

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:

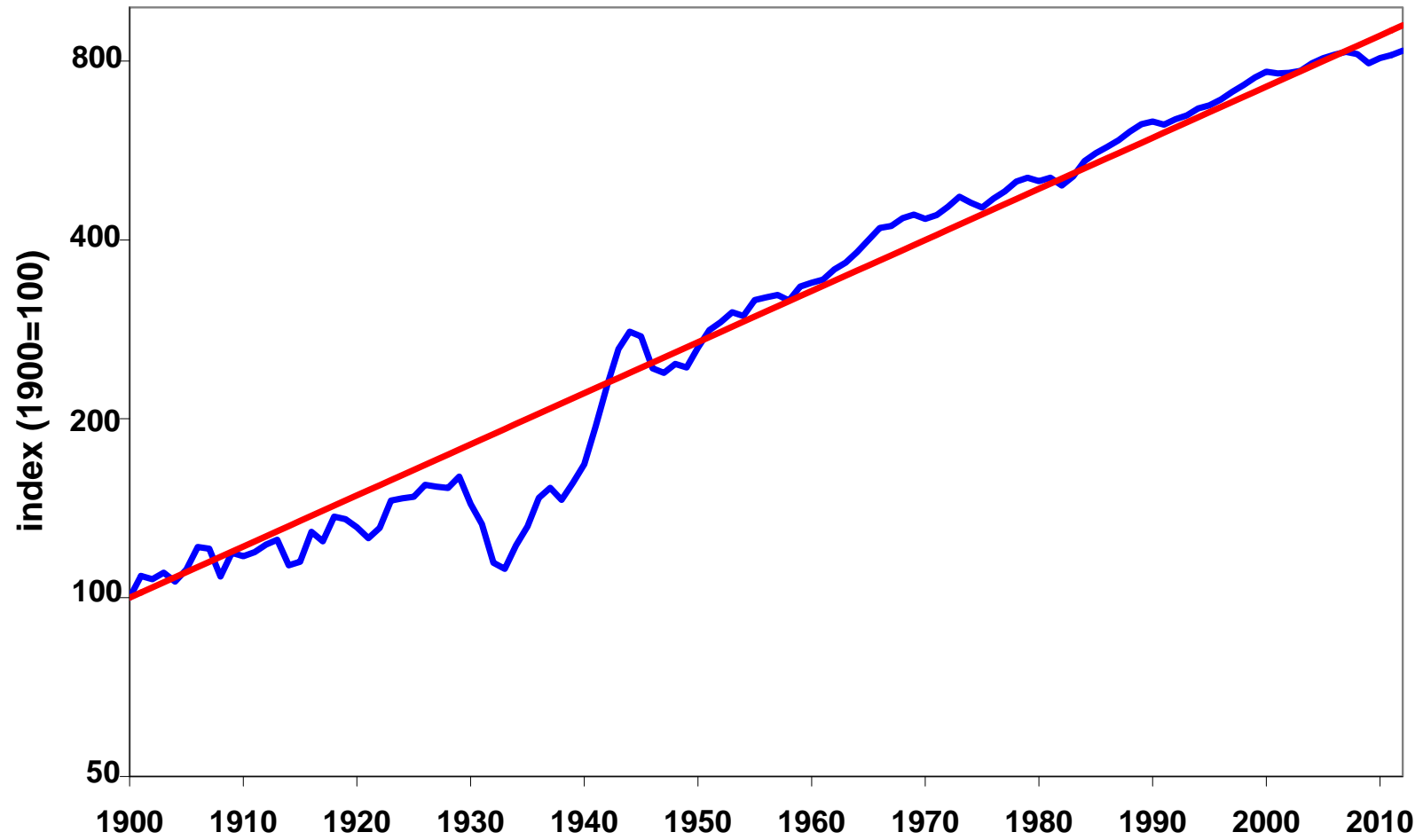
Follow-the-leader theory of growth

Different stages of economic growth

Kehoe and Ruhl (2010), “Why Have Economic Reforms in Mexico Not Generated Growth?” *Journal of Economic Literature*.

Kehoe and Meza (2011), “Catch-up Growth Followed by Stagnation: Mexico, 1950–2010,” *Latin American Journal of Economics*.

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.

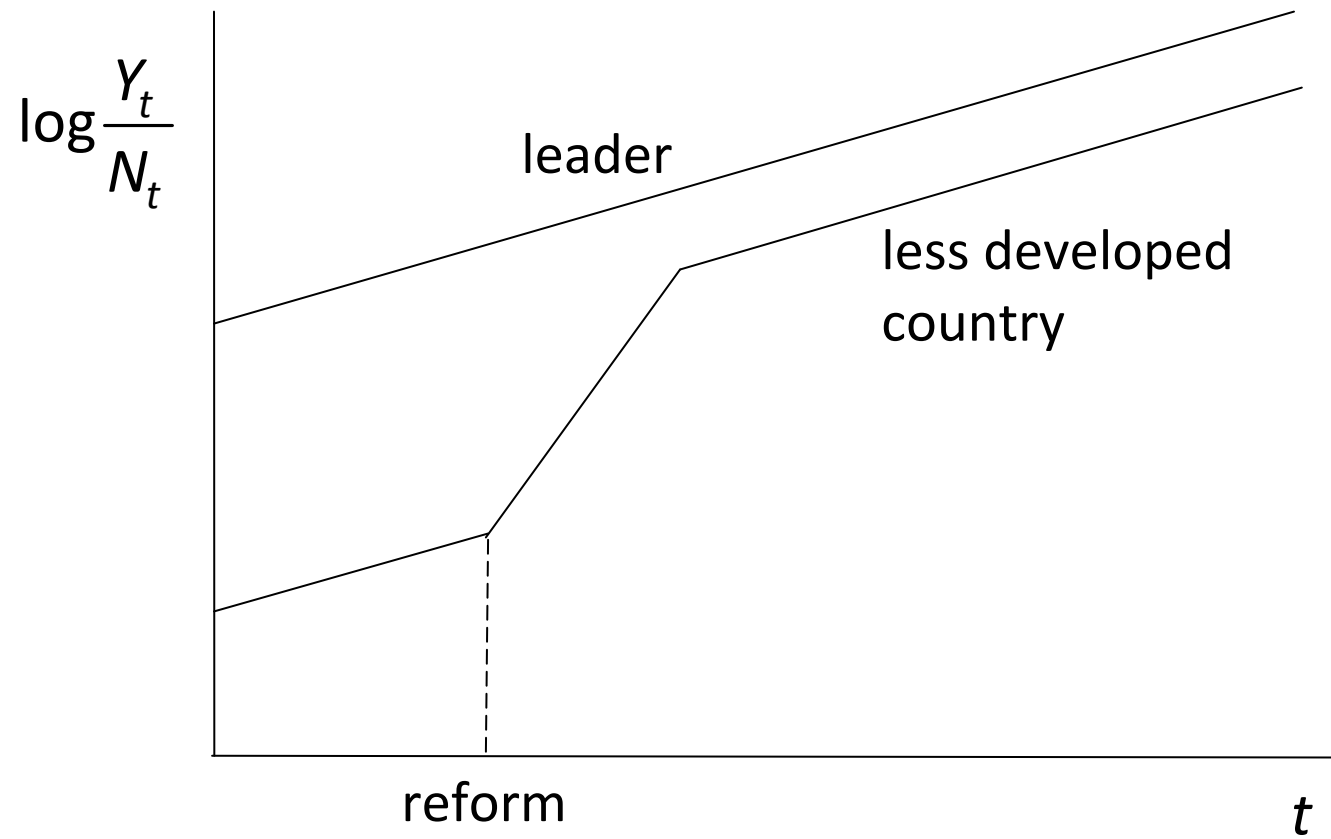
This growth is a combination of technological progress and improvements in management.

