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This case was prepared by Amy Lemley, with the assistance of N. Raghu Kishore, under the supervision of Professor Paul Farris and Associate Professor Rajkumar Venkatesan. It was written as a basis for class discussion rather than to illustrate effective or ineffective handling of an administrative situation. Copyright © 2009 by the University of Virginia Darden School Foundation, Charlottesville, VA. All rights reserved. To order copies, send an e-mail to sales@ardenbusinesspublishing.com. No part of this publication may be reproduced, stored in a retrieval system, used in a spreadsheet, or transmitted in any form or by any means—electronic, mechanical, photocopying, recording, or otherwise—without the permission of the Darden School Foundation. ◇

THE TATA NANO: THE PEOPLE'S CAR (A)

It was one of the longest-awaited and most talked-about automobile debuts in India. On January 10, 2008, Tata Motors unveiled its (U.S. dollars) USD2,500 car¹ (also called “Rs1 lakh car” or “the people’s car”) at the ninth Auto Expo in New Delhi. The Tata Nano brought a media blitz and a crush of onlookers that required top-level security. Would the car live up to its hype? And did its launch signal a new era for the small car market in India? How could Tata ensure the product would be profitable?

Widely touted as the cheapest car in the world, the Nano was scheduled to be available in September 2008. In addition to paying (Indian rupees) INR1 lakh—equivalent to INR100,000—buyers would also have to pay 12.5% value-added tax along with charges such as road and transportation taxes. The two-cylinder gasoline-powered version would debut first; the diesel versions would soon follow.

The Nano was one of the world’s most fuel-efficient cars, getting 52 miles per gallon (mpg) in the city and 61 mpg on the highway (22 km per liter and 26 km per liter, respectively). Measuring 3.1 meters by 1.5 meters, it displaced Maruti Udyog’s Maruti 800 as the world’s smallest car, yet its seating room was 21% greater than the 800’s—providing ample room for four adults.

Company History

The Tata Group was a diverse conglomerate that had international interests in

engineering, energy, information systems and communications, materials, services, consumer products, and chemicals. Its 96 companies employed 650,000 people on six continents.

For many casual observers, the May 2008 news that a British automotive icons Jaguar and Land Rover had been acquired from Ford Motor Co. by a non-Western company came as a surprise. But new owner Tata Motors was in fact the sixth-largest commercial vehicle manufacturer in the world and was among India's largest automobile companies. In 2004, Tata Motors became the first Indian manufacturing company to be listed on the New York Stock Exchange.

Tata Engineering and Locomotive Co. Ltd, a train manufacturer, was established in 1945. In 1954, the company launched its first automobile; between 1954 and 1969, it collaborated with Daimler-Benz to produce commercial vehicles known as Tata Mercedes-Benz trucks, later produced independently as Tata trucks. By the 1990s, Tata had entered the passenger-vehicle market with India's first sport utility vehicles, called the Tata Sierra. In 1998, it hit the jackpot with the Tata Indica—a name derived from "India's Car," an apt moniker given that the car had become the most popular vehicle in the country's economy car segment. Tata launched the Indigo in 2002. In 2005, Tata launched India's first indigenously developed mini truck, called the Tata Ace.

In 2004, Tata Motors acquired the Daewoo Commercial Vehicle Co. Ltd., Korea's second-largest truck manufacturer. In 2005, it acquired a 21% stake in Hispano Carrocera SA, a Spanish bus manufacturer.

The company had manufacturing plants in the Indian cities of Jamshedpur, Pune, and Lucknow, and assembly operations in Malaysia, Kenya, Bangladesh, Spain, Ukraine, Russia, and Senegal. Globally, the company served the European, African, Asian, Middle Eastern, and Australian markets.

As the Nano's expected launch date neared, Tata Motors was experiencing a downturn in its stock price—from USD18.60 per share in September 2007 to USD9.53 in September 2008, a drop of almost 50%.

India's Automobile Industry

The automobile industry in India benefited significantly from liberalization in the 1990s when the government eased regulations on foreign trade and restrictions on private companies. International companies took advantage of India's affordable yet highly trained engineers, establishing manufacturing operations throughout the country. In 2005, experts predicted that India would become the world's third-largest economy by 2020.

In 2005–06, India was among the largest and fastest-growing car markets in the world. The passenger car market was growing by almost 25% per year, and passenger-vehicle exports were growing by 12.7% annually. India's exports, which went mainly to Asia and Africa, were growing at a rate approaching 30% annually and had already reached 850,000 units in 2005–06, compared with 600,000 units in 2004–05.² Some years saw as much as 65% growth in exports.

According to <http://www.knowIndia.net>, India exported “331,539 passenger cars, and over one million two-wheelers.”¹

Economy cars

Indian car buyers already had their choice of cars in the USD5,000 (INR195,000) market; Maruti commanded more than 50% of that market share. Estimates of automobile ownership in India ranged from 8 to 25 per 1,000 people, placing India at the low end of global per-capita automobile rankings (**Table 1**).

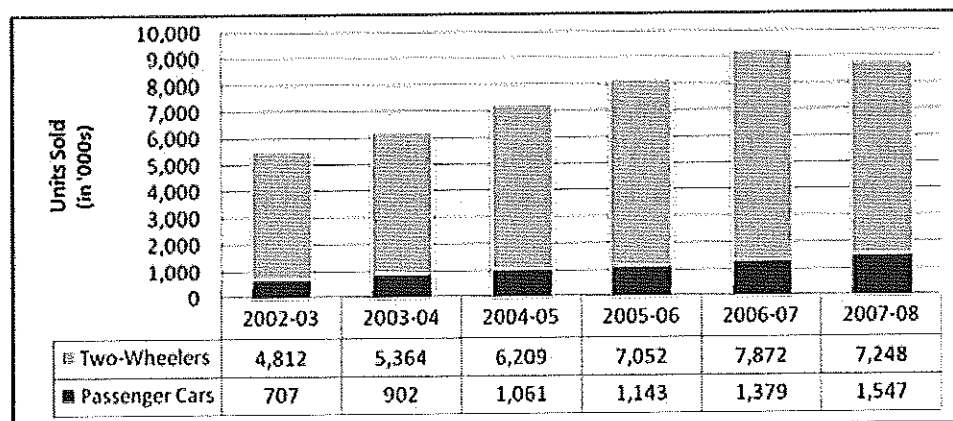
Table 1. Number of motor vehicles per 1,000 people, by country.

Country	Motor Vehicles per 1,000
United States	765
Australia	619
Canada	563
Germany	546
Japan	543
United Kingdom	426
India	12
China	10

Source: *United Nations World Statistics Pocketbook and Statistical Yearbook*, 2007.

With a population of 1.1 billion, “a median age of just under 25, and a rapidly expanding middle class, India will overtake China next year as the fastest-growing car market, according to estimates by CSM Worldwide, an auto industry forecasting service,” the *International Herald Tribune* reported.² **Figure 1** depicts sales trends in the Indian automobile and motorbike market.

Figure 1. Sales trends of automobiles and motorbikes in India, 2002–08.



Data source: “Industry Trends of Automobiles,” *Corporate India*, May 15, 2008.

There were six major players in India’s passenger-vehicle segment (**Table 2**).

Table 2. Major players in India's passenger-vehicle market, percentage of market share, number of dealers, and sales per dealer, 2008.

Passenger Vehicles	Percentage of Market Share	Number of Dealers	Sales (Units) per Dealer
Maruti Udyog	52.2	580	1,275
Hyundai Motors India Ltd.	19.2	225	800
Tata Motors	16.6	200	1,000
Honda Sael Cars India Ltd.	4.4	NA	NA
Ford India Pvt. Ltd.	1.9	125	225
GM	NA	100	600

NA = Not available

Note: Dealer comparison numbers are approximate.

Data sources: <http://Automobileindia.com> (accessed August 10, 2008) and Emkay Research.

Cars were sold via dealer networks, and sales volume depended both on the extent of the network and the sales per dealer (**Table 2**). According to a J.D. Power and Associates study of the Asia Pacific market, Tata's dealer margins across the various models ranged from 4% to 10%. Another study, by A.T. Kearney, estimated the profit margin of ultra-low-cost cars at 2% to 3%—about USD75 for the USD 2,500 Tata Nano.¹ Dealers received further discounts if they paid cash up front to Tata—amounting to about 1% of the full dealer cost. Although Tata Motors did not disclose its contribution margins, the case writers' estimate is about 15%.

Used cars

In the months leading up to the Nano's highly touted launch, used car sales in India had fallen considerably. The price of a used Maruti 800—arguably the Nano's closest competitor—fell 30%, *Autoblog* reported. "Indian car buyers apparently are not dumb," the article stated. "Why buy a new or used car today when you can wait until the end of the year and get a new Tata Nano for much less?"²

Two- and three-wheelers

In 2007, India's two-wheeler market was the second-largest globally, with almost eight million in total units sold (**Figure 1**). By 2011, two-wheeler production was forecast to approach 18 million units. A typical motorbike cost about INR37,000 (one-third the cost of a Nano). Manufacturers included Bajaj Auto, Hero Honda, TVS Motor, Yamaha Motor, and Kinetic. **Table 3** shows the types of vehicles in this class and their fuel efficiency, cost, and top speed.

Table 3. Types of two-wheelers available in India.³

Vehicle	Gas mileage (km/liter)	Cost (INR)	Market	Speed (kph)
Moped, moped, or step-thru	55–70	15,000–40,000	Teens, the elderly, and city riders	40–45
Scooterette/mini	55	20,000–25,000	City riders, students	65
Scooter	40–60	25,000–50,000	Popular with women, city riders; longer rides possible	70 and up
Motorcycle	Up to 70	35,000–75,000	Primarily a style choice; more popular with men	80 and up
Enfields Diesel Bullet (India's only diesel two-wheeler)	66	65,000	Seekers of "India's Harley-Davidson"	80 and up

Source: Created by case writer.

Bajaj Auto also dominated the market for passenger-carrying three-wheelers, commonly called “auto rickshaws.” Often used for transporting small cargo loads, these vehicles had earlier faced competition from the Tata Ace, as well as from Piaggio’s Ape Truk, a four-wheeled cargo carrier. Just months before the Nano’s launch, rickshaw drivers had begun filing petitions through their union requesting that they be allowed to drive the Nano under their existing three-wheeler permits.

Even if Nano manages to convert 10% of the two-wheeler market of about seven million, it will have almost 50% share of the car market [Figure 1]. Nano may lead to a 20% reduction in prices of two-wheelers and a 35% decline in prices of secondhand cars, according to industry chamber ASSOCHAM.⁴

Aman Verma, a Hero Honda showroom manager in East Delhi, expected two-wheeler sales to remain strong. “Nano may give a lot of people a chance to own a car,” Verma said. “But more than fixed price, it’s the variable cost of maintenance, fuel, and spare parts, where the two-wheeler sector has an edge.”

“A car is much more suitable, safer, and a comfortable option than a two-wheeler, but in a cost-conscious nation like India, there will always be a place for a two-wheeler,” said another two-wheeler dealer. “There will not be a large-scale migration to the Nano. Both the bike and the entry-level car segment would have its own niche customers in future.”

The Tata Nano

Nano is expected to change the automobile market in India. It would cater to a typical middle-income Indian family of four who wants to avoid rain, wind, and dust ... It's freedom for four.

—Dilip Chenoy, Society of India Automobile Manufacturers

What must you forgo for USD2,500? Air-conditioning. Power steering. Power windows. A tachometer. Dual windshield wipers. But the cost savings in creating a USD2,500 car did not result only from such omissions. Rather, Tata sought the bulk of its cost savings in a streamlined modular design in which many components served more than one function. Perhaps most notably, the car’s component parts could be built at separate facilities and shipped for local manufacture. Even village

garages could assemble it, creating a unique distribution channel for rural areas. In that way, the Nano was a kit car, said Tata Group Chairman Ratan Tata:

A bunch of entrepreneurs could establish an assembly operation, and Tata Motors would train their people, would oversee their quality assurance, and they would become satellite assembly operations for us. So we would create entrepreneurs across the country that would produce the car. We would produce the mass items and ship it to them as kits. That is my idea of dispersing wealth. The service person would be like an insurance agent who would be trained, have a cell phone and scooter, and would be assigned to a set of customers.⁵

At the start of the launch, Tata expected that its new 1,500-crore plant at Singur in West Bengal would handle the bulk of the manufacturing; but construction was put on hold after significant protest from area farmers whose land the government had appropriated for the project without compensation. In response, Tata elected to shift production to another facility, and to reduce its initial run from 40,000 to 10,000 cars per month during the first few months of production.⁶

Between 2003, when development began, and mid-2008, the cost of raw materials to assemble the Nano had risen from 13% to 23% of retail selling price, compared with a 7% cost for the average U.S. automobile.⁷ Even before this cost spike, however, the company had planned to use reverse auctions to lower parts costs. It set a rejection rate of less than 100 parts per million and expected to reduce warranty costs tenfold. (Note: Automobile margins were typically 10% to 15% on spare parts for dealers and 20% to 25% for Tata Motors; for normal servicing, the dealer margin was about 4% to 10%).

In all, 90% of the Nano's components were outsourced, and about 75% were single-sourced. Tata engaged 100 subcontractors, signing them to long-term volume contracts rather than annual contracts. Half these vendors were to be co-located in a manufacturing park adjacent to Tata's Singur plant—occupying a portion of the 950-acre property the government had made available to the cooperative enterprise.

Critics questioned whether the low price meant the vehicle was of low quality. But one Tata vendor credited the company with designing from scratch, saying it precluded “dumbing down” the engineering: “There are so many legacy costs built into a design, and trying to engineer those out is difficult. It's better to start with a clean sheet of paper and engineer low costs in.”⁸

Tata's original plan was to produce 350,000 Nanos the first year; it had plans to set up three additional plants to achieve its goal of selling one million units annually.

Competitive Response

“Small cars have always been popular in India, even when oil prices were low,” said automobile industry analyst Ashvin Chotai.⁹ Indeed, previous low-cost, high-efficