International Trade and Offshore Production:
Tracking China’s Shifting Role in the Global Economy

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Main Topics

1. International competitiveness via exports: China vs. Mexico
2. “Made in China” doesn’t tell the whole story
3. Role of foreign firms in China’s export trade
4. Intra-regional trade and indirect exports
5. The real story of China’s export success: regional & global, not bilateral
Analytical Tools and Concepts

• Global value chains
• International trade and production networks
• Intra-firm (or related-party trade) by MNCs
• Industrial upgrading
• International competitiveness
• Development strategies
Mexico’s Industrialization since 1985

- Export oriented (mainly to U.S. market)
- Highly diversified
- Shifting emphasis from primary product exports & intermediate goods to manufactures
- Within manufacturing, medium-tech and high-tech exports are displacing low-tech exports
Graph 1: Composition of Mexico's Exports to the U.S. Market, 1985-2003

Source: World Trade Analyzer.
China’s Industrialization since 1995

- Sustained & diversified export dynamism
- Decline of low-tech manufactured exports
- Increase in medium-tech and high technology manufactured exports
- China’s science & education policy emphasizes high-tech parks & ICTs
- Business services weak outside of big firms
Graph 2: Composition of China’s Exports to the U.S. Market, 1985-2003

Source: World Trade Analyzer.
Mexico vs. China

• Head-to-head competition in U.S. market
• China is world’s leading exporter of many manufactures, esp. consumer goods
• China and Mexico are typically among the top three exporters to the U.S. market in many product categories
• China is moving ahead of Mexico with dominant market shares in the United States, especially in 2000-2005 period
<table>
<thead>
<tr>
<th>Product</th>
<th>Mexico (SITC categories)</th>
<th>% Market Share in USA</th>
<th>Change in Market Share 2000-2004</th>
<th>China (SITC categories)</th>
<th>% Market Share in USA</th>
<th>Change in Market Share 2000-2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>773- Equipment for distributing electricity</td>
<td>58.8</td>
<td>-2.0</td>
<td></td>
<td>994- Baby carriages, toys, games and sporting goods</td>
<td>78.2</td>
<td>13.6</td>
</tr>
<tr>
<td>761- Television receivers</td>
<td>46.2</td>
<td>-17.3</td>
<td></td>
<td>961- Footwear</td>
<td>68.8</td>
<td>6.9</td>
</tr>
<tr>
<td>782- Motor vehicles for transport of goods/materials</td>
<td>40.4</td>
<td>8.8</td>
<td></td>
<td>848- Apparel and clothing of other than textile</td>
<td>53.0</td>
<td>44.8</td>
</tr>
<tr>
<td>716- Rotating electric plant and parts</td>
<td>32.9</td>
<td>0.0</td>
<td></td>
<td>753- Sound or television recorders or reproducers</td>
<td>49.8</td>
<td>22.3</td>
</tr>
<tr>
<td>772- Electronic app. such as switches, relays, fuses</td>
<td>29.2</td>
<td>4.7</td>
<td></td>
<td>775- Household type equipment</td>
<td>46.0</td>
<td>8.8</td>
</tr>
<tr>
<td>762- Radio broadcast receivers</td>
<td>25.3</td>
<td>-0.2</td>
<td></td>
<td>752- Automatic data processing machines &amp; units</td>
<td>41.0</td>
<td>29.7</td>
</tr>
<tr>
<td>778- Electrical machinery and apparatus</td>
<td>21.2</td>
<td>2.8</td>
<td></td>
<td>762- Radio broadcast receivers</td>
<td>40.3</td>
<td>4.9</td>
</tr>
<tr>
<td>713- Internal combustion piston engines &amp; parts</td>
<td>21.1</td>
<td>4.1</td>
<td></td>
<td>821- Furniture and parts thereof</td>
<td>39.3</td>
<td>15.7</td>
</tr>
<tr>
<td>771- Electric power machinery and parts</td>
<td>20.9</td>
<td>-4.0</td>
<td></td>
<td>650- Made-up articles of textile materials</td>
<td>39.0</td>
<td>14.0</td>
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<tr>
<td>872- Instruments and appliances for medical or veterinary purposes</td>
<td>20.5</td>
<td>0.3</td>
<td></td>
<td>693- Articles of plastics</td>
<td>36.1</td>
<td>5.2</td>
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<tr>
<td>899- Miscellaneous Manufactured Articles</td>
<td>32.8</td>
<td>-10.0</td>
<td></td>
<td>771- Electric power machinery and parts</td>
<td>31.1</td>
<td>9.3</td>
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<td>759- Parts and accessories of automatic data processing machines</td>
<td>31.1</td>
<td>19.6</td>
<td></td>
<td>699- Manufactures of metal</td>
<td>24.2</td>
<td>10.5</td>
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<tr>
<td>764- Telecommunications equipments &amp; parts</td>
<td>23.9</td>
<td>13.6</td>
<td></td>
<td>808- Musical instruments and parts</td>
<td>22.0</td>
<td>13.5</td>
</tr>
<tr>
<td>842- Women's apparel of woven textiles</td>
<td>21.4</td>
<td>5.6</td>
<td></td>
<td>778- Electrical machinery and apparatus</td>
<td>21.1</td>
<td>9.2</td>
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</table>

Source: United States International Trade Commission and US Department of Commerce
<table>
<thead>
<tr>
<th>SITC category</th>
<th>Product</th>
<th>2000</th>
<th>2005</th>
<th>Change in Market Share 2000-2005</th>
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<tr>
<td>752</td>
<td>Automatic Data Processing Machines and Units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>6.4</td>
<td>5.7</td>
<td>-2.6</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>6.3</td>
<td>29.9</td>
<td>47.1</td>
</tr>
<tr>
<td></td>
<td>US Total</td>
<td>55.9</td>
<td>63.5</td>
<td></td>
</tr>
<tr>
<td>764</td>
<td>Telecommunications Equipments and Parts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>9.1</td>
<td>7.7</td>
<td>-7.9</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>4.6</td>
<td>17.5</td>
<td>28.9</td>
</tr>
<tr>
<td></td>
<td>US Total</td>
<td>44.3</td>
<td>60.6</td>
<td></td>
</tr>
<tr>
<td>778</td>
<td>Electrical Machinery and Apparatus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>3.1</td>
<td>4.4</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>2.0</td>
<td>4.4</td>
<td>10.2</td>
</tr>
<tr>
<td></td>
<td>US Total</td>
<td>17.1</td>
<td>20.0</td>
<td></td>
</tr>
<tr>
<td>784</td>
<td>Auto Parts and Accessories</td>
<td>4.6</td>
<td>7.9</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>4.6</td>
<td>7.9</td>
<td>2.3</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>0.4</td>
<td>2.0</td>
<td>3.2</td>
</tr>
<tr>
<td></td>
<td>US Total</td>
<td>28.4</td>
<td>42.3</td>
<td></td>
</tr>
<tr>
<td>821</td>
<td>Furniture</td>
<td>3.2</td>
<td>4.3</td>
<td>-9.8</td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>3.2</td>
<td>4.3</td>
<td>-9.8</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>4.5</td>
<td>13.2</td>
<td>-1.9</td>
</tr>
<tr>
<td></td>
<td>US Total</td>
<td>18.9</td>
<td>60.6</td>
<td></td>
</tr>
<tr>
<td>84</td>
<td>Articles of Apparel and Clothing</td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mexico</td>
<td>8.7</td>
<td>6.3</td>
<td>-5.3</td>
</tr>
<tr>
<td></td>
<td>China</td>
<td>8.5</td>
<td>19.9</td>
<td>12.9</td>
</tr>
<tr>
<td></td>
<td>US Total</td>
<td>64.3</td>
<td>76.4</td>
<td></td>
</tr>
</tbody>
</table>

Main Competitors in the US Market for Automatic Data Processing Machines and Units (SITC 752)

- China
- Malaysia
- Mexico
- Singapore
- Taiwan


Share of US Market
Main Competitors in the US Market for Telecommunications Equipments and Parts (SITC 764)

Year

Share of US Market

- China
- South Korea
- Mexico
- Malaysia
- Canada
Main Competitors in the US Markets for Furniture and Parts (SITC 821)

- China
- Canada
- Mexico
- Italy
- Taiwan

Year

Share of US Market

2000 2001 2002 2003 2004
Why is China gaining U.S. market share over Mexico?

