SEPTEMBER	31.9	45.3	43.2
OCTOBER	31.5	25.3	36.0
NOVEMBER	33.0	24.7	28.9
DECEMBER	32.8	25.7	25.1
1982			
JANUARY	38.7	24.9	21.1
FEBRUARY	64.3	35.5	26.4
MARCH	37.9	45.5	21.9
APRIL	36.2	46.6	23.6
MAY	44.3	34.0	30.2
JUNE	46.4	44.0	39.8
JULY	53.0	48.9	46.2
AUGUST	45.5	53.8	40.4
SEPTEMBER	45.5	44.7	42.8
OCTOBER	34.7	38.1	42.1
NOVEMBER	42.8	36.6	41.7

NOTE: THE DIFFUSION INDEXES SHOW THE PERCENT OF THE INDUSTRIAL PRODUCTION INDEX'S 235 SEASONALLY ADJUSTED COMPONENT SERIES THAT IN THE MONTH INDICATED WERE HIGHER THAN THEY WERE ONE MONTH EARLIER, THREE MONTHS EARLIER, AND SIX MONTHS EARLIER. IN CALCULATING THE DIFFUSION INDEXES HALF OF THE UNCHANGED COMPONENTS ARE COUNTED AS BEING HIGHER AND NO ALLOWANCE IS MADE FOR THE RELATIVE IMPORTANCE OF THE INDIVIDUAL COMPONENTS IN TOTAL INDUSTRIAL PRODUCTION. DIFFUSION INDEXES BASED ON CHANGES OVER A SIX-MONTH PERIOD GENERALLY SHOW MORE PRONOUNCED CYCLICAL PATTERNS THAN DIFFUSION INDEXES BASED ON CHANGES OVER SHORTER PERIODS.

Explanatory Note

Coverage. The industrial production index is a measure of the physical output of the Nation's factories, mines, and electric and gas utilities expressed as a percentage of production in a base period, currently 1967. The 235 individual series representing Standard Industrial Classification (SIC), 1967 edition, codes 10-14, 19-39, 49, and 91 (part) are calculated first as index series relatives. These relatives are aggregated into: (1) market groupings (such as consumer goods, equipment, intermediate products, and materials) from which the total is derived and (2) industry groupings (for example, SIC 2-digit industries) and major aggregates of these groupings, such as manufacturing, mining, and utilities.

Timing. A first estimate of output for a month is published about the 15th of the following month. This estimate may revise in each of the next 3 months as new data become available. After the fourth month, indexes are not further revised until an annual or a benchmark revision.

Source data. The monthly indexes of industrial production are built up from data of two types: (1) directly-measured physical product data, (2) estimates of physical product output derived from input data adjusted by conversion factors that relate these inputs to physical output. The directly measured physical product data (lbs., tons, etc.) are obtained from reports of the Bureau of the Census, Bureau of Mines, other Government agencies, and trade associations. Estimates of physical output based on input data are used when appropriate monthly physical product data are not available. The major input data are (1) hours worked by production workers as indicated by the monthly establishment survey of the Bureau of Labor Statistics, and (2) industrial electric power use as ascertained from utilities by the Federal Reserve Banks. The input conversion estimates are based mainly on their historical trends and recent developments.

Seasonal adjustment. Individual series are seasonally adjusted by the X-11 version of the Method II seasonal adjustment procedure developed by the Bureau of the Census. The seasonal adjustment factors for the basic aggregate series in the summary table and in Tables 1 and 2 are reviewed and edited monthly. The seasonal factors currently being used were developed from data through 1978, edited to minimize the effect of the sharp cyclical decline and recovery in industrial production in 1974 and 1975.

Weights. The total index and various groupings of component series are combined on the basis of 1967 value-added weights (shown in the first column of the index tables). The gross-value-weighted product series are expressed in terms of 1972 dollars.

Formula. The symbolic expression for the total index (I) is:

$$I_t = \sum \left(\frac{q_{67}p_{67}}{\sum q_{67}p_{67}} \right) \cdot \left(\frac{q_t}{q_{67}} \right) \cdot 100 = \frac{\sum q_t p_{67}}{\sum q_{67} p_{67}} \cdot 100$$

where q is quantity, p is Census value-added per unit of output, and t represents the t -th period.

Reliability. The median of the revisions in total IP, without regard to sign, between the first and fourth estimates is 0.25 per cent; that is, in about half of the cases, the absolute value of the revision from the first to the fourth estimate was less than 0.25 per cent. (Calculated on the basis of data for the August 1971 to July 1976 period.)

Rounding. Changes shown for index components may not aggregate to changes for totals due to independent rounding.