Perspectives on Global Manufacturing
Global Cost Comparison and Near-Shoring Trends

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AlixPartners publishes an annual Global Manufacturing Study which compares the landed costs of components to the US marketplace
- Includes a Global Manufacturing Index which considers various cost factors (e.g. wages, freight costs to US, currency)
- Looks at different parts individually and collectively as a market basket

The 2011 Study indicated that the US has regained some competitiveness
- U.S. regained some competitiveness relative to the LCCs (largely due to a weaker dollar and LCC wage inflation)
- Mexico had the lowest landed costs
- Other key/emerging LCCs (e.g., India, Vietnam, Russia, Romania) remain more competitive than China, but with higher costs than Mexico

Based on the changes in the global manufacturing landscape, we surveyed 80 executives to see if US companies are changing their views on near-shoring or off-shoring manufacturing
AlixPartners Global Manufacturing Study and Index

Global Trends and their Implications

Near-shoring Survey

Survey Findings

What this means to US Companies – “Is it time to Near-shore?”
Countries and Market Basket of Parts Studied
A Broad Array of Both

Countries
- U.S.
- China
- Mexico
- Brazil
- India
- Vietnam
- Singapore
- South Korea
- Russia
- Hungary
- Czech Republic
- Romania

Product Types
- Fabricated Parts
  - Machined
  - Stampings
  - Molded plastic
  - Precision medical
- Assemblies
  - Complex electromechanical
  - Auto-welded assemblies
- Consumer Products
  - Custom packaging
U.S. Manufacturers Regained Some Ground, But Still at a Cost Disadvantage

All major LCCs improved cost advantage vs. the U.S. during 2009\(^1\) – to roughly equivalent to 2005 / 2006

The U.S. regained some cost advantage (due largely to weak dollar) over the past 2 years

Mexico and Vietnam had the lowest landed costs

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1) Landed cost in U.S. from LCCs relative to U.S. domestic manufacturing cost for market basket of parts
Source: AlixPartners Analysis
Most currencies (Eastern Europe, China, India, Mexico) saw gains against the weak U.S. dollar.

Vietnam’s currency weakened again in 2011 by ~5% against the dollar.
Ocean-Freight Rates: A Major Drop in Shipping Rates\(^1\) in 2009 Made Off-Shore LCCs More Competitive – No Major Change since 2010

Key Drivers

- Slowing global economy reduced the demand for ocean freight – cutting prices
- Lower fuel prices cut container ship operating costs (fuel is typically 50% or more of operating cost)
- Some recovery in late 2009, but ocean freight-container costs still about 1/3 of peak from early 2008

Notes: 1) Baltic Dry Index used as a proxy for container shipping index
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A Combination of Assumptions for China Would Increase the Landed Cost of the China Part to that of the US-Manufactured Part

- Annual Increases
  - China wage rate = 30%
  - China exchange rate = 5%
  - China freight rate = 5%
  - US wage rate = 2.5%

- Landed cost of China part equals the cost of a US manufactured part by 2015 for the market basket of parts analyzed
Likely Future Trends

- LCCs' competitiveness relative to U.S. manufacturers will erode, as key general manufacturing cost-drivers (logistics, materials, etc.) stabilize at more economically-sustainable levels
  - Asian LCCs will be more impacted than Mexico

- China, in particular, will experience negative pressure on landed cost, due to:
  - Wage inflation (labor unrest, greater unionization, double-digit inflation)
  - Exchange-rate pressures (international pressure to float the yuan)
  - Higher freight rates (increasing demand for oil, etc.)
What Does This Mean For Companies’ Supply-Chain Strategies?

- **Basic considerations**
  - What is the end market?
  - What is the appropriate risk-reward profile?
  - What is the demand fluctuation profile?

