



RESHORING to the USA

How Will This Movement Affect Planning?

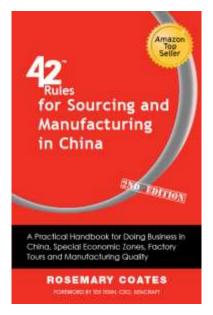
American Planning Association Webcast March, 2015

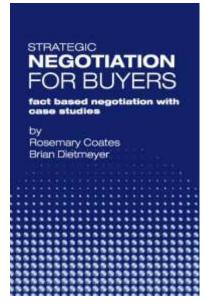
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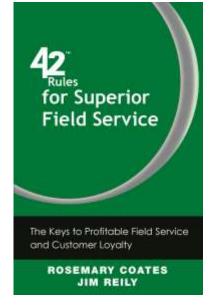
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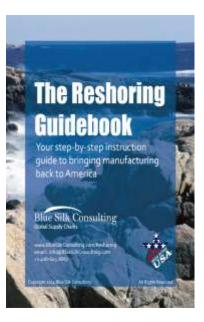


- Executive Director of the Reshoring Institute
- President of Blue Silk Consulting
- Nearly 25 years of Global Supply Chain consulting experience
- Over 80 supply chain clients, worldwide
- Author of
 - 42 Rules for Sourcing and Manufacturing in China
 - Strategic Negotiation for Buyers and
 - 42 Rules for Superior Field Service
 - The Reshoring Guidebook
- BS in Business Logistics Arizona State University
- MBA University of San Diego











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501c3 Non-profit Organization

A collaboration





Our Mission

The Reshoring Institute provides research and support for companies bringing manufacturing and services back to America.

Our Vision

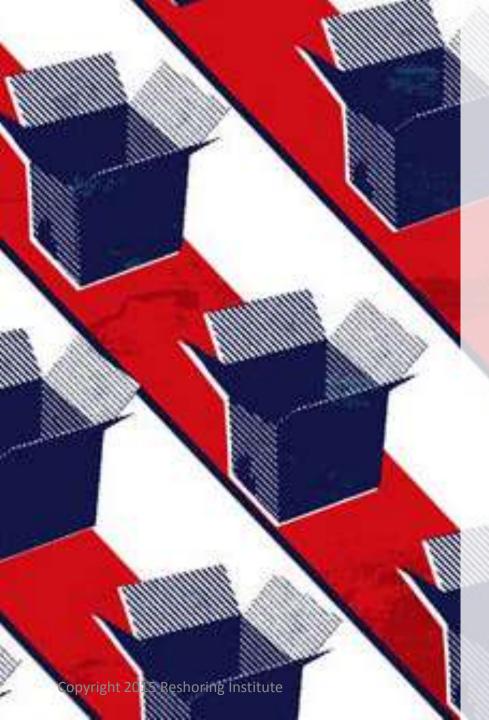
In collaboration with the University of San Diego Supply Chain Management Institute, we provide information, research and support for companies trying to "Reshore" manufacturing. This includes topics such as site selection, tax incentives, science and math education, marketing, public relations and cost comparison development.

Our Student Interns at USD

Interns work 100 paid hours per semester on directed research in support of the Institute's research agenda or as directed by clients.

Our Sponsors

Our sponsors are businesses that support bringing manufacturing back to America. Sponsorships are available at the silver, gold and platinum levels.



What is Reshoring?

The process of bringing manufacturing and other jobs that were previously offshored, back to America and Europe

We used to think that manufacturing would never come back to the US. It just didn't make economic sense. It was too expensive to manufacture in America and consumers would not pay higher prices for American-made goods.

But then everything changed...

