The Resurgence of U.S.-Mexico Manufacturing: How Long Will It Last?

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U.S.-Mexico Manufacturing: Back in the Race

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Much of the news out of Mexico recently has been bad:

Seven Are Charged in “El Chapo” Escape

CNN
The bad news often crowds out the good economic news:

The Comeback: Mexico’s Newfound Competitiveness Helps It Regain a Share of the U.S. Import Market It Had Lost to China

International Monetary Fund

Mexico’s Manufacturing Cost Competitiveness: A Rising Global Star

Boston Consulting Group

Mexico's Manufacturing Sector Continues to Grow

Forbes

but

Mexico Struggles to Break Shackles that Bind Productivity

Financial Times
As Chinese growth slows down, U.S.-Mexico manufacturing is surging.

Today, I will

♦ Compare growth in Mexico and China and point out reforms Mexico needs to undertake.

I will also briefly

♦ Indicate sectors in which manufacturing is likely to remain in North America, sectors in which it is likely to remain in East Asia, and sectors in which competition will take place;

♦ Explain why North American manufacturing output will increase over time but manufacturing employment will decrease.
Four Reasons Mexico Is Becoming a Global Manufacturing Power
Bloomberg Business

Mexico has followed free trade policies, with 44 FTAs, more than the U.S. and China combined.

Mexican manufacturing has access to cheap energy

Industry clusters are growing, especially in autos and appliances

Productivity in manufacturing is increasing and wage increases are moderate.

…but increasing productivity is a recent phenomenon associated with the recovery from the 2008–2009 recession is largely concentrated in large firms.
Comparing Mexico and China:

Follow-the-leader theory of growth

Different stages of economic growth


Real GDP per working-age person in the United States
Follow-the-leader theory of growth

Real GDP per working-age person has grown by 2 percent per year in the United States since 1875.

This growth is a combination of technological progress and improvements in management.

Any country with stable institutions and policies should grow at roughly 2 percent per year.

A country that improves its institutions and policies should grow faster, until it reaches a new balanced growth path.

A country whose institutions deteriorate or whose policies worsen...
Follow-the-leader theory of growth

\[ \log \frac{Y_t}{N_t} \]

leader

less developed country

reform

\( t \)
Stages of economics growth

0. Malthusian society

1. Take-off into sustained growth

2. Catch-up to the industrial leader

3. Joining the industrial leader

Influenced by

Stages of economics growth

0. Malthusian society

1. Take-off into sustained growth

   Average more than 1 percent per year growth in real GDP per capita for 25 consecutive years — U.K. experience 1819–1844.

2. Catch-up to the industrial leader


3. Joining the industrial leader

   Reach 65 percent of GDP per capita relative to industrial leader and stay there.
Take-off into sustained growth is associated with

Urbanization
Industrialization
Education
Improving health and educating fertility

Catch-up and stay-up with industrial leader is associated with adoption of best practices from abroad
Power of productivity

\[ Y_t = A_t K_t^\alpha L_t^{1-\alpha} \]

\[ \frac{Y_t}{N_t} = A_t^{1-\alpha} \left( \frac{K_t}{Y_t} \right)^\alpha \left( \frac{L_t}{N_t} \right) \]

output per person = productivity * capital * labor


Best practice
Growth accounting for the United States

index (1950 = 100)


output
productivity
capital
labor
Growth accounting for Mexico

-1.0 0.0 1.0 2.0

index (1950 = 100)

output
productivity
capital
labor

index (1950 = 100)
Growth Accounting for Mexico, 2000-2014

Index (2000 = 100)

- Productivity
- Capital
- Output
- Labor

Years: 2000-2014
Power of productivity


A decline in piracy and an improvement in economic organization account for most of the productivity change observed.

We have to identify and eliminate the pirates!
High levels of productivity are the result of allocating resources — labor and capital — to efficient firms.

Increases in productivity are the result of birth and growth of newer, more productive firms and death of older, less productive firms.

A useful data source for data on ease of allocating resources across firms and creating new firms: World Bank, *Doing Business*

The Doing Business project provides objective measures of business regulations for local firms in 185 economies and selected cities at the subnational level.
Ease of Doing Business Rankings, *Doing Business 2015*

<table>
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<th>Country</th>
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- Denmark 1
- Singapore 7
- Germany 12
- Japan 15
- United States 17
- Spain 37
- Brazil 69
- Egypt 94
- China 100
- Mexico 103
- Argentina 107
- Kazakhstan 126
- Venezuela 161
- Libya 166
- Afghanistan 172
What are the barriers to growth in Mexico?

Poor financial institutions
Lack of contract enforcement
Problems in labor markets
...also problems with crime

But China has many of these same sorts of problems

Poor financial institutions
Lack of contract enforcement
Problems in labor markets
...also problems with the political system
But why is China growing so rapidly?

For the same reasons that Mexico grew rapidly between 1950 and 1980:

Urbanization
Industrialization
Education
Improving health and reducing fertility
Agriculture value added

[Graph showing the percentage of GDP attributable to agriculture over time for China, South Korea, and Mexico.]
Enrollment in tertiary education per 100,000 inhabitants

- South Korea
- Mexico
- China

But why is China growing so rapidly?

For the same reasons that Mexico grew rapidly between 1950 and 1980:

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Education
Improving health and reducing fertility

Hypothesis: Mexico would have grown more rapidly between 1950 and 1980 if it had been open to foreign trade and investment.
Purchasing power parity GDP in Mexico and China

2005 U.S. dollars per person


Mexico GDP per working-age person

Mexico GDP per capita

China GDP per working-age person

China GDP per capita
When will the barriers to growth that are limiting Mexico’s growth start to bind on China?

Hypothesis: Absent major reforms, China’s growth will slow to about 2 percent per year within the next 5 years, probably before China reaches the level of real GDP per working-age person of Mexico.
What reforms does Mexico need to resume rapid growth?

Eliminate barriers to growth:

Reform financial institutions
Improve contract enforcement and rule of law
Make labor markets more flexible

also

Reduce monopoly and inefficiencies in nonmanufacturing sectors like electricity, telecommunications, transportation, and petroleum extraction.

Reduce corruption and violence related to drug trafficking
Major sectors in international trade

China has rapidly overtaken the U.S. apparel market and will not surrender its share soon, in spite of recent gains by producers in Southern Mexico.

Mexico (and Canada) dominate the U.S. automotive market and will not surrender its share.

Electronic equipment is where the intensive competition is.

Other sectors?
Share of U.S. Imports: Apparel

- China
- Mexico

Graph showing the percentage share of U.S. imports from China and Mexico from 1989 to 2013.
Share of U.S. imports: Electrical machinery

- Mexico
- China
North American manufacturing output will increase over time but manufacturing employment will decrease.

Productivity in manufacturing is increasing much faster than in other sectors.

Relative prices of manufactured goods are falling.

Expenditure shares — and employment shares — are falling.

U.S. labor productivity in goods, services, and construction