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

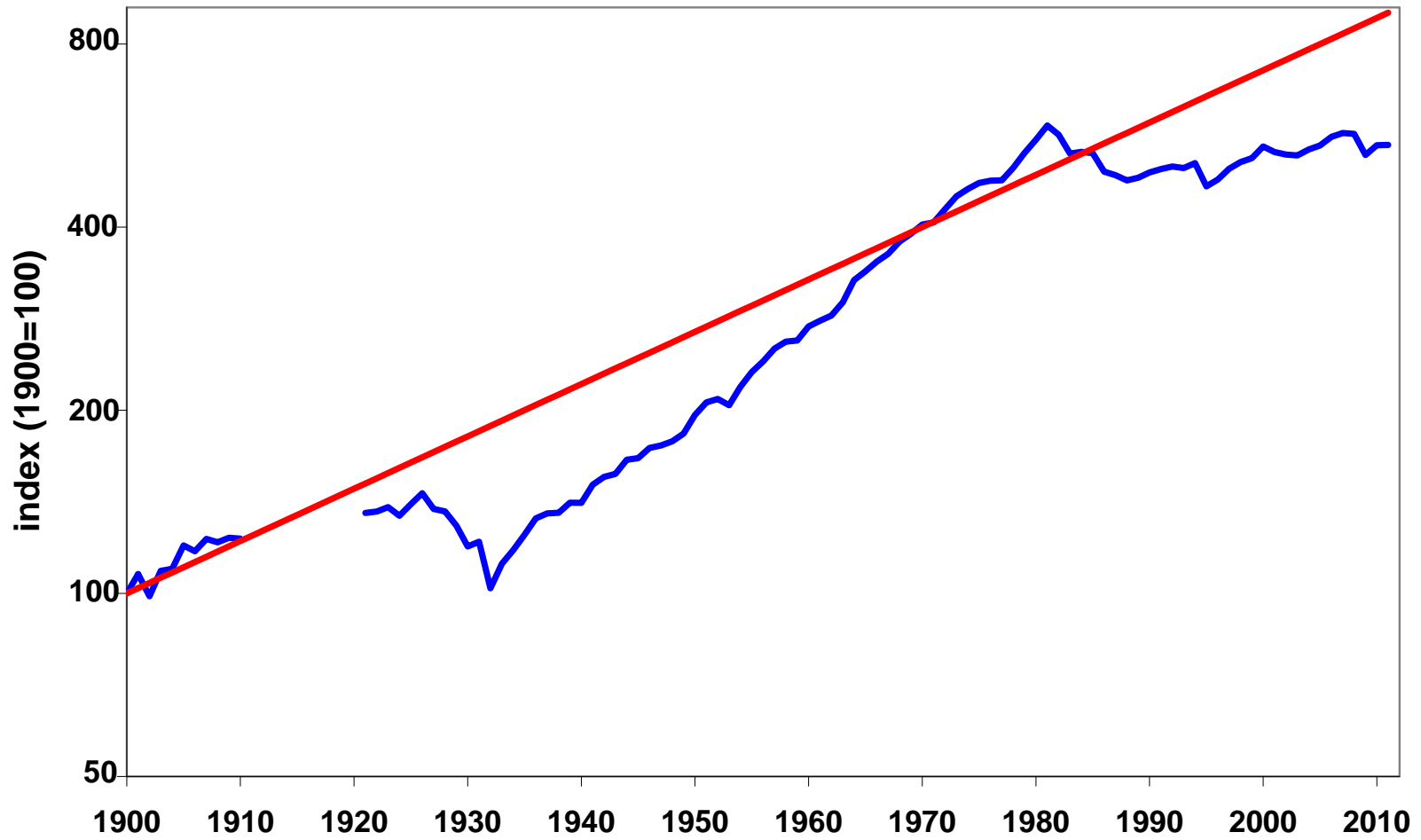
A country that improves its institutions and policies should grow faster, until it reaches a new balanced growth path.

A country whose institutions deteriorate or whose policies worsen...

Follow-the-leader theory of growth



Real GDP per working-age person in Mexico



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

Rostow (1960), *The Stages of Economic Growth: A Non-Communist Manifesto*.

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

Reach 35 percent of GDP per capita of industrial leader (United Kingdom 1844–1903 and United States 1904–2010, excluding 1930–1940).