2012 Presidential Elections: Both Barack Obama and Mitt Romney blamed China for America's economic decline

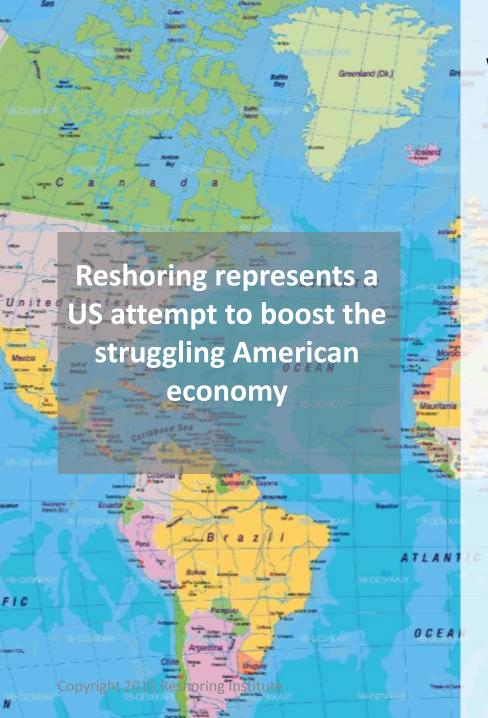






Why Are Companies Reshoring Now?

- Mood of America has shifted from a desire to buy the least expensive goods to goods made in America
- Maturing of Supply ChainManagement strategies
- Introduction of new technologies such as robotics and 3D printing and 5-axis milling
- Incentives offered by governments
- Corporate "Economic Patriotism"



Why Are Companies Reshoring Now? (cont'd)

- Rise in Chinese wages at about 15-18% per year for the last 14 years, and an annual energy cost increase of 5-10%
- Fluctuating oil prices resulting in changing international freight costs
- Difficulty in dealing with quality issues in China
- Intellectual Property protection
- Lower natural gas prices reducing
 U.S. chemical and energy costs



The US Is Not Going Back To 1960s Manufacturing

To be cost effective, Reshoring must include heavy investment in automation



Robot called Baxter



3D Printing



Fully automated production lines



Walmart Is Leading With A \$250 BILLION Investment In US-Made Goods







Revitalize American Manufacturing Act of 2014

- Creation of Network for Manufacturing Innovation, expanding advanced manufacturing jobs by investing in manufacturing technologies and capabilities
- Goal of up to 45 institutes over the next decade
- Institutes bring together companies and universities, supported by Federal agencies, to co-invest in world-leading manufacturing technologies and workforce capabilities
- https://www.youtube.com/watch?v=7gaYlJ1HOdw



President Obama's State of the Union Address, Jan 20, 2015

- Emphasis on sustaining growth in the US Manufacturing sector
 - New lower tax rates for manufacturers
 - Fair and transparent regulations
 - Energy policy that favors manufacturing
 - Encouraging innovation
- Launch six new innovation hubs
- US Patent reform
- Improve US infrastructure
- Energy independence
- Education and training



Should Manufacturers Completely Leave China?

- 35-40% of the world's manufactured goods come from China
- The supply base is there
- Skills have been off-shored from America to China
- "Buy Chinese" laws requiring local content and manufacturing
- China is the largest economy in the world and growing at 8% annually
- But most importantly:
 - China's middle class is expected to include 630 million people by 2022
 - By 2030, Asian middle class will be 66% of the global share
 - It is likely to be the largest target market in the world

Leave China? Probably Not!





Reshoring Has Begun In America

- 54% of US Manufacturers with annual sales greater than \$1Billion say they are considering Reshoring
- Since 2003, new offshoring is DOWN by 70% to 80% and new Reshoring is UP by 1500%
- 50,000 jobs have beenReshored to the US since 2011



How Will Reshoring Affect Location and Development in America?

