

Reshoring Initiative

Bringing manufacturing back home.



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Bringing manufacturing back home

Large companies: Why to Source Local
Suppliers: How to sell Local Sourcing
Machine tool suppliers: How to help them both reshore

Gardner Publications Inc.
June 27, 2011

Harry Moser
President
Reshoring Initiative

A non-profit with 10 sponsors

Platinum



Gold



Silver



Bronze



Steel



Definitions

- Reshoring: Bringing back to the U.S. manufacture of products that will be sold here
- Offshoring: Antonym of reshoring
- Backshoring and Onshoring: Synonyms
- Nearshoring: Canada, Mexico, Costa Rica
- Outsourcing: Work done by another company, wherever located
- In-house: work done in the company's facilities, wherever located

Rethinking herd behavior

- A 'herd' mentality to participate in the 'Chinese miracle' developed among global giant corporations -- {Peter Nolan; University of Cambridge; - 9/03
- "There is a herd mentality with OEMs in China — sometimes it makes sense, sometimes it doesn't—not always rational decision...
People tell their bosses what they want to hear— (going to China) gives a boost to the stock valuation, but you really have to do the analysis on a case by case basis." {Technology Forecasters 10/03

Source: Stone & Associates

Reshoring Initiative's Objectives

- **Change the Sourcing Mindset:**
 - From: “Offshored is Cheaper.”
 - To: “Local Reduces the Total Cost of Ownership.”
- **Train:**
 - OEMs: Why to source local.
 - Suppliers: How to “sell” local sourcing.
- **Encourage production near the customer**
- **Do the best we can on the unlevel field now:**
 - Alternative to protectionism.

The Industry-Led Initiative Provides

- Free Total Cost of Ownership (TCO) Software for OEMs and suppliers/unions
- Online Library of 98 reshoring articles
- Media coverage of the trend: WSJ, USATODAY, IW, CBS, CNBC, etc.
- Regional Initiatives
- Motivation for skilled manufacturing careers
- Objective tools passionately promoted
- A solution to today's supply chain problems

Some major global supply chain problems

- Fragility:
 - Natural disasters: Japan, European volcano
 - Political instability
- Chinese and other LLCC (low-labor-cost countries):
 - Wages rising rapidly
 - Currencies poised to rise
- U.S. \$ declining
- Oil soaring

Logical Foundation

60% of manufacturers:

- Apply “rudimentary” total cost models
- Ignore 20% or more of the total cost of offshored products

Source: Archstone Consulting survey, American Machinist Mag., 7/16/09

Survey results re costs considered

Cost Factor	% of companies
Carrying cost	69%
Emergency air freight	39%
Opportunity cost	39%
IP risk	31%
Prototype cost	31%
Travel	23%
Impact on innovation	23%
End of life inventory	15%
Green	15%

Source: ISM-CT, March 2011, very limited sample

TCO Estimator benefits

- Differentiates the Initiative from groups that just talk.
- Flexible: values are 100% user selected.
- Broad:
 - 29 cost factors.
 - Via pull down menus automatically insert:
 - Freight rates for 17 countries
 - Duty rates for parts or tools, e.g. molds
 - Present value and 5 year forecast of TCO.
- Easy to use:
 - Explanations and references to help select values.
 - Instruction Manual.
- Free

TCO Estimator: Some Cost Factors

- FOB Price
- Packaging
- Duty
- Freight: air, surface, all fees
- Inventory: en-route, safety stock, obsolete
- Rework/quality
- Product liability
- IP risk
- Impact on innovation
- Travel
- Prototype
- Wage inflation and currency appreciation

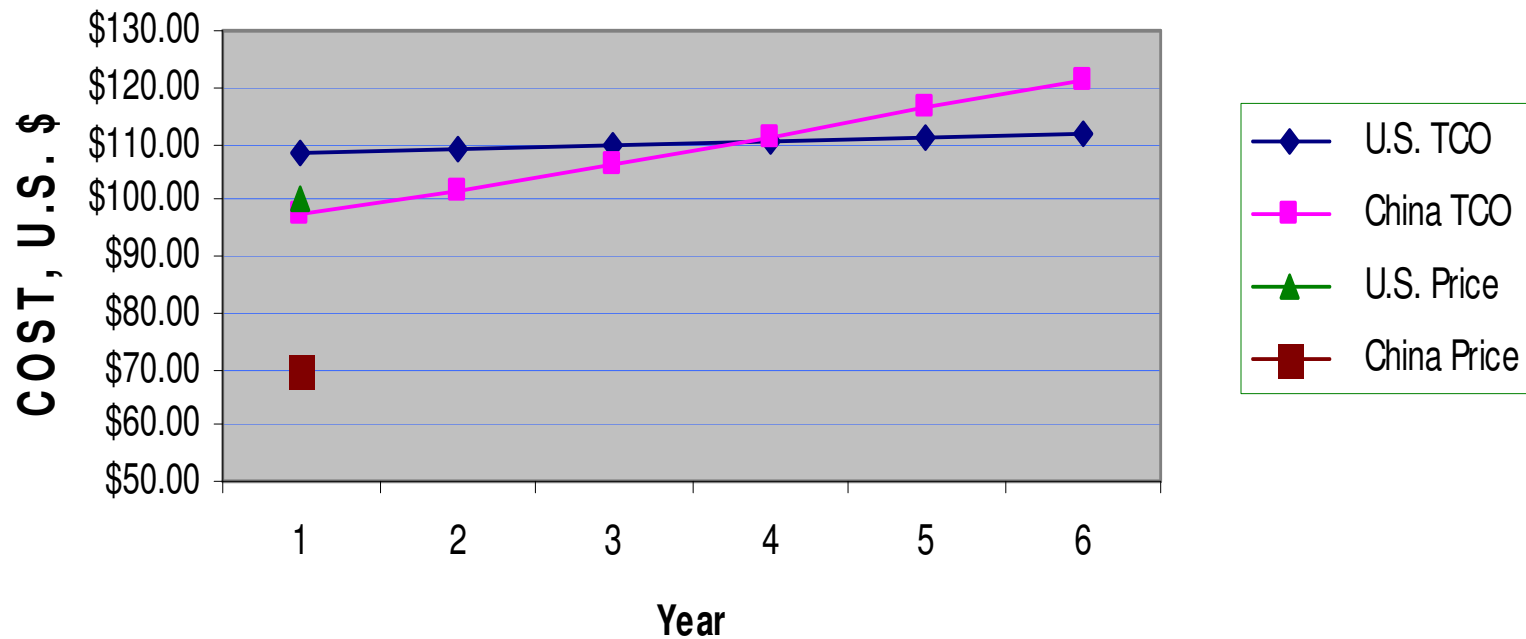
Example Assumptions: a Part

Chinese unit price	\$70	Product liability risk*	0.5%
U.S. unit price	\$100	IP risk*	1.9%
# units/year	12,000	Innovation*	0.5%
unit weight, lbs	2	Trips/yr	2
Shipments/year	6	Prototype cost*	\$5,000
product life, yrs	5	Country political instability risk*	0.4%
Packaging*	1%	Wage inflation, annual*	8%
Payment on shipment	Yes	Currency appreciation, annual*	5%
Quality*	2%		

