A global road map for China’s automakers

China’s carmakers have a great future on the world stage—but not in the immediate future.

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A decade of astonishing growth has catapulted China past Germany and Japan to become the world’s second-largest market for automobiles, trailing only the United States. Global OEMs such as GM, Toyota Motor, and Volkswagen still command the lion’s share of sales in China. Nonetheless, the impressive inroads of homegrown upstarts such as Chery Automobile and Geely in the local market are fueling a desire among China’s OEMs to become not only domestic but also global competitors—aspirations encouraged by the government. Such ambitions aren’t far fetched: as recently as 2004, China was a net importer of automobiles; in 2005, the country became a net exporter, and in 2007 it exported over half a million cars and trucks, the majority of them Chinese-branded vehicles shipped to developing markets around the world.

A disquieting body of evidence, however, suggests that China’s automakers aren’t ready to go global. Chinese vehicles have languished in recent J. D. Power and Associates Initial Quality Study (IQS) results, and the recent models of several Chinese automakers have scored poorly in independent safety tests. Our own experience with some of China’s leading OEMs has uncovered significant shortcomings, including insufficient quality- and talent-management approaches, as well as a lack of strategic focus. Unless rectified, these problems could hinder the realization of the industry’s significant global potential.

China’s OEMs ought to reexamine their plans for entering overseas markets and, in some cases, scale back or postpone such moves. At the same time, they should improve their pricing and margins by repositioning brands around value, not just low prices. Moreover, the OEMs must push their quality-improvement efforts further upstream—for example, into product development and to their suppliers—and stop associating product quality solely with shop floor activities. Such efforts will require the automakers to bolster their management teams with global talent and to explore ways of encouraging much greater cross-functional collaboration. Also, some OEMs must reject the mind-set of pure wholesalers or exporters and instead focus on building sustainable businesses that include marketing, sales, and distribution activities.

Under the hood

Less than a decade ago, the annual production of a typical global automaker dwarfed the output of China’s entire auto industry. Since 2002, however, the country’s automotive sales have grown by 25 percent a year—up from 10 percent a year between 1997 and 2001—and in 2006 China overtook Japan, to become the world’s second-largest market for automobiles. What’s more, from 2001 to 2006, China’s vehicle exports rose by a remarkable 67 percent a year, to more than 340,000 units. Gone are the days when carmakers such as Shanghai Automotive Industry Corporation (SAIC), First Automobile Works (FAW), and Dongfeng Motor relied solely on joint ventures with foreign OEMs to make automobiles. Today, these carmakers have joined Brilliance Auto, Chery, Geely, and other local players in either launching or announcing plans to produce branded vehicles. In 2007, China exported upward of 500,000 cars and trucks—more than 70 percent of them bearing domestic Chinese brands—to Africa, Eastern Europe, Latin America, Russia, and Southeast Asia.

Significant strategic and structural advantages underpin these successes. Compared with the starting point of the Japanese and South Korean OEMs, in the 1970s and 1980s, respectively, Chinese carmakers enjoy a massive, fast-growing home market that allows them to scale up

operations quickly and avoid any reliance on exports for growth. Compared with today's global carmakers, Chinese OEMs command substantial cost advantages, including lower capital and labor costs, to say nothing of much lower levels of capital investment. (Chinese OEMs typically substitute cheaper labor for more expensive plant automation.) Altogether, China's cost advantages over OEMs based in mature markets have now reached 30 to 40 percent, even after the recent appreciation of China's currency. Projections foreseeing increased global demand for low-cost cars, as well as growing openness to Chinese brands on the part of Western consumers, suggest that the country's OEMs do have global opportunities in the long term. Finally, these carmakers, unencumbered by a legacy infrastructure, could leapfrog their global competitors—for example, by developing alternative power-train vehicles to capitalize on growing demand for environmentally friendly products.

Yet the industry's significant shortcomings must temper such optimism. According to the 2006 J. D. Power and Associates IQS, the Chinese industry average for problems per hundred vehicles, at 231, was nearly twice the US average. Worse still, the average was almost twice as high for domestic Chinese OEMs, at 368, than for locally built international brands. In safety tests conducted by independent agencies in Europe and elsewhere, Chinese carmakers, including Brilliance and Jiangling Motors, fared terribly. In 2005, Jiangling's Landwind SUV earned no stars at all from ADAC, an independent German automotive organization.

Our experience working with Chinese OEMs suggests that many of these problems have operational roots. But there are other issues, too. Some OEMs, in their zeal to go global, fail to prioritize target markets sufficiently and therefore divert precious management attention away from product quality. Some embark on ambitious globalization plans before establishing strong market positions at home and so fail to take advantage of the important learning opportunities available there. And some don't pay enough attention to marketing and distribution—even outsourcing these activities to local partners (see sidebar, "Beyond production"). Such quick-and-dirty approaches risk permanently damaging brands.

Further, organizational shortcomings can short-circuit operational processes and thus raise costs and lower quality. One Chinese carmaker we studied, for instance, had a seemingly robust and well-documented quality-gate system to catch defects during product development. Although the system detected problems adequately, many errors went unfixed, largely because of poor collaboration within the company and intense pressure on engineers to deliver products quickly.

Other OEMs take a scattershot approach to talent. To jumpstart product development, for example, one of them hurried to recruit dozens of experienced Chinese-born engineers from the Big Three automakers. Although the engineers were skilled in safety, interior design, and other specific technical areas, they lacked the project-management and system-integration skills needed to run an overall vehicle program and had little experience managing interactions with suppliers or colleagues in other departments. The resulting lackluster improvements disappointed top executives.

The road ahead

To improve, China's automakers must adopt a focused strategy, upgrade their operational skills and product quality, and develop rigorous performance evaluation systems that promote a culture of continuous improvement from the C-suite to the shop floor.

A focused strategy

Chinese auto executives should start by asking themselves a tough question: do we have sufficient scale and financial and management resources to go abroad? For the majority, particularly OEMs selling fewer than 300,000 cars a year, the answer is probably "not yet." Hyundai, for example, entered the US market, in the mid 1980s, with volumes comparable to

those of many smaller Chinese OEMs today. Its fast start was hampered by quality and other problems that damaged the company's reputation with consumers and took several years to repair.

The risks are greatest for China's smallest OEMs—those selling fewer than 100,000 units a year—which face a difficult trade-off, because the cost of meeting stringent Western safety and emission standards could price vehicles beyond the reach of Chinese consumers. These companies should consider licensing their technology to partners. The fledgling Chinese automaker BYD Auto, for example, which began as a supplier of batteries and electronic components to mobile-phone makers, might be well served by this approach, because the company's experience with rechargeable batteries gives it advantages in the growing market for vehicles using alternative fuels.

For automakers intent on globalization, the imperative is focus and, in some cases, patience. We've seen Chinese OEMs—in their eagerness to expand—overlook or misjudge the size, competitive intensity, or consumer tastes of target markets and consequently find themselves overstretched and playing catch-up against competitors with stronger offerings. Some Chinese OEMs plan to enter 20 or more individual markets simultaneously. The strategic rationale for such plans is weak. In Africa and Southeast Asia, competition isn't less intense than it is in China, and such markets, even combined, are considerably smaller than China's domestic market.

Overly ambitious plans can also divert management's attention and thus compound operational problems and strategic oversights. In 2006, for example, both Brilliance and Jiangling not only suffered quality and safety problems in their rush to crack the lucrative European market but also unnecessarily limited their potential by misjudging important market characteristics. Neither company offered diesel engines, which power about half of Western Europe's passenger cars. Brilliance targeted a declining category—Sedan-D, a midsize segment in which European sales are falling by about 6 percent a year—and didn't offer station wagons, though they constitute about half of Europe's Sedan-D segment. The results were disappointing: together, the two companies sold only about 150 vehicles in Europe in 2007, far below initial forecasts.

Some OEMs are doing better. Chery and Great Wall Motor, for example, postponed expansion in Europe and North America, instead focusing on Russia, where the market dynamics are more favorable. Russia, for example, has a relatively large fleet of aging, domestically produced vehicles, and the country's growing economy has spurred strongly growing demand for new cars. Yet because many imports from Western OEMs are out of reach for ordinary Russians, Chinese automakers have opportunities to target consumers seeking new, low-priced cars. Both Chery and Great Wall have capitalized on these advantages: Chery sold about 40,000 vehicles in Russia in 2007, Great Wall more than 8,000. At times, Chery has struggled to ship enough cars to meet Russian demand.

To grow further, Chinese OEMs must develop cars with proprietary design features. Many of China's automakers have reached their present size by reverse-engineering the models of competitors. Over the long run, this approach will fall flat in export markets, particularly developed ones. Compact and standard vehicles, representing about 40 percent of the EU and US markets, offer good near-term prospects, although they are underrepresented in the offerings of most Chinese OEMs. In the longer term, however, Chinese automakers should aspire to create truly innovative product lines—for example, high-quality electric or hybrid vehicles.

The quality imperative

Strategic considerations will be irrelevant if China's automakers can't improve the quality of their products in the eyes of global consumers. To do so, the OEMs must reexamine their operational processes and adopt a broader view of quality. Among some Chinese OEMs we've studied, quality control means visual inspections on the shop floor to spot assembly defects. In our experience,

however, problems that occur at that point can represent as few as 10 percent of all defects. One OEM, for example, traced the excessive brake noise of one model to the raw materials selected during the earliest stages of design. Complaints about leaky power-steering pumps led this company to uncover deficient quality-control processes at a key supplier. Overall, 85 percent of the 50 most significant defects the automaker found had been introduced before assembly (Exhibit 1).

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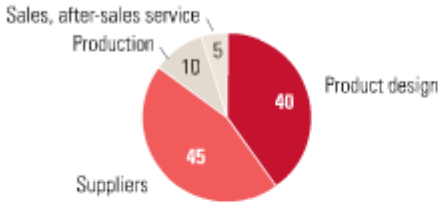
Solving such problems will require Chinese OEMs to work more closely with their suppliers during the product-development and production phases to ensure that both parties have the same high-quality standards. Examining a supplier's processes is crucial—a lesson that leading global OEMs already take to heart.[1] Chinese carmakers also must incorporate into their thinking ideas such as performance quality (ensuring that vehicles and components perform to specifications) and "ramp up" quality (so that products, parts, and processes can be scaled up during manufacturing without compromising the cars). This mentality, commonplace among top global OEMs, isn't widely entrenched in China.

Broadening quality control

Top 50 field defects as reported by customers, share by point of origin, %[1]



Prior to assembly

	Product design	Suppliers	Production	Sales, after-sales service
Examples	• Rear-brake noise caused by choice of raw materials • Corrosion of electric fuel pump caused by fuel quality in China	• Battery problems for remote-control transmitter caused by issues in supplier's manufacturing process • Oil leaks in power steering caused by supplier's lack of quality control for seals	• Dashboard malfunction caused by assembly problems	• Recall because of defect in after-sales part (steering column)

[1]Disguised example of Chinese OEM.

To get started, OEMs should beef up their quality-gate systems—the critical series of evaluation procedures and decision points allowing automakers to address, long before production, potential problems with quality, manufacturability, and the maturity of operational processes. Many Chinese OEMs will have to develop sharper quantitative insights about appropriate quality targets and conduct follow-up activities in a more disciplined way. Often, we find that poorly defined specifications or definitions lead designers to benchmark their products against inappropriate offerings from competitors.

The rewards of retooling a quality-gate system are substantial: one European automaker, for example, strengthened its approach and shaved ten months off a new model's development time, reduced production defects fivefold, and lowered costs to boot. Given the greater experience of OEMs in the developed world, the gains for Chinese automakers would be greater still.

China's OEMs must recognize that today's cost advantages aren't necessarily sustainable, particularly given the rising wages and currency appreciation of recent months. Moreover, almost all leading global OEMs produce cars in China and thus enjoy the same labor advantages Chinese OEMs do. That's why Chinese automakers must raise the output of assembly workers, who are less productive in China than in Brazil, India, and Mexico. Our analysis suggests that China's OEMs could cut their costs 20 to 30 percent—for example, by reducing waste and rebalancing production lines to minimize the time workers remain idle. OEMs could also reduce the cost of product development. We found that improving the productivity of one leading Chinese automaker to the levels of Japanese OEMs would lower its development costs by half, without sacrificing speed.

Strengthen the organization

Many Chinese automakers, like their global counterparts, attempt to emulate Toyota's lean-manufacturing processes. But Chinese OEMs struggle to instill the organizational focus on constant improvement that underpins Toyota's historic successes. Most of the blame for these disappointments stems from poor talent management and poor cross-functional collaboration.

At one carmaker, for example, a dearth of project know-how and weak collaboration among key engineers—more than half with less than two years of experience—led to the unnecessary replication of design flaws across several models of vehicles. Poor linkages between marketers and engineers created delays and required substantial rework to incorporate critical design features properly. Particularly in product development, difficulties associated with poor project management and coordination are common among Chinese OEMs. The problem, to a certain extent, is that foreign partners in joint ventures in China have managed key product-development activities themselves, which slowed the transfer of these critical skills to their Chinese partners. Consequently, many Chinese OEMs excel at localizing products for domestic tastes (say, restyling existing models to include rear-seat DVD players) but lack the broader product-development skills involved in creating entirely new vehicles from scratch.

To address such gaps, OEMs can place junior engineers in mentoring programs that expose them to fresh skills—in particular, collaborating with different functions. Other OEMs have instituted weekly quality reviews that bring together engineers from the R&D, quality, and purchasing units in order to examine specific components that seem likely to present quality risks later on. Such efforts have helped one automaker to increase the transparency of a new project and to clarify the responsibilities of line leaders.

Automakers should adopt a similar approach with suppliers. A Chinese OEM, for example, found that in one of its new models, the gap between the bumper and the headlight was too big. The problem was brought to the attention of the R&D team, which worked with colleagues in the quality and production units to determine its root cause. In the past, the team would have forwarded its recommendations to the supplier. Instead, it worked closely with the supplier to solve the problem together. As a result, the supplier made the necessary corrections without losing production time—a crucial point, since launch delays can sap a new project's overall profitability. Moreover, the exercise enabled the supplier to save money on tooling.

To improve operations continuously, China's automakers must also harness the talents of their production workers. Often, this kind of collaboration calls for new performance-management schemes that support and reward it. While many Chinese OEMs employ billboards and other visual aids to inspire performance on the shop floor, relatively few encourage frontline workers to suggest quality and productivity improvements, let alone follow through on the ideas those workers do propose. Some existing compensation structures even discourage quality improvements—for instance, by rewarding workers for the number of units they produce. In plants run in this way, we have observed shop floor workers ignoring scratches and other visible defects in order to keep production moving briskly.

Finally, China's automakers must aggressively bolster the ranks of their senior product developers by bringing in experienced foreign managers, including those from rival automakers. Here, they might take a page from the playbooks of Lenovo and other successful Chinese companies that have embraced veteran global talent as they expanded.

China's auto industry has made remarkable progress and enjoys considerable opportunities. If the country's leading OEMs focus their strategies, develop the right organizational skills, and—above all—improve the quality of their products and their operational performance, they could propel themselves to the top of the global automotive business.

Beyond production

To build successful overseas businesses, China's automakers must shake off their prevailing mind-set, which makes distribution, after-market services, and brand building secondary concerns. Many Chinese OEMs, for example, leave such activities to their local partners in target markets and therefore risk long-term damage to their nascent brands. We know of one Chinese OEM whose distributor in Germany admitted having planned to set up only a single central location for sales and service. This lack of foresight cannot bode well for the automaker's efforts to build awareness—and a good reputation—among German consumers. Such approaches are a far cry from the practices of Toyota Motor, which works closely with dealers in Japan to reduce the interval between order and delivery to less than a week.

Many Chinese OEMs show a lack of sophistication in marketing to consumers in specific regions. No Chinese car model currently targeted for Europe or the United States, for instance, has iPod connectivity—a Western preference. Yet many offer leather seats, rear-seat DVD players, and other amenities more strongly to the taste of Chinese consumers. Both Chery Automobile and Great Wall Motor, however, have made strides in meeting their Russian customers' preferences, which include sizable interiors and trunk space, as well as cars that are relatively easy and cheap to repair.

Of course, China's carmakers should look for opportunities to exploit economies of scale while minimizing expensive regional variations. To do so successfully, the OEMs must explore specific regional tastes. Many of these can be aggregated into three core dimensions: usability and value (including factors such as a brand's value for the money and for fuel economy), passion and prestige (trendiness, for example), and intelligence and competence (comfort, reliability). By assessing the importance of these core dimensions in given markets, carmakers can tailor product adjustments or marketing messages to specific regions without jeopardizing the global platform. Some global OEMs, including BMW and Porsche, have followed this approach quite successfully by offering vehicles that require very little customization of product or brand positioning in different regions yet are perceived as meeting "local" tastes—because they aim to attract specific groups of premium customers who hold similar tastes regardless of geography. By contrast, some Japanese OEMs in value segments significantly vary design elements such as body shapes, as well as their brand messages, between regions. Such an approach may require separate tooling, or advertising, and is therefore more costly.

Fonte: The McKinsey Quarterly, p. 90-98, 2008.