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 reducing fertility

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

Power of productivity

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

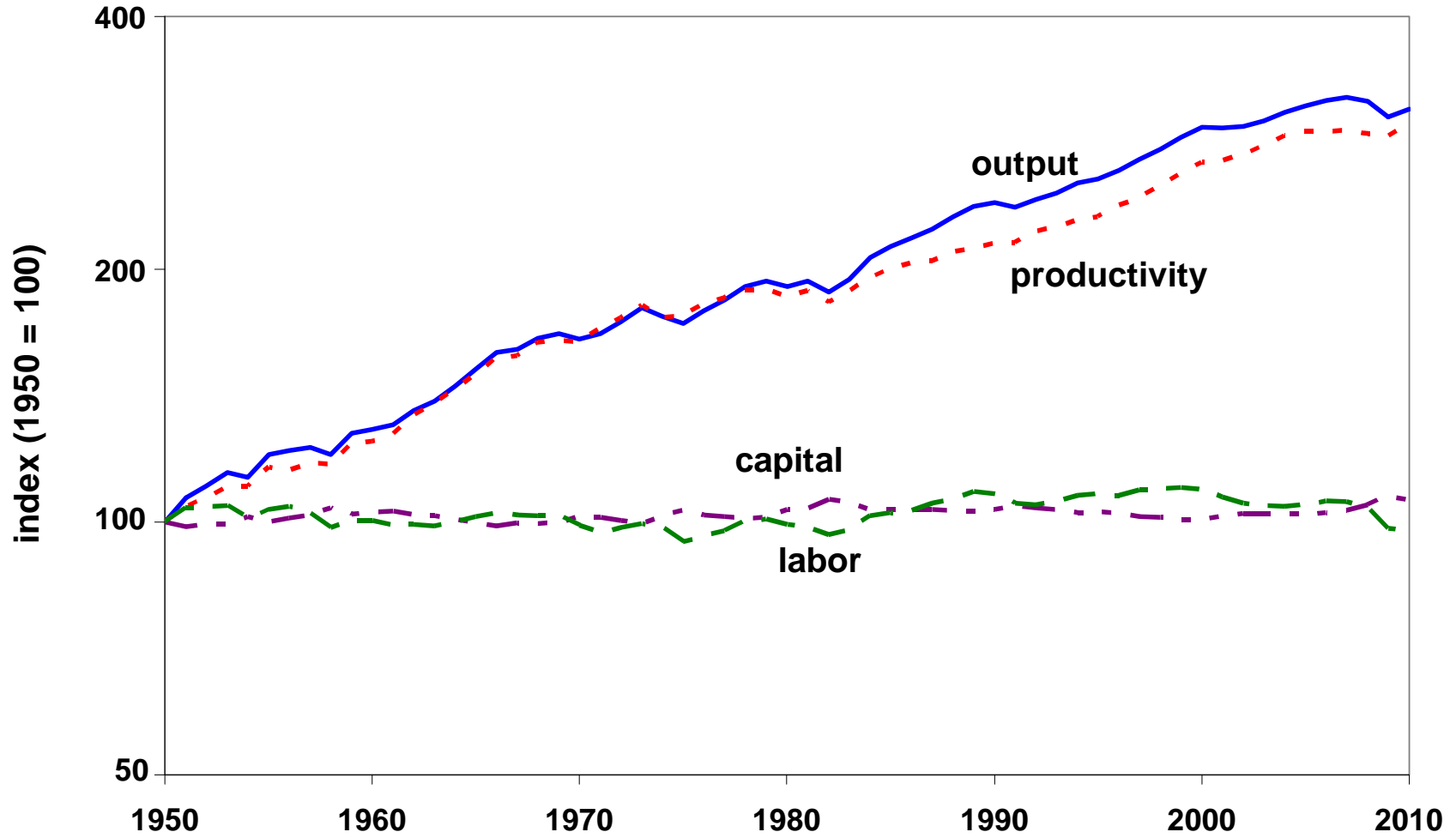
$$\frac{Y_t}{N_t} = A_t^{\frac{1}{1-\alpha}} \left(\frac{K_t}{Y_t} \right)^{\frac{\alpha}{1-\alpha}} \left(\frac{L_t}{N_t} \right)$$

output per person = productivity * capital * labor

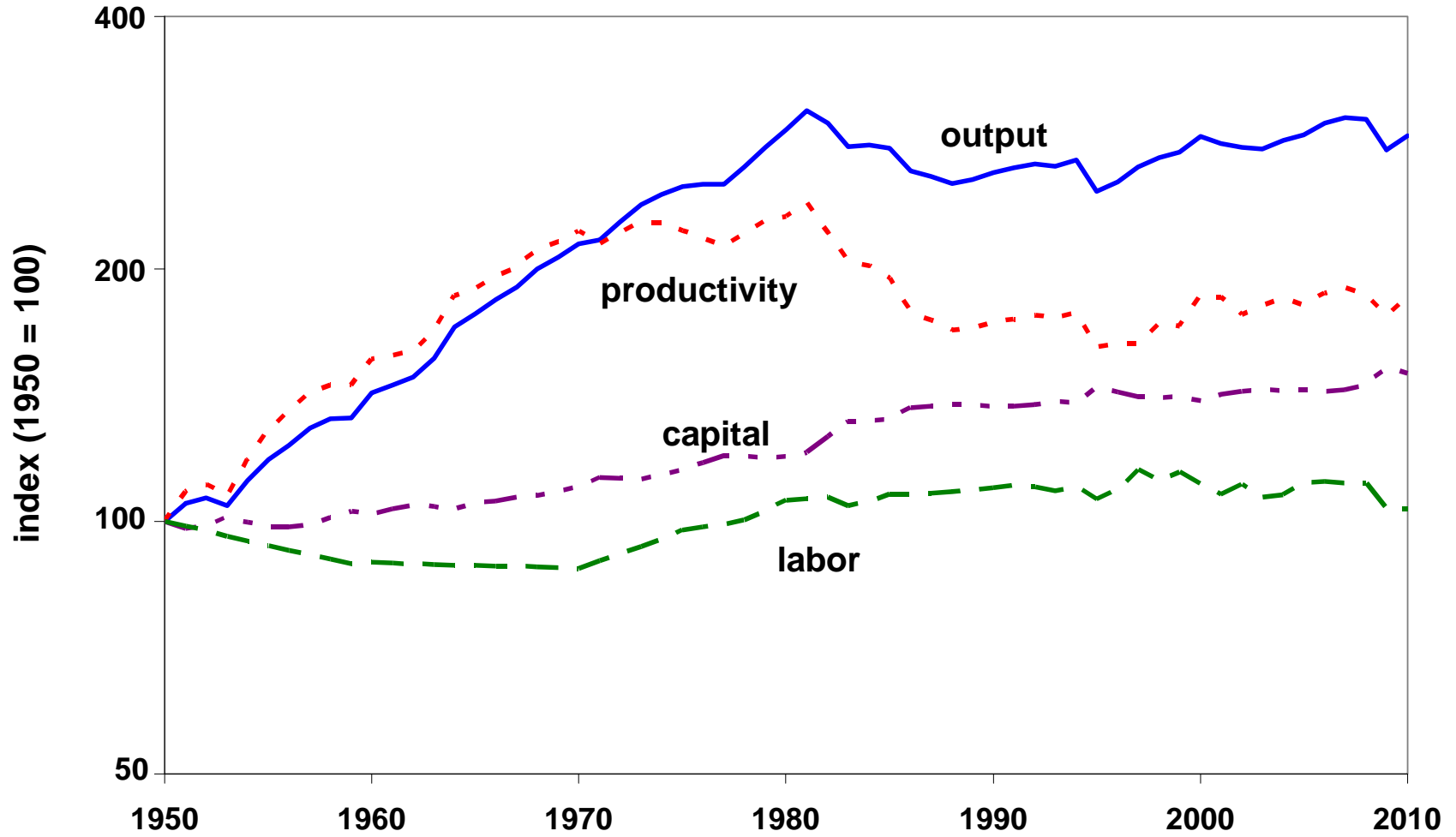
Lewis (2005), *The Power of Productivity: Wealth, Poverty, and the Threat to Global Stability*.

Best practice

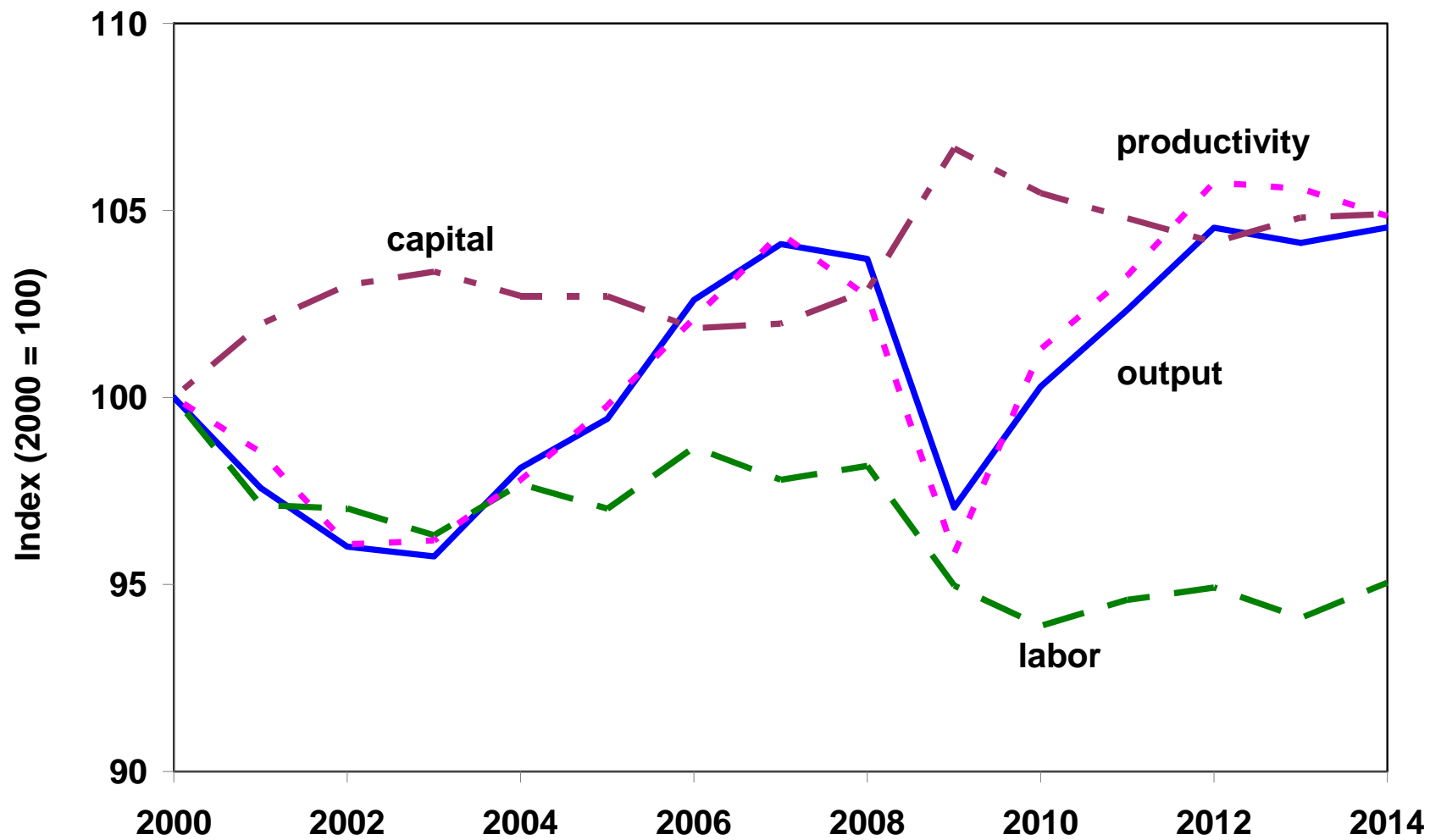
Growth accounting for the United States



Growth accounting for Mexico



Growth Accounting for Mexico, 2000-2014



Power of productivity

North (1968), “Sources of Productivity Change in Ocean Shipping, 1600-1850,” *Journal of Political Economy*.

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*

Singapore	1
Hong Kong	4
United States	7
Germany	14
Spain	33
Mexico	39
Kazakhstan	77
China	90
Egypt	112
Brazil	120
Argentina	124
Mozambique	127
Venezuela	182
Afghanistan	183
Libya	188

Corruption Perception Rankings, *Transparency International*, 2014

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:

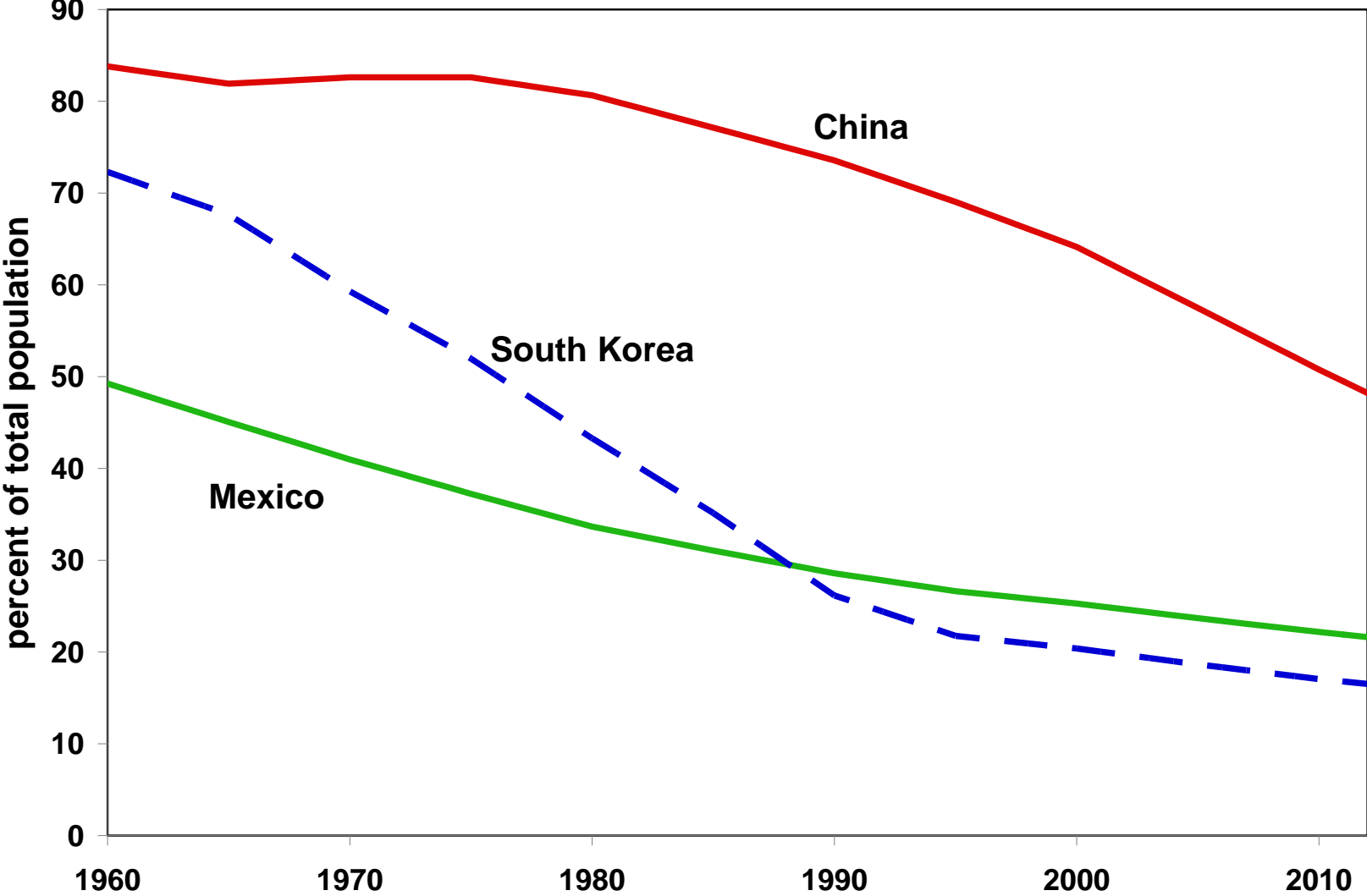
Urbanization

Industrialization

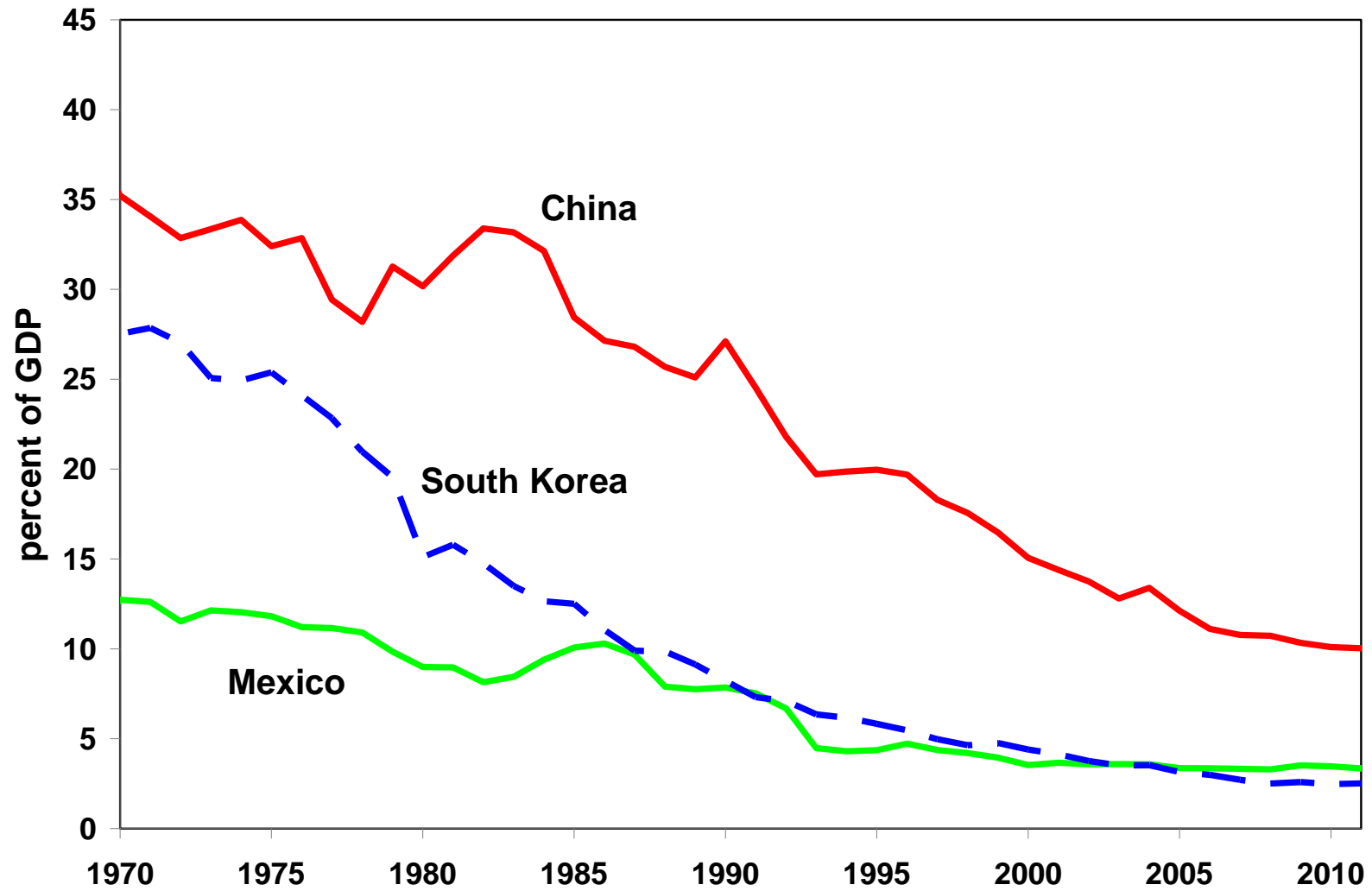
Education

Improving health and reducing fertility

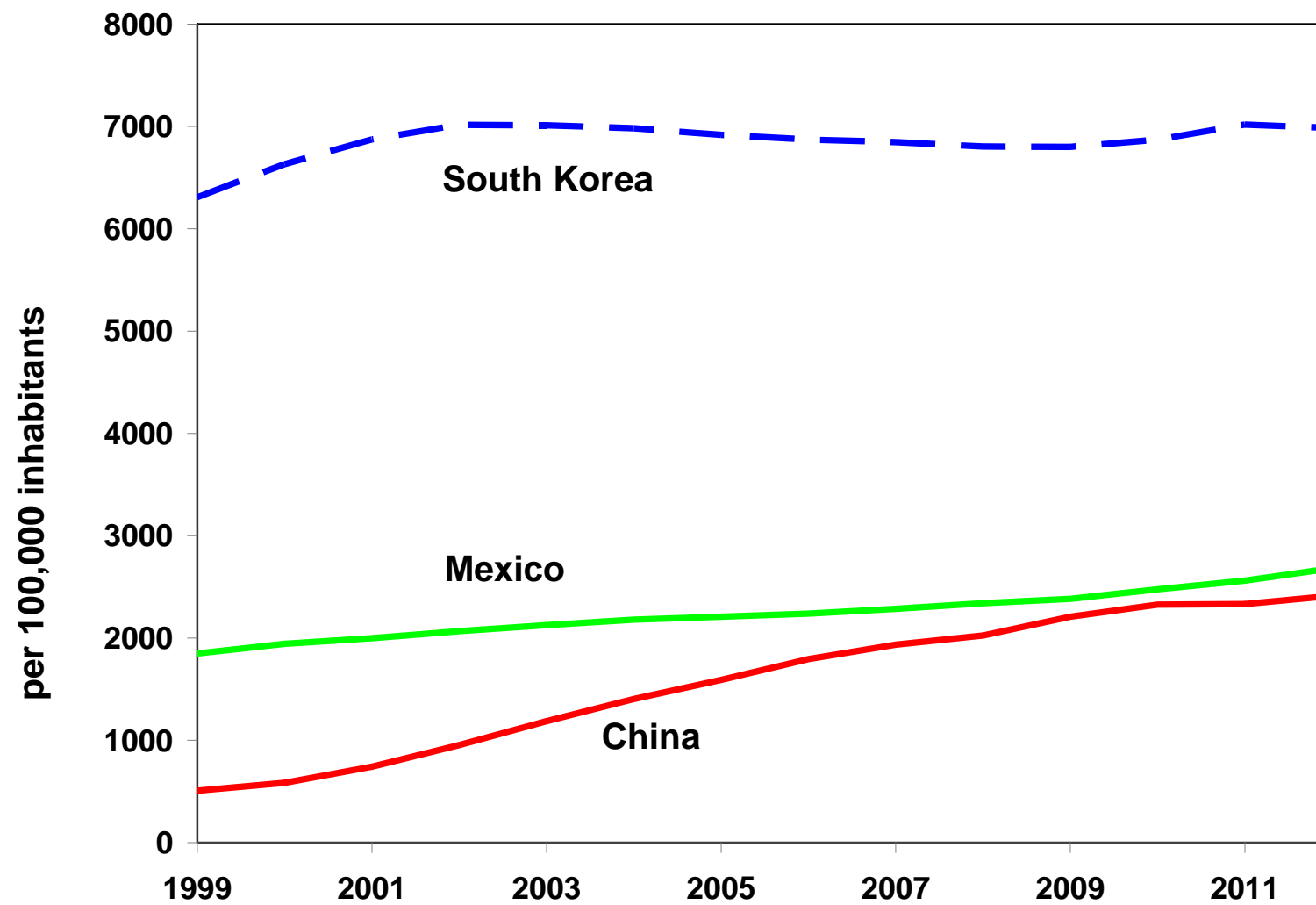
Rural population



