The Silver Lining to Industry Transformation II

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In the APD article, "The Silver Lining to Industry Transformation," published in July 2009, we demonstrated that the rapid and drastic steps that manufacturers were taking to survive the economic downturn were having a positive effect on their overall cost structure and would ultimately make them more competitive in the future.

We based our analysis upon information obtained through our True Cost Modeling Process and discussions with industry executives. The analysis included an example of a $100M supplier that had sales fall by 40% during this recessionary period and who, in response to this loss of sales, cut SG&A as well as "fixed costs" by 30 to 35%. Examples of the cost reduction areas include:

- Renegotiating equipment and building leases
- Consolidating manufacturing locations
- Renegotiating service contracts such as information technology
- Reducing their finance costs through financial restructuring

We illustrated in the article that the companies who reduced structural cost would break even during this period and were positioning themselves to be exceptionally competitive when the industry volumes returned.

Fast forward to 2012. The extreme restructuring of the industry has resulted in a return to profitability for almost all manufacturers at volume levels that are still below industry peaks and, in many cases, lower than their prior breakeven points. A combination of learning to do more with less and uncertainty in global economic conditions have kept re-growth of cost structures to a minimum.

Taken on its own, this lowering of U.S. manufacturing costs should cause us to rethink how and when we source or manufacture product in "Low Cost Countries." In addition, U.S. restructuring has been joined by another powerful economic force, China inflation. So, we thought it would be interesting to update our 2009 look by layering on the impacts of China inflation.

Our 2009 analysis showed how U.S. labor and structural costs have trended downward since the pre-2008 crisis. Additionally, per the Bureau of Labor Statistics, U.S. productivity can be expected to continue driving cost downward the next few years. Conversely, we see the opposite is happening in China. China labor and structural costs have continued to increase at an alarming rate since the early 2000s and are expected to continue into the foreseeable future. A glaring example of this is China's Labor Rate growing at an astonishing 20% annual rate from 2006 to 2011. *(http://www.bls.gov/fls/china.htm and APD market studies).*

This raises a captivating question with regards to purchasing organizations: How does this inverse relationship of – Decreasing U.S. cost vs. Increasing China cost - affect sourcing ideology where China was once thought of as THE premiere low-cost country?

To better illustrate, let's use again the same $100M company from our example in 2009 and extrapolate over time to see what the data says.