• China is a lower-cost producer overall (labor costs lower, but not transport & tariffs)
• China has huge scale economies
• China has a coherent and multidimensional upgrading strategy – diversify and add high value activities
• China is using direct foreign investment to promote “fast learning” in new industries
• China uses access to its domestic market to attract TNCs and promote knowledge spillovers
China’s Supply Chain Cities in Apparel

Made in China, Shipped Worldwide

The factory towns on the coast of China manufacture clothing to keep America’s closets full, making everything to wear from head to toe.

<table>
<thead>
<tr>
<th>Factory orders, 2003</th>
<th>PRODUCTION</th>
<th>TOTAL SALES</th>
<th>U.S. EXPORTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>MEN’S WEAR</td>
<td>100 MILLION PIECES</td>
<td>$800 MILLION</td>
<td>$100 MILLION</td>
</tr>
<tr>
<td>Zhucheng</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CASUAL WEAR</td>
<td>160 MILLION PIECES</td>
<td>$260 MILLION</td>
<td>$58 MILLION</td>
</tr>
<tr>
<td>Haiyu, Changshu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>DOWN-FILLED PRODUCTS</td>
<td>26 MILLION PIECES</td>
<td>$470 MILLION</td>
<td>$290 MILLION</td>
</tr>
<tr>
<td>Xintang, Hangzhou, Xiaoshan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TIES</td>
<td>300 MILLION PIECES</td>
<td>$1.21 BILLION</td>
<td>$384 MILLION</td>
</tr>
<tr>
<td>Shenzhou</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SOCKS</td>
<td>9 billion PAIRS</td>
<td>$1.57 BILLION</td>
<td>$240 MILLION</td>
</tr>
<tr>
<td>Datang, Zhiji</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>UNDERWEAR</td>
<td>969 million PIECES</td>
<td>$360 MILLION</td>
<td>$290 MILLION</td>
</tr>
<tr>
<td>Jinjiang, Shenchu</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WEDDING DRESSES, EVENING GOWNS</td>
<td>510 million PIECES</td>
<td>$950 MILLION*</td>
<td>$640 MILLION†</td>
</tr>
<tr>
<td>Chaoshou</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JEANS</td>
<td>225 million PIECES</td>
<td>$1.04 BILLION</td>
<td>$480 MILLION</td>
</tr>
<tr>
<td>Xintang, Zengcheng</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Includes all textiles made in the city. †Wedding dress and evening gown exports only.

Sources: China National Textile Council, Shenchu Underwear Association, Datang Town Government

The New York Times

How can Mexico compete with China?

- Take advantage of proximity to U.S. market (e.g., quicker time to market; large & heavy goods; made-to-order customized products)
- Eliminate comparative disadvantages (bureaucracy; low productivity; poor utilities & transport infrastructure; education)
- Move into high-value activities within GVCs (e.g., R&D, design, engineering, business services)
- Use domestic market as an asset
“Made in China” Doesn’t Tell the Whole Story
“Made in China”? 

