The interconnected global economy will see a continued increase in the levels of international trade and capital flows, but unless international conventions can be strengthened, progress and optimum economic benefits may not be realized.

Global trade as a share of GDP increased from: 40% in 1980 to 63% in 2011.

Global growth in trade is projected to continue at approximately 5% annually through 2030.

Global Foreign Direct Investment stocks have quintupled as a share of GDP, from approximately 6% to 30%.

1 1980 2011
2 x1 x2 x3 x4 x5
3 1980 2011
Asia’s share of global exports is expected to nearly double to 80% by 2030.\textsuperscript{4}

of reciprocal trade agreements currently in force have been introduced since 1990.\textsuperscript{5}

The consequences of economic interconnectedness

- Trade and investment continue to drive growth
- Increasingly complex trade and investment relationships
- Declining barriers to trade
- Greater risk for international (economic/financial) contagion events
Today’s New “Place” Reality

- The economy changed
- The competition changed
- Locational factors changed
- The U.S. workforce has changed
- The talent demands changed
- Customer (talent & companies) demands/expectations changed
- The pace of change and everything else changed
<table>
<thead>
<tr>
<th></th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>General Motors</td>
</tr>
<tr>
<td>2</td>
<td>Exxon</td>
</tr>
<tr>
<td>3</td>
<td>Ford</td>
</tr>
<tr>
<td>4</td>
<td>Mobil</td>
</tr>
<tr>
<td>5</td>
<td>Texaco</td>
</tr>
<tr>
<td>6</td>
<td>Standard Oil – California</td>
</tr>
<tr>
<td>7</td>
<td>IBM</td>
</tr>
<tr>
<td>8</td>
<td>General Electric</td>
</tr>
<tr>
<td>9</td>
<td>Gulf Oil</td>
</tr>
<tr>
<td>10</td>
<td>Chrysler</td>
</tr>
<tr>
<td>11</td>
<td>International Telephone and Telegraph</td>
</tr>
<tr>
<td>12</td>
<td>Standard Oil – Industrial</td>
</tr>
<tr>
<td>13</td>
<td>Atlantic Richfield</td>
</tr>
<tr>
<td>14</td>
<td>Shell</td>
</tr>
<tr>
<td>15</td>
<td>US Steel</td>
</tr>
<tr>
<td>16</td>
<td>E.I. du Pont</td>
</tr>
<tr>
<td>17</td>
<td>Western Electric</td>
</tr>
<tr>
<td>18</td>
<td>Continental Oil</td>
</tr>
<tr>
<td>19</td>
<td>Tenneco</td>
</tr>
<tr>
<td>20</td>
<td>Procter and Gamble</td>
</tr>
<tr>
<td>21</td>
<td>Union Carbide</td>
</tr>
<tr>
<td>22</td>
<td>Goodyear</td>
</tr>
<tr>
<td>23</td>
<td>Sun Oil</td>
</tr>
<tr>
<td>24</td>
<td>Caterpillar</td>
</tr>
<tr>
<td>25</td>
<td>Eastman Kodak</td>
</tr>
</tbody>
</table>
## 2013 Fortune 500: Top 25

