

Reshoring

How to: sell more, help your customers, bring jobs home and strengthen the local economy.

NTMA/AMBA/BTC/PMA

12/9/10

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Supported by:



Definitions

- Reshoring: Bringing work back to the U.S.
- Antonym: Offshoring
- Synonyms: Backshoring and Onshoring
- Nearshoring: Includes U.S., Canada & Mexico

Reshoring Initiative 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.
- **Do the best we can on the unlevel field now!**

The Industry-Led Initiative Provides

- Free Total Cost of Ownership (TCO) Software for OEMs and suppliers
- Online Library of 98 reshoring articles
- Linked NTMA/PMA Purchasing Fairs
- Media coverage: WSJ, USATODAY, IW, CBS, CNBC, etc.

Logical Foundation

60% of manufacturers:

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

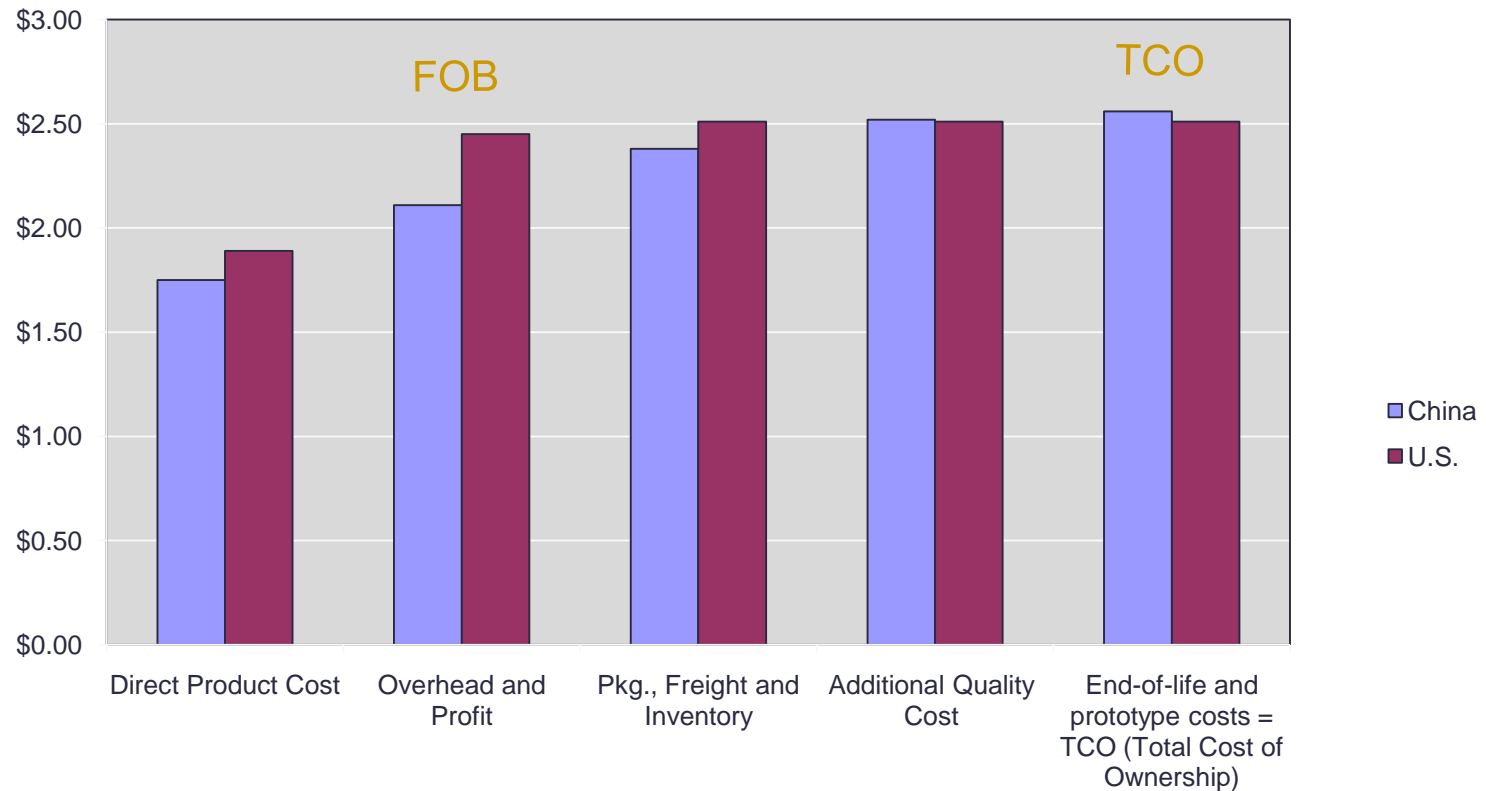
51% of companies found no financial benefit in offshoring**

Sources:

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

** Supply Chain Solutions, Grant Thornton, Jan. 2010 survey.

Total Cost of Ownership: Steel Gear



Source: Gibb River Group

TCO Estimator Available

- Easily estimate the Total Cost of Ownership
- Compare onshore to offshore cost
- 18 user-modifiable cost factors
- Current and forecast costs
- For parts and tooling
- Status: in Beta test at customers and shops
- Available Free! www.reshorennow.org

TCO Estimator Software: 18 Cost Factors

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

Example Assumptions: a Part

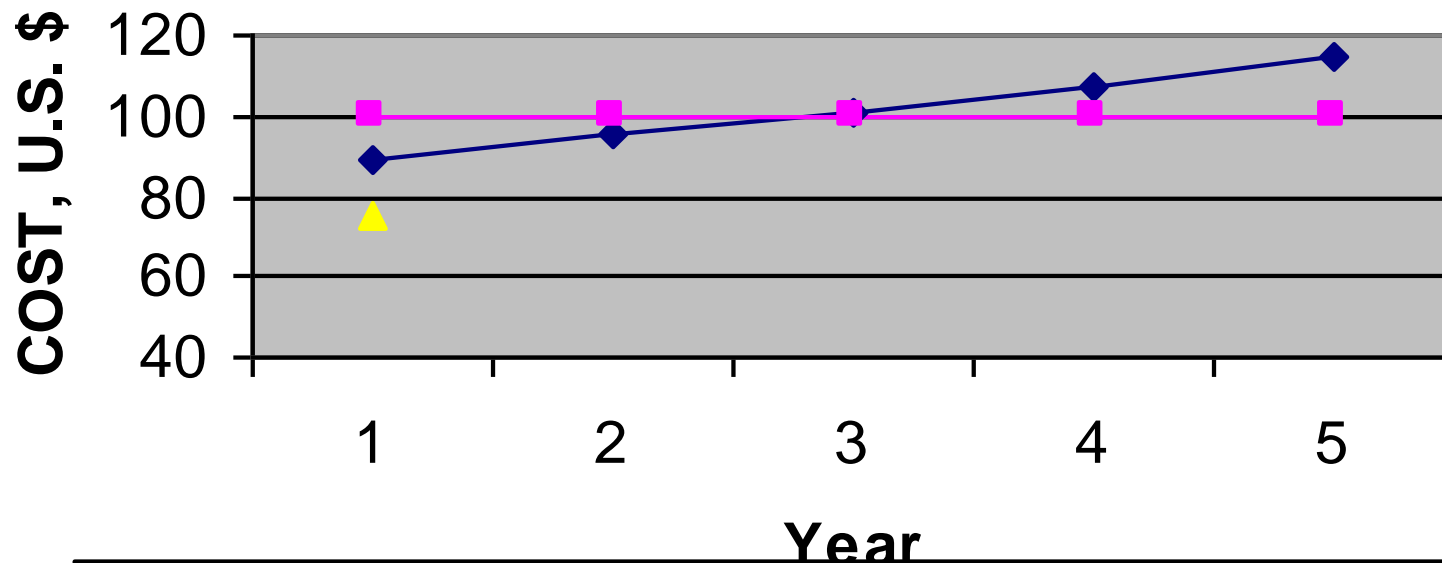
Chinese unit price	\$75
U.S. unit price	\$100
# units/year	12,000
unit weight, incl. packaging, lbs	2
shipment size, units	1,000
product life, yrs	5
Packaging*	0
Payment on shipment	Yes
Quality*	2%

Product liability*	0.50%
IP risk*	2%
Innovation*	0%
Trips/yr	2
Prototype cost*	\$5,000
Obsolescence, mos.*	2
Wage inflation, annual*	8%
Currency appreciation, annual*	5%

* Chinese differential vs. U.S.

TCO Comparison Example: a Low-Moderate Labor Content Part

Comparison of U.S. and China TCO: Parts



—◆— China TCO —■— U.S. TCO —▲— China FOB

“As China’s Wages Rise, Export Prices Could Follow”

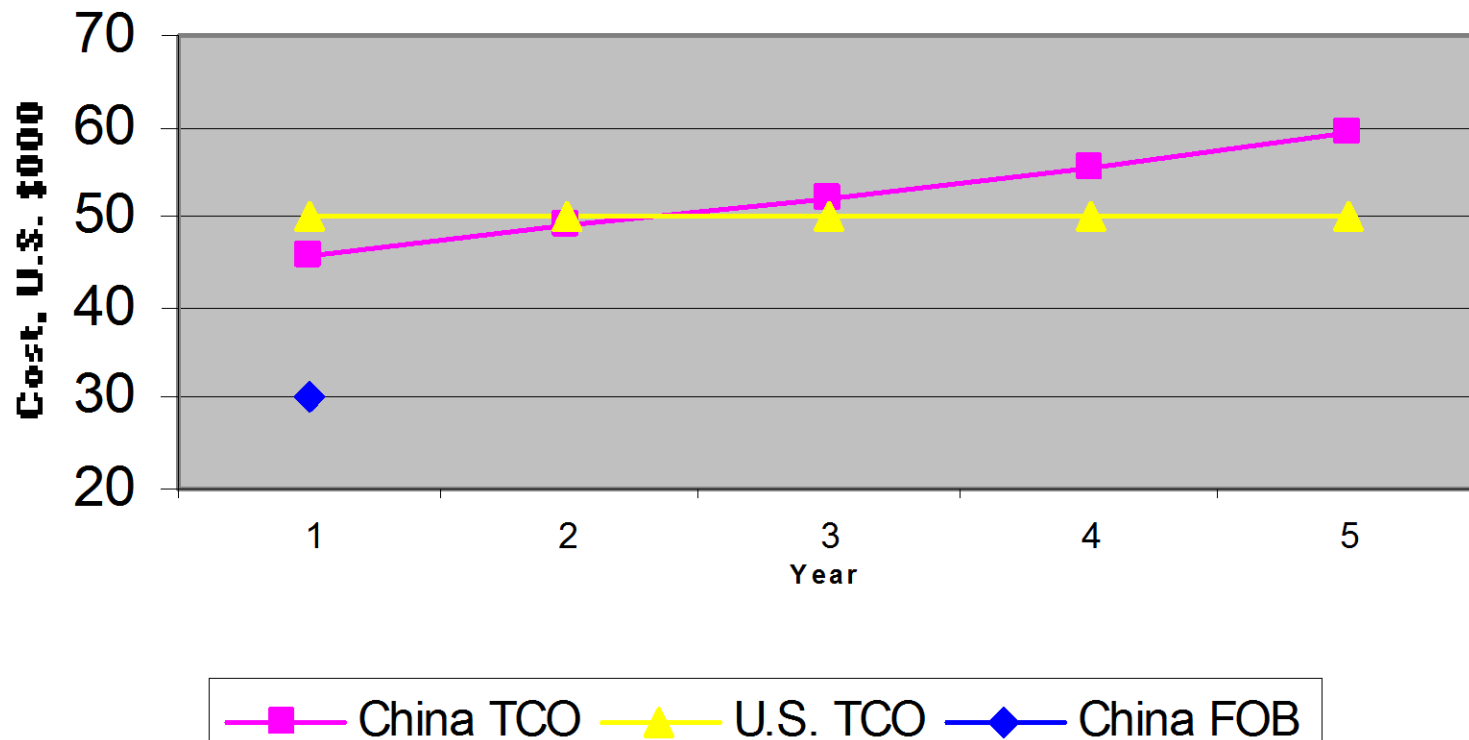
- 24% to 100% wage increases!



Source: New York Times, June 7, 2010

TCO Comparison Example: a Die or Mold

Comparison of U.S. and China TCO: Dies/Molds



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 contributes to Waste

<u>Toyota Wastes</u>	<u>Offshoring Contributes</u>
Overproduction	Large batch shipments
Waiting	Uncertain delivery/Inconsistent quality, port, customs
Transport	12,000 mi. inbound, 6,000 return (boat ½ full)
Overprocessing	More packing and unpacking
Inventory	In transit, cycle, safety stock, uncertain delivery and quality
Motion	Large batches require a customer warehouse. Travel, e.g. 2-3 weeks, 2-3X/yr
Defects	Much higher than local sources, extra inspection of materials and tolerances

Offshoring contributes to Instability

- Weather
- Port strikes
- Loss from mishandling
- Language problems
- Pirates

Offshoring contributes to Overburdening

- Travel
- 2 am phone calls

Impact on Product Strategy

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

Reshoring Facilitates Clustering

- Innovation
- Partnering
- Communications
- Lean supply chain
- DFMA



2010 NTMA / PMA Contract Manufacturing Purchasing Fairs

A one-stop for OEMs to find competitive U.S.-based sources.

- 50+ OEMs.
- 100+ job shops - machined, stamped, fabricated and molded parts, special tooling (dies, molds, jigs, fixtures and gauges) and special machines.



Purchasing Fairs



Results of May 12 Fair

- 57 Customers: 64% brought offshored work
- 113 shops

Next NTMA/PMA Fair

- Probably Chicago, 2H2011

Why Reshoring is a Hot Topic

- A renewed focus on manufacturing by the White House and Congress
- High international transportation costs
- High foreign wage inflation
- Expected Yuan appreciation
- Low domestic capacity utilization
- Focus on increasing employment
- Growing awareness of IP and quality risks
- Increasing understanding of TCO

Global sourcing not reducing costs

% of companies reporting issues:

- Unreliable delivery: 65%
- Longer lead times: 61%
- Poor quality: 61%
- Increased costs: 34%

Source: The Smarter Supply Chain of the Future,
IBM, Jan 2009, 400 executives worldwide

Offshoring is slowing down

% of companies moving some or all production work offshore:

- 2010: 15%
- 2007: 35%

Source: 2010 Manufacturing and Wholesale Distribution National Survey, McGladrey, March 2 to April 5, 2010, 1061 U.S. respondents

Sourcing Moving Home

- 20% of companies brought sourcing closer in 2009
- Of which 59% reshored

Source: Supply Chain Solutions, Grant Thornton, Jan. 2010 survey. 312 responses.

Reshoring Easier than Exporting More

- 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
 - No exchange rate issues
 - Cost advantages of greater than 24%, similar to total direct labor % of mfg. cost
 - Timing: quick impact because already selling here

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.

Focuses on the manufacturing sector which has suffered so many job losses for decades.

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, decision processes and industry mix of U.S. offshoring and reshoring.

Reshoring and Government

- Status:
 - TCO software in Cong. Wolf's HR 5980
 - Discussions with Commerce Dep. Assist. Sec. Perez, MEPs, EDA
 - Encouraging Pres. Obama to broaden focus from exporting to include reshoring!
 - Trying to set up focused reshoring initiatives in AZ, CT, Flint, IL, MD, OH and SC.

Local Reshoring Initiatives

- Chambers of Commerce and Economic Development offices involve the OEM execs.
- Train supply chain managers and local suppliers re reshoring advantages.
- Hold local reshoring fairs.
- Local team motivates follow-up and monitors the results, e.g. \$ cost per job reshored.
- Develop model to take to other cities/states. *

Getting to the policy makers

To influence companies that have mandates to offshore:

- Local Reshoring Initiatives
- Publicity: WSJ, CNBC, USAToday, etc.
- Work thru the Supply Chain Managers, Quality Managers and Lean and Green champions
- Start with <\$1B/year companies
- I am working NAM, US Chamber of Commerce, etc.

Requests of OEMs and Suppliers

- Submit successful reshoring cases *
- Good publicity
- Good for the country

Requests of OEMs

- Try the TCO Estimator
- Help improve the Estimator
- Make sourcing decisions based on TCO, not just price
- Check our Library to see what your industry is doing
- Consider how a stronger home market benefits your sales
- Attend the Fairs!
- Bring some offshored work to the Fairs

Requests of Suppliers

- Talk TCO
- Use the Estimator to help customers compare costs
- Show customers Library articles, e.g.:
 - Plastic components
 - Stamped parts
 - Die castings and dies
 - Tools
 - Sheet metal parts

3 Related Strategies for Suppliers

- Sell TCO (Reshoring Initiative)
- Maximize the value of proximity, and/or
- Avoid the LLC competitors

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

- Early Involvement. Partner. DFMA
- Max. face-time w/customer
- Get customer to your facility
Show technology, lean, NTMA 6S Program
- Respond to phone calls timely
- Get customer to buy FOB destination
- Provide great customer support
- Lean

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

- Guarantee delivery
- Help solve assembly issues
- Guarantee the integrity of supply base
- Focus on IP parts
- Automate

Suppliers: Avoid LLCC competitors

Workpiece characteristics:

- Products to be sold in N. American market
- High mix/low volume
- New/quick launch/frequent engineering changes/short life cycle
- Fragile
- High risk, safety parts
- Low labor content
- Shipping cost high vs. labor costs
- 6σ
- Custom raw material, e.g. castings or forgings, sourced in U.S.

Suppliers: Avoid LLCC competitors

Markets:

- Medical/pharmaceutical
- Defense ITAR/DFAR
- Aerospace
- Any requiring regulatory compliance
- Green/alternative energy
- Made in USA, e.g. fire and police equipment
- Food Processing and Packaging
- Oil and gas

Presentations

- 9/28 National Press Club
- 12/7 AFS Sales Training Session
- 12/9 NTMA/AMBA/BTC, W. MI
- 1/13 AFL-CIO, Washington, DC
- 2/?? PMA Roundtable, OH
- 3/10 SME Milwaukee Chapter
- 3/16 Reshoring Conference, Chicago
- 3/30 CAPM (ISM) Forum, Conn.
- 4/13 or 14 Amerimold, Chicago
- 5/4 Assembly Magazine webinar
- 6/9 New Haven Mfg. Assoc.



For more information on the Fairs

Contact:

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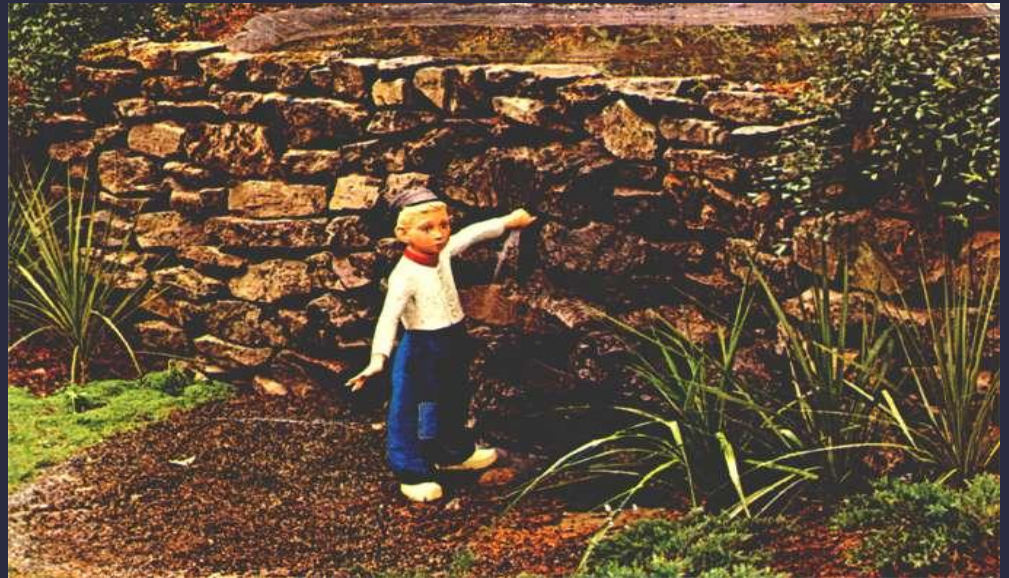
Direct: 301.281.8009

E-mail: Rakers@ntma.org

Visit: www.PurchasingFair.com

For more information, to increase profitability and help slow the offshoring flood now!

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Initiative: www.reshorennow.org

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