

Fed Challenge Brief:

Industrial Production and Capacity Utilization

Purpose

Industrial Production measures an economy's raw output; it is used to gauge business activity and understand business cycles.

Capacity utilization measures how fully an economy is employing its productive capabilities.

Industrial Production

Indicator Use:

Industrial production is used as an indicator of business cycle activity. Industrial production differs from other indicators in that it is a non-monetary (real) index in that it measures actual quantities such as tons of coal produced. This difference allows the index to be used in a variety of situations where other index may be vulnerable to inaccuracies.

Technical details

Physical output of factories, mines, and electric and gas utilities.

Published monthly.

Series classified into market groups and industry groups.

Input measures adjusted for productivity changes.

Aggregation index is composed using a Fisher ideal index.

Built as an annually weighted chain-type index since 1977.

Special aggregates for key sectors, such as high technology and automobiles, have recently been added.

Standard Industrial Classification (SIC) components classified as industrial production:

Division B: Mining – metals, anthracite, coal, oil, gas, non-metallic minerals

Division D: Manufacturing – food, tobacco, lumber, printing, chemicals, rubber, machinery, transportation equipment, etc.

Parts of Division E: Electric and Gas Services – power generation, transmission services, distribution

Capacity Utilization

Indicator Use:

Capacity utilization is typically used to measure how full the economy is employing its productive resources.

If capacity utilization rises high enough (contemporary thought centers around 80%), employment of older capital in the production process may lead to higher costs and inflation

Falling capacity utilization can help signal downturns in the business cycle.

Technical details

Goal of consistency: e.g., 80% during a past year should mean the same as 80% today.

Released monthly.

The index is a ratio of actual output to potential output.

Annual capacity indexes are interpolated to monthly frequencies, because there is no direct information.

Short-term changes usually approximate the difference between change in the production index and the growth in capacity.

Where to Find Data

Current Data:

Board of Governors: Released on or around the 15th of each month www.federalreserve.gov/releases/

Historical Data:

FRED: Federal Reserve Economic and Financial Database
www.stlouisfed.org/fred/

Board of Governors

www.federalreserve.gov/releases/G17/download.htm

Online Analysis:

The Dismal Scientist

www.dismal.com

CNN Financial News:

www.cnnfn.com

Additional Resources

[Capacity Utilization Explanatory Notes](#) (Technical)

http://www.federalreserve.gov/Releases/G17/cap_notes.htm

[Industrial Production Explanatory Notes](#) (Technical)

http://www.federalreserve.gov/Releases/G17/ip_notes.htm

[Industrial Production: 1986 Edition "With A Description of Methodology."](#) Board of Governors of the Federal Reserve System, Washington D.C.

[Capacity Utilization-Inflation Linkages, a cross-country analysis](#), Gabriel De Kock, FRB New York, 1996

[Capacity Utilization and the evolution of manufacturing output, a closer look at the bounce back effect](#), Evan F. Koenig, FRB Dallas 1994