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Wal-Mart</td>
</tr>
<tr>
<td>2</td>
<td>Exxon/Mobil</td>
</tr>
<tr>
<td>3</td>
<td>Chevron</td>
</tr>
<tr>
<td>4</td>
<td>Phillips 66</td>
</tr>
<tr>
<td>5</td>
<td>Berkshire Hathaway</td>
</tr>
<tr>
<td>6</td>
<td>Apple</td>
</tr>
<tr>
<td>7</td>
<td>General Motors</td>
</tr>
<tr>
<td>8</td>
<td>General Electric</td>
</tr>
<tr>
<td>9</td>
<td>Valero Energy</td>
</tr>
<tr>
<td>10</td>
<td>Ford Motor</td>
</tr>
<tr>
<td>11</td>
<td>AT&amp;T</td>
</tr>
<tr>
<td>12</td>
<td>Fannie Mae</td>
</tr>
<tr>
<td>13</td>
<td>CVS Caremark</td>
</tr>
<tr>
<td>14</td>
<td>McKesson</td>
</tr>
<tr>
<td>15</td>
<td>Hewlett Packard</td>
</tr>
<tr>
<td>16</td>
<td>Verizon Communications</td>
</tr>
<tr>
<td>17</td>
<td>United Health Group</td>
</tr>
<tr>
<td>18</td>
<td>J.P. Morgan Chase and Co</td>
</tr>
<tr>
<td>19</td>
<td>Cardinal Health</td>
</tr>
<tr>
<td>20</td>
<td>IBM</td>
</tr>
<tr>
<td>21</td>
<td>Bank of America Corp.</td>
</tr>
<tr>
<td>22</td>
<td>Costco Wholesale</td>
</tr>
<tr>
<td>23</td>
<td>Kroger</td>
</tr>
<tr>
<td>24</td>
<td>Express Scripts Holding</td>
</tr>
<tr>
<td>25</td>
<td>Wells Fargo</td>
</tr>
</tbody>
</table>
The New Economy
- Each country does what it's best at.

China
Manufacturing

India
Software Design

U.S.
I'd like to take out a third mortgage on my house so I can buy more stuff.

Loans
I'll have to ask China or India for the money.
Global Business Trends

Four mega and counter trends in corporate strategy affecting economic development...

- Concentration/consolidation to get more focus, interaction, collaboration, discovery
- Diversification of location to access, reach, understand new markets and cultures
- Integrating the enterprise on a global basis … breaking out components -- what goes where?
- Innovation to optimize location, quality and cost
Manufacturing Trends

- Globalization
- Technology/Innovation
- New Types of Products
- Near Term Shift in Focus: From Process to Cost
- Infrastructure
- Focus on Environment and Sustainability
- Future Supplier Locations
- Trade
- Long Term Critical Need for Educated/ Skilled Workforce
The Boeing 787: An Example of a Global Supply Chain
287 Suppliers Across 22 countries

<table>
<thead>
<tr>
<th>THE COMPANIES</th>
<th>CANADA</th>
<th>AUSTRALIA</th>
<th>JAPAN</th>
<th>KOREA</th>
<th>EUROPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S.</td>
<td>Boeing</td>
<td></td>
<td>Boeing</td>
<td></td>
<td>Messier-Dowty</td>
</tr>
<tr>
<td></td>
<td>Spirit</td>
<td></td>
<td>Kawasaki</td>
<td>KAL-ASD</td>
<td>Rolls-Royce</td>
</tr>
<tr>
<td></td>
<td>Vought</td>
<td></td>
<td>Mitsubishi</td>
<td></td>
<td>Latecoere</td>
</tr>
<tr>
<td></td>
<td>GE</td>
<td></td>
<td>Fuji</td>
<td></td>
<td>Alenia</td>
</tr>
<tr>
<td></td>
<td>Goodrich</td>
<td></td>
<td></td>
<td></td>
<td>Saab</td>
</tr>
</tbody>
</table>

- **WING TIPS**
  - Korea

- **MOVABLE TRAILING EDGE**
  - Australia

- **TAIL FIN**
  - Fredrickson, Washington

- **HORIZONTAL STABILIZER**
  - Foggia, Italy

- **AFT FUSELAGE**
  - Charleston, S.C.