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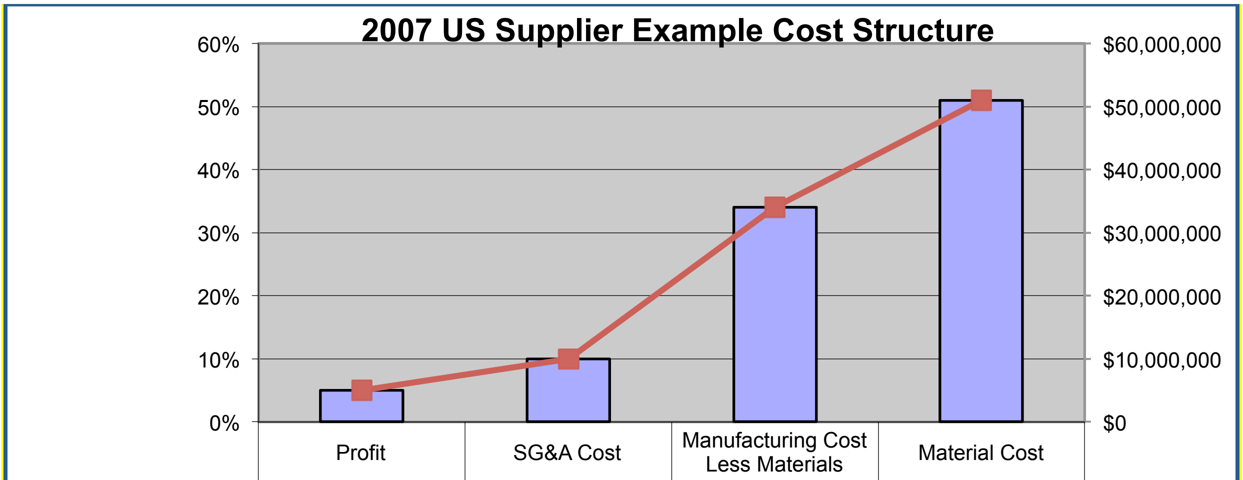
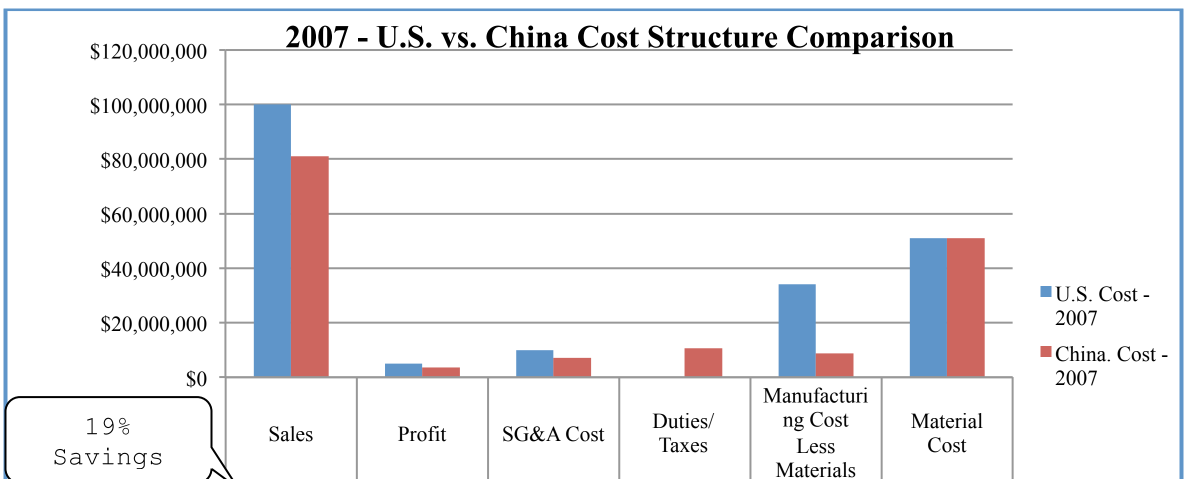
Here is the pre-2008 U.S. manufacturer cost structure upon which we based our 2009 analysis.



	Profit	SG&A Cost	Manufacturing Cost Less Materials	Material Cost
as % of Sales	5%	10%	34%	51%
2007	$5,000,000	$10,000,000	$34,000,000	$51,000,000

During that time APD conducted a series of U.S. to China quotation comparisons that can be used as a basis for the U.S. to China comparison. That data showed an average of 19% cost savings opportunity based on Total Landed Cost to the U.S. (Includes duties/taxes/freight est. @ 15% markup on Ex-Works price, while standardizing material cost.)

China held a significant cost savings in labor and overhead cost but a disadvantage in duties/taxes/freight cost netting a total savings of 19%.

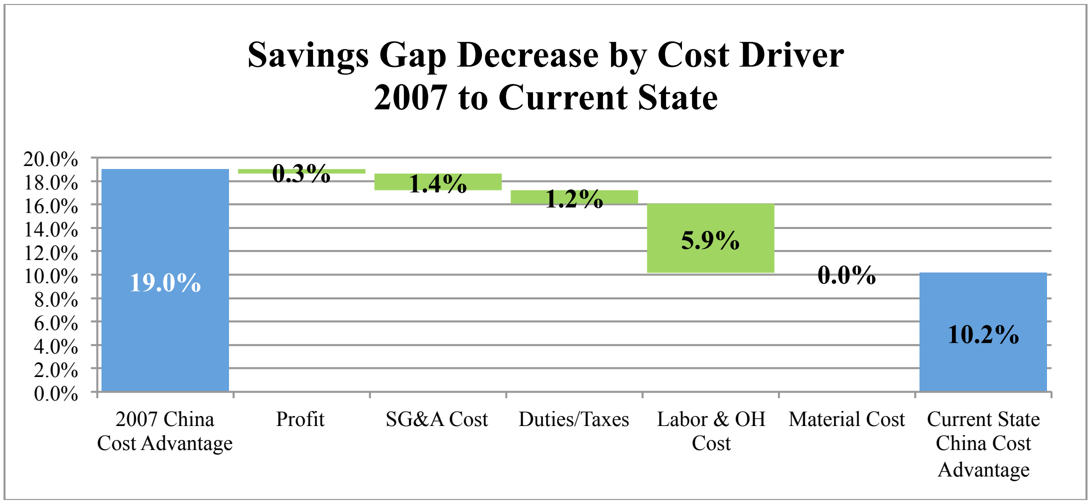


	Sales	Profit	SG&A Cost	Duties/ Taxes	Manufacturing Cost Less Materials	Material Cost
U.S. Cost - 2007	$100,000,000	$5,000,000	$10,000,000	$0	$34,000,000	$51,000,000
China. Cost - 2007	$81,000,000	$3,521,739	$7,043,478	$10,565,217	$8,869,565	$51,000,000

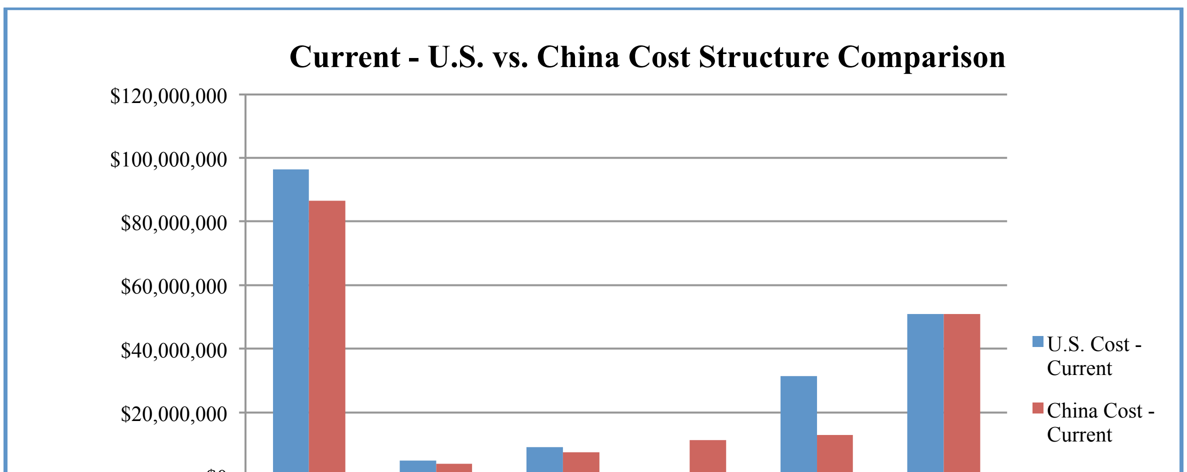
**Utilize China Labor Rate Avg. from 2002 to 2008 of $0.83/hr USD (http://www.bls.gov/fls/china.htm)*
**Labor Cost of company is 16% of Sales*
**Profit for Chinese supplier is standardized to be equal to U.S. supplier at 5% of Ex-Works cost*

Now factoring in the impacts of the U.S. restructuring and the China inflation, we see that this 19% gap has closed to 10% based on current day cost structure changes:

- China labor rate increase from pre-2008 level of $0.83/hr vs. $2.00/hr USD in 2011
- China productivity at an annual rate of 9.1%
- U.S. restructuring resulting in cost reductions of 30 to 35% in SG&A and fixed costs



The resulting U.S. to China cost structure comparison is explained in the chart below:



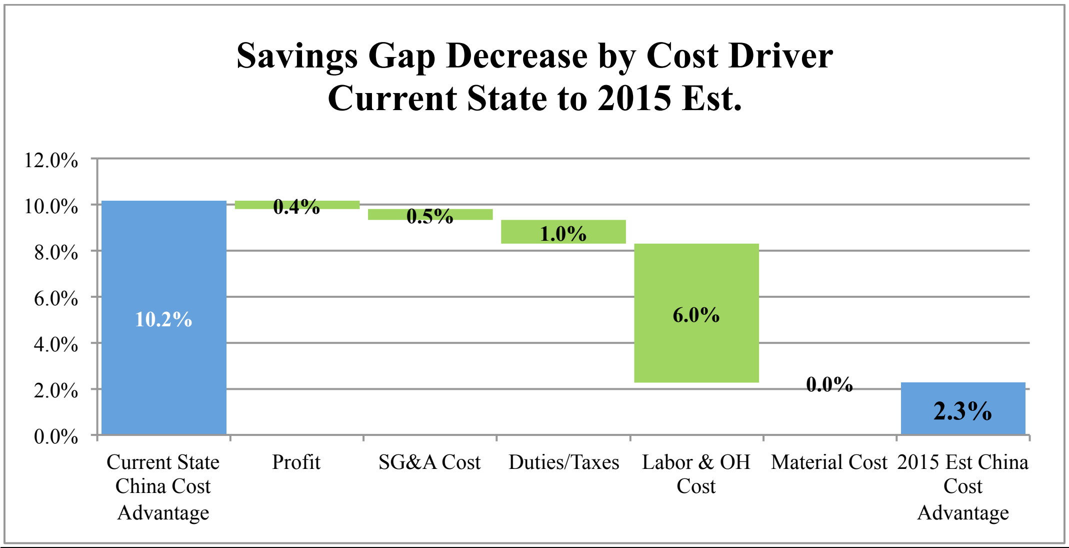
10% Savings

	Sales	Profit	SG&A Cost	Duties/ Taxes	Manufacturing Cost Less Materials	Material Cost
U.S. Cost - Current	$96,300,000	$4,850,000	$9,000,000	$0	$31,450,000	$51,000,000
China Cost - Current	$86,520,000	$3,761,739	$7,523,478	$11,285,217	$12,949,565	$51,000,000

**Utilize China Labor Rate of $2.00/hr USD based on APD market study 2011*
**Utilized China Productivity at an annual rate of 9.1% (http://www.conference-board.org/data/economydatabase/)*
**Labor Cost of company is 16% of Sales*
**U.S. restructuring resulting in cost reductions of 30 to 35% in SG&A and fixed costs based on APD study in 2008*
**Profit for Chinese supplier is standardized to be equal to U.S. supplier at 5% of Ex-Works cost*
**Material Cost are standardized for both suppliers*

What will happen in the future? If the current trends continue, this 10.2% gap could close to only 2.3% by 2015. Extrapolating the data out to 2015 we see:

- China labor rate increase from 2011 of $2.00/hr vs. $4.12/hr USD estimated in 2015
- China labor productivity at an annual rate of 9.1%
- U.S. labor productivity continued at an annual rate of 2.9%



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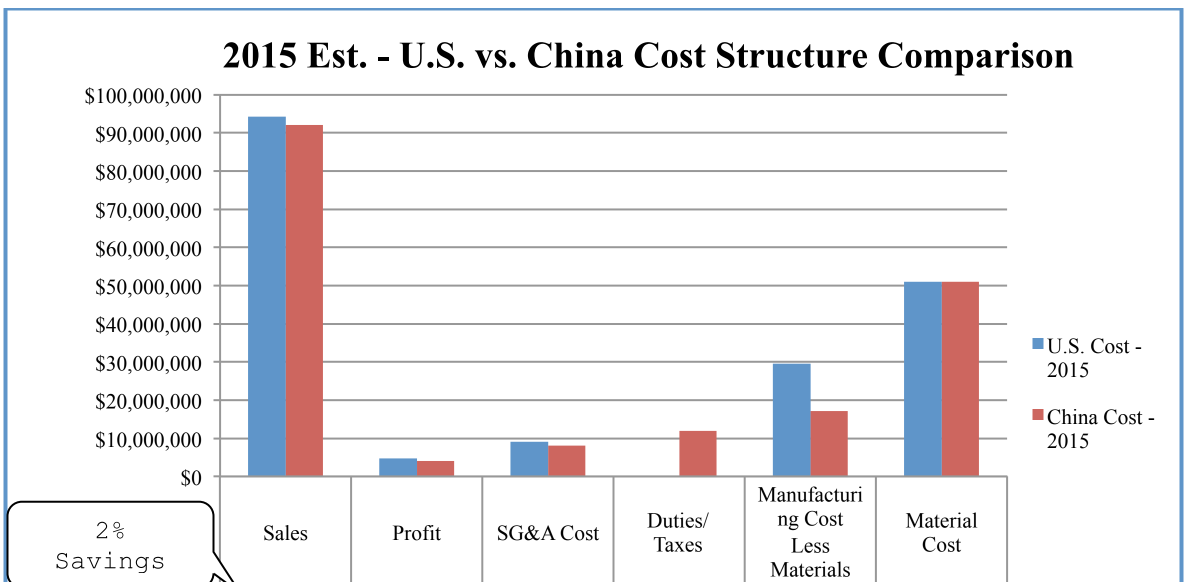
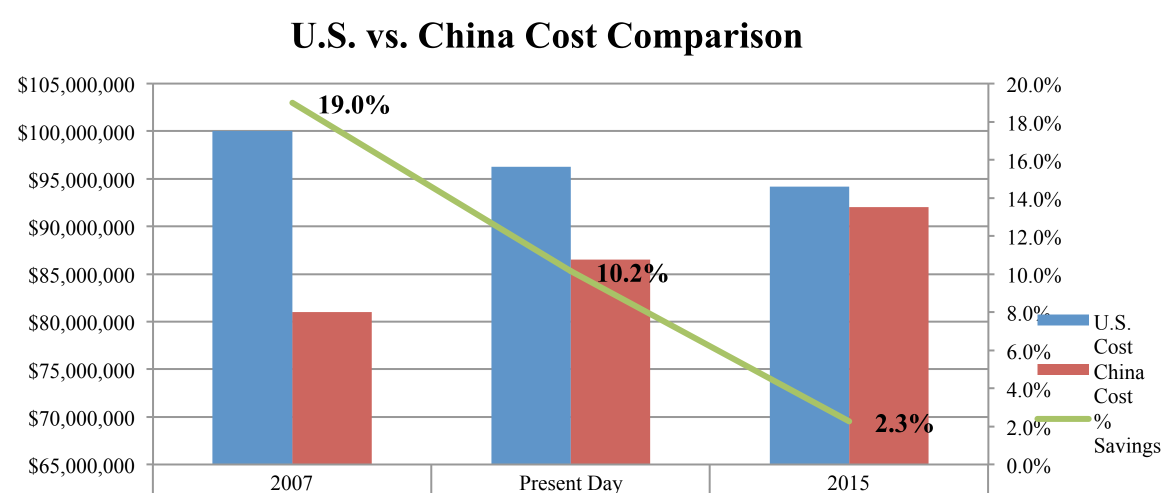


	Sales	Profit	SG&A Cost	Duties/ Taxes	Manufacturing Cost Less Materials	Material Cost
U.S. Cost - 2015	$94,199,428	$4,733,302	$9,000,000	$0	$29,466,126	$51,000,000
China Cost - 2015	$92,064,000	$4,002,783	$8,005,565	$12,008,348	$17,047,304	$51,000,000

**2015 Chinese Labor rate est. @$4.12 based on CAGR of 20%*
**Utilized China Productivity at an annual rate of 9.1% (http://www.conference-board.org/data/economydatabase/)*
**Labor Cost of company is 16% of Sales*
**Utilized 2010 annual labor productivity rate of 2.9% based on 3rd Qtr 2010 to 3rd Qtr 2011 and extrapolated to 2015(http://www.bls.gov/news.release/prod2.nr0.htm)*
**Profit for Chinese supplier is standardized to be equal to U.S. supplier at 5% of Ex-Works cost*

Conclusions

- Restructuring in U.S. manufacturing has resulted in a significant reduction in the gap between U.S. and China production costs.
- Combined with inflationary pressures in China, these restructuring efforts now make sourcing to China a business practice that requires a very critical analysis prior to execution. Factors like obsolescence, travel expenses, on-time delivery issues, etc. need to be strongly considered before sourcing decisions are made.
- Using current China inflation rates, the gap between U.S. and China manufacturing costs may be completely closed within the next 3 years.



	2007	Present Day	2015
U.S. Cost	$100,000,000	$96,300,000	$94,199,428
China Cost	$81,000,000	$86,520,000	$92,064,000
% Savings	19.0%	10.2%	2.3%

Want to learn more about using cost breakdowns to manage your material cost? Sign up for APD's Effective Use of Cost Breakdowns course on March 22, 2012. Click here to register and to learn more.