- Manufacturing looks different this is not your Grandfather's 1960's manufacturing
- Fully automated production lines require different skills and different kinds of buildings
- Training and quality of life are important factors in employee attraction and retention
- Government incentives can be the deciding factor
- Access to markets and proximity to suppliers and customers must be considered





Here Are the "Moving Parts" We Have Identified

- 1. Organize Your Project
- 2. Cost Evaluation
- 3. Innovation
- 4. Automation
- 5. Localization
- 6. Skills and Education
- 7. Tax and Other Incentives
- 8. Government Outreach
- 9. Supply Base Considerations
- 10. Marketing and PR
- 11. Roadmap for Reshoring
- 12. Building Your Business Case

Consider all these steps BEFORE you start a Reshoring project



Some Reshoring Success Stories



GE appliances

General Electric added 10,000 jobs and set up new plants in the US in 2011.



1888 "Made Here" towels

Sold at Walmart



Apple Computer

Foxconn in China

Foxconn in California and Texas



Starbucks ceramic mugs

Reopened plant in Ohio





Rebuilding the Middle Class In America

- Manufacturing is the key to middle class growth
- Immediately after World War II, manufacturing workers in America represented about 30% of the total workforce
- Today, about 18%
- Factory jobs are key to economic health in towns and communities across the America

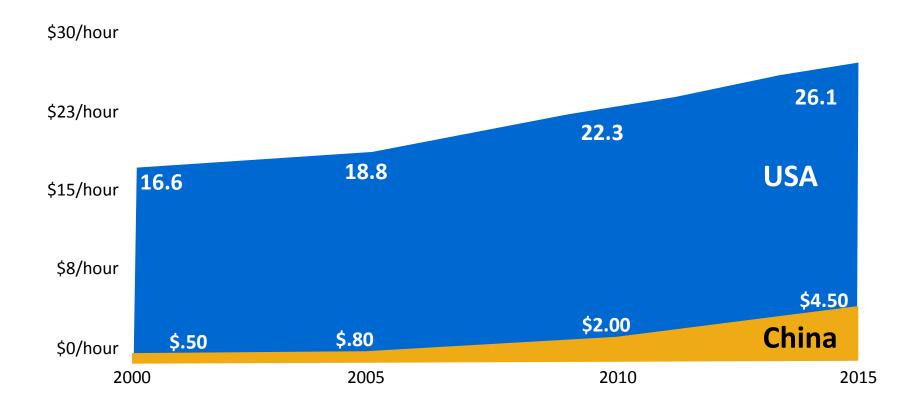


There Are Different Opinions About America's Cost Competitiveness

- Chinese manufacturing laborer earns just
 12% of U.S. wages
- Chinese productivity is growing significantly faster than U.S. productivity
- Lower energy costs from shale gas production help, but energy costs are less than 5% of total costs in 90% of U.S. manufacturing industries. For most manufacturing industries energy savings are modest.

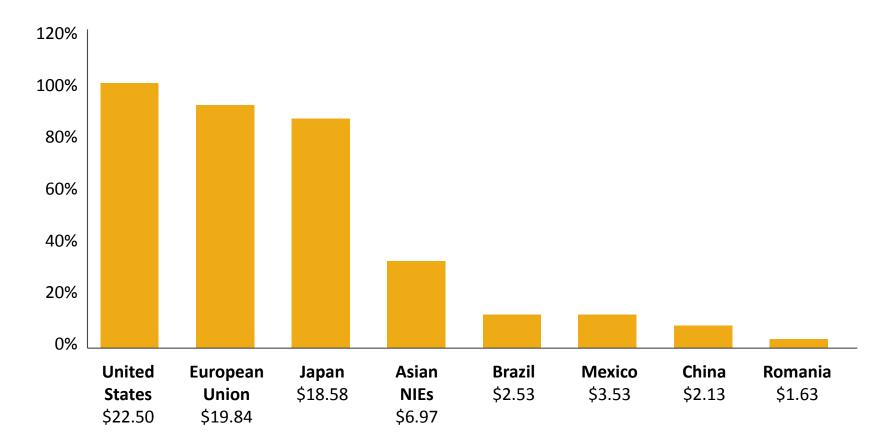
Average Manufacturing Labor Costs Per Hour, China Vs. U.S. In Dollars