- **MAIN LANDING GEAR WHEEL WELL**
  - Nagoya, Japan

- **LANDING GEAR**
  - Gloucester, UK

- **CENTER WING BOX**
  - Nagoya, Japan

- **ENGINE NACELLES**
  - Chula Vista, CA

- **CENTER FUSELAGE**
  - Grottaglie, Italy

- **FORWARD FUSELAGE**
  - Nagoya, Japan

- **FORWARD FUSELAGE**
  - Wichita, Kansas

- **CARGO ACCESS DOORS**
  - Sweden

- **WING/BODY FAIRING**
  - Landing Gear Doors
  - Winnipeg, Canada

- **ENGINES**
  - GE-Evendale, Ohio
  - Rolls-Royce-Derby, UK

- **FIXED AND MOVABLE LEADING EDGE**
  - Tulsa, Oklahoma
Offshoring Revisited

For years, offshoring production and suppliers has been the mantra for cost reduction.

However, today a new paradigm is emerging that challenges this “decades old” logic and suggests that it may not be a sound strategy going forward.

**Ten Macro Forces currently undermining the offshoring trend**

1. Uncertain global economic future
2. Volatile commodity prices
3. Continuing high offshore transportation costs
4. Exchange rate uncertainty
5. Increased offshore labor rates
6. Higher cost of quality
7. Reduced supply chain flexibility
8. Decreased visibility and increased network complexity / risk
9. Increasing customer requirements
10. High IC theft and piracy / grey market

**Manufacturers have reacted by reevaluating their supply chains**

Nearly 90% of manufacturers recently reported that they are considering or have already begun rebalancing their manufacturing and supply strategy:

- 40% have reported an increase in aggregate cost of 25% or more
- 90% expect further increases of 10% or more

*Source: 2008 Archstone / SCHR Survey of Manufacturers*

Furthermore, many manufacturers state that offshoring has prevented them from more aggressively pursuing product and service customization strategies.
The True Cost of Offshoring

As the marginal benefit of offshoring decreases, other costs rarely included in total cost models are becoming more visible.

**Top 4 most significant “soft” costs**

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cycle / Delivery Time</td>
<td>59%</td>
</tr>
<tr>
<td>Supply Chain Flexibility</td>
<td>56%</td>
</tr>
<tr>
<td>Supply Chain Visibility &amp; Control</td>
<td>50%</td>
</tr>
<tr>
<td>Logistics Bottlenecks (e.g. freight)</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Manufacturers are becoming more aware: other costs are eroding the advantages of offshoring**

- Reduced ability to “sense and respond”
- Additional costs driven by the need to compensate for an inflexible supply chain and buffer against demand fluctuations by holding additional inventory
- Long-haul logistics drives larger batch sizes, increased in-transit inventory, and requires more precise forecasting
- Increased risk for delivery cycle delays, jeopardizing vendor and customer relationships
- Limited ability to gain competitive advantage through customer-centric operations and supply
- Increased cost of quality

**Manufacturers expect “non-core” hard costs to increase as well**

<table>
<thead>
<tr>
<th>Cost Type</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packaging Costs</td>
<td>65%</td>
</tr>
<tr>
<td>Procurement Staffing Costs</td>
<td>60%</td>
</tr>
<tr>
<td>Overhead &amp; Administrative Costs</td>
<td>59%</td>
</tr>
<tr>
<td>Inventory Costs (e.g. buffer, in-transit)</td>
<td>49%</td>
</tr>
</tbody>
</table>

*Source: 2008 Archstone / SCM Survey of Manufacturers*
Chart 1:

China vs. US
Growth in Manufacturing Wages:
12/2007-12/2012

Comparative Economic and Related Data

Movement and levels of manufacturing products to and from top manufacturing economies and their trading partners, by product type

Total manufacturing exports in billion US$:
- >1,000
- 500-1,000
- 200-499
- <200

Color of arrows:
- Violet: >80%
- Green: 60-80%
- Orange: 40-50%
- Yellow: <40%

Source: Deloitte Touche Tohmatsu Limited analysis

Notes:
- The classification of goods into different degrees is based on Standard International Trade Classification (SITC) codes, UNCTAD
- Shaded grey countries represent export trade partners of top 10 GMMCI competitive nations

Source: Deloitte Touche Tohmatsu Limited and US Council on Competitiveness, 2013 Global Manufacturing Competitiveness Index
Who’s Talking About Onshoring?