- **Increased cash focus**
  - We are seeing more involvement by private equity sponsors
  - Extended supply chains can tie up excessive cash

- **Understanding the rapid changes in global cost-competitiveness**
  - The correct strategy is product-dependent
  - The necessary analysis takes more time, effort and expertise than it has in the past
  - Analyses needs to be done more frequently to remain relevant
  - Simple rules / conclusions are usually not optimal

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*Is it time to Near-shore?*
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Survey Overview

- **Date:** January 25 - April 4, 2011
- **Population:** C-level and other senior executives in manufacturing-oriented companies that sell into the U.S. market from more than 15 different industries
- **Methodology:**
  - Web-based survey conducted by AlixPartners
  - A total of 80 respondents surveyed
- **Survey Focus:** The two-part survey polled respondents on their (1) near-shoring and (2) off-shoring current practices and plans – key areas of focus included:
  - Understanding scope of current manufacturing near-shoring (and off-shoring) practices
  - Gauging extent and timing of plans to near-shore and/or off-shore operations
  - Identifying barriers to relocating operations to new locations
  - Determining favored locations for relocation of operations
### Industry Breakdown of Sample

<table>
<thead>
<tr>
<th>Industry</th>
<th>% of Sample</th>
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<tbody>
<tr>
<td>Auto / Transportation</td>
<td>24%</td>
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<tr>
<td>Aviation</td>
<td>16%</td>
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<tr>
<td>Consumer Goods</td>
<td>12%</td>
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<tr>
<td>General Manufacturing</td>
<td>10%</td>
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<tr>
<td>Chemicals</td>
<td>6%</td>
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<tr>
<td>Environmental Systems</td>
<td>6%</td>
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<tr>
<td>Medical</td>
<td>6%</td>
</tr>
<tr>
<td>Durable Goods</td>
<td>4%</td>
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<tr>
<td>Packaging</td>
<td>4%</td>
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<tr>
<td>Agriculture</td>
<td>2%</td>
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<tr>
<td>Communications</td>
<td>2%</td>
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<tr>
<td>Construction</td>
<td>2%</td>
</tr>
<tr>
<td>Electrical Systems</td>
<td>2%</td>
</tr>
<tr>
<td>Energy</td>
<td>2%</td>
</tr>
<tr>
<td>Manufacturing, Other</td>
<td>2%</td>
</tr>
</tbody>
</table>

### Operational Location(s) Currently Serving U.S. Customer Base

- China: 75%
- Mexico: 68%
- India: 43%
- Eastern Europe: 39%
- Brazil: 33%
- Other Asian Country: 25%
- Russia: 20%
- Other Latin...: 20%
- Singapore: 12%
- Malaysia: 9%
- Western Europe: 9%
- Vietnam: 5%
- Africa: 4%
- Canada: 3%
- Puerto Rico: 1%
- Indonesia: 1%
- Dom Republic: 1%
- Mexico: 1%
- China: 1%
- Costa Rica: 1%
87% Own or Operate Operations Outside the U.S.; 83% have Third-Party Operations Relationships Outside the U.S.

How many manufacturing operations and / or suppliers do you own / operate in Asia, India, Eastern Europe, Russia, or Latin America (combined)?

- 5 or more: 61%
- 3-4: 20%
- 1-2: 13%
- None: 5%

How many third-party contract-manufacturing and / or sourcing relationships do you have in Asia, India, Russia, Eastern Europe, or Latin America (combined)?

- 5 or more: 53%
- 3-4: 22%
- 1-2: 17%
- None: 8%

The majority of those surveyed are consider international companies; less than 20% source strictly from the US.
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Executive Summary

Near-Shoring Findings
- Despite security concerns, Mexico remains the destination of choice for “near-shoring,” the relocation of previously outsourced manufacturing to areas closer to products’ U.S. end-market.
  - 87% of respondents own or operate operations outside the U.S.; 83% have third-party operations relationships outside the U.S.
  - 42% of respondents are either already near-shoring or likely to near-shore in the next three years
  - 63% of those already near-shoring select Mexico as their top choice (vs. just 19% for the U.S.)

Off-Shoring Findings
- Respondents also answered questions related to plans for off-shoring current U.S. operations.
  - 27% of respondents expect to off-shore U.S. operations within the next three years, with Mexico also being their top choice for off-shoring locale
  - Just 21% have experienced supply-chain disruption due to security issues in Mexico
  - 50% expect security/safety issues in Mexico to improve in the next five years
42% Say They Are Either Already Near-Shoring or Will Be Within the Next Three Years…

If near-shoring is a consideration, what is your time horizon for near-shoring Asian / Indian operations to the Americas, including Latin America?
Of that Number, 63% Say their First Option is Mexico, with the U.S. Next at 19%.

