



# **Ohio Manufacturing: Big Positive Converging Forces (Have to Get Energy Right)**

**Eric L. Burkland  
President**

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# Roadmap

- Multiple studies with converging findings
- Agreement on factors that influence manufacturing siting, reshoring and growth
- Right now: a confluence of positive forces
- Critical time for getting policy right
- Especially energy (and talent development)



# Accenture Manufacturing's Secret Shift:

Gaining Competitive Advantage by  
Getting Closer to the Customer

March 2011



Accenture conducted a survey of 287 manufacturing companies to find out what executives are doing

to balance manufacturing costs competitiveness with the agility needed to meet customer demand.

# What cost factors are used when evaluating offshoring?

## Direct costs:

- Logistics 67%
- Supplier costs 66%
- Labor costs 64%

# Region Specific Costs:

- Taxes 48%
- Regulations 39%
- Customs/Duties 35%

# Customer Service Costs:

- Agility of supply network 48%
- Customer responsiveness 38%



# Quality Costs:

- Quality inspection/validation 39%

# Supply Chain Costs:

- Operational risk 39%
- Network inventory 26%
- Safety 21%

# Operational Costs:

- Infrastructure (IT, facilities...) 36%
- Tooling/molds 23%

# People/Talent Costs:

- Training 32%
- Organizational communication 30%

# Financial Costs:

- Local incentives 29%
- Capital amortization 26%
- Exchange rates 23%

# Conclusions:

- Company utilization of “total cost” analysis of offshoring is limited.
- An overreliance on direct costs to the exclusion of other costs distorts the business case for offshoring.
- Likely, many decisions to offshore were incorrectly made.

**Companies are reevaluating customer service requirements, total costs and operational agility, they are “rebalancing” operations:**

**61% report they were considering more closely matching supply location with demand location**



**What are companies doing  
to move supply closer to demand?**



# Actions companies have taken or plan with regard to supply chains:

- Pursuing new supply options 59%
- Shifting the network to be better aligned with demand location 37%
- Improving within existing supply network 54%
- Being more selective in offshoring 34%

# What are the challenges to “rebalancing” manufacturing and supply chains?

# Top barriers cited as impediments to rebalance production and supply bases:

- Production skills, workforce availability 46%
- Transportation costs 45%
- Supply base access 41%
- Capital required 38%
- Employment issues (labor law, unionization) 31%



# **The Boston Consulting Group Made in America, Again:**

**Why Manufacturing Will Return To  
the U.S.**

**August 2011**



**Economic trends point to a U.S.  
manufacturing renaissance.**

# **The conditions are coalescing for a U.S. resurgence.**

Rising wages, shipping costs and land prices – combined with a strengthened renminbi – are rapidly eroding China's cost advantages.

The U.S. meanwhile is becoming a lower-cost country.

BCG concludes that, by sometime **around 2015** – for many goods destined for North American consumers – **manufacturing in some parts of the U.S. will be just as economical as manufacturing in China.**

## China's wages are rising, fast:

- Wages grew 150% from 1999 to 2006
- From 2000 to 2005, wages rose 10% annually
- From 2005 to 2010, wage hikes averaged 19% a year



Meanwhile, fully loaded costs of U.S. production workers rose by only 4% per year.

Manufacturing output per worker in China has improved by 10% a year over the last decade.

Maintaining that growth over the next few years, China's productivity would reach 40% of U.S. productivity by 2015: **not enough to compensate for rising wages.**

Other Chinese costs are rising, too.

- The cost of electricity has surged by 15% since 2010
- Industrial land prices are significantly higher than in most of the U.S
- Transpacific shipping rates are going up
- There's been a steady appreciation of the renminbi against the U.S. dollar
- Costs of relying on extended supply chains: quality control problems, the threat of supply disruptions, trades disputes, IP theft...

Other low-cost nations won't be able to absorb all the export (*to North America*) manufacturing that is likely to leave China.

The low-cost nations (*Thailand, Vietnam, Indonesia, Cambodia...*) lack the first-rate infrastructure, skilled talent pool, well-developed supply networks, and worker productivity of China.



# **Booz & Company**

## **Manufacturing's Wake-up Call**

**August 2011**

U.S. manufacturing is at a “moment of truth”



Economics and market dynamics increasingly suggest that manufacturers locate factories close to their major markets:

- Provide adequate scale/volume
- Minimize transportation costs
- Increase market responsiveness and innovation
- Customize products for regional/cultural differences

Booz's four strategies to provide competitiveness momentum in both the public and private sectors:

- 1. Attract the best workers:** better collaboration among manufacturing, education and government

## **2. Invest in high-impact clusters:** encourage clusters by investing in infrastructure and targeted incentives

**3. Build a future with Mexico:** shift less-demanding, design stable products to Mexico; keep highly skilled or rapidly evolving technology in the U.S.

# 4. **Simplify & streamline the U.S. tax and regulatory structures**



**It appears to be a generational opportunity.**

Lots of areas of policy to get right...

None more important than energy  
(except talent development)



# Energy Principal #1:

**Predictable, stable energy pricing achieved through effective energy rate design attracts job-creating capital investments.**

## **Energy Principal #2:**

**A modernized energy infrastructure will help maximize energy supplies and stabilize energy pricing and reliability.**

## **Energy Principal #3:**

**Strategic and operational collaboration among utilities, government and manufacturers and their supply chains produces better economic outcomes than do confrontational and adversarial regulatory proceedings.**

## **Energy Principal #4:**

**Ohio's traditional industrial capabilities enable global leadership in energy technology innovation and manufacturing.**

## **Energy Principal #5:**

**Sustainability requirements can create profitable new market opportunities but must be economically feasible.**

## **Energy Principal #6:**

**Effective government regulation recognizes technical and economic realities.**

**Eric L. Burkland**  
**eburkland@ohiomfg.com**  
**614.224.5111**