Agriculture value added



Enrollment in tertiary education



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Urbanization

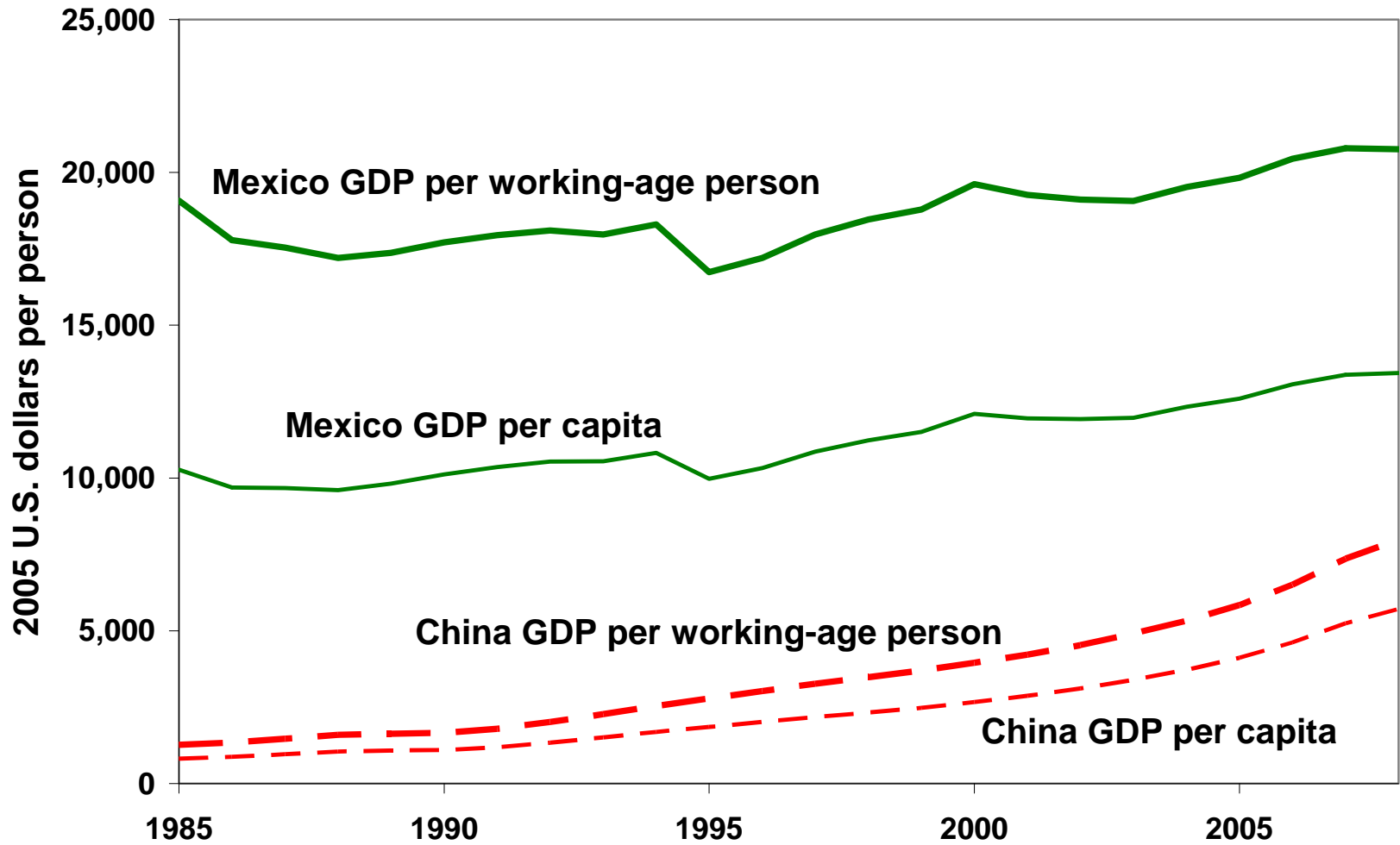
Industrialization

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



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

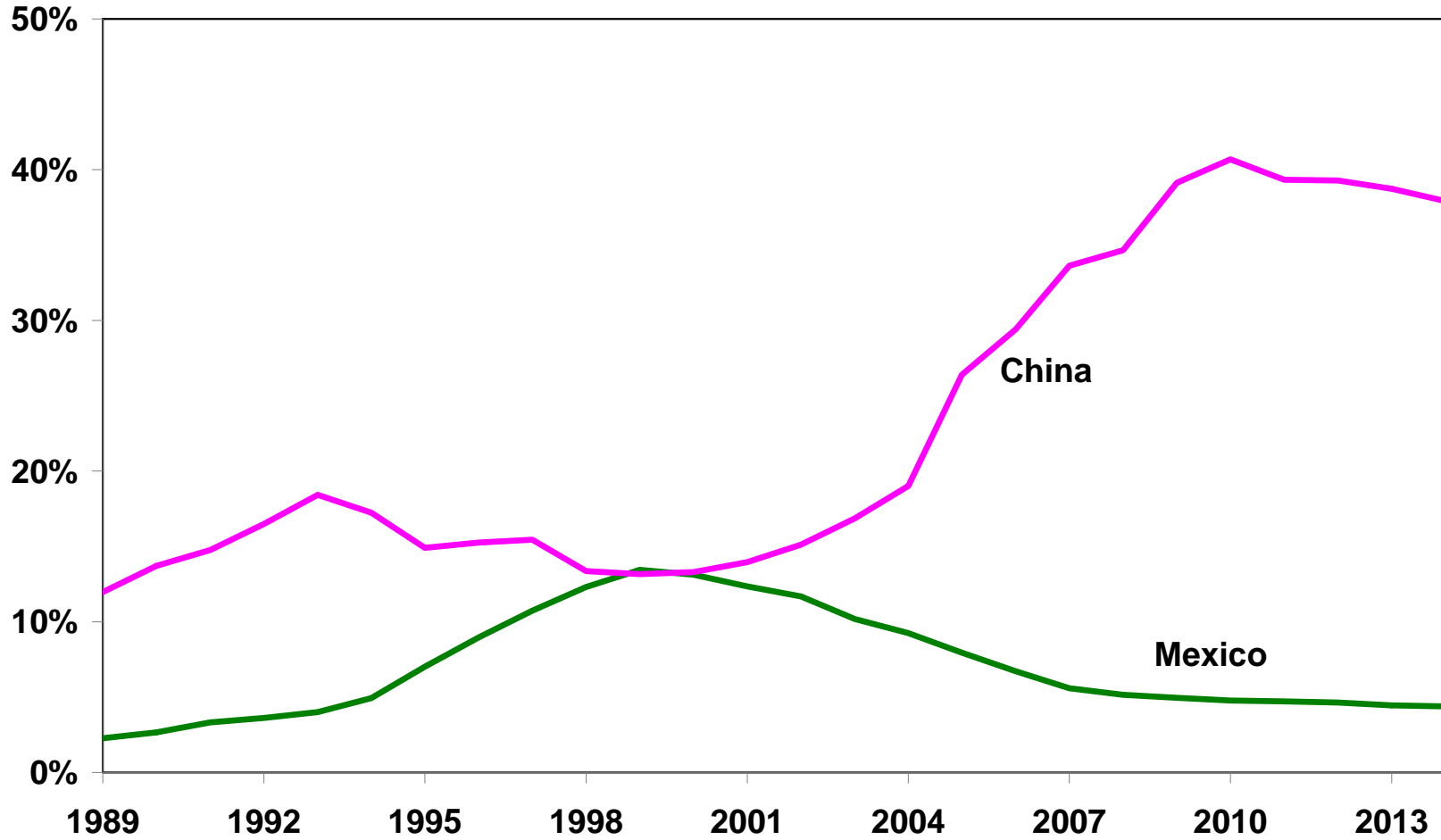
China has rapidly overtaken the U.S. apparel market and will not surrender its share soon, in spite of recent gains by producers in Southern Mexico.

