

# TEACHING TIPS

## Rebuilding Rural Manufacturing



Teacher Edition

BASED ON THE JUNE 2012 MAIN STREET ECONOMIST "REBUILDING RURAL MANUFACTURING" FROM THE FEDERAL RESERVE BANK OF KANSAS CITY

This article in the Main Street Economist examines rural manufacturing trends and explains the recent rebound in rural manufacturing due to increased productivity in high-skilled manufacturing industries, such as petroleum, coal, machinery, chemical, and food products. Factors contributing to this rebound include global demand from developing countries and booming U.S. commodity markets. The article suggests that continued growth of exports and innovative manufacturing technologies will be necessary to sustain this rebound in the future.

Suggested use: Read and discuss the article in class, using the direct discussion questions that follow. Students interested in further research on this topic could work on the extension activities and share their findings with the class.

The article is available at: [http://www.kansascityfed.org/publicat/mse/MSE\\_0212.pdf](http://www.kansascityfed.org/publicat/mse/MSE_0212.pdf).

### Reading the Article with Students

#### Economic Trends

1. Historically, rural manufacturing was a robust sector of the economy until the last decade, when more than a third of manufacturing jobs were lost. Name the factors suggested in the article that caused this loss. (*The factors include intense foreign competition and a strong dollar, which makes exports more costly. These factors intensified the outsourcing of U.S. jobs to low-wage countries.*)
2. Explain why advanced manufacturing techniques and new technologies helped rural manufacturing rebound from 2000-2010. (*Rural manufacturers began to use biotechnology and computerized systems to compete in global markets. This led to productivity gains, even though the workforce was reduced.*)
3. The highest rural productivity gains came in high-skilled manufacturing sectors. Look at Chart 2, "Total Earnings by Rural Manufacturing Industry." Which industries show a positive annual percent change? (*Petroleum and coal; machinery; chemicals; food and beverages.*) Why are these areas considered high-skilled sectors? (*More than a third of the jobs related to these industries are in high-skilled occupations, such as engineers, scientists and technicians.*) Explain why industries such as textiles and apparel declined during this period. (*Textiles and apparel are low-skilled areas which are prone to more foreign competition and outsourcing.*)

#### Education and Training

1. Rural manufacturers have indicated a need for technically skilled employees, such as engineers and welders. Since only half of rural residents have an associate's degree or some college training, what are local manufacturers doing to increase these numbers? (*Manufacturers are teaming up with universities and community colleges to educate more technically skilled workers. One example is the Dream It, Do It campaign in Nebraska to expand the pool of workers with science and technology, engineering and math skills.*)

### Direct Discussion Questions

## KEY PERSONAL FINANCE & ECONOMIC CONCEPTS

*Review the meanings of some of the personal finance and economic concepts contained in this article.*

**COMMODITIES MARKET:** *The market for the purchase and sale of commodity (a basic product, usually, but not always, agricultural or mineral) futures, contracts for the sale and delivery of commodities at some future time.*

**DEMAND:** *The quantity of a good or service that buyers are willing and able to buy at all possible prices during a period of time.*

**DURABLE GOODS:** *Goods intended to last for a period of more than three years.*

**GROSS DOMESTIC PRODUCT (GDP):** *The market value of all final goods and services produced in a country in a calendar year.*

**EMPLOYMENT RATE:** *The percentage of the total population aged 16 or over that is employed.*

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## Economics and Business

1. China and other developing countries increased the demand for commodity-based products, such as food and fuel. How has this demand particularly helped increase rural manufacturing? (Food manufacturing is the largest rural manufacturing industry, accounting for 15 percent of earnings. Rural petroleum and coal have also surged 3 percent in the last decade.)
2. The article states that rural factories need to be competitive in global markets to sustain their growth. One way of measuring economic growth is by yearly GDP, or Gross Domestic Product. Look at Chart 3, "Difference Between Advanced and Emerging Country GDP Growth." How does emerging countries' GDP growth compare to advanced countries? (Since 2000, emerging countries' GDP growth has been greater than advanced countries' GDP growth.) What are the factors that account for the surge in GDP for emerging countries? (Increased populations in developing countries along with rising incomes led to the surge.) What is the forecast for emerging nations' GDP growth through 2015? (The forecast is continued growth of approximately 4% through 2015.)
3. The article suggests that rural manufacturers need to be innovative to continue to have a competitive edge. Why are rural communities not thought of as centers for innovation? (Fewer patents for new products come from rural areas.) What innovative techniques are rural businesses known for? (These businesses can adapt existing technologies well as a means of enhancing productivity. Technology transfer has been successful through Manufacturing Extension Partnerships and the Small Business Technology Transfer Program.)

1. View additional data on rural manufacturing at <http://www.kansascityfed.org/publication/research/mse/index.htm>. These charts show a comparison of metropolitan (urban) vs. nonmetropolitan (rural) manufacturing trends. Looking at Chart 1, "Manufacturing Share of Nonfarm Earnings," how has manufacturing's percent of total earnings changed for the metropolitan areas? (27%-9%=18% rate of change.) What is the rate for nonmetropolitan areas? (27%-15%=12% rate of change.) In your opinion, what might account for the increasing gap between metropolitan and nonmetropolitan manufacturing trends over the years? (Answers may vary, but could include increasing productivity and the commodity boom in rural areas.)
2. Read the Main Street Economist article "A Rural Rebound in 2010" at [http://www.kansascityfed.org/publicat/mse/mse\\_0510.pdf](http://www.kansascityfed.org/publicat/mse/mse_0510.pdf). Answer the following questions based on the article: When did rural manufacturing first begin to rebound? (2009-2010) How did this rebound affect jobs at rural factories? (Layoffs declined 75%; overtime increased; additional workers were eventually hired.) By October 2010, how many percentage points had the manufacturing employment rate in rural areas risen by? (6%)

Federal Reserve Bank of Kansas City:  
Main Street Economist - Spring 2012  
Rebuilding Rural Manufacturing  
[http://www.kansascityfed.org/publicat/mse/MSE\\_0212.pdf](http://www.kansascityfed.org/publicat/mse/MSE_0212.pdf)

Federal Reserve Bank of Kansas City  
Main Street Economist - extra charts  
<http://www.kansascityfed.org/publications/research/mse/mse-extra.cfm>

Federal Reserve Bank of Kansas City  
Main Street Economist - Spring 2010  
A Rural Rebound in 2010  
[http://www.kansascityfed.org/publicat/mse/mse\\_0510.pdf](http://www.kansascityfed.org/publicat/mse/mse_0510.pdf)

## Extension Activities

## Links and Resources

Federal Reserve Bank of Kansas City  
Economic Review - 2nd Quarter 2005  
Do Only Big Cities Innovate? Technological Maturity and the Location of Innovation  
<http://www.kansascityfed.org/publicat/ecomrev/pdf/2q05orla.pdf>

Federal Reserve Bank of Kansas City  
Main Street Economist - Spring 2002  
Can Regional Colleges Make a Difference in Rural America?  
[http://www.kansascityfed.org/publicat/mse/mse\\_0502.pdf](http://www.kansascityfed.org/publicat/mse/mse_0502.pdf)

## Key Personal Finance & Economic Concepts continued

**INFLATION:** A rise in the general or average price level of all the goods and services produced in an economy. Can be caused by pressure from the demand side of the market (demand-pull inflation) or pressure from the supply side of the market (cost-push inflation).

**INNOVATION:** A new idea or method.

**MANUFACTURING:** The process of converting raw materials into finished goods. Manufacturing commonly uses a man-made setup with division of labor in a large scale production.

**PRODUCTIVITY:** The amount of output (goods and services) produced per unit of input (productive resources) used.

**RECESSION:** A decline in the rate of national economic activity, usually measured by a decline in real GDP for at least two consecutive quarters (i.e. six months).

**TECHNOLOGICAL CHANGES:** Improvements in a firm's ability to produce due to improved processes, methods and machines.

For more economic concepts, definitions and lessons, check out Virtual Economics 4.0 from the National Council on Economic Education (online at [www.ncee.net](http://www.ncee.net)).

Teaching Tips is a FREE resource from the Federal Reserve Bank of Kansas City. It is available on our web site at [www.kansascityfed.org](http://www.kansascityfed.org).

For more educational resources from the Federal Reserve Bank, contact Michele Wulff ([michele.wulff@kc.frb.org](mailto:michele.wulff@kc.frb.org)).