TRADE POLICY IN A CHANGING GLOBAL ENVIRONMENT
CHALLENGES FACING THE U.S. IN THE 21ST CENTURY

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THE EVERGREEN SOLAR STORY

- Evergreen Solar founded in 1994
  - Manufactured solar panels using technology developed at MIT
  - Promised greater power output at lower cost

- Headquartered in Marlborough
  - Opened $430M manufacturing plant in Devens
  - Aided by $58M in state development money
  - Employed total of 925 people
Evergreen Solar panels installed at Boston’s Logan Airport.
• Model for 21st century US economy?
  ◦ Foundation in high tech
  ◦ In growing clean-energy industry
  ◦ Manufacturing as well as R&D in US

• Evergreen: model of the wrong sort
  ◦ Announced closure of US operations
    • Loss of 800 jobs
  ◦ Production being shifted to China
    • Reason was cost disadvantage, plus recession
FAMILIAR STORY

• Same story in many important industries

• Same story in solar production generally
  ◦ Of top 10 producers in world, only one is US-based
  ◦ Eight are in Asia
  ◦ China has heavily promoted its solar industry
    • Went from 1% of world photovoltaic output in 1999, to 32%
    • While US went from 30% to 6% in same period

• Much the same for wind turbine production
  ◦ Of top 10 manufacturers, only one is US (GE)
  ◦ Several in Europe
  ◦ But 5 of top 10 are Chinese
• Same for sizeable fraction of high-tech manufacturing
  ◦ US had $25-30B favorable trade balance as recently as 1998
  ◦ Crossed over to deficit in 2002
  ◦ More than $80B deficit in 2010

• US has gone from a trivial payments deficit 30 years ago
  ◦ To peak of $834B in 2008
  ◦ Small offset due to surplus in services
U.S. Trade Balance

Billions USD

Year


Data Source: US Census Bureau Foreign Trade Division
MANUFACTURING

• Trade effects most severe in manufacturing

• US has lost 5.5M manufacturing jobs since 2000
  ◦ 32% of all manufacturing jobs
  ◦ We have lost 32,000 factories

• We have lost entire industries, not just high tech

- ✓ Machine tools
- ✓ Appliances
- ✓ Furniture
- ✓ Ceramic tile
- ✓ Auto parts
- ✓ Luggage

• Manufacturing now is smallest fraction of economy since before WWII
Manufacturing Employment

- Manufacturing Employment
- Share of Total Employment

Year Range: 1950 to 2000

- Share of Total Employment shows a decline from the late 1950s to the early 2000s.

Graphical representation showing trends in manufacturing employment over the specified years.
TRADE DEFICIT

• Our biggest trading partner is Canada
  ◦ But our biggest deficit by far is with China
    • In 2010 we sold China about $95B in goods
    • But we imported $370B
  ◦ Result is trade deficit of $275B—about 35% of overall deficit

• Next largest country deficit is about $60B
  ◦ Japan, or Mexico, or EU

• US does run trade surpluses with some countries
  ◦ But our biggest surplus is $22B, with Hong Kong
• Other major source of trade deficit is petroleum

• Deficit of $342B in 2008 (then dropped a bit)
  ◦ Constitutes another 35% of total trade deficit

• Most of these payments go to OPEC countries

• So China + Oil comprise more than 70% of our trade deficit
  ◦ *If we want to do something about deficit, we need to address these two things*
Petroleum Trade Balance
DO TRADE DEFICITS MATTER?

- Traditional economics: comparative advantage
  - Countries specialize where they are best suited
  - Sell those products abroad
    - Import other commodities where foreign countries better

- Result is net gains from trade
  - Some possible losers, including workers
  - But they can find other jobs, aided by Trade Adjustment Assistance

- Does not matter which industries survive:
  - “Computer chips = potato chips”
• “Free trade” view has dominated academia and policymaking for decades
  ◦ Resulted in international trade organizations and agreements that lowered trade barriers
    • GATT, NAFTA, WTO
    • Uruguay, Doha
  ◦ Advocates point to trade, growth, and development nexus
Some observers have more nuanced view

- Contend that policy differences between US and other countries create disadvantages
  - Worker health and safety, environmental standards
- “Fair traders” argue that policy needs to ensure “level playing field”
  - But once that is achieved, they accept free trade and its advantages
Doubts About Free Trade Paradigm

- But there always has been deeper skepticism about entire free trade paradigm
  - Some have never accepted its underpinnings
  - Several sources of doubt

- (1) Theory based on very strong assumptions
  - Perfect competition
  - No economies of scale
  - No changes or differences in technology
  - Costless mobility of labor and capital within a country
  - No movement of labor or capital between countries

- These clearly not correct in modern economies
  - As a result, implication favoring free trade may not hold
  - Economists have shown this for 30 years
(2) Real world examples of “strategic” (non-free) trade policy
- Japan’s MITI fostered entry into semiconductors
- EU protected Airbus until it became competitive

“Facilitated entry” generally used in industries characterized by
- high value
- lots of spillovers
- foundational to other sectors

Provide support and protection until industry achieves scale and viability
- No longer subject to same easy displacement
- Policy can influence which industries have comparative advantage
• (3) Comparative advantage may not be reason for growth and development

• For longest time, US approach to trade was protectionist
  - Focused on developing manufacturing base, national economy, etc.

• After WWII, focus became control of Communism
  - Led US to promote capitalism through freer trade

• Policy emphasized development of industrial capability overseas
  - US companies could get cheaper inputs abroad
    - Complemented by domestic consumption:
      - “US as consumer of last resort”
POLICY CLEARLY SUCCESSFUL

- First Europe, then East Asia, recovered and developed market economies

- Successful in continuing to build US manufacturing
  - Manufacturing employment grew up until about 1970
  - Reached 27% of GDP

- Successful in orienting US economy toward consumption

- Importantly, this did not involve major dislocations in US
  - If one industry doing badly, another doing well
  - Workers mostly could shift from one job to another
PARADIGM FAILURE

- Somewhere in 1980s this paradigm failed

- Major US industries started to completely die off
  - Dislocations greater, fewer comparable job opportunities
  - US resorted to “Voluntary Restraint Agreements,” that is, quotas

- These were at best temporary reprieves
• Underlying changes more fundamental
  ◦ New foreign competitors had vastly lower cost
  ◦ US products competed fairly well against South Korea, Taiwan, etc.
    ◦ They had wages 25% of ours
  ◦ US did less well against Mexico with wages around 10% of ours
  ◦ And no success against China with wages 3-4% of ours

• But US as “consumer of last resort” was deeply rooted
  ◦ Led to vast trade imbalances
DOES THIS MATTER?

- Several serious adverse effects of large persistent trade imbalance

- (1) Loss of manufacturing jobs
  - Manufacturing jobs are good jobs
    - Higher pay, large multiplier, teach skills, provide mobility
  - Not easily replaced—fewer “lateral” opportunities
    - Information economy, financial services quite different
(2) Foreign exchange holdings

- Ordinarily large trade imbalances would lead to currency devaluation
  - Has not happened to US due to capital inflows
    - Foreigners willing to hold dollars
    - Result is vast holdings of US currency abroad
- These represent vulnerabilities, even threats
- Used to be concerned about OPEC holdings
  - Saudi Arabia has about $500B in reserves
  - But this is dwarfed by China
    - In ten years, China has accumulated nearly $3 trillion
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<th>Rank</th>
<th>Country</th>
<th>Billion USD (end of month)</th>
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<tr>
<td>1</td>
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<td>$ 3045 (Mar 2011)</td>
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<tr>
<td>2</td>
<td>Japan</td>
<td>$ 1116 (Mar 2011)</td>
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<td>3</td>
<td>Russia</td>
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<td>4</td>
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<td>10</td>
<td>Hong Kong</td>
<td>$ 273 (Mar 2011)</td>
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WHAT CAN BE DONE?

- On trade front, need new—and real—trade policy
  - Insist major trading partners reduce their protections
  - Tougher actions with respect to China
    - Remove restrictions on inflows of capital
    - Allow renminbi to appreciate
    - And more, if necessary
• On domestic front, need new—and real—energy policy
  ◦ National renewable energy standards
  ◦ Local sourcing

• Plus, renewed investment in infrastructure
  ◦ Engineering
  ◦ Management
  ◦ R&D
• Also, renewed commitment to social safety net
  ◦ health care reform
  ◦ education reforms
  ◦ labor unions

• Willingness to intervene to foster industry success
THE AUTOMOBILE INDUSTRY STORY

• Auto industry illustrates willingness to intervene

• Autos are enormously important industry
  ◦ For most of last century, at heart of US manufacturing
  ◦ Provided good jobs benefitting tens of millions of people
    ◦ High wages, skills, health benefits, retirement security, mobility into middle class
    ◦ At mid-century, Detroit had highest per capita income of any US city

• Extraordinary record of public and private benefit
• Detroit “Big 3” in decline since 1970s
  ◦ Principle reasons were cost and quality disadvantages
    • Refusal to produce smaller cars
    • Resistance to change
  ◦ That is, lack of true competition, loss of “edge”

• Great Recession of 2008 pushed companies to brink
  ◦ GM, Ford, Chrysler sales dropped 40-50%
  ◦ GM lost $6B in one quarter
  ◦ All three teetered on bankruptcy, even liquidation
Market Shares of U.S. Vehicle Sales

- GM: 23.6%
- Toyota: 16.2%
- Ford: 15.2%
- Chrysler: 13.0%
- Honda: 9.4%
- Nissan: 6.5%

Years 1996 to 2006.
• US government response was bailout, but with conditions

• Bailout component involved
  ◦ Loans to auto makers
  ◦ Assistance to finance companies
  ◦ Supplier support program
  ◦ Warranty commitment program
• Conditions designed to ensure fundamental change
  ◦ And make any appeal to government unattractive

• Conditions included:
  ◦ Bankruptcies
  ◦ CEOs forced out
  ◦ Changes in Boards of Directors
  ◦ Insistence that Chrysler find partner
  ◦ Elimination of brands, dealers
  ◦ Closure of factories
  ◦ Concessions from UAW
• Results are not all in
  ◦ But thus far quite promising

• This may be model for targeted intervention:
  ◦ Requirement for fundamental change
  ◦ Intervention that is temporary only
CONCLUSIONS

• The 21\textsuperscript{st} century represents a paradigm shift for US trade policy
  ◦ Simply being “consumer of last resort” is unsustainable
  ◦ Make ourselves vulnerable to outside forces

• Need to avoid uncritical embrace of “comparative advantage”
  ◦ Must develop less simplistic approach to trading partners
  ◦ Must develop energy policy that diminishes dependence
  ◦ Need domestic policies that rebuild our capabilities