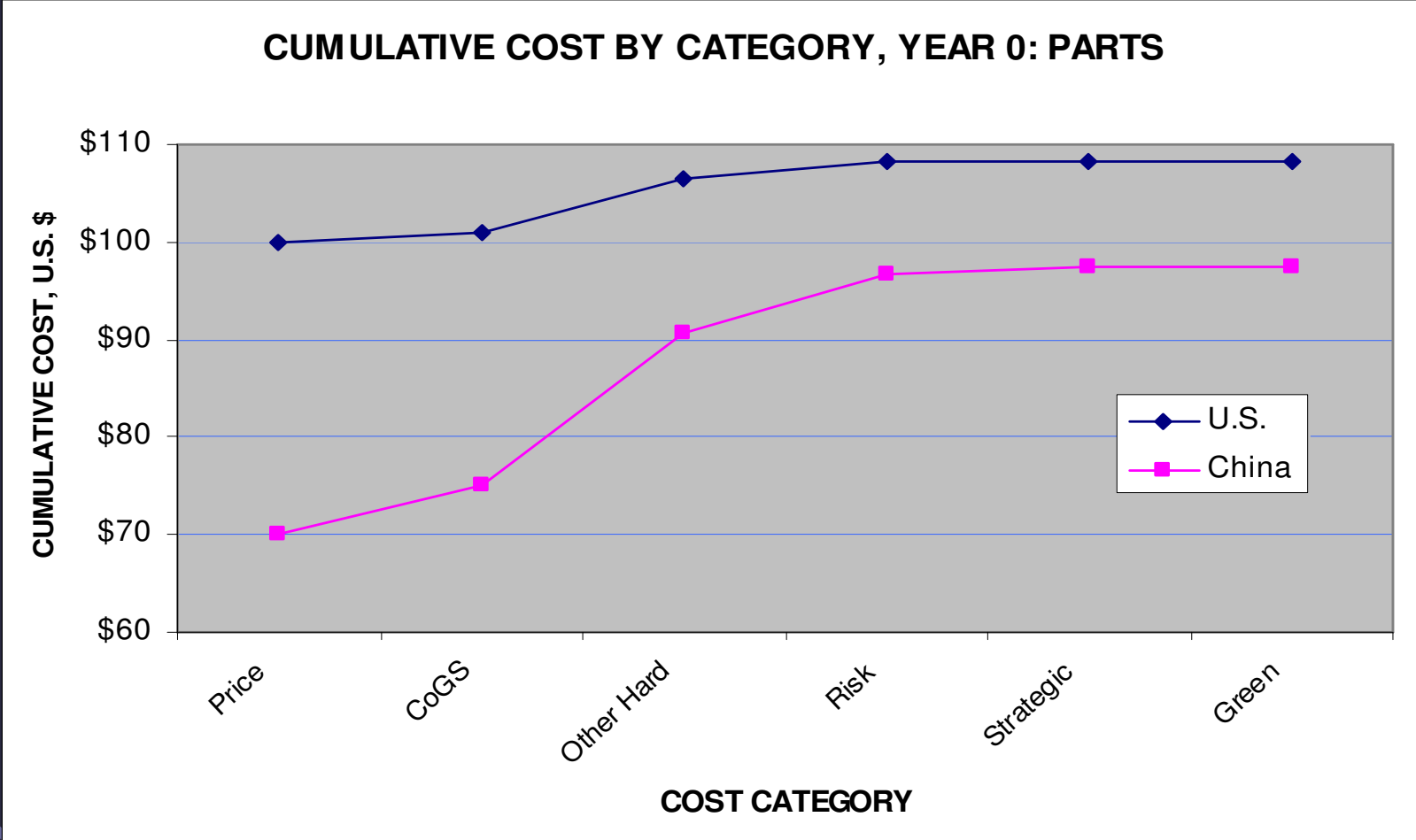
* Chinese differential vs. U.S.

TCO Comparison Example: a Moderate Labor Content Part

PRESENT AND FORECAST U.S AND CHINA PRICE AND TCO: PARTS



Cumulative Cost by Category



“Gaining competitive advantage by getting closer to the customer”

- Move supply closer to demand. Reasons:
 - Better service
 - Agility
 - Low inventories
 - Total cost
- Cost factors considered, % of companies:
 - Other than direct costs: < 50%
 - Other costs: typically 30%

Source: *Manufacturing's Secret Shift*, Accenture
Survey of 287 mfg. companies, 2010
Published 2011

“Manufacturing Is Expected to Return to America” “Renaissance in Manufacturing”

- “We expect net labor costs for manufacturing in China and the U.S. to converge by around 2015”
- “take a hard look at the total costs”
- Labor cost 20-30% of unit costs and will be only 30% below U.S. level. 10% savings exceeded by other offshoring costs.

