

# Doing Business in China\*

**\*Disclaimer:** No purchase necessary. Entries subject to validation at the discretion of contest sponsor(s). Other countries may be mentioned than the one in the title. Inclusion of any specific country, including the United States of America, does not represent endorsement by the speaker or anyone else. Information may be wildly inaccurate. Use at your own risk. Consumption of alcohol may increase severity of side effects.



**EAF LLC**

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC





For me, I:

- ✓ Don't drink any non-bottled water.
- ✓ Don't drink coffee unless boiled or Starbucks.\*
- ✓ Don't eat any fresh vegetables.
- ✓ Only eat fruit I can peel (bananas, oranges, apples if I have a knife).
- ✓ Deep fried is good!!
- ✓ Carry a small pharmacy.

Air pollution ca 2010 near Tianjin, China

\*Starbucks, for instance, uses sterilized milk from cartons for lattes in China.



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# Basic Demographics of China

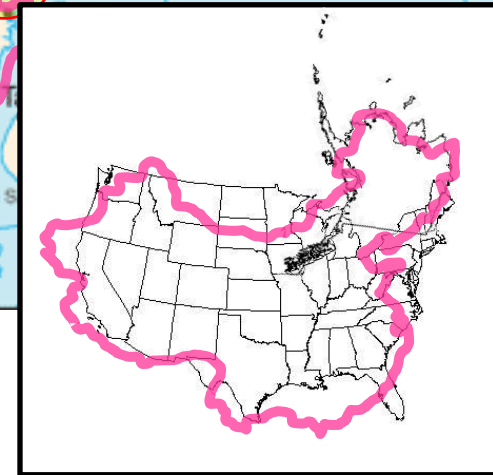
China area: 9.6M sq km , population 1.35B (2012)

US area: 9.8M sq km, population 314M (2012)

US growth ~0.75% y/y

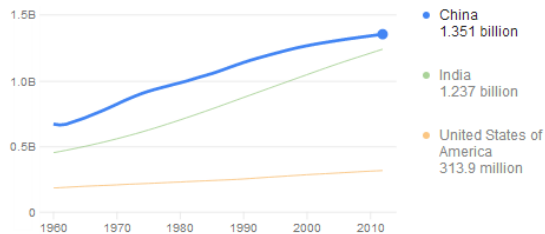
China growth ~ 0.50% y/y

Same size as US, more than 4x population



1.351 billion (2012)

China, Population



Explore more

Retrieved from Google search 20131028

<https://www.cia.gov/library/publications/the-world-factbook/geos/ch.html>

<http://geography.about.com/library/blank/blxusa.htm>



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC



# Why do business internationally?

- Market access
  - Economic development creates **new consumers** for your products
  - Market differences create opportunities to **tailor your product**
- Unique resources = bidirectional opportunities
  - Most pure silicon wafers from Japan; Software development in India; Mining in China, South America: **suppliers & markets**
- Manufacturing—lower costs, close to customers, favorable logistics, *better integration*
  - Outsourced, joint venture, wholly owned, ODM
- Business process outsourcing (think “call centers”)
  - Originally “customer service”, now legal, IT, HR, staffing, etc.



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

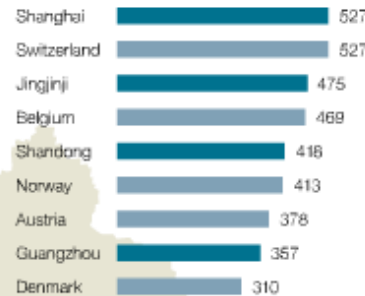
Confidential, EAF LLC

# McKinsey—"Clustering"

Beijing: 22,000,000  
 Shanghai: 19,210,000  
 Chongqing: 14,749,200  
 Tianjin: 12,281,600  
 Chengdu: 11,000,670  
 Guangzhou: 10,182,000  
 Harbin: 9,873,743  
 Wuhan: 9,700,000  
 Shenzhen: 8,912,300  
 Xi'an: 8,252,000  
 New York: 8,244,910  
 Los Angeles: 3,819,702  
 Chicago: 2,707,120

A clustering approach can help companies target consumers more effectively in Chinese cities, some of which are economically larger than entire European countries.

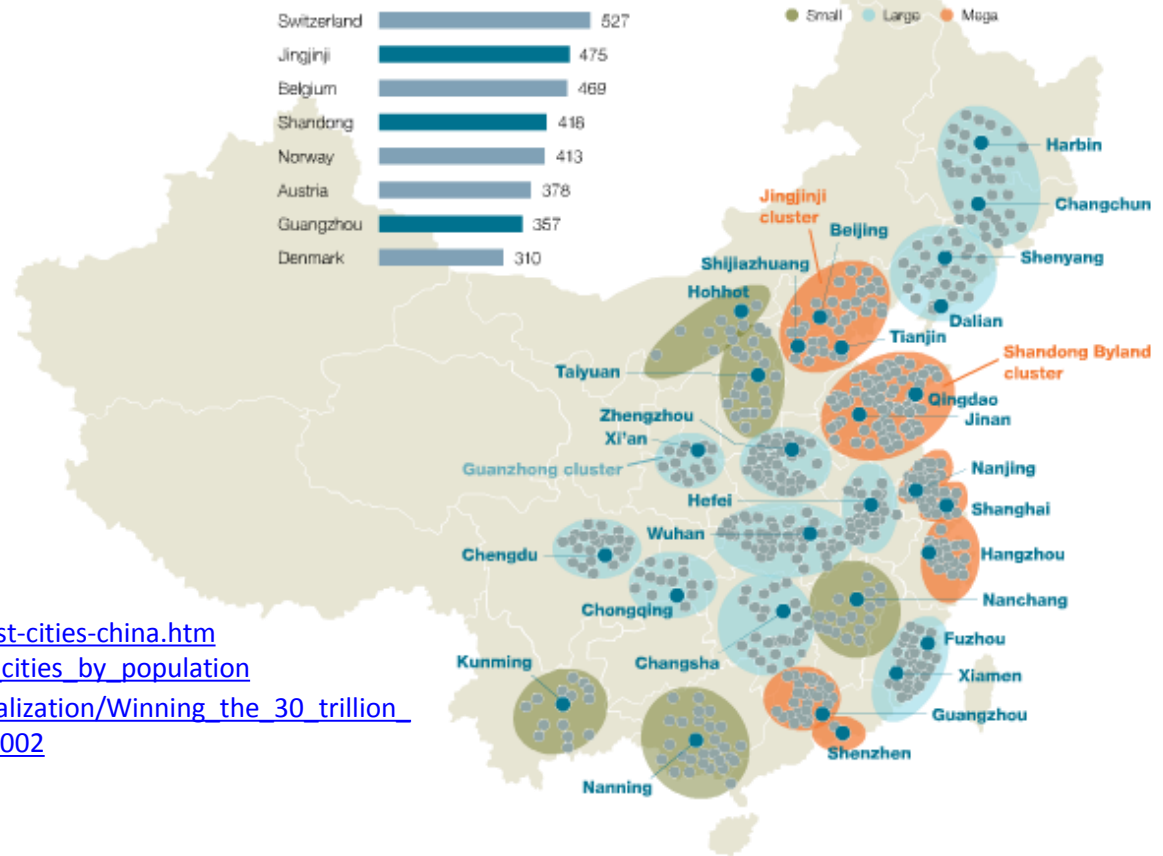
2010 GDP for urban clusters in China vs selected countries, \$ billion



Urban clusters in China and their hub cities

Clusters are grouped by size, based on average 2015 urban GDP estimates

● Small ● Large ● Mega



Sources:

- <http://geography.about.com/od/chinamaps/a/largest-cities-china.htm>
- [http://en.wikipedia.org/wiki/List\\_of\\_United\\_States\\_cities\\_by\\_population](http://en.wikipedia.org/wiki/List_of_United_States_cities_by_population)
- [https://www.mckinseyquarterly.com/Strategy/Globalization/Winning\\_the\\_30\\_trillion\\_decathlon\\_Going\\_for\\_gold\\_in\\_emerging\\_markets\\_3002](https://www.mckinseyquarterly.com/Strategy/Globalization/Winning_the_30_trillion_decathlon_Going_for_gold_in_emerging_markets_3002)



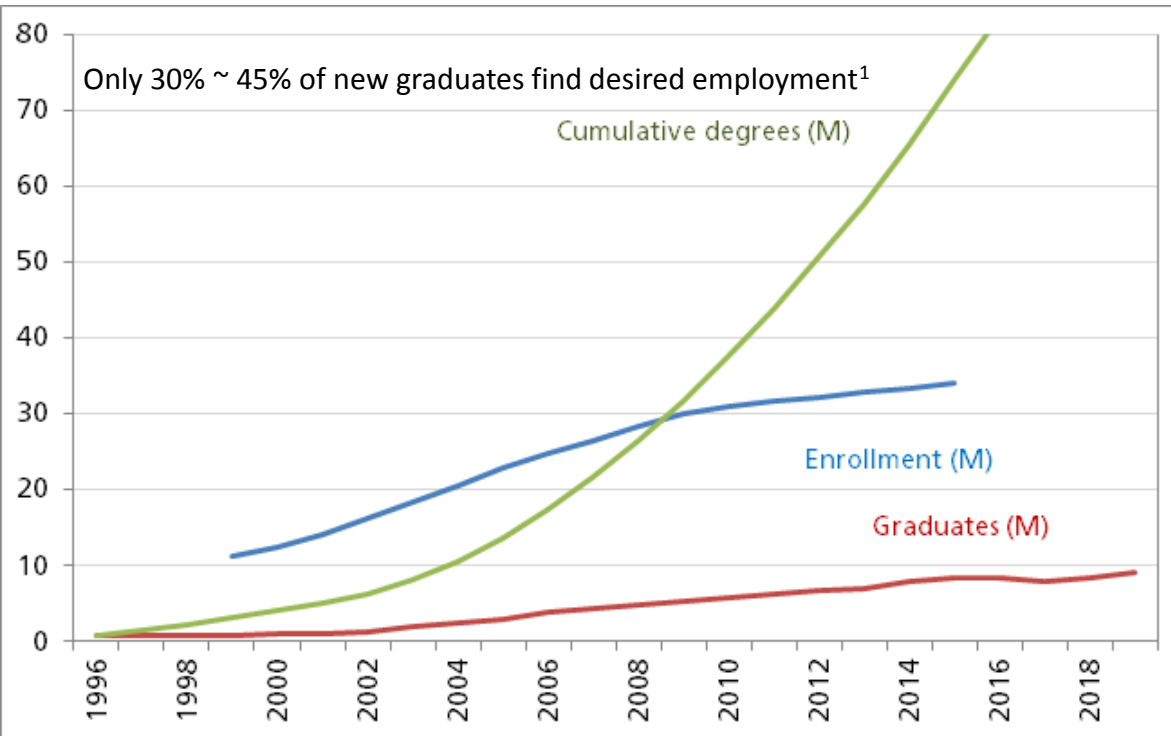
EAF LLC  
 ...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# Education



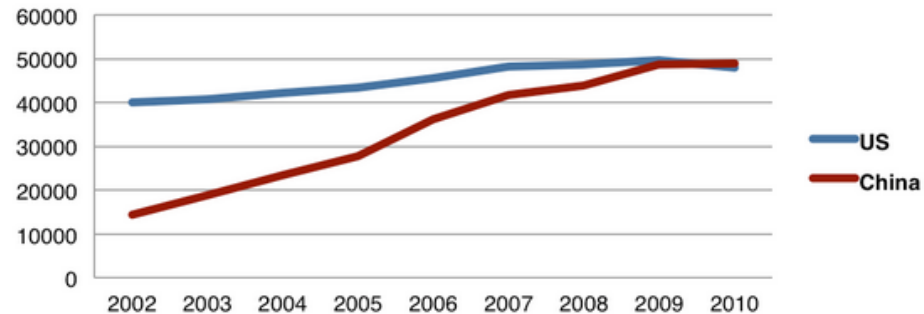
Sources:

- <http://www.ibtimes.com/chinese-college-graduates-cannot-secure-jobs-28-beijings-2013-graduates-44-shanghais-have-found-job>
- [http://worldnews.nbcnews.com/\\_news/2013/09/15/20026512-chinas-7-million-recent-graduates-compete-in-toughest-job-market-ever](http://worldnews.nbcnews.com/_news/2013/09/15/20026512-chinas-7-million-recent-graduates-compete-in-toughest-job-market-ever)
- <http://www.nytimes.com/2013/01/17/business/chinas-ambitious-goal-for-boom-in-college-graduates.html>
- <http://english.peopledaily.com.cn/90001/98649/7315789.html>
- <http://www.kpmg.de/docs/Education-in-China-201011.pdf>
- <http://www.nytimes.com/interactive/2013/01/16/business/In-Education-China-Takes-the-Lead.html?ref=business>

## Number of PhDs Awarded (China vs US)

China has been graduating more degreed students per year than the US since 2001

China has had more degreed population than the US since 2006



Source: <http://blog.inomics.com/chinese-phds-vs-us-phds/>



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# Wage inflation

- Recently I modeled the cost to set up laptop assembly lines in the USA using modular robotic automation, as compared to assembly in China with more manual labor.
- I don't think we are quite ready for “reshoring” en-masse yet, but...
- Note that the estimated 5-year NPV for a laborer in China in my model actually exceeds\*\* that for a *minimum wage* worker in the US under the assumption of continued 20% CAGR of minimum wage in China.

*What does this do for the “middle class”?*



EAF LLC

...a fusion of engineering & art

\*\* note that the combination of social benefits including housing for employees in China may be > 3x base salary as compared to < ½ base pay for US workers (BLS average)



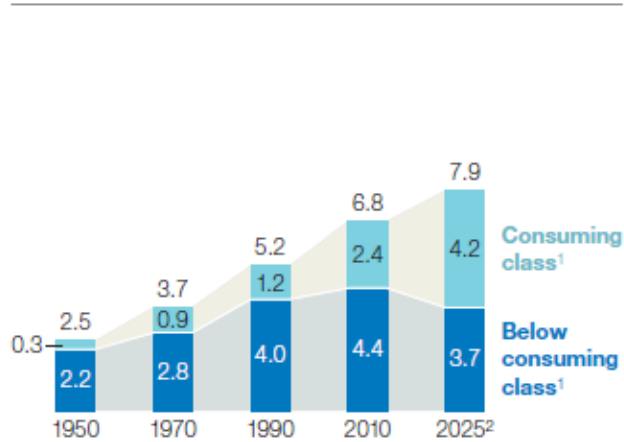
# Developing world as a consumer

China Daily, April 2, 2012

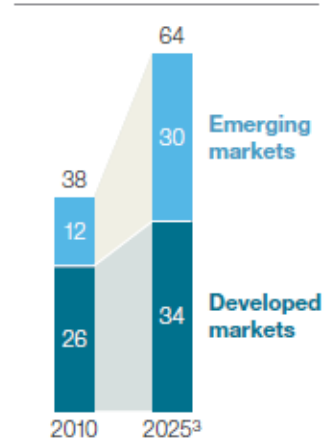
## Bigger middle class key to growth: Expert

By 2025, the consuming class will swell to 4.2 billion people. Consumption in emerging markets will account for \$30 trillion—nearly half of the global total.

World population, billions

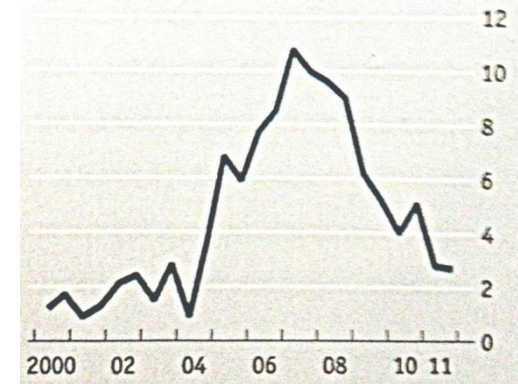


World consumption, \$ trillion



### Mountain becomes molehill

China's current-account surplus as % of GDP



The Economist, March 17, 2012

Shanghai Daily Saturday 31 March 2012

TOP NEWS A3

## China cuts import duties to boost spending

Source: Angus Maddison, founder of Groningen Growth and Development Centre, University of Groningen; Homi Kharas, senior fellow at Wolfensohn Center for Development at Brookings Institution; McKinsey Global Institute analysis



EAF LLC

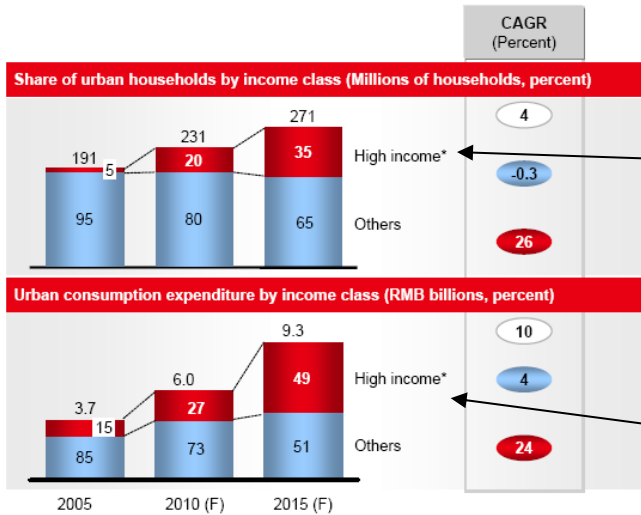
...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# “Middle Class”



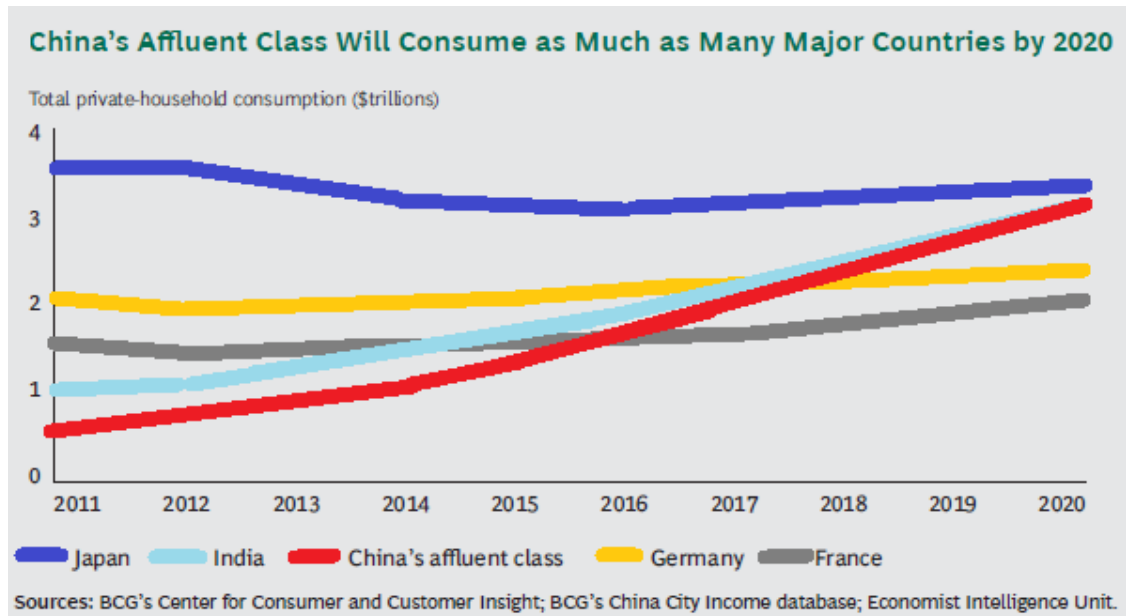
This group makes about 5x the income of a typical factory worker, is about 1/5 of the population today, but will soon be over 1/3 of households, growing > 25% per year

Over the same time frame, this group, the new “consumer class”, will account for half of spending.

\* Monthly household income > 5,000 renminbi  
Source: MGI China Consumer Demand Model v2.0; Insights China by McKinsey

Source: McKinsey (Insights China) Consumer Survey, Sept. 2008

Japan  
Germany  
France  
India  
China



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development













Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# The new, innovative China

Innovation is a strategic priority for Chinese businesses (94% of Chinese respondents report innovation is a strategic priority for their business, 3 points higher than the Global average). **81% cite development of entirely new products/offerings--way above the Global average.** 70% cite development or improvement of products *customized to local circumstances.*

Source: GE Global Innovation Barometer, 2013

Industry	Catch-up barriers	Catch-up capabilities
Machine tools	 Low	 High
Medical devices	 Medium	 Low
Auto parts	 Medium	 Medium
Construction equipment	 Low	 High
Trucks	 Medium	 High
Nuclear power	 High	 High

“There is no magic behind the emergence of the Chinese challengers. They start in geographic markets that are more price sensitive and in product segments that are relatively less technology intensive than those of Western incumbents. They then create the capabilities to go global. The final stage is to confront incumbents in developed markets and more sophisticated product segments. The best time to counter the threat of the Chinese challengers is when they are still fostering these capabilities. Never wait until the direct competition begins.”

Boston Consulting Group: Hadi Zablit, partner & managing director Paris office & Benny Chui, HK analyst

Source:

[https://www.bcgperspectives.com/content/articles/automotive\\_engineered\\_products\\_project\\_business\\_next\\_wave\\_chinese\\_cost\\_innovators/](https://www.bcgperspectives.com/content/articles/automotive_engineered_products_project_business_next_wave_chinese_cost_innovators/)



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# R&D and Intellectual Capital in China

## CHINA'S ABSORPTIVE STATE

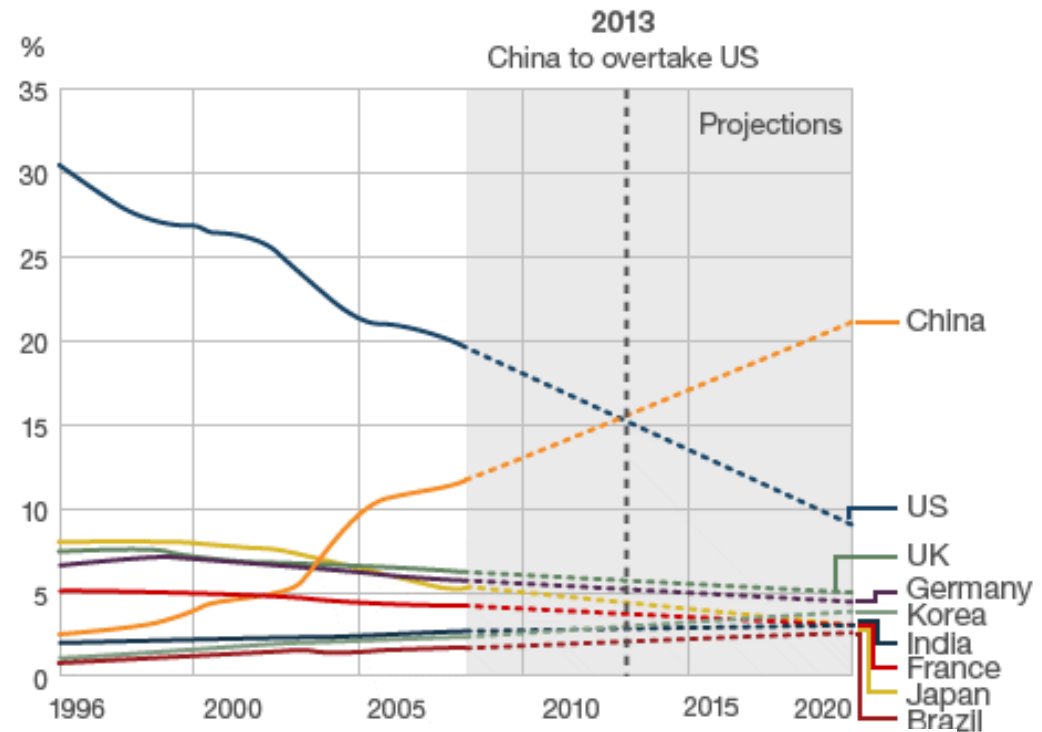
Research, innovation and the prospects for China-UK collaboration

Kirsten Bound, Tom Saunders, James Wilsdon and Jonathan Adams

October 2013

Source: [www.nesta.org.uk](http://www.nesta.org.uk)

### Projected growth in citations in scientific literature



Source: <http://www.bbc.co.uk/news/science-environment-12885271>



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# So, what does this mean?

- China has a rapidly growing group of educated, relatively affluent consumers.
- China is far from monolithic, and the regional differences may present opportunities.
- There are many layers to practices in China. “Usual and Customary” may be very different from that to which you are accustomed.
- China brands will compete globally.
- China will become a legitimate source of innovation.



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC



# Mei Wenti\* = No problem!



- \* there is a cultural bias against admitting a problem, mistake, etc. If you ask directly about a possible issue, this is a common response. I found this often is a red flag, indicating there is a problem, but you should not address it directly, right then, or publicly.



EAF LLC

...a fusion of engineering & art

# Supplier Capabilities

We needed to make this



Supply Chain found a new molding vendor who offered very attractive pricing...they looked at the part, and said **Mei Wenti!**



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# First Try



4/22/2002

Supplier changed their view from Mei Wenti to “your design is bad and the part is un-moldable!”



**EAF LLC**

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# After Lots of Assistance to Supplier



5/29/2002

T = 37d

After putting our people on site, found they were not drying resins, and many other issues. They were used to making children's toys, not using engineering thermo-plastic resins.



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC

# Success!



6/13/2002

T = 52d



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

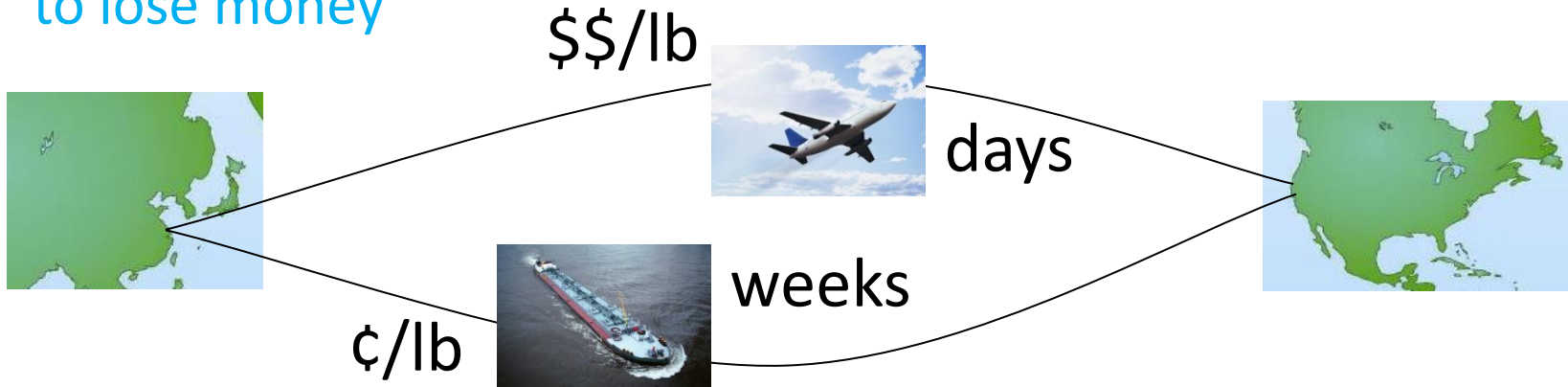
Confidential, EAF LLC



# “It’s Logistics”



- *UPS is right—it’s Logistics! Either direction, you never want to hear “Flying airplanes over boats” --sure way to lose money*

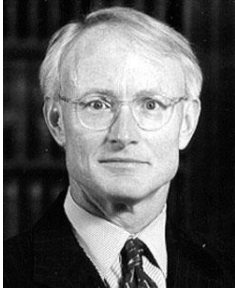


EAF LLC  
...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC



# Patience is a virtue



## Porter-5 forces

- Buyers
- Suppliers
- New Entrants
- Substitutes
- Rivalry

Wang, W. and Chang, P. (2009), “Entrepreneurship and strategy in China: why ‘Porter’s five forces’ may not be”, Journal of Chinese Entrepreneurship

- Business purpose—moral force of business
- Business climate—regulation, technology, **customer values**, etc.
- Business location—**regional differences**, infrastructure
- Business organization—Chinese cultural approach to organization & management
- Business leader—the identity & qualities of the leader address all competitive forces and external/internal issues; includes things like emotional connection to workers, etc.

Source: Emerald Group Publishing <http://dx.doi.org/10.1108/02580540910952172>

It may take much longer than expected for business to come to fruition in China.



EAF LLC

...a fusion of engineering & art

Read: [http://chinamarketingtips.com/common-mistakes-by-western-companies-dealing-with-chinese-businesses/?goback=%2Egde\\_36656\\_member\\_5800516154355113984#%21](http://chinamarketingtips.com/common-mistakes-by-western-companies-dealing-with-chinese-businesses/?goback=%2Egde_36656_member_5800516154355113984#%21)

# calvin and hobbes

by WATSON



OLLY-WOLLY  
POLLIWOGGY  
UMP-BUMP FIZZ!

HEY!



HA HA!  
I STOLE  
YOUR  
FLAG!

BUT I HIT YOU WITH THE  
CALVIN BALL! YOU HAVE TO  
PUT THE FLAG BACK AND  
SING THE "I'M VERY SORRY"  
SONG!

I DON'T  
HAVE TO  
SING THE  
SONG!  
I WAS IN  
THE "NO  
SONG"  
ZONE!

NO YOU WERENT. I  
TOUCHED THE "OPPOSITE  
POLE," SO THE "NO  
SONG ZONE" IS NOW  
A "SONG ZONE"!

I DIDNT SEE  
YOU TOUCH THE  
OPPOSITE POLE!  
YOU HAVE TO  
DECLARE IT!

I DECLARED  
IT OPPOSITELY  
BY NOT  
DECLARING  
IT. START  
SINGING.

"HERE'S THE  
"VERY SORRY  
SONGG." WONT  
YOU HELP AND  
SING ALONGS?"

BUM BUM BUM

I BLEW IT! .... HE'S SORRY!  
I KNEW IT! .... SO SORRY!  
I'M VERY VERY JUST DONT DO IT  
SORRY THAT I ANY MORE, YOU  
TOOK YOUR SCURVY  
PRECIVUS FLAAGGG! SCLAWAAGGG!

I'M FREE!  
I GET FREE  
PASSAGE  
TO WICKET  
FIVE!

NO, THAT'S WHAT  
WE DID LAST  
TIME, REMEMBER?

OH  
YEAH.  
HMM.

OK, THE NEW  
RULE IS WE  
HAVE TO JUMP  
EVERYWHERE  
UNTIL SOME-  
ONE FINDS  
THE BONUS  
BOX!

THAT'S  
GOOD!

THE ONLY  
PERMANENT  
RULE IN  
CALVINBALL  
IS THAT YOU  
CANT PLAY  
IT THE  
SAME WAY  
TWICE!

THE SCORE IS  
STILL 6 TO 12!



THE ONLY  
PERMANENT  
RULE IN  
CALVINBALL IS  
THAT YOU CAN'T  
PLAY IT THE  
SAME WAY  
TWICE!

THE SCORE IS  
STILL 0 TO 12!



# Lessons Learned

- **Intellectual property risk** is lower than perceived in the West. On the other hand, knock offs, copycats, brand duplication, etc. are real concerns esp. if you sell into the China market. Large instances are reducing through international cooperation and crackdown by the Chinese government, but as the Chinese consumption market gets larger, there will be **more internal demand for brand copies**
- Frequently changing government rules, variable and **regional interpretation** can be frustrating. Government managed power shortages are common in summer, most larger facilities have their own diesel-electric generators.
- Employee turnover in labor positions is very high, especially after holidays. Chinese New Year (~ February), the May holidays, and other culturally important observances can disrupt operations—especially if 20% or more of your workers don't come back.
- Communication, especially by email, can seem clear and be nothing of the sort—keep digging, ask the same question different ways. Frequent use of word by word translators etc. means what you are getting back may be a lot different from what they thought.
- You can deal with problems and **make changes in hours or days in a factory in China, things which could take weeks in a US factory**.
- **Chinese young professionals** have various personalities just like Western professionals. They respond to leadership and management. They also **are more willing to make sacrifices, work long hours, and can be very aggressive trying to solve problems**.
- Lowest price isn't lowest cost. **Quality is negotiable and frequently traded off vs. price**.
- Logistics costs can wipe out all advantages of low-cost manufacturing (not only in China).
- There is a **shift from a manufacturing-export economy to a self-sustaining consumption** economy. Does this work for your business model?



EAF LLC

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC



Blaine Bateman  
President, EAF LLC  
+1 720-202-2855

[eafpres@eaf-llc.com](mailto:eafpres@eaf-llc.com)  
[www.eaf-llc.com](http://www.eaf-llc.com)



**EAF LLC**

...a fusion of engineering & art

Business Strategy, Market Research, Engineering, Product Development

Telecom, Wireless, Telematics, RF, Medical, Chemical

Confidential, EAF LLC