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

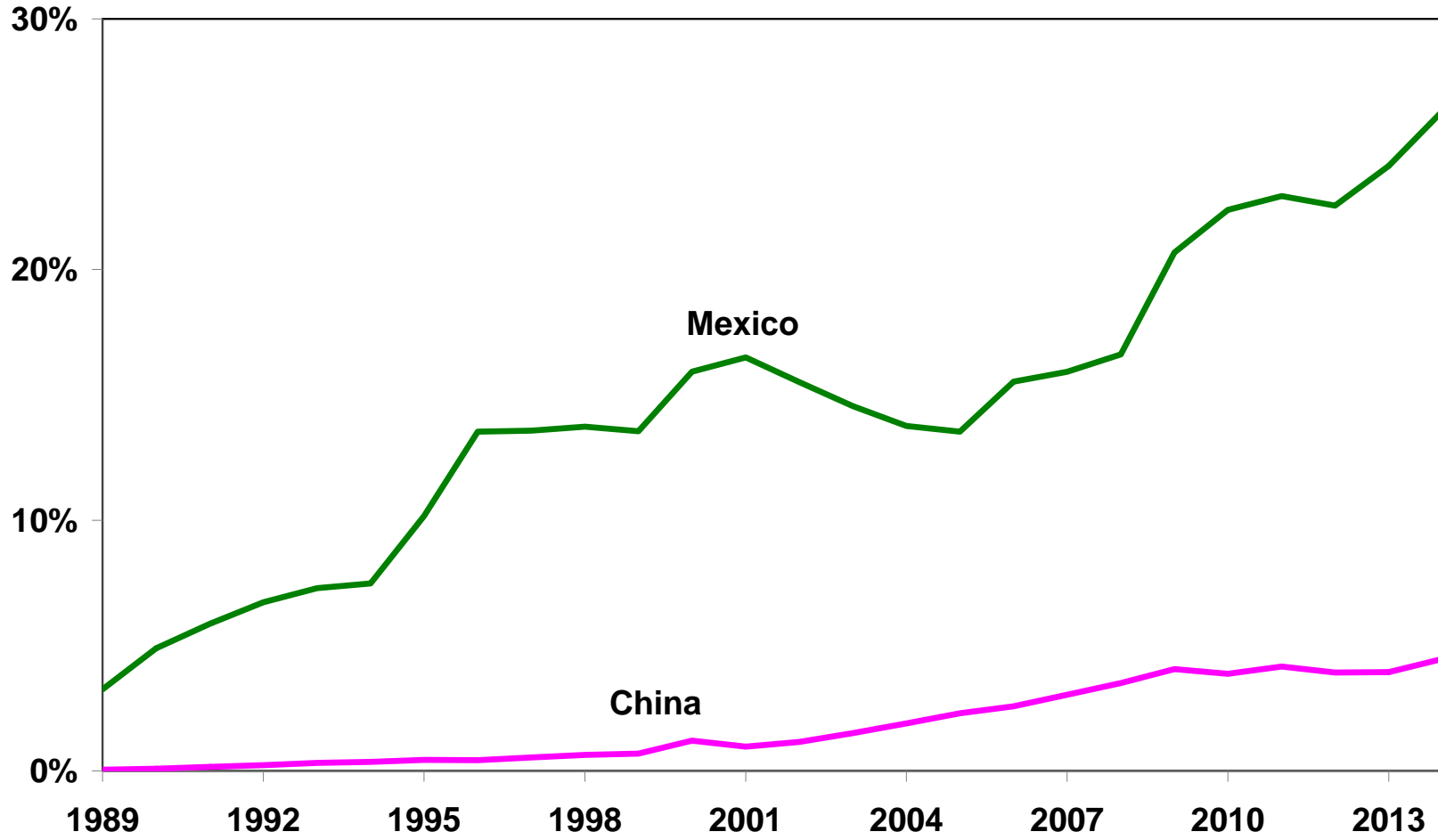
Electronic equipment is where the intensive competition is.

Other sectors?

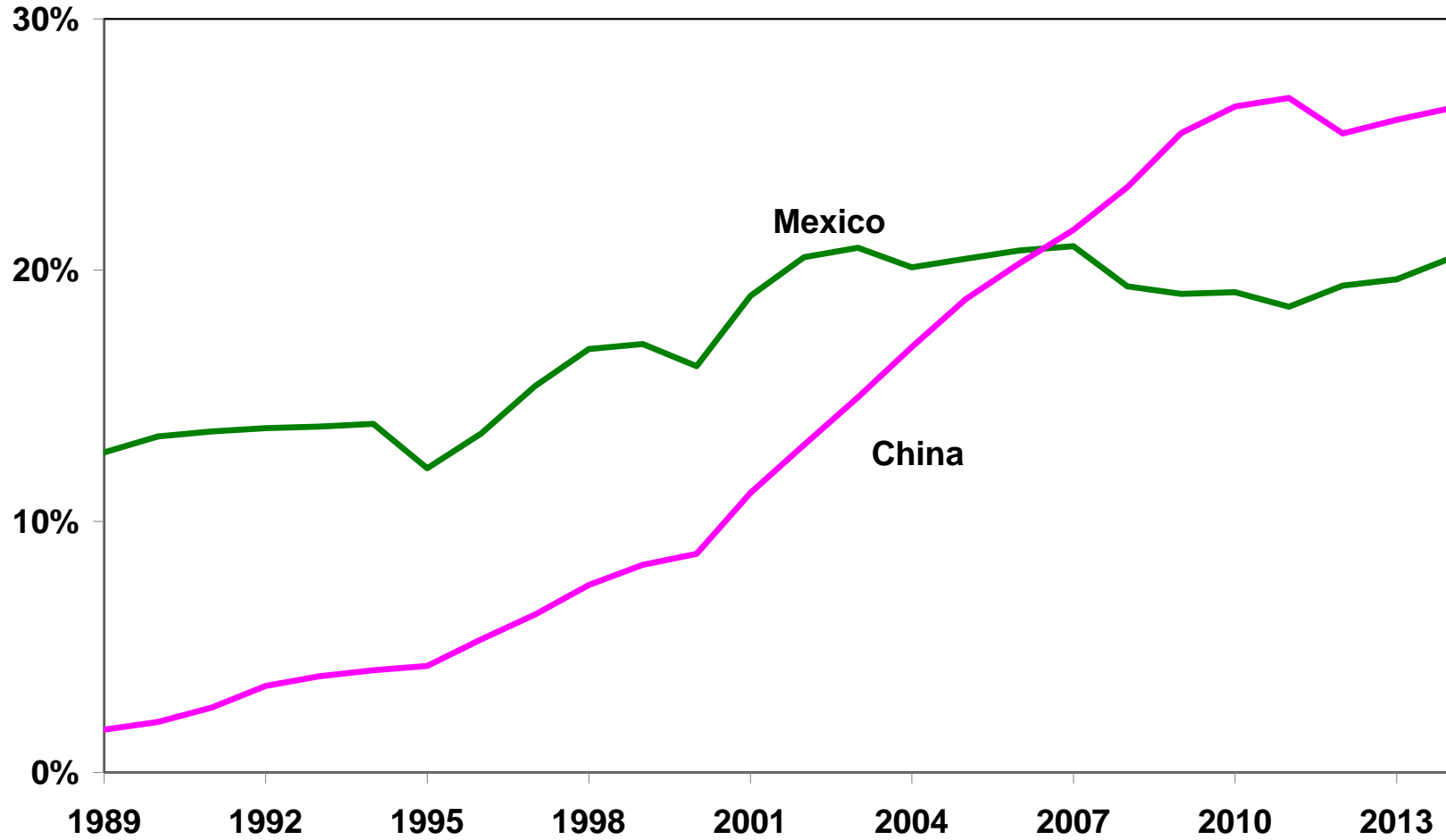
Share of U.S. Imports: Apparel



Share of U.S. imports: Road vehicles



Share of U.S. imports: Electrical machinery



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.

Kehoe, Ruhl, and Steinberg, “Global Imbalances and Structural Change in the United States,” Federal Reserve Bank of Minneapolis, 2013.

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

