Is Midwest manufacturing at a crossroads?

by William A. Testa, vice president and director of regional programs, and Thomas Klier, senior economist

Is the recent weak performance of manufacturing transitory or does it reflect a sustained structural change? A recent Chicago Fed conference assessed the challenges facing U.S. manufacturing and how the sector is adapting to an increasingly competitive global marketplace.

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Is Midwest manufacturing at a “crossroads,” or merely experiencing a “bump in the road?” On September 30, 2003, over 100 leaders from the public and private sectors attended the first in a series of conferences, part of the Federal Reserve Bank of Chicago’s Midwest Manufacturing Project, on the current landscape of manufacturing in the Midwest. The conference addressed whether the recent weakness in manufacturing is attributable to transitory factors, such as an investment overhang from the late 1990s, worldwide economic weakness, and a high-valued dollar, or is the result of a structural change, whereby domestic production activities will accelerate their migration overseas.

In his welcoming remarks, Chicago Fed President Michael H. Moskow explained that by one measure, personal income generated by manufacturing, the Midwest is 44% more dependent on manufacturing than the rest of the nation. Thus, the recent weak performance of manufacturing is a matter of some concern for the region. National manufacturing employment ended each of the past five years lower than the previous year, and has declined for 39 consecutive months.

It is important, said Moskow, to answer this question: Is this recent performance transitory, or does it reflect a more pronounced and sustained structural change? The 2001 recession and its aftermath have obfuscated the answers, and so have multiple structural changes in business organization and process technologies. Among the many structural changes, technological advances in inventory control have seemingly dampened the historical production volatility in the auto industry and other durable goods sectors. In addition, outsourcing and supply chain management of both production and service activities have become more prevalent and geographically widespread.

Another dimension to this question is that shrinking employment may reflect accelerating productivity. The manufacturing sector began a robust, though not unprecedented, productivity acceleration (and labor saving) in the 1990s. Over the long term, such growth means higher living standards for American households. Finally, many believe that, owing to changing terms of trade throughout the world, the Midwest can no longer compete in the production end of manufacturing.

So, what is the future of manufacturing in the Midwest? Given the experience of the past 15–20 years, Moskow cited some grounds for optimism. During this time, the Midwest pulled off a remarkable comeback in manufacturing health, following the dismal years of the early 1980s.
While analysts will not be able to disentangle today’s transitory changes from the structural for some time, Moskow warned against giving up on any industry or manufacturing activity without first considering efforts to eliminate inefficiencies in the region’s physical and institutional infrastructure. There are many factors that are critical to keeping manufacturing competitive. One is the extent and composition of our public capital stock and infrastructure. How well can our roadways, rail, air, energy delivery, and communications systems coordinate and deliver goods to their sources of final demand? A second is education and training. How skilled, adaptable, and creative are midwestern workers versus those elsewhere? A third factor is the creation, transfer, and embodiment of new technologies in manufacturing.

Next, Bill Testa, Chicago Fed vice president and director of regional programs, explained that seen across a time span of three decades, the recent fall-off in the region’s manufacturing jobs does not appear to be out of the ordinary. Since 1969, manufacturing jobs as a share of total jobs in the region have fallen from 24% to 17%. Compared with a trend line, manufacturing employment now appears to be above trend rather than below it.

In fact, the region has maintained and slightly enhanced its historical concentration in manufacturing activities relative to the nation. Accordingly, while the recent manufacturing employment decline has been no sharper here than in other regions, its impact on the District economy is likely to be more pronounced. Secondly, the region is coming off a period in which it had enjoyed a resurgence vis-à-vis other U.S. regions. Having lost one in five manufacturing jobs in the 1980 and 1981–82 recessions, it had regained its national share by the late 1990s. The region outperformed the nation during the relatively mild (for manufacturing) 1990–91 recession.

Discussing the long-term national trends, William Strauss, Chicago Fed senior economist and economic advisor, noted that manufacturing job growth has been stagnant for much of the last half century. A number of economic trends explain the shrinkage in manufacturing employment. One is the growing importance of the service sector. Another is productivity improvements in manufacturing, which have facilitated output growth with stable to slightly declining employment. Importantly, strong productivity growth has allowed manufacturing output to grow faster than the overall economy, which has contributed to rising standards of living—U.S. living standards have never been higher.

The current doldrums in manufacturing employment are closely linked with the most recent economic recession. The economy has been hit by a number of negative economic shocks, including the equity market collapse of 2000; rising energy prices in 1999/early 2000 and again in late 2002/early 2003; the September 11 attacks on the United States; the corporate governance scandals that started in 2001; and the geopolitical uncertainties associated with the conflict in Iraq. The loss of manufacturing employment observed during the recent slowdown is consistent with the decline in overall manufacturing production.

Why have declines in manufacturing production been pronounced and long-lasting during the last three years? Spencer Krane, Chicago Fed vice president and economic advisor, discussed trends and volatility in U.S. investment behavior. Krane noted that the equipment and software component has performed unusually, not only in its steep deceleration during the recessionary period, but also in its long period of expansion during the preceding 1990s. For most of the 1990s, real investment in equipment and software grew at rates of 10%–15% per annum, a level unparalleled over the past four decades. This contributed 1.0–1.5 percentage points to real gross product growth—upwards of one-half of the robust growth of that era. The ultimate deceleration in spending was precipitous, beginning mid-year 2000 and contributing significantly to the 2001 recession. In fact, excluding business fixed investment, the remainder of output did not turn negative during the 2001 recession. But then again, said Krane, “there is never anything typical about a typical recession.”

Even though investment spending in equipment and software is now contributing to real growth, Krane said, it hardly feels like a boom because the pace of capital spending has not yet returned to levels attained prior to the recession.

Krane voiced some optimism about continued growth—perhaps at a faster pace—of investment in equipment and software. Technological advances continue and relative prices of computing equipment are falling. In addition, he said, the services sector, which is expanding well, purchases the majority of equipment and software. Even the manufacturing sector is showing signs of renewed expansion.

**International trade**

J. Bradford Jensen, deputy director of the International Institute of Economics, discussed the role of international trade in U.S. manufacturing from 1977 to 1997. In particular, Jensen’s research focuses on imports from countries with low average wages in the manufacturing sector. These countries, which include China, India, Egypt, and many small nations in Africa, are defined by wage levels that are 5% or less of the average U.S. wage. Imports from this cohort to the U.S. market grew at a fast pace over the period, rising from 2% of U.S. imports in 1972 to 15% by 2002, with textiles, apparel, and leather goods comprising the highest shares.

Jensen’s results demonstrate that plant survival, as well as output and employment growth, is negatively associated with the share of industry imports sourced from the world’s lowest-wage countries. In addition, he finds that plants are more likely to alter their product mix in response to trade with low-wage countries, especially by switching to products that are more capital- and skill-intensive. Jensen’s preliminary estimates of import shares by industry suggest that many U.S. industries face heightened value and product competition.

In addition to cost-side pressures, many argue that relative currency values have contributed to U.S. export weakness and growing import competition. Donald Nichols, professor of economics and
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print at the University of Illinois and
Regional dimensions

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consumption. Among possible scenarios,
Nichols suggested that China will main-
tain a low-valued yuan for many years
to come, but that it will respond to its
growing trade surplus with the U.S. by
opening its markets for direct investment,
capital goods, and licensing/protection of
intellectual property. Eventually,
China will feel the need to find other
ways to stimulate economic development
than through manufactured exports,
and the yuan is likely to rise.

Regional dimensions

Next, Geoff Hewings, professor of geog-
raphy at the University of Illinois and
director of the Regional Economic
Applications Lab, discussed changes
in the structure and performance of
manufacturing in Illinois, which have
been significant relative to the rest of
the region. In Illinois, employment was
keeping pace with the region, but began
to erode significantly in the mid-1990s.
A closer look reveals that manufactur-
ing declines have led the way. Mid-2003
employment levels were down 21% from
1990 levels in Illinois and 17% in the
rest of the Midwest, versus 12% nation-
al. Illinois is now only slightly more con-
centrated in manufacturing than the
nation, and significantly less so than the
remainder of the Midwest. But Illinois’s
performance is weaker across the board,
industry by industry, outperforming only
in the leisure/hospitality sector.
Within the region, it only added busi-
ness/professional services to its per-
formance advantages.

Restructuring has also taken place in
trading patterns. Chicago’s weaker man-
ufacturing performance can be traced
to a “hollowing out” process by which local
manufacturers now buy from and sell
to each other to a much lesser ex-
tent than 20 years ago. Rather, Chicago’s
manufacturers have followed a pattern of
vertical specialization, whereby each
plant trades with other manufacturers
scattered throughout the Midwest—a
manufactured good is broken into com-
ponents and each is produced at a geo-
graphically distant location so as to
squeeze costs out of the value chain.
Surely, this region-wide scale of “cluster”
has implications for optimal public policy,
relying as it does on cheap and efficient
overland transportation, which may be
designed and planned cooperatively
among states and areas. The implication
is that a loss or unraveling of an indus-
try in any one state may have detrimen-
tal consequences in neighboring ones.

Hewings argued that the ongoing focus
on competition using tax incentives
might not be the best approach to eco-
nomic development in the region.

The shift toward vertical specialization
also has implications for international
trade. Midwest manufacturers are in-
creasingly dependent on trade with the
rest of the world. Worldwide productivity
gains, the rise of East Asian economies,
and protected steel prices are all con-
tributing to manufacturing job losses.
Hewings noted that the Midwest econ-
omy remains vulnerable to energy prices
and imported oil, and that jobs could
be created through the adoption of re-
newable energy and energy efficiency
programs.