- Regardless of product labels… do “made in China” product labels tell the whole story? Are these products truly made by Chinese firms?
- A closer examination of trade statistics shows a complex picture.
  - *Intrafirm trade* between branches of multinational companies constitutes a large part of China’s exports.
  - China plays a central role in evolving *intraregional trade networks* in East Asia.
Figure 1: US Annual Trade Deficit with China, 1990-2005

Source: U.S. Census Bureau, Foreign Trade Division; U.S. Department of Commerce, Bureau of Economic Analysis
China and the US Trade Deficit

- China accounts for more than a quarter of the US trade deficit ($201.6 billion in 2005)
  - Largest trade deficit for the US with any country in 2005
  - Largest deficit in history for the US with any country
- China’s surplus has prompted a strong response from Congress, the public, and the media
  - “The trade deficit is a crisis waiting to happen. We can't continue to borrow $650 billion from the rest of the world to finance our consumption.” - Robert E. Scott, Senior International Economist, Economic Policy Institute
  - “These exploding trade deficit numbers…are a sign of weakness. They indicate a slow bleeding at the wrists economically for the United States.” - Sen. Charles Schumer (D-NY), 10 February 2006
- Is this a China problem?
Figure 2: US Annual Trade Balance with Selected Asian Countries, 1990-2005

Source: U.S. Census Bureau, Foreign Trade Division; U.S. Department of Commerce, Bureau of Economic Analysis
US Trade Deficits with Asia

• From 1990-2005, US ran major deficits with China (1990: $10b; 2005: $202b) and Japan (1990: $41b; 2005: $83b)

• US trade deficits with East Asian NIEs either remained steady (Taiwan, Korea) or improved (Hong Kong, Singapore)
  – Reason: Rise of China shifted US imports from East Asian NIEs to China
Decomposing China’s Export Trade: Role of Foreign Firms
Figure 3: China’s Exports to the US

- Exports by Chinese firms to unrelated firms in the US
- Exports by foreign-funded enterprises (FFEs)
  - Exports to unrelated firms in the US
  - Exports to related firms in the US* (related-party)
Figure 4: US Related-Party Imports from China, 1992-2004

Source: U.S. Census Bureau, Related-Party Trade Statistics. 1992-1998 numbers re-calculated using overall import data from Trade Stats Express and percentages from above. China’s related-party exports to the US would include trade between parents and affiliates of all nationalities.
Figure 5: US Related-Party Imports from Selected Countries, 1992-2004

Trends in related-party trade

• Increasing dramatically in China & Korea
  – Korea: 26.8% to 62.3%
    • Sector diversification
    • Rising capital intensity
    • Technological innovation
    • Increasing R&D investment
  – China: 10.5% to 27.1%
    • Sector diversification
    • Growing FDI
    • China’s accession to the WTO
    • Increasing R&D investment

• Holding steady in Mexico (around 65%)
Figure 6: FDI Flows into China by Country of Origin, 1990-2005

Source: Chinese Ministry of Commerce, Foreign Investment Management Office
Figure 7: Foreign-Funded Enterprise (FFE) Share of China’s Global Trade, 1990-2005

China’s Total Trade

<table>
<thead>
<tr>
<th>Year</th>
<th>1990</th>
<th>1995</th>
<th>2000</th>
<th>2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>(in billions of $)</td>
<td>115.4</td>
<td>280.8</td>
<td>474.3</td>
<td>1422.1</td>
</tr>
</tbody>
</table>

Source: Chinese Ministry of Commerce, Foreign Investment Management Office
Figure 8: China's Exports to World Markets by Technology-Based Product Classification, 1990-2003

Source: World Trade Analyzer. Classifications are from the work of Oxford professor Sanjaya Lall.
Foreign Capital in China’s Exports

• China the third largest recipient of worldwide FDI
  – World’s largest recipients: US ($96b), United Kingdom ($79b), China ($61b) *(UNCTAD, 2005)*
  – Largest contributors of China’s FDI are in Asia, including the East Asian NIEs (45.5%) and Japan (10.8%) *(2005 Chinese statistics)*

• China’s foreign-funded enterprises (FFEs), in turn, drive China’s export trade.

• *Sector diversification* is promoting FDI and FFEs
  – China is pushing for exports in higher-tech products, thus promoting intrafirm trade and pushing China up the value chain.
Intra-regional Trade Networks: China’s Changing Role in Asian Exports to the US
Despite fears of the “rise of China,” the share of US overall imports from Asia has declined slightly from 1990 (38.2%) to 2005 (35.8%).

Composition of imports has shifted with the rise of new global production networks.
- Firms shift production of goods from Japan and the East Asian NIEs to China.
- Trade balances have shifted, with some worsening (China, Japan) while others have improved (Hong Kong, Singapore).
Figure 9: US Imports from Asia, 1990-2005

Source: U.S. Department of Commerce, Trade Stats Express. Asia here includes Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China, East Timor, Hong Kong, India, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Laos, Macau, Malaysia, Maldives, Mongolia, Myanmar, Nepal, North Korea, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Tajikistan, Thailand, Turkmenistan, Uzbekistan, Vietnam.

<table>
<thead>
<tr>
<th>Year</th>
<th>% of Worldwide US Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>38.2%</td>
</tr>
<tr>
<td>1995</td>
<td>41.1%</td>
</tr>
<tr>
<td>2000</td>
<td>36.7%</td>
</tr>
<tr>
<td>2005</td>
<td>35.8%</td>
</tr>
</tbody>
</table>

(in billions of $)

189.2 305.4 446.4 598.0
Figure 10: US Imports from China, Japan, and the East Asian NIEs, 1990-2005

Source: U.S. Department of Commerce, Trade Stats Express.
US Textile Imports from Asia

• Textile imports from Asia have declined since 1990.
  – 1990s: Textile imports from Asia fell, as NAFTA causes shift to Mexico.
  – Since 2000: Imports have risen slightly, with China’s WTO accession and the phase-out of MFA.

• Composition of imports has shifted: firms have shifted production of textiles and fibers from Japan and the East Asian NIEs to China
  – China rapidly assuming a dominant role in textile production chains
  – East Asian NIEs sharply contracting
Figure 11: US Textile Imports from Asia, 1990-2005 (SITC 26, 65, 84)

Source: U.S. Department of Commerce, Trade Stats Express. Asia here includes Afghanistan, Bangladesh, Bhutan, Brunei, Cambodia, China, East Timor, Hong Kong, India, Indonesia, Japan, Kazakhstan, Kyrgyzstan, Laos, Macau, Malaysia, Maldives, Mongolia, Myanmar, Nepal, North Korea, Pakistan, Philippines, Singapore, South Korea, Sri Lanka, Taiwan, Tajikistan, Thailand, Turkmenistan, Uzbekistan, Vietnam.
Figure 12: US Textile Imports from China, Japan & the East Asian NIEs, 1990-2005 (SITC Codes 26, 65, 84)

Source: U.S. Department of Commerce, Trade Stats Express.
Intra-regional Textile Trade Networks

- Bilateral trade in textiles masks emerging regional trade networks.
- China is now the hub in Asia’s regional production networks.
  - China as a growing export production center for SITC 84 (Apparel)
  - China is importing SITC 26 (Textile fibers) and 65 (Textiles for Apparel) from East Asia in significant numbers
- Thus, China’s exports to the US include indirect exports from Japan and the East Asian NIEs.
Figure 13: China's Place in Asian Textile Trade Networks, 2003 (SITC 26, 65, 84)
China’s Trade Impact Is Global, and Not Simply a Race to the Bottom

• Analyzing the US’s bilateral trade with China must situate China within emerging intraregional trade networks.

• Foreign firms play a key role in China’s strategy of export diversification.

• China is pioneering new forms of industrial organization – supply chain cities, not clusters.

• High-value activities are receiving most attention (R&D, design, science & engineering education, brands).
Broad Conclusions

• There is a globalization paradox
  – The dramatic expansion of production capabilities reflected in global outsourcing creates heightened anxieties in both developed and developing countries regarding sustainable development

• The global economy is concentrated at the top and fragmented at the bottom
  – Thus, the real opportunities to move up in value chains are concentrated in a small number of developing economies
• Global consolidation is increasing among largest developing economies (China, India) and among largest firms & factories

• Development strategies need both vision and balance
  – Exports and domestic markets can be complementary
  – Industrial policies are being implemented at subnational level
  – Regional markets supplement national ones, and can reduce the pressures from global competition
Thank you for your attention!