Boston Consulting Group

“Within the next five years, the U.S. is expected to experience a manufacturing renaissance.”

Onshoring Trends

- Costs of labor and commodities are rising
- The dollar is worth 25% less than three years ago
- Rising energy costs increase shipping costs
- Intellectual property concerns
- American made products preferred by some
- US has abundance of skilled but unemployed labor
- US wages are stagnant or even falling
Next-Shoring

• Greater emphasis on proximity to both demand and innovation
  1- Local decisions that balance economies of scale against diversity of tastes within and across global markets
  2- Building supplier ecosystems that combine technical expertise with local market knowledge
  3- Develop the people and skills to make the most of technological advances across the organization
Reshoring, 3D Printing and Big Data

- Interface of three separate movements
- Data and 3D printing saves logistics costs
- Facilities can now be closer to the consumer
- Allows more flexible and responsive manufacturing process
- Enhances quality control
- Protects R&D
- Reduces the number of Full Truck Loads
Big Data (Smart Data)

- Cloud computing
- Advanced robotics
- Internet of Things
- The iPad run factory is here-GE, Fiat
- Crowdsourcing networks
3D Printing Benefits

- More customized
- Consumer demand
- Quicker turn around time
- Reduces inventory
- Reduces supply chain interruptions
- Interfaces with social media
- Prototyping is less risky
- Interfaces with Big Data
Foreign Direct Investment

Cumulative Foreign Direct Investment in the United States, 2008-2012

Foreign Direct Investment in the United States 2002-2012

Data are shown on a historical-cost basis, or cost at time of investment.
Source: Bureau of Economic Analysis

Data are shown on a balance of payments basis.
Source: Bureau of Economic Analysis
Foreign Direct Investment

Cumulative Foreign Direct Investment in the United States by Country Through 2012

1. United Kingdom $487 B
2. Japan $308 B
3. Netherlands $275 B
4. Canada $225 B
5. France $209 B
6. Switzerland $204 B
7. Luxembourg $202 B
8. Germany $199 B
9. Belgium $89 B

Data are shown on a historical-cost basis, or cost at time of investment.
Source: Bureau of Economic Analysis

Top Countries by 2012 FDIUS Inflows

1. Netherlands $29.9 B
2. France $21.7 B
3. United Kingdom $20.5 B
4. Japan $19.2 B
5. Canada $15.5 B
6. Belgium $11.9 B
7. U.K. Islands Caribbean $7.7 B
8. Luxembourg $6.2 B
9. South Korea $5.2 B
10. Hungary $3.6 B

Data are shown on a financial flow basis without current-cost adjustment.
Source: Bureau of Economic Analysis
Foreign Direct Investment

Cumulative FDIUS by Industry 2012

- Manufacturing $899 B
- Other Industries $563 B
- Real Estate & Leasing - $50 B
- Retail Trade - $52 B
- Professional, Scientific & Technical Services $107 B
- Information $124 B
- Banking $198 B
- Wholesale Trade $292 B
- Finance & Insurance $366 B

FDIUS Flows by Select Industries 2011-2012

- Manufacturing
  - 2011: $93.2 B
  - 2012: $79.5 B
- Wholesale Trade
  - 2011: $22.0 B
  - 2012: $19.1 B
- Professional, Scientific, & Technical Services
  - 2011: $2.6 B
  - 2012: $11.1 B
- Retail Trade
  - 2011: $2.2 B
  - 2012: $4.5 B
- Information
  - 2011: $4.3 B
  - 2012: $3.4 B
- Finance & Insurance
  - 2011: $7.1 B
  - 2012: $2.6 B
- Banking
  - 2011: $27.2 B
  - 2012: $2.4 B

Data are shown on a historical-cost basis, or cost at time of investment.
Source: Bureau of Economic Analysis