Thomas Klier, Chicago Fed senior econ-
omist, next discussed the auto industry,
a key cluster in the Midwest. While the
auto corridor now extends from Detroit
west to Chicago and south to Tennessee,
with fingers reaching into Canada and
Mexico, Detroit remains the hub of this
industry. A 400-mile radius drawn around
the Motor City includes virtually the en-
tire Canadian auto sector and just under
60% of all U.S. light vehicle assembly
plants, as well as the vast majority of
supplier plants. A number of trends
challenge the continued prominence of
the Midwest as the nation’s auto hub.
First and foremost is the declining mar-
ket share of U.S. auto manufacturers—
down to 60% so far in 2003 from 73% in
1996. Increased U.S.-based produc-
tion by foreign-owned plants has played
a major role in market share gains by
foreign automakers. These new plants
tend to be located at the southern end
of the auto region. The recently ratified
contracts between the UAW and the Big
Three, including Delphi and Visteon,
point to a challenge for the Midwest
auto industry. As the domestic autom-
makers are heavily concentrated in the
upper Midwest, capacity reductions will
disproportionately affect that region.

In addition, legacy costs, such as health

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Evanno, Vice President, financial studies; David
Marshall, team leader, macroeconomic policy research;
Daniel Sullivan, Vice President, microeconomic policy
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care and pension benefits, continue to
pose a competitive challenge for the
Big Three. At the same time, the south-
ward expansion of the auto corridor
poses a test for auto suppliers. Current-
ly, suppliers can easily serve multiple
assembly plants from one of their pro-
duction facilities in the auto corridor.
However, continued southward expan-
sion of the auto region could stretch it
to the point where customers at both
the northern and southern ends of the
auto corridor could no longer be served
from the same plant.

Industry perspective
Tom Duesterberg, executive director of
the Manufacturing Alliance, delivered a
keynote address, based on the new book
published by Praeger, *U.S. Manufacturing:
The Engine for Growth in a Global Econo-
my*, which argues that manufacturing
“activity” is evolving into a “solutions-
based” High Innovation Model. He sug-
gested that manufacturing production
is becoming a commodity. Value added
will continue to move away from manu-
facturing per se, to activities associated
with design, engineering, marketing,
servicing, and organization of products.
As such, a commitment to technology
and innovation is key to sustaining com-
petitiveness and productivity growth.

While U.S. manufacturers face grow-
ing challenges from international
competitors and from domestic policy,
Duesterberg said the U.S. is the ideal
platform for the innovation model due
to its economic, political, social, and
cultural environment. In contrast, many
other countries face rigid labor market
laws, heavy-handed regulation, poorly
developed bankruptcy codes, lack of
worker mobility, aging labor markets,
and restrictions on immigration.

Despite these advantages, there is much
the U.S. must do if it is to sustain manu-
facturing as the engine of U.S. economic
growth that it has been. This includes
encouraging a higher level of domestic
savings, sustaining high levels of invest-
ment in research and development and
in public infrastructure, a more educat-
ed and flexible work force, a more mar-
ket-oriented regulatory approach, and
more open international trade and
investment.

Policymaker’s view
Grant Aldonas, Undersecretary of
Commerce for the U.S. International
Trade Administration, discussed a policy
study on manufacturing he undertook for
Commerce Secretary Donald Evans in
March 2003 (the report is due later this
year). Aldonas has been conducting
roundtable discussions with manufactur-
ers around the country, including the
Midwest, over the past four to five months.

Aldonas pointed out that much of the
latest growth in the U.S. trade deficit has
come about because the U.S. has grown
more rapidly than most of the world.
He suggested this cannot continue,
partly because of the counterproductive
growth of protectionist sentiment in
Washington that is accompanying the
growing deficit. Even so, he expects
U.S. manufacturing to adapt by becoming
more capital and technology intensive.
He also sees the emergence of
“global industry clusters”—that is, the
challenge for many U.S. companies is
not whether they can export to Japan,
per se, but rather if they can become a
supplier to Toyota or to another lead-
ing multinational company. Roundtable
participants urged the federal govern-
ment to assist in making manufacturing
policies with a more federalist shape.
For example, should the U.S. govern-
ment encourage interstate cooperation
in planning and fashioning transporta-
tion and other infrastructure, work force
training/mobility, and skills accreditation?

Conclusion
Many households’ fortunes remain close-
ly tied to the sagging manufacturing
sector—especially in the Midwest. The
Chicago Fed’s Midwest Manufacturing
Project aims to increase public under-
standing of economic events affecting
the manufacturing sector. Public policies
are being shaped now at the community,
state, and national level that will affect
both the size and location of manufac-
turing activities in the future.

1 For more on the Midwest Manufacturing
Project, go to http://www.chicagofed.org/
newsandevents/conferences/midwest_
manufacturing_project/index.cfm.