Strategy
Case: GM in China

Please write 1-2 page answer to the discussion questions for the case **GM in China**, and submit your answer to Blackboard by the due date.

You will need to read three articles for this case: Mini-Case GM in China, Bloomberg's report on GM's electric car Bolt, and Reuters' report on electric vehicles in China. **Please answer the following questions (not those listed after the mini case or in the Case&PaperGuideline)**. You can write one short paragraph for each question or organize your answer as an essay.

Discussion questions for Case GM and Chapter 8 International Strategy:

1. What are GM's **motivations/incentives** to expand to overseas market? How can GM benefit from the expansion?

2. What **international corporate-level strategy**/strategies is GM using? Multidomestic/localization, Global, or transnational? Is this strategy suitable for GM's core competency? Is this strategy suitable for the target overseas market, China? Think of the two needs/pressures in the target market (needs to localize and needs to lower cost or integrate globally).

3. Which **stakeholder groups** are affected by GM's expansion into China? How? You can think about capital market stakeholders (shareholders), organizational stakeholders (GM workers in US and in China), and product market stakeholders (consumers, suppliers, environment).

4. What are the potential negative impact of GM's expansion in China? You can think along those stakeholder groups in Q3. What can GM do to alleviate the impact? What are the caveats of these approaches?

Required reading for Case GM in China:
1. Mini case GM in China
2. Bloomberg, Nov 2016, GM's Electric Car Bolt
https://www.bloomberg.com/news/articles/2016-11-30/gm-s-ready-to-lose-9-000-a-pop-and-chase-the-electric-car-boom
3. Reuters, Jan 2016, In coal-powered China, electric car surge fuels fear of worsening smog
http://www.reuters.com/article/us-china-pollution-autos-idUSKCN0V51BH

The main takeaway from these articles are:
1. GM views China as next big business opportunity; but the expanding auto industry in the country has worsened air pollution;

2. GM launched its full electric car model Bolt in US in 2016, partly as a response to California and other states' regulation on emission; the performance of Bolt rivals Tesla's mass market EV Model 3;

3. Electric car might not solve the problem of air pollution in China due to its coal-powered power plants.

MiniCase 22

Does GM's Future Lie in China?

GIVEN THE SHEER size of the U.S. automotive market, the "old" GM concentrated mainly on its domestic market. GM once held more than 50 percent market share in the United States and was the leader in global car sales (by units) between 1931 and 2007, before filing for bankruptcy in 2009.[1] In its heyday, GM employed 350,000 U.S. workers and was an American icon. The future for the "new" GM may lie overseas, however; most notably in China. Some 70 percent of GM's revenues are now from outside the United States. This is quite a high level of globalization for a company that once was focused on the domestic market only. GM sold more than 3.6 million vehicles in China, 37 percent of total GM cars sold. The Chinese market is becoming more and more important to GM's performance, accounting already for almost 30 percent of total GM revenues of some $155 billion (in 2014).

With a population of 1.4 billion and currently only 11 vehicles per 100 people—compared with a vehicle density of 81 per 100 in the United States—China offers tremendous growth opportunities for the automotive industry. Since China joined the World Trade Organization (WTO) in 2001, its domestic auto market has been growing rapidly and has now overtaken the United States as the largest in the world. Although the growth of the Chinese auto market has slowed in recent years because of the economy's downturn, GM CEO Mary Barra remains convinced that China offers significant long-term growth opportunities.

Unlike some of its main rivals, GM entered the Chinese market early. In 1997, GM formed a joint venture with Shanghai Automotive Industrial Corp. (SAIC), one of the "big four" Chinese carmakers. SAIC is one of the largest companies worldwide and ranked 60th on the Fortune Global 100 list. Over almost 20 years, GM was able to develop *guanxi*— social networks and relationships that facilitate business dealings—with its Chinese business partners and government officials.

Mary Barra, General Motors CEO
© Tomohiro Ohsumi/Bloomberg/Getty Images

GM's China operation has been cost-competitive from day one. The company operates about the same number of assembly plants in China as in the United States, but sells more

vehicles while employing about half the number of employees. Chinese workers cost only a fraction of what U.S. workers do, and GM is not weighed down by additional health care and pension obligations.

Although struggling in the United States, GM's Cadillac luxury brand is in high demand in China, where owning a Cadillac is considered a status symbol. GM's best-selling model in China, however, is the Wuling Sunshine, a small, boxy, purely functional "micro van" priced between $5,000 and $10,000 depending on what options the customer chooses. The SAIC-GM joint venture sold almost 2 million Wuling vehicles in China in 2014. The Wuling Sunshine may help GM further penetrate the Chinese market; it also may be an introductory car for other emerging markets, such as India. GM's low-cost strategy with this vehicle has been so successful that the firm is planning to expand the Wuling product line and offer the vehicle globally. GM already sells the Wuling Sunshine in Brazil under the Buick nameplate.

Taken together, China and other emerging economies in Asia, Latin America, and the Middle East are becoming more and more critical to GM's future performance as it strives to become a lean and low-cost manufacturer of profitable small cars (at least for its non-U.S. markets). To back up its strategic intent, GM has quadrupled its engineering and design personnel in China and is investing a quarter-billion dollars to build a cutting-edge R&D center on its Shanghai campus, home of its international headquarters. Moreover, GM is spending an estimated $14 billion to build five additional manufacturing plants to support anticipated annual sales of 5 million vehicles.

Yet, given the slowdown in the Chinese economy combined with devaluation of the Chinese currency (the yuan), the competitive intensity in the world's largest automobile market is becoming more intense. Moreover, several government-supported domestic car manufacturers in China are initiating a cut-throat price war to gain market share and with it scale. In contrast, low gas prices in the United States have fueled high demand for sport utility vehicles (SUVs) and trucks, where GM and Ford hold strong positions.

DISCUSSION QUESTIONS

1. What explains the resurgence of the "new" GM in the United States? Do you think GM can sustain its competitive advantage in the United States? Why or why not? Buttress your arguments.
2. How important are non-U.S. sales to GM? What implications does this have for GM's global and business strategy? Think about the integration-response framework to inform global strategy and different strategic positions to inform business strategy.
3. In 2014, GM held almost 15 percent market share in China, while Ford held only 3 percent. Why was GM so successful in China, while some of its rivals, including Ford, struggle to gain a stronger position in the world's largest automobile market?
4. What are the challenges GM is currently facing in the Chinese automobile market? How should GM's CEO address them? Be specific.

Endnote

[1] Selling a large volume of cars doesn't make a company profitable if the cars are sold at a low margin or even at a loss. In contrast, Ferrari only sells some 7,000 vehicles a year but is highly profitable (not surprising because the sticker price of the entry-level Ferrari is $200,000).

Sources: This MiniCase is based on: "China stocks take GM, Ford on rough ride," *The Wall Street Journal,* July 10, 2015; "Big vehicles power surge in GM's profit," *The Wall Street Journal,* July 23, 2015; "GM, Ford flourish out of the limelight," *The Wall Street Journal,* July 28, 2015; "GM, SAIC plan to jointly design new cars," *The Wall Street Journal,* July 28, 2015; "GM hopes to shift gears after recalls," *The Wall Street Journal,* September 29, 2014; "GM 2012 global sales rise 2.9 percent on strong Chevy demand," *Reuters,* January 14, 2013; "Can China save GM?" *Forbes,* May 10, 2010; Tao, Q. (2009) , "Competition in the Chinese automobile industry," in Peng, M.W. (2010) , *Global Strategy,* 2e (Independence, KY: Cengage), pp. 419–425; "Cruising into China's booming car market," *The Wall Street Journal,* April 28, 2010; and various GM annual reports.

GM's Ready to Lose $9,000 a Pop and Chase the Electric Car Boom

by **David Welch** and **John Lippert**
November 30, 2016, 4:00 AM CST
Updated on November 30, 2016, 12:34 PM CST

- California's clean-air rules spur no-emissions vehicle output
- So many EVs flooding the state, you can lease one for $69

General Motors Co. <https://www.bloomberg.com/quote/GM:US> stands to lose as much as $9,000 on every Chevrolet Bolt that leaves a showroom once the all-electric subcompact starts rolling out. Sounds crazy, but the damage makes perfect business sense under the no pain, no gain policy driving the electric-vehicle boom in the U.S.

California crafted the doctrine, with tough clean-air rules and a mandate that automakers sell some non-polluting vehicles if they want to do business in the Golden State. Nine others have adopted it, New York and New Jersey among them, and all told they make up close to 30 percent of the U.S. market. That goes a long way to explaining why zero-emissions models from more than 10 brands are on the roads, with more on the way. Most are destined to be loaded with red ink for their makers, but they'll be great deals for consumers as companies

unload them to meet their targets.

While the Trump administration may dilute federal programs that take aim at carbon-dioxide spewing cars, California won't be backing down, certainly not during Governor Jerry Brown's term. The most populous state is such a powerhouse -- roughly one in eight <http://www.cncda.org/CMS/Pubs/CA%20Auto%20Outlook%202Q%202016.pdf> new vehicles was registered there in the first half of the year -- that companies will keep spitting out electrics for the privilege of selling everything else in their lineups.

"California will continue to act as the ballast, as the center of gravity, for clean air and climate policies in the U.S.," said Levi Tillemann, author of "The Great Race," a book on the future of automobile technology. "Trump will thrust the state back into the role of clean-air crusader, and that's a banner a lot of people in California don't mind carrying."

'Ludicrous' Idea

Where it'll get interesting is over the next decade or so. The states' rules are set to tighten so that zero-emission vehicles, or ZEVs, will have to rise to an estimated 15.4 percent of sales by 2025, some five times the current level.

The hurdles may go higher: Brown, a Democrat with two years left in his term, signed a law ordering greenhouse-gas emissions be 40 percent below 1990 levels by 2030. To get there, ZEVs, plug-in hybrids or fuel-cell cars like Honda Motor Co. <https://www.bloomberg.com/quote/7267:JT> 's Clarity may have to comprise 40 percent of sales, up from about 3 percent now, according to California Air Resources Board <https://www.bloomberg.com/quote/0855275D:US> staff projections.

Can that really happen? "The idea that automakers will sell 40 percent of their vehicles at a loss in California is ludicrous," said Eric Noble, president of the

CarLab, a consulting company in Orange, California, who reckons most electric cars lose at least $10,000 per sale.

The industry's willing to take the hit on a small scale now. Fiat Chrysler Automobiles NV <https://www.bloomberg.com/quote/FCA:IM> 's battery-powered Fiat 500e is made for California alone, and Chief Executive Officer Sergio Marchionne said in 2014 that it was losing <http://www.bloomberg.com/news/articles/2015-08-03/california-regulator-mary-nichols-may-transform-the-auto-industry> $14,000 per sale. The company's pretty much giving it away, at a monthly lease-rate of as little as $69. Nissan Motor Co. <https://www.bloomberg.com/quote/7201:JT> has advertised lease deals for the Leaf at as low as $149.

To read about California's clean-car resistance to Trump, click here. <http://www.bloomberg.com/news/articles/2016-11-30/california-s-clean-car-resistance-to-donald-trump-quicktake-q-a>

Of course, the industry might figure out how to make ZEVs into money makers, once the charging-station infrastructure is built out and as battery costs fall. Global demand seems sure to rise, with major economies, including China, having recognized climate change as a threat and tailpipe-emissions from gas-powered autos as a chief contributor.

The U.S. has a ZEV incentive of its own, offering a $7,500 tax credit to buyers, and also gives credits to manufacturers to reward them for cars that meet greenhouse-gas reduction targets set by the Obama administration.

There's no indication President-elect Donald Trump has a view on these

enticements. While he has dismissed global warming as "nonsense," he told the New York Times he has an "open mind" on scientists' overwhelming consensus that human activity is warming the planet. Key members of his transition team have rejected that notion or contend the dangers are exaggerated.

Smog-Laden Cities

The Alliance of Automobile Manufacturers, the industry's main trade group, has asked Trump to consider their state ZEV costs when evaluating the feasibility of rules set under President Barack Obama to boost average fuel economy standards by 2025. Over the next eight years, the electric-vehicle demands will impose costs of up to $40 billion on companies that they'll pass on to customers, according to the group. The miles-per-gallon standard, which is 35.3 for 2016, will under the rules go to 50.8 -- a number the industry contends could make cars prohibitively expensive.

On Wednesday, the U.S. Environmental Protection Agency took a formal step <http://www.bloomberg.com/news/articles/2016-11-30/epa-proposes-leaving-obama-s-2025-fuel-economy-goals-in-place> that makes it harder for Trump to undo the Obama targets. EPA Administrator Gina McCarthy announced a preliminary determination that Obama's 2025 targets are achievable, affordable and appropriate. If she finalizes this decision before leaving office, she'll force Trump into a formal and protracted rule-making process to revise the rules.

Whatever happens in the national capital, California, a largely left-leaning state, will be where the power is for years to come. The bill that established its greenhouse-gas targets was championed by then-Governor Arnold Schwarzenegger, a Republican. Two California cities, Los Angeles and Bakersfield, are the most smog- and particulate-laden in the U.S. Brown has called climate change "the existential threat of our time."

And California is where ZEVs are being dumped. More than half of all electrics

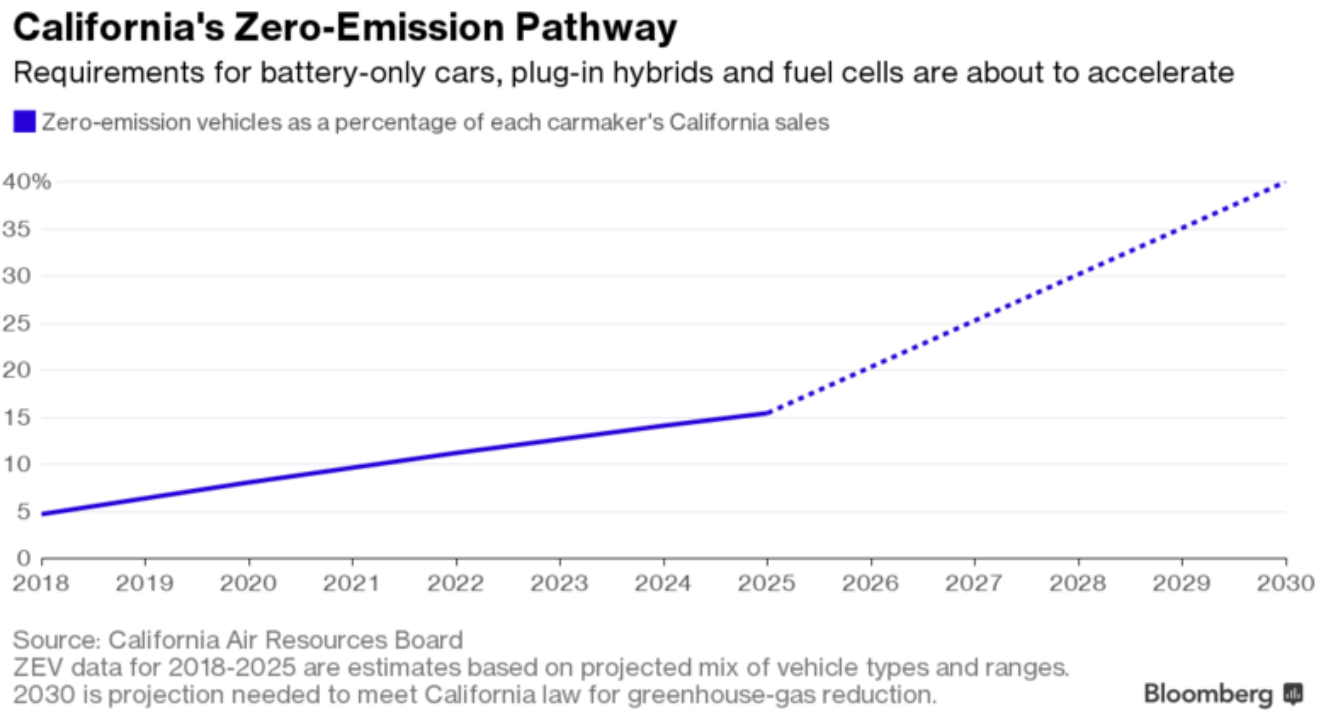
were sold there in the first six months of 2016, according to IHS Markit Ltd.

Jump On Tesla

Under the rules, GM needs to sell enough Bolts that it can go to town on other vehicles, including pickups and SUVS, which is where the big money is. The Bolt's anticipated per-sale loss of roughly $8,000 to $9,000 is an estimate based on a sticker price of $37,500, according to a person familiar with the matter. A GM spokesman declined to comment on the expected profitability.

But GM has reasons beyond compliance to promote the Bolt, according to Tim Mahoney, Chevy's chief marketing officer. For one thing, it lures younger, technologically savvy buyers who probably wouldn't have considered Chevrolet, he said. "It's a statement about what we can do for the Chevy brand."

The Bolt has a 238-mile range, which gives it an edge over mass-market electrics that have been around for a while; the Leaf can go 107 miles on a single charge, the Fiat 500e just 85. GM will also have a jump on Tesla Motors Inc. <https://www.bloomberg.com/quote/TSLA:US> 's first and hotly anticipated mass-market offering, the Model 3, due late next year. The Bolt will be available in California and Oregon this month, with states added through 2017. GM also plans to sell the Bolt in China and Europe.



Here's how the math works for GM in California. Let's say it sells a total of 219,962 vehicles in one model year (as it did, in fact, in 2015). To avoid heavy fines or the threat of getting shut out entirely, it would need state-awarded ZEV credits equal to 14 percent of the total -- or 30,794. That would mean finding buyers for 7,698 Bolts, earning four credits for each, or 10,082 Chevy Volt plug-in hybrids or a combination of the two.

"EVs are compliance vehicles and GM knows this," said the CarLab's Noble. "The Bolt will take sales from all of the other vehicles on the market, and GM will get a lot of credits."

The more ZEVs a company peddles to the public, the more credits it earns, and those with a surplus can sell them to competitors that are falling behind. As an electric-only manufacturer, Tesla has been able to really tap the program. In the third quarter, it made $139 million selling <http://www.bloomberg.com/news/articles/2016-10-31/musk-s-sale-of-clean-air-credits-may-have-marked-peak-for-market> credits, which helped Tesla hit its second-ever quarterly profit on a GAAP basis. The biggest buyer in the 11 months ending in August was Fiat

Chrysler; GM purchased the smallest amount.

Tesla CEO Elon Musk has called California's ZEV bar "pathetically low," saying on an earnings call in August that "there's massive lobbying by the big-car companies to prevent CARB from increasing the ZEV credit mandate, which they absolutely damn well should."

Some see the future in zero- and low-emissions, with or without incentives. Toyota Motor Corp. <https://www.bloomberg.com/quote/7203:JP> has said it will stop making virtually all gasoline-burning models by 2050, and Volkswagen AG <https://www.bloomberg.com/quote/VOW3:GY> has laid out plans to be selling 1 million battery-powered cars annually by 2025.

The U.S. is one-fifth of the global car market, and groups ready to go to battle over emissions like to offer an argument beyond the threats of smog and global warming. California's policies are forcing companies to be innovative, said Luke Tonachel, a senior analyst for the Natural Resources Defense Council. If they stop, "U.S. manufacturers could lose market share."

TECHNOLOGY NEWS | Wed Jan 27, 2016 | 7:09am EST

In coal-powered China, electric car surge fuels fear of worsening smog

A customer checks a BYD e6 electric car at a dealership in Beijing, China, in this December 9, 2015 file picture. REUTERS/Jason Lee/Files

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By **Jake Spring** | BEIJING

In coal-powered China, electric car surge fuels fear of worsening smog

Automakers' latest projections for rapid growth of China's green car market have added to concerns of worsening smog as the uptake of electric vehicles powered by coal-fired grids races ahead of a switch to cleaner energy.

Volkswagen AG (VOWG_p.DE) plans 15 new-energy models over 3-5 years, its China chief told a green car conference in Beijing on Saturday, predicting - like the government - that Chinese production of electric and plug-in hybrid vehicles would grow almost six times to 2 million annually by 2020.

At the same event, BYD Co Ltd's (002594.SZ) (1211.HK) chairman told media that the Chinese automaker's electric vehicle sales would double in each of the next three years.

The government has been promoting electric vehicles to cut the smog that frequently envelops Chinese cities, helping sales quadruple last year and making China the biggest market, the finance minister said at the conference. Less than 1 percent of passenger cars are now new energy, but the pace of growth raises their potential to worsen smog.

A series of studies by Tsinghua University, whose alumni includes the incumbent president, showed electric vehicles charged in China produce two to five times as much particulate matter and chemicals that contribute to smog versus petrol-engine cars. Hybrid vehicles fare little better.

"International experience shows that cleaning up the air doesn't need to rely on electric vehicles," said Los Angeles-based An Feng, director of the Innovation Center for Energy and Transportation. "Clean up the power plants."

China plans to convert the grid to renewable fuel or clean-coal technology as part of efforts to cut carbon emissions by 60 percent by 2020.

That will speed the green impact of electric vehicles, said environmental science professor Huo Hong at the elite Tsinghua university. But that goal will be "really difficult to achieve."

Tsinghua's studies call into question the wisdom of aggressively promoting vehicles which the university said could not be considered environmentally friendly for at least a decade in many areas of China unless grid reform accelerates.

China's industry, environment and science ministries, which devise most new energy vehicle policies, did not respond to requests for comment. BYD and Volkswagen declined to immediately comment.

POLICY MISMATCH

To promote new-energy vehicles, the government has offered various incentives in recent years including tax breaks, and set targets such as having 5 million new-energy vehicles on the road by 2020 - more than 8 times the current number.

Authorities in some cities particularly affected by smog have gone further. Beijing and Tianjin, for instance, have exempted new-energy vehicles from limits on the number of new cars granted license plates, and exempted them from driving restrictions that other cars face on certain days of the week.

This month, the industrial Hebei province decreed that all new residential complexes must have car-charging facilities.

In coal-powered China, electric car surge fuels fear of worsening smog

In western Beijing, 62-year-old retired truck and taxi driver Zhang Zhijun bought a BYD Tang hybrid last month and plans to trade in his petrol-engine Toyota Corolla for an electric car for short rides like taking his grandson to school.

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"Right now smog is very heavy in China. This way, if everyone does their part, it will definitely cut down on pollution," Zhang said.

But Beijing, Tianjin and Hebei are all more than 90 percent reliant on coal for energy, Tsinghua's research showed.

Huo and academics point out that, at the very least, the proliferation of electric vehicles pushes more sources of pollution away from heavily populated urban centers.

Whatever the impact, Qin Lihong, president of startup electric automaker NextEV, said cleaning the grid would be the quickest route to clear skies.

"It's much easier for society to make hundreds of power plants better than change the hundreds of millions of cars in thousands of cities," he said.

(Reporting by Jake Spring; Additional reporting by Beijing newsroom; Editing by Christopher Cushing)

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LAS VEGAS Automotive suppliers and automakers are expanding alliances to develop self-driving car technology that can serve multiple automakers, as the race to put such vehicles on the road separates companies that can go it alone from those that need help sharing the financial and technical burdens.

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