If near-shoring is a consideration, rank each region in attractiveness.

Most Attractive Locations (First Choice)

- Mexico: 63%
- US: 19%
- Brazil: 6%
- Other: 4%
- Other Central American country: 2%
- Other South American country: 0%
- Other South American country: 0%
- Other Central American country: 2%
- Canada: 0%
- Other: 4%

Note: Most of Brazil’s manufacturing demand is consumed in Brazil, not exported for U.S. consumption.
The Most Attractive Advantages Expected From Near-Shoring: Lower Freight Costs and Improved Speed to Market

Rank the advantages you expect from a near-shoring decision.

- Lower freight costs: 30%
- Improved speed-to-market: 25%
- Lower inventory (in-transit) costs: 18%
- "Time-zone advantages" (easier management coordination, etc.): 16%
- Improved cultural alignment with North American managers: 11%

Rising fuel prices and a renewed focus on working capital has increased the attractiveness of Near-Shoring.
37% Are in the Process or Have Completed Off-Shoring Within the Last Three Years; 27% Expect to Off-Shore Within Three Years...

What is your time horizon for off-shoring operations and / or supply outside the U.S.?

- In process, or completed within last three years: 37%
- 1 year: 15%
- 2-3 years: 12%
- 4-5 years: 7%
- 5+ years: 2%
- Not under consideration: 28%
Of that Number, 43% Say their First Option is Mexico; No BRIC Country Higher than 30%

If off-shoring is an option, rank each region in attractiveness.
(1=most attractive; 11=least attractive)

- Mexico: 43%
- China: 30%
- India: 14%
- Eastern Europe: 5%
- Other: 3%
- Canada: 3%
- Brazil: 3%
Primary Concerns Associated with Off-Shoring:
Safety / Security of Operations and Extension of the Supply Chain...

Rank the concerns you expect from an Off-Shoring decision.
(1=most concerned; 8=least concerned)

Top Concern for Off-Shoring Decision
(% of Sample)

- Safety / Security: 38%
- Extension of Supply Chain: 17%
- Performance Deterioration: 13%
- Political Stability: 12%
- Loss of Direct Control: 10%
- Language / Cultural Barriers: 8%
- Customs / Tariffs: 2%

Most Concern

Least Concern
But, Just 19% of Respondents Have Experienced Supply-Chain Disruption Due to Security Issues in Mexico

Have you experienced any supply chain disruption due to security issues in Mexico?

- No: 59%
- Not applicable: 22%
- Yes: 19%
50% Expect Security / Safety Issues in Mexico to Improve in the Next Five Years

What best represents your outlook on the security / safety situation in Mexico over the next 5 years?

- 45% expect dramatic improvement
- 29% expect modest improvement
- 14% expect the security situation in Mexico will actually worsen somewhat over time
- 7% expect the situation in Mexico is spiraling out of control
- 5% expect the security situation will not change
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Is It Time To “Near- Shore”? 

- From AlixPartners observations, most US companies did not make big supply-chain changes during or immediately after the global recession.
  - High level of uncertainty – was not clear when economy would hit bottom
  - In many cases, the infrastructure (plants, supply base, etc.) needed to be rebuilt to bring work back from Asia to the U.S. or Mexico
  - China is now the second-largest economy in the world, and still very attractive as a target for long-term growth

- Manufacturing in China may not be the best solution for certain products
  - Continued wage and freight cost pressure
  - Mexico had the most attractive landed cost (to U.S.) for our market basket of parts

- We are seeing an uptick in near-shoring activity, with strong bias towards Mexico¹

Notes: 1) AlixPartners Near Shoring Survey
AlixPartners is a Global Firm of Senior Business and Consulting Professionals That Specializes in Improving Corporate Financial and Operational Performance, Executing Corporate Turnarounds and Providing Litigation Consulting and Forensic Accounting Services When It Really Matters—in Urgent, High-impact Situations

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