Even if labor costs quadruple in China, they are still far below the US



If You Only Consider The Labor Costs, It Is Impossible For America To Compete

Average hourly compensation costs of manufacturing workers



^{*}Asian NIE are Newly Industrialized Economies of Hong Kong, Korea, Singapore, Taiwan Source: US Bureau of Labor Statistics 2012



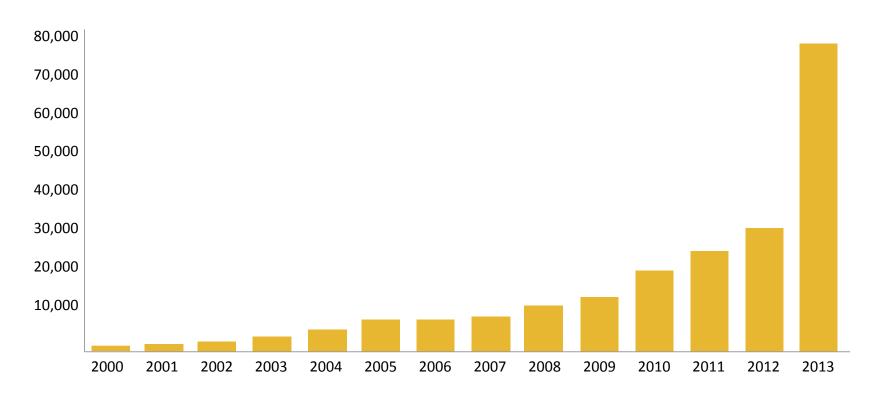


Chinese Are Buying Businesses In the US – Foreign direct investment will also increase the need for new factories

- Total Chinese foreign direct investment in the U.S. is on pace to reach at least \$20 billion this year.
- Includes all acquisitions and investments in manufacturing facilities, warehouses, labs and offices in the United States valued at \$1 million or higher.
- Generally, these acquisitions represent a higher return on investment than can be achieved by investing in Chinese companies.

Chinese Firms Now Have More Than 80,000 Americans On Their Payrolls, A Sharp Increase From 10,000 In 2007

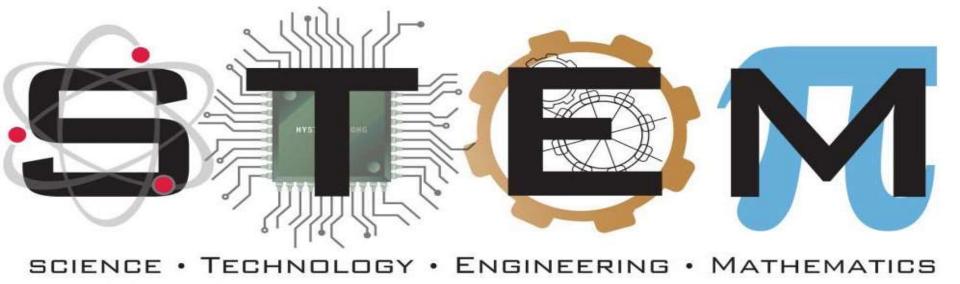
Jobs Provided by Majority-Owned Chinese Firms in the US, 2000-2013 Number of full time jobs



Source: Rhodium Group and US Department of Commerce



STEM Skills Have Been Offshored, Too



- Currently, 9 out of 10 manufacturers are having difficulty finding skilled workers and they say
 this is directly hurting the bottom line
- 64% of manufacturers say productivity losses are a result of a skills gap
- 41% cited quality losses
- 56% report the gap in skilled labor has impacted their company's ability to grow
- 78% cited a lack of qualified candidates as one of the top two factors that impacted their ability to hire a skilled workforce
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Skills Requirements and the Skills Ladder by Location

- Not all skills are available in every location
- Determine what skills are needed
- Investigate the skills available in the target area before you commit to relocating there
- Delay the time frame for opening the new production line until skilled workers are available
- What is the quality of life in the target area?
 The costs?
- Can you attract the kinds of workers you need?
- Is there a career future for skilled labor? Engineers? Other Professionals?