Data are shown on a financial flow basis without current-cost adjustment.
Source: Bureau of Economic Analysis
Foreign Direct Investment

Cumulative FDIUS in Manufacturing 2012

FDIUS Flows by Select Manufacturing Industries 2011-2012

- Chemicals: $43.7 B in 2012, $39.9 B in 2011
- Electrical Equipment, Appliances, & Components: $2.1 B in 2012, $23.3 B in 2011
- Transportation Equipment: $6.0 B in 2012, $6.6 B in 2011
- Machinery: $4.5 B in 2012, $9.5 B in 2011
- Computers & Electronic Products: $3.1 B in 2012, $1.8 B in 2011
- Petroleum & Coal Products: $18.3 B in 2012, $0.2 B in 2011

Data are shown on a financial flow basis without current-cost adjustment.
Source: Bureau of Economic Analysis

Data are shown on a historical-cost basis, or cost at time of investment.
Source: Bureau of Economic Analysis
Targeted Subsectors for Reshoring

Figure 3: Prospects for selected subsectors

- Chemicals
- Primary metals
- Electrical equipment
- Fabricated metal products
- Machinery
- Paper
- Transportation equipment
- Wood products

Cost benefits and trade balances likely to favor United States re-shoring

Cost benefits and trade balances that may favor United States re-shoring

Source: Census Bureau, Bureau of Transportation Statistics, Bureau of Economic Analysis, PwC Analysis
Manufacturers Expect Continued Pressures

Source: Industry Week

Percent of Respondents selecting as one of their top 3 choices

- Competition from low-cost countries: Currently 48%, Three years from now 50%
- Cost of healthcare: Currently 47%, Three years from now 47%
- Cost of raw materials: Currently 46%, Three years from now 43%
- Attracting/keeping skilled labor: Currently 26%, Three years from now 37%
- Credit markets/working capital: Currently 8%, Three years from now 26%
- Cost of oil & gas/electricity: Currently 19%, Three years from now 24%
- Time-to-market for new products: Currently 18%, Three years from now 16%
- Quality control/assurance: Currently 7%, Three years from now 15%
- Taxes (federal, state and/or local): Currently 15%, Three years from now 24%
- Supply chain disruption: Currently 11%, Three years from now 8%
- Regulations: Currently 10%, Three years from now 17%
- Environmental compliance: Currently 8%, Three years from now 13%
- Other (see Appendix A): Currently 3%, Three years from now 9%

Source: Industry Week
Critical Need for Educated Workforce

• Excellence in education is becoming a key site selection factor in our “tech economy”
• Focus must be on academics, “soft” skills, and hands-on experience
• Greater client demands for high-skilled, flexible workforce
• Insufficient funding of local education programs leaves many communities unprepared for advanced technology
• A highly skilled and educated workforce is the most critical element for innovation success
• 80% of U.S. parents discourage their children from science and technology careers
International Competition

• Unfair Trading Practices

• Export Constraints

• Distorted Currency Values

• Counterfeit Goods
Challenges: Regulatory Costs

Federal Regulatory Costs Per-Employee

- Manufacturing
- Retail/Wholesale Trade
- Services
- U.S. Average

Source: Small Business Administration
Mississippi Legislative Efforts

- Inventory Tax Relief
- Workers Compensation Reform
- Workforce Enhancement Training Fund
- Civil Justice Reform
- Unemployment Insurance Reduction
- 1 ½% Sales Tax exemption for energy used in the manufacturing process
- No Tax Increases
- No Fee Increases
Offshoring jobs dropped by 70% over the last 10 years

Over the last three years 100,000 jobs have been created by companies bringing jobs back to the U.S.

Key factors behind relocations are lower-cost energy, lower transportation costs and better intellectual property protection
The key to unleashing the growth potential of Mississippi manufacturing is to provide a conducive business climate that encourages innovation, entrepreneurship and investment. Picking winning industries is risky business.
Thank You