

The road ahead



A look at automotive futures of India and China

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Introduction

Across India's cities and towns, would-be drivers are celebrating. The \$2,500 Tata Nano has just been introduced, making car ownership a sudden reality for millions of citizens. Many of whom don't actually know how to drive yet.

Meanwhile, Western drivers might be trading their Chevy in for Chery, as Chrysler plans to bring this Chinese-made car to the highways of the US and Europe. And that's just the beginning of the China's acceleration into the upper echelons of auto making.

How will India and China change the way the world drives? What obstacles stand in their way to becoming world-class brands? And what is the roadmap to follow in order to develop and distribute home-grown automotive innovation?

One thing is for certain: the auto market in India and China is picking up speed.

Highways and byways

How infrastructure paves the way in India:

In the U.S. Midwest, there are said to be two seasons: winter and road construction. But in India, the rapid growth of car ownership is not as well supported by the infrastructure.

3,625 miles of national highways connect 19 of the largest Indian cities, encircling the country. And progress is slower than planned. For example, from April to June 2006, only 986 kilometers (about 612 miles) of the nation's highways were upgraded, missing the target by nearly 14 percent.

Existing roads in India's large cities continue to be plagued by overcrowding, with large delivery trucks, three-wheelers, two-wheelers, pedestrians and the occasional ox-drawn cart jostling for space. So, even though some people can afford larger cars, smaller cars are the face of India's automotive future.

The people's car hits the road



In a market dominated by two-wheelers, owning a four-wheeler is an upgrade in status and space. But not too much space. The Tata Group's "1-lakh car" will sell for \$2500 and offer enough trunk space for a small duffel bag. But when families of four are a common sight on scooters, even that is a luxury.

How infrastructure paves the way in China:

China is in the midst of building a massive concrete and asphalt circulatory system. With a total highway length of more than 1.8 million kilometers (over a million miles) in 2003, China now has the second longest highway system in the world. In 2005, China's State Council announced its long-term National Expressway Network Plan to increase the expressways by a factor of four through 2035, in order to connect all cities with populations larger than 200,000. This will better

Map of highways in China



Source: Shen, Timothy. "Investing in Nature & Environment for Eco-tourism Development." Eco-Tourism Business Opportunities Conference, June 5-6, 2002.

However, compared to efforts to build more vehicles and roads, the government has paid less attention to traffic management. Traffic management is an integrated activity involving traffic planning, traffic-flow control and congestion management for the safe and efficient movement of people and goods. So the biggest challenge for the government is simultaneously managing road construction, traffic congestion and driver behavior patterns.

How the government drives change in India:



In 2006, the Indian government's support for the auto industry reached a high point with the creation of the Automotive Mission Plan (AMP). This plan not only documents the importance of the automotive industry to the Indian economy, but also the increased support the government will provide through 2016.

The Indian government is also supporting the National Automotive Testing and R&D Infrastructure Project (NATRIP) to encourage growth of the auto industry in India. NATRIP is a partnership among the national government, several state governments and the Indian automotive industry to create a state-of-the-art testing, validation and R&D infrastructure. The government is funding the construction of six major facilities throughout the country expressly for this purpose. The project aims to create core global competencies in the automotive sector.

How the government drives change in China:



Over the past 20 years, the Chinese government's management of its economy has shaped the structure of the auto industry by determining the joint venture relationships among Chinese and foreign manufacturers. Today, it controls the growth of the market through its restriction of financing as a tool for vehicle sales. As the government's banking reforms progress and vehicle financing becomes available, there will likely be significant opportunities for growth in auto sales.

The government has begun issuing new financing policies and has allowed a number of manufacturers to develop their own financing units. These units are offering vehicle loans and are even training specialists for home visits to assess customer credit status. Dealers are also trained to assess customer credit status through their communication with customers. Until the government finalizes standards for assessing credit risk, these manufacturers that set up their own risk assessment to control defaults have an important competitive advantage in selling vehicles.

The experience gap

Where is the next Henry Ford in India?

In the past, traditional automakers designed, engineered and tested their own vehicles while spending hundreds of millions of dollars in the process. This meant investing in research and development and creating a generation of engineers to help automakers grow. In India, despite being considered the world's back-office, there is a marked shortage of this kind of experience. So automakers there have to change the rules

The skills issue is a tough problem for India, where it's estimated only 300,000 graduates enter a job market with twice that number of jobs. Joint ventures with foreign companies offer rich and varied opportunities for experience, bringing with them an extensive history of research and development. And unlike China, India offers tough intellectual property protection, encouraging foreign investment and knowledge sharing.



Mahindra thinks outside the factory

Indian automaker Mahindra & Mahindra broke the unspoken rule of in-house R&D in 2002. The company built a brand-new vehicle with virtually 100% supplier involvement from concept to reality for \$120 million, including improvements to the plant. The Mahindra Scorpio SUV had all of its major systems designed directly by suppliers with the only input from Mahindra being performance specifications and program cost.

Where is the next Henry Ford in China?

To address their experience gap, China had to look outward. But only in a controlled manner. Starting in the 1980s, the government began to allow joint venture partnerships with foreign manufacturers. The intent has been to facilitate the growth of Chinese research, development and manufacturing knowledge, stimulating domestic automotive growth.

But the knowledge and skill sets have not been free-flowing. When foreign automakers see the success of the Chinese companies in other industries such as electronics, furniture and textiles, they see themselves creating their next global automotive competitor.



Geely Motors: starting from scratch

Many small domestic Chinese automakers have faced tough obstacles trying to rise through the ranks of manufacturing. Li Shufu is a prime example of the lengths new players need to go with his company, Geely Motors. Roadblocks included resistance from the Chinese government and refusal of Chinese banks to lend him the capital to become a private carmaker in China.

He used unorthodox alternatives, such as purchasing a building that had formerly been used for ducks and chickens to house his first facility, and began by studying foreign-made vehicles. This "study" included disassembling these vehicles in order to learn anything the company could from the fit, finish and assembly of the product. Li, by his own admission, was not concerned with intellectual property rights in his initial efforts to start his company.

Look down the road

How India can steer the future:



To become a major player in the global automotive industry, India faces only a slight uphill battle. Manufacturers and suppliers need to accelerate the perception that “quality vehicles” and “quality automotive components” can come from India, and find their niches in the world vehicle market. They also need to manage their businesses on a world-wide scale, improving global logistics, sales and distribution.

But imports and exports rely on supply chains. To this end, India’s government needs to expand the country’s port capabilities. Furthermore, the automotive industry and the government need to work in partnership to boost skilled labor availability and strengthen India’s own research and development capabilities.

How China can steer the future:



The road to China’s automotive future will be bumpy. There are serious challenges stemming from the country’s rapid growth, including defaults on auto loans, uncertain relationships with joint venture partners, higher pollution levels and severe traffic problems in the cities. The Chinese government has to determine how to manage the auto economy without harming its domestic manufacturers and suppliers or the environment.

Finally, the potential growth of the Chinese vehicle market may have a dramatic effect on the world’s future oil supply. China became the world’s second-largest oil consumer in 2003 and its third-largest importer of oil in 2004. If the Chinese automotive market reaches the level of countries like the United States, their demand for oil could accelerate the drain on dwindling resources and increase international tension.

IBM Corporation

New Orchard Road, Armonk, NY 10504