Failure Alert: Otis Elevator

- In 2013, Otis Elevator opened a new US manufacturing plant in Florence, SC, bringing a production line back from China
- Project failed and cost the company upwards of \$60 million in lost business
- Primary reasons for the failure:
 - Lack of skilled manufacturing labor in the Florence area
 - Failure to plan for skilled labor development
 - No partnering with local schools and colleges to train new workers
 - Concurrent SAP implementation



Supply Base Considerations

- Over the past 20 years, production has been offshored, and so have component parts and raw materials
- Electronics are a good example. Not only has assembly of finished products like laptops, iPods, smartphones, and other devices been offshored to contract manufacturers such as Foxconn and Flextronics, but semi-conductors and components that go into these products have also been offshored. Suppliers have located their own manufacturing facilities near the offshore production sites. Raw materials suppliers have been developed in the manufacturing country, such as copper from Chinese mines.
- When considering production at US
 manufacturing sites, identify where suppliers are
 located and include them in Reshoring efforts.
 This is not a trivial task! Working with suppliers
 takes major involvement by Sourcing and
 Purchasing departments





Shortening the Supply Chain Through Manufacturing Near Your Customers

Shortening the supply chain

- Reduces risk
- Reduces need for working capital
- Shorter lead time for customers
- Increased flexibility
- Enhanced customer responsiveness
 - On-schedule production
 - Fewer shortages and errors
 - Minimizing obsolescence
 - Minimize inventory
 - Avoiding delays

Attractive Locations In the US - Criteria

- Favorable business environment
- Supportive governments and incentives
- Proximity to customers
- Skilled workforce
- Labor costs
- Proximity to Colleges and Universities
- Accessibility of transportation
 - Airports
 - Highways
 - Rail
- Proximity to supply base



Single Sales Factor

- Most large corporations do business in more than one state and are subject to corporate income tax in multiple states
- Single sales factor allows for tax exemptions except for what is sold in that state
- For states with no sales tax, (Alaska, Delaware, Montana, New Hampshire, and Oregon) this can be a big savings

No Property Tax

 As incentives, governments and municipalities are offering no property tax

Employment Tax Credits, Training Credits

 Other city, county and state governments offer incentives and tax holidays to attract business



Other Cost Reductions

- Fracking boom has revolutionized US oil and gas production. We now have an abundance of inexpensive energy
- Attractive location for manufacturers that are energy intensive or that can use natural gas as a primary input. Clear winners include chemicals and petrochemicals (such as plastics)
- Strengthening of China's currency has eroded cost advantages
- U.S. manufacturers have enhanced productivity and automation. For example, in the transportation equipment sector, labor costs represented 31% of manufacturing value in 1991. By 2011, this figure had fallen to 21%. Shift from labor-intensive to technology-intensive manufacturing processes
- Industrial manufacturers have become lean and automated to survive

There Is More To Consider Beyond Labor Costs

- Innovation
- Automation
- Localization
- Skills and Education
- Tax and Other Incentives
- Government Outreach
- Supply Base Considerations
- Marketing and PR





Benefits Of Manufacturing In The US

Benefits

- Creation of jobs in the US
- Tax revenue in the US
- Closer to US consumer market
- Shorter supply chains
- Access to new technologies
- Local, State, Federal incentives

What Can YOU do to Support Reshoring?

- Buy "Made in USA" products vote with your dollars
- Ask retailers to stock American-made products
- Support STEM skills and programs in elementary schools, high schools, colleges and universities
- Change the way you talk about manufacturing – today it is a well-paid profession and often in a clean, high-tech environment
- If you own stock in companies, tell the Board and Executives you want them to Reshore
- Vote for politicians who are working to bring manufacturing back – not those who give tax breaks to overseas operations





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