Source: Boston Consulting Group press release 5/5/11

Deming on Total Cost

- “End the practice of awarding business on the basis of price tag. Instead, minimize total cost.”

Source: “4th Key Principle for Management,”
Out of the Crisis, W. Edwards Deming

Offshoring multiplies Waste

<u>Toyota Wastes</u>	<u>Offshoring Contributes</u>
Overproduction	Large batch shipments, filling containers
Waiting	Uncertain delivery/Inconsistent quality, port, customs, shared “awake time” window for discussions
Transport	12,000 mi. inbound, 6,000 return (boat ½ full)
Overprocessing	More packing and unpacking, customs paperwork,
Inventory	In transit, cycle, safety stock, uncertain delivery and quality, less ability to see and count
Motion	Increased cost over time – repetitive motion injuries or additional labor to compensate
Defects	Much higher than local sources, extra inspection of materials and tolerances, customers unhappy longer

Offshoring contributes to Instability

- Weather
- Port strikes
- Loss from mishandling
- Language problems
- Natural disasters
- Political instability
- Pirates

Impact on Product Strategy

- Impact of batch size and distance:
 - Offshoring → commoditization
 - Reshoring → differentiation/mass customization

Selling using TCO

- Focus on profit impact, risk management, strategic benefits
- Overcome mandates
- Many Supply Chain Managers believe
- Work with natural allies:
 - Lean, Green, compliance, quality, line management
- Maximize the advantages of proximity
- Match “Chinese” price or TCO?

Suppliers: Maximize the value of proximity: Beat the LLCC competitors

- Early Involvement. Partner. DFMA™
- Max. face-time w/customer
- Get customer to your facility
Show technology, lean
- Respond to phone calls timely
- Get customer to buy FOB destination
- Provide great customer support
- Lean: adding customer value

Gaining support in DC: Jan. 13&14 Visit

- Council on Competitiveness:
 - Working on Reshoring
 - Will cooperate
- AFL-CIO:
 - National Reshoring webinar
- NIST MEP:
 - Webinar
 - Presentation at Annual Conference
- Cong. Wolf (R VA)
 - HR516: “Bring Jobs Back to America Act”.
 - “Will call me to testify at a House hearing”

Manufacturing essential to Innovation

“exporting manufacturing has a negative impact on the country's industrial commons, which represents the collective capability to sustain innovation.”

Professors **Gary Pisano** and **Willy Shih**
Harvard Business School

Benefits of globalization less clear

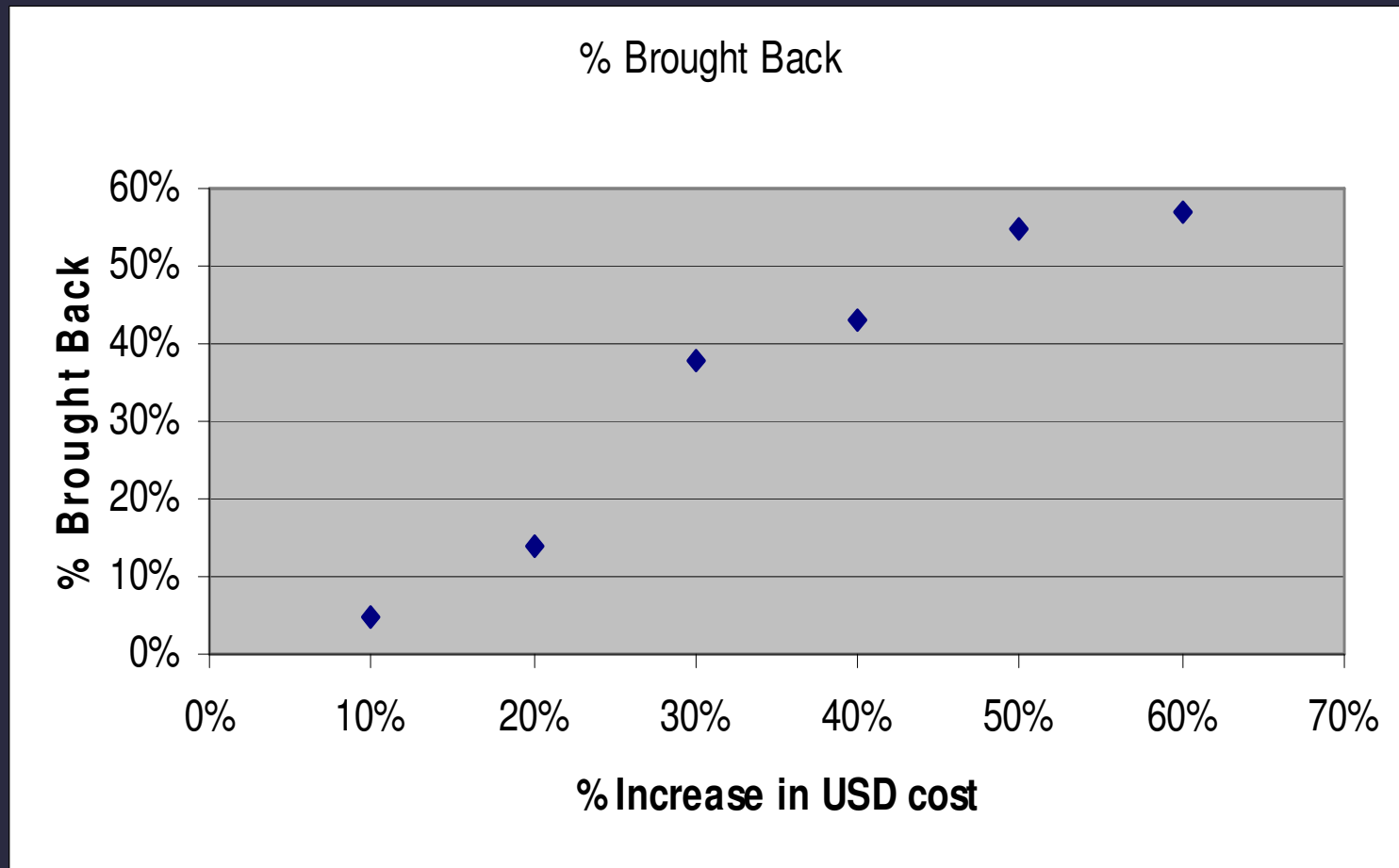
- The impact of incremental unemployment and other benefit payments is approx. equal to the consumer price saving.

Source: The China Syndrome: Local Labor Market Effects of Import Competition in the United States. March 2011. David Autor, MIT and NBER, et al

Initiative Will Affect Policy

- Survey supply chain managers:
 - What cost factors are considered?
 - What is the price elasticity of the offshoring/reshoring decision?
- Become the **national source** of actionable information on the size, motivation and decision processes of U.S. offshoring and reshoring.

Reshore/offshore: price elasticity



Source: ISM-CT, March 2011 limited sample

Close the price/cost gap project

- Complement TCO's recognition of the real cost of offshoring with recognition of how to reduce U.S. firms' costs/prices.
- Analysis of a typical company to close the gap, applying:
 - lean
 - theory of constraints
 - DFMA
 - QRM
 - Etc.

An excellent complement to the Export Initiative

- There are distinct advantages for a U.S. manufacturer to compete here rather than offshore:
 - Most of the TCO costs
 - Familiar legal and regulatory system
 - Simplicity of selling into huge home market vs. added cost of overseas sales and support
 - Cost advantages of greater than 24%, similar to total direct labor % of mfg. cost
 - Timing: quick impact because already selling here
- Well suited to contract manufacturers and SMEs
- Communicating with SelectUSA via Peter Perez.

The fastest and most efficient way to strengthen the U.S. economy

- Reshoring breaks out of:
 - The economic zero-sum-game of tax/borrow and spend.
 - The increases in consumer prices of relying solely on currency changes.
 - The waiting-for-policy-decisions problem.
- Assures that the pie grows, to the advantage of all Americans.
- Grows the pie by taking back what we earlier lost.
- Focuses on the manufacturing sector which has suffered so many job losses for decades.

Approx. 100 presentations in 2011

Including:

- 6/14 Int. Forum on DFMA, Providence, RI
- 6/15 & 16 R.E. Morris Co. Windsor, CT
- 6/27 Gardner Publications, Cincinnati, OH
- 6/28 Lean Logistics Summit, Cincinnati
- 7/8 & 9 IUE-CWA, Las Vegas, NV
- 9/8 NTMA/PMA Purchasing Fair, Chicago, IL
- 9/15 & 16 Lean Accounting Summit, Orlando, FL
- 9/26 AEM Customer Support Council Seminar, Milwaukee, WI

See www.reshorennow.org for links

ILLINOIS RESHORING INITIATIVE

2011 Launch Schedule

1. **IRI Conference** - March 16 at Harper College
2. **Supply Chain Managers Program –D2P**, Schaumburg, IL May 4
3. **Illinois Suppliers Seminar** – July 20, at TMA
4. **NTMA/ PMA Contract Manufacturing Purchasing Fair** Sept. 7, 8 at O'Hare Intercontinental Hotel
5. **Measure \$ Value of reshored work, # jobs retained or created**

Supported by 40 trade, technical and economic development groups

Two \$150+M IL Companies Committed

Company	Contact	Products	Actions
Morey Corp., Woodridge	Owner	Circuit boards and telematics	Trained 10 on purchasing and selling
Hydraforce, Lincolnshire	VP of Global Continuous Improvement and Supplier Development	Industrial hydraulic cartridge valves	Trained 20 on both

Targets

Group	Issue	Methods to Reach
Large companies	<ul style="list-style-type: none">-investments-strategies-mindset-mandates-hard to reach	<ul style="list-style-type: none">-general and public media-conferences/associations (AEM)-supplier salesmen-unions-comments in business media
Supplier companies	<ul style="list-style-type: none">-willing re sourcing-excited re selling	<ul style="list-style-type: none">-industry media-conferences
U.S. government	<ul style="list-style-type: none">-Export Initiative-NIH	<ul style="list-style-type: none">-NIST MEP-Commerce Dept-Senators and Congressmen

Top priorities/questions

Issue	Method
<ul style="list-style-type: none">-Documented successes-Public company commitment	<ul style="list-style-type: none">-working contacts at big companies-starting with smaller private companies
National business media	<ul style="list-style-type: none">-speaking, writing, being a reference source
Revenue	<ul style="list-style-type: none">-asking conference hosts to sponsor-decide whether to charge for software and consulting-foundation/government grants

How to participate

- Use the TCO Estimator. Free.
- Buy and sell thinking TCO
- Call on me to train and help your supply chain, sales teams and customers. Free.
- Propose an Initiative in your state.
- Submit reshoring cases, esp. after using the Estimator
- Sponsor

- Rethink Sourcing!
- Reshore Manufacturing!
- Rebuild America!

For more information, to increase U.S. jobs and help slow the offshoring flood now!

Contact:
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Initiative: www.reshorenow.org

Competing with/avoiding LLC competitors:
<http://us.gfac.com/company/careers/swot.cfm>