Overview of the Automobile Industry in China

Colloquium Session CS3 Eleventh International Conference on Fluid Dynamics (ICFC2014) October 10, 2014 Tohoku University Noriko Hikosaka Behling www.norikobehling.com

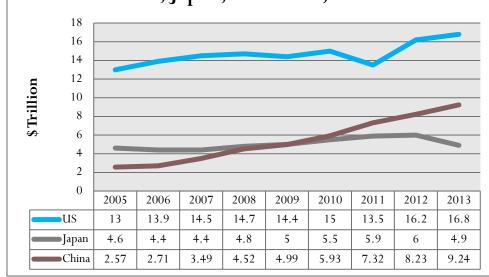
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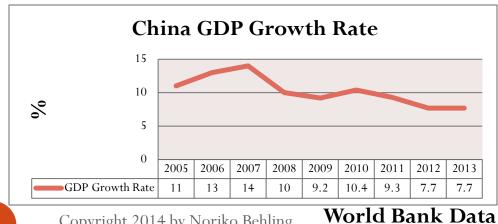
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China's Economy

GDP: US, China, Forecast

GDP: US, Japan, and China, 2004-2013



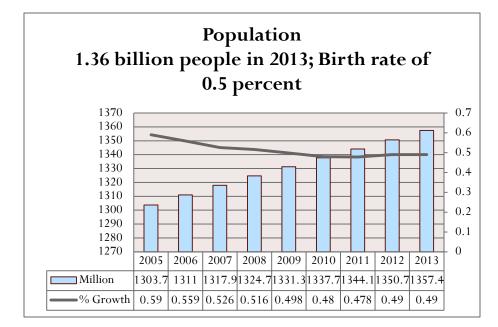


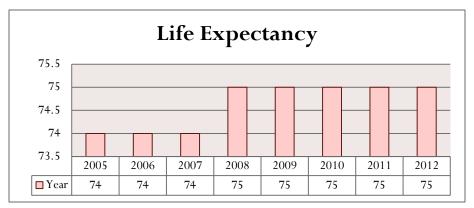
GDP \$trn* China US US 60 2019 2013 US: 16.8 40 China: 9.24 20 0 2000 05 10 15 20 25

IMF; The Economist

China's Population

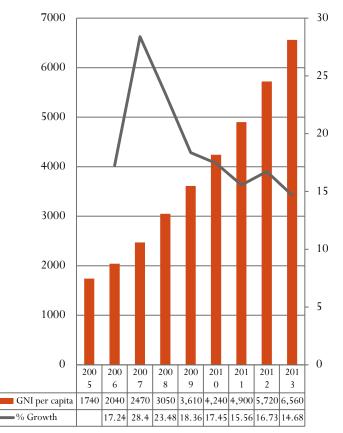
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China's Gross National Income (GNI) Per Capita Atlas Method; \$6,500 in 2013

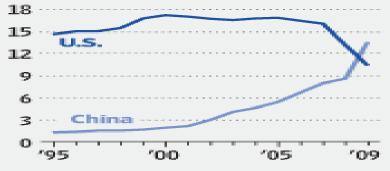


China's Automobile Industry

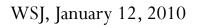
In January 2009, the Chinese government implemented stimulus measures that cut sales taxes by half on small cars with engines smaller than 1.6 liters and offered rebates for rural residents buying new cars.

Taking the Lead

Vehicle sales for China and the U.S., in millions



Sources: IHS Global Insight (1995-08); Autodata, China Association of Automobile Manufacturers (2009 data)



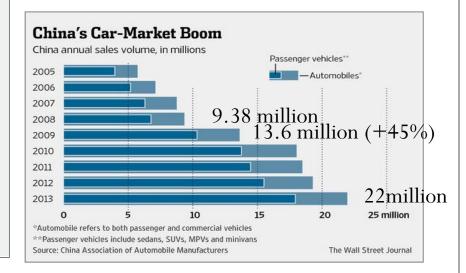
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(Asked on a 5-point scale) Asked of Chinese adults in 16 Chinese cities % Who responded "agree" (4) or "strongly agree" (5) 71% 65% 59% 55% 53% 47% 44% 2007 2008 2009 Data collected in June 2009 in Beijing, Cengxi, Changsha, Chengdu, Guangzhou, Guilin, Fuzhou, Jinzhong, Lanzhou, Liaocheng, Nantong, Shenvang, Shenzhen, Shanghai, Yuevang, and Zunvi

Do you agree that Chinese economy would be getting better in 12 months?

GALLUP POLL

Gallup, August 13, 2009



WSJ, April 18, 2014

China's Automobile Industry (2)

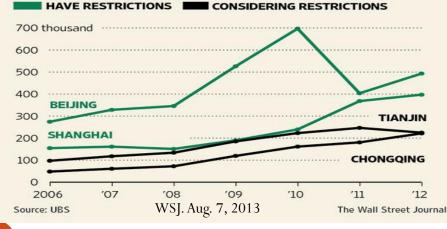
In January 2011, Beijing started to limit the number of new vehicle license plates and started a vehicle license lottery for new car buyers. Many cities followed this example.

Hangzhou will only issue new license plates via an auction and lottery.

✤ Shanghai, Guangzhou, Guiyang, and Tianjin also limit the number of new vehicles registered each year.

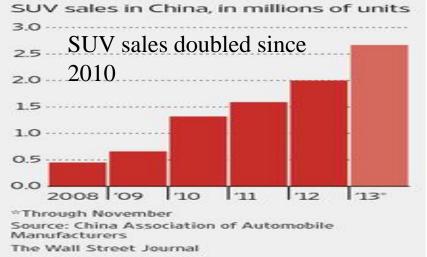
Chinese Cities Limit Cars

Number of cars sold in these municipalities



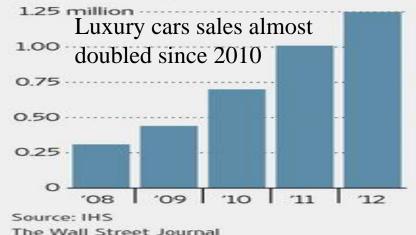
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The Bigger the Better



Making Tracks

China's appetite for luxury cars continues to grow. Vehicle sales



China's Automobile Industry (3)

- In October 2013, China implemented a policy to limit driving age of a vehicle and scrap up to 6 million vehicles that don't meet emission standards. Hebei province, where seven of China's smoggiest cities, has been ordered to scrap 660,000 cars that do not meet emission standards.
- Up to 333,000 will be taken off the roads in Beijing and 160,000 in Shanghai. Up to 5 million are being removed in highly developed regions including the Yangtze River Delta, the Pearl River Delta and the smog-choked region of Beijing-Tianjin-Hebei.
- ✤ Elimination of old cars has prompted less affluent to buy more Minivans in 2014.

Minivans Bloom in China

Top 10 selling passenger vehicles for the first four months of 2014

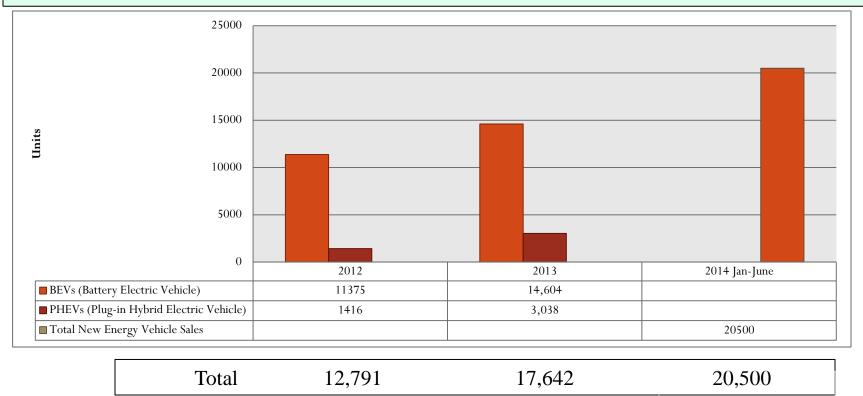
Wuling Hongguang	Minivan		270,100
Volkswagen Lavida	Sedan	150,000	
Wuling Rongguang	Minivan	142,500	
Ford Focus	Sedan	134,500	
Volkswagen Santana	Sedan	127,200	
Wuling Sunshine	Minivan	116,100	
Great Wall Haval	SUV	112,900	
Volkswagen Sagitar	Sedan	102,000	
Changan Star	Minivan	101,600	
Volkswagen Jetta	Sedan	101,000	

Note: Wuling-branded vehicles are made by a joint venture among General Motors, SAIC and Liuzhou Wuling

Sources: China Association of Automobile Manufacturers; IHS Automotive; car makers The Wall Street Journal

China's Automobile Industry (4)

September 2013: China implemented a program to promote new energy vehicle, targeting at 5 million new energy vehicles by 2020.
Buyers of electric cars can receive subsidies up to \$9,800.
It has an immediate impact. During the Jan-June 2014, 20,500 new energy vehicles (including hybrid and electric cars and buses) were sold.

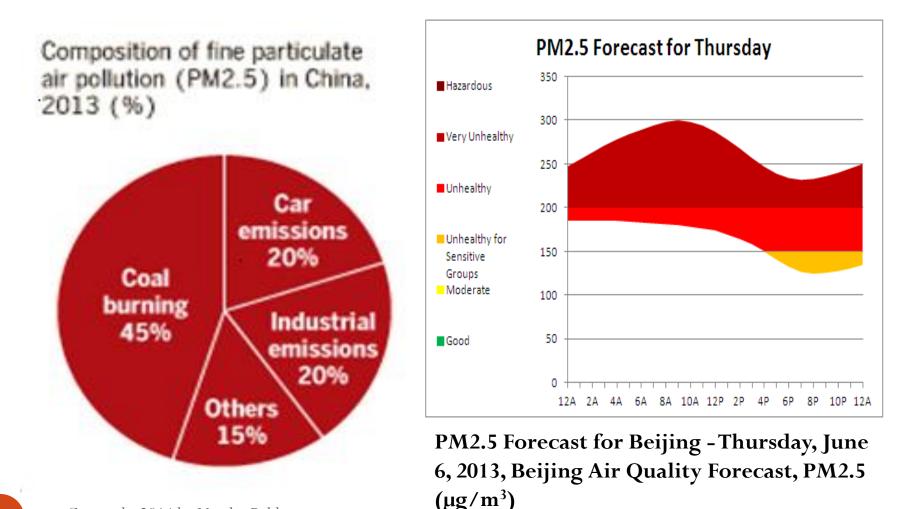


Air Pollution in China: A Critical Problem



A photo of the skyline of Shanghai's Lujiazui Financial District covered with heavy smog, Associated Press, 9 December 2013

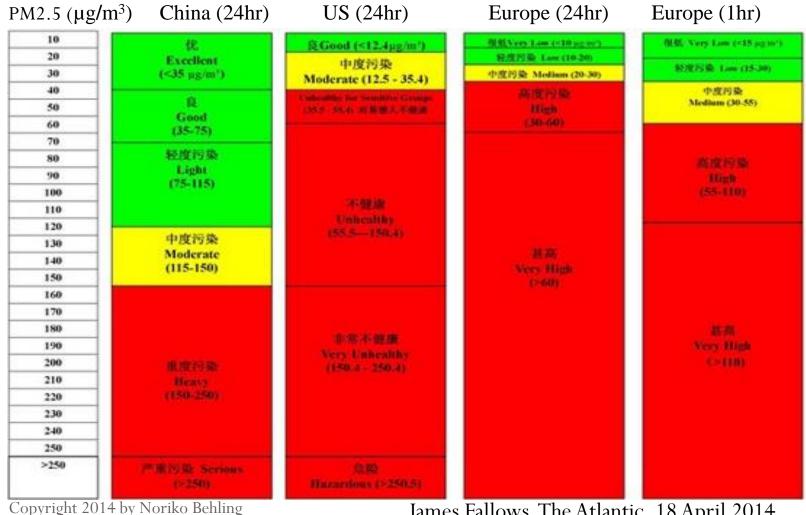
Air Pollution in China (2)



10

Air Pollution in China (3)

Air Quality Assessment Standards in China are Less Stringent: based on PM2.5 ($\mu g/m^3$)



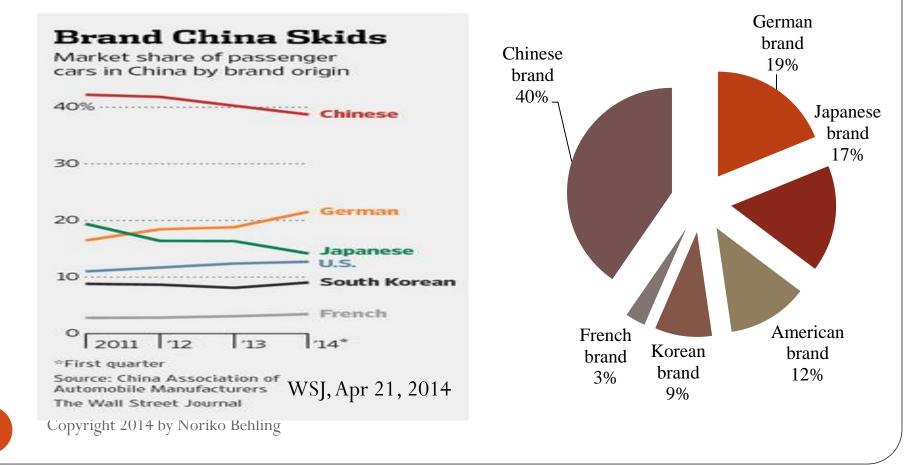
James Fallows, The Atlantic, 18 April 2014.

Challenges and Opportunities

- Declining Ratio of China Domestic Car Sales; Poor Quality, Uninspiring Marketing and Inefficient Industry Structure
- ✤ Increasing Foreign Market Shares

2013 Total Vehicle Sales = 22 Million; Passenger Car Sales = 18 Million

Passenger Sales Share Breakdown



Challenges and Opportunities (2)

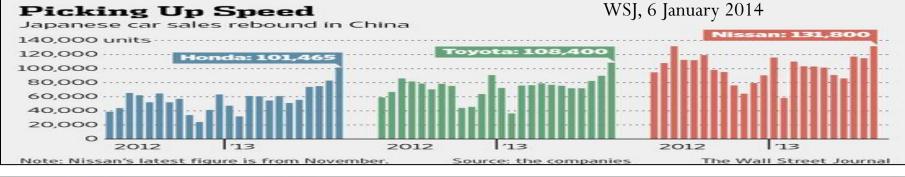
✤ Island dispute had severe impact on Japanese auto sales in China

Political Penalty

Japanese auto makers' September vehicle sales in China, and change from a year earlier



Out of Favor Chinese shun Japanese-brand vehicles Monthly sales of Japanesebrand cars in China 300 thousand 200 98,900 100 0 FMAMJ JASO Source: China Association of Automobile Manufacturers WSJ, Nov 9, 2012 The Wall Street Journal



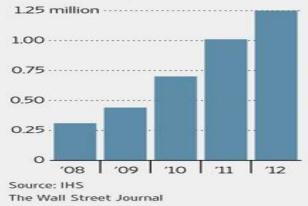


Outlook

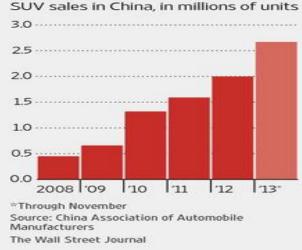
- Luxury Cars. Consulting firm McKinsey in 2013 estimated that by 2022 China's urban population will grow by an additional 100 million to 357 million. Upper middle class, households with disposable income between 106,000 and 229,000 yuan will expand to 54% of all households from 14% in 2012. These consumers would be prime targets for luxury car marketers, especially if they embraced monthly payments. (WSJ, April 28, 2014)
- SUVs. According to the Market China SUV Industry Report, 2014, the SUV market is expected to grow rapidly over the next five years, and sales volume will reach 7.9 million in 2018. (PRWEB, February 12, 2014). Many foreign automakers are planning to produce SUVs in China. GM China introduced the Cadillac SRX, which melds the characteristics of a car and a sport-utility vehicle, in 2009. Sales of the car rose 23% in China to 14,496 vehicles in the first half of 2014 from the year before, accounting for more than 40% of Cadillac sales in the country.

Making Tracks

China's appetite for luxury cars continues to grow. Vehicle sales



The Bigger the Better



Outlook (2)

Lower-Tier Buyers are Next Frontier in China

Compact Cars, including Minivans, and Low Cost Cars. Consumers living in smaller cities, known as tier-three and tierfour cities, will drive future demand for cars in China, as the world's largest market for new autos undergoes structural shifts, according to a survey by the semiofficial China Association of Automobile Manufacturers and market-research firm Nielsen Holdings. These cities are less affluent but faster-growing. About 60% of would-be buyers in these cities are looking at cars priced at below 120,000 yuan (around \$19,400), according to the survey. (WSJ, July 10, 2013)

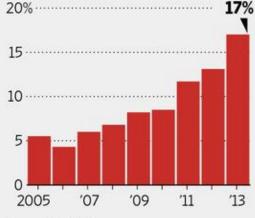
Outlook (3)

Huge Potential in China's Auto Loan Business
 Auto makers introduce China to the car loan, where young car buyers are open to financing where cash has traditionally ruled

Revving Up

Car makers see huge potential in China's auto financing sector.

China's loan-financed car sales, as a percentage of total



Global loan-financed car sales in 2013

U.S.	80%
India	70
Brazil	50
Germany	50
U.K./France	45
Turkey	40
Japan 🛛	35
Russia	30
China 🗾	17
Vietnam	8

The Wall Street Journal

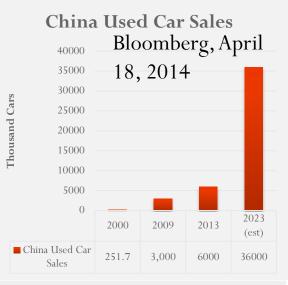


WSJ, July 9, 2014

Source: Ford Motor

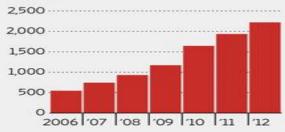
Outlook (4)

- Used Cars. In the last five years, 60 million new cars were sold in China. Now, some are starting to come back on the market as used vehicles. In addition, many cities are reducing the number of new car registrations. Through trade-ins, used car dealers get the license plates. The city isn't retiring old license plates, so they can continue to use them. Last year, the number of used cars in China increased by 8.6% to 5.2 million units, while the turnover grew 10.6% to yuan 291 billion, according to the China Automotive Distribution Industry and Aftermarket Report.
- Leased Cars. Tesla said it created a new finance arm and is offering a business leasing program for small and medium-size businesses, providing another financing option for its electric cars.
- Automobile Parts. Delphi, an auto parts maker, expect its China revenue to double to nearly \$5.5 billion by 2016 as Chinese car makers boost quality for discerning local customers. Delphi China President said Chinese brands could become global players if the government relaxed joint-venture restrictions on foreign auto companies.



China Component

Demand for cars boosts parts industry. Production value in billions of yuan:



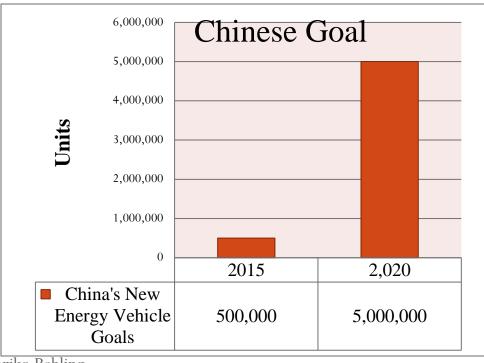
Note: Amount includes components used in making new cars and servicing old ones in China, as well as components exported.

Sources: China Association of Automobile Manufacturers; China Auto Infonet; AlixPartners

The Wall Street Journal

Outlook (5)

New Energy Vehicles. China implemented a subsidy program in September 2013. China reportedly is contemplating on a new gasoline tax to subsidize new energy cars and electric charging infrastructure. In July 2014, China announced individual car buyers will be exempt from a 10% vehicle tax when they purchase new energy vehicles or fuel-efficient automobiles.

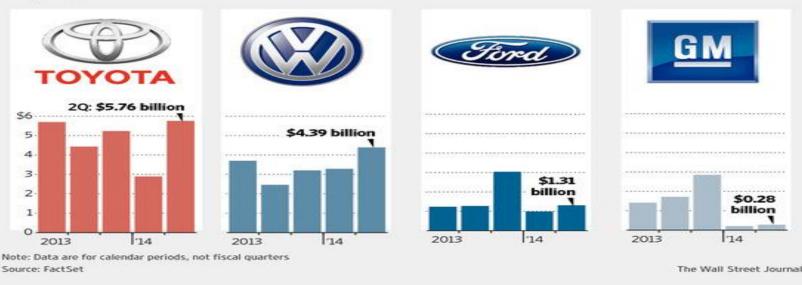


Conclusion

- The Chinese market is changing rapidly, and Chinese car buyers are increasingly disloyal. Despite the prospects the Chinese market is presenting at various times, automakers should stick to their core values you believe in and develop consumer loyalty over the longer term
- This strategy has served Toyo well.

Full Throttle

Toyota earnings are outrunning its top rivals around the globe. Net profit, in billions



Thank You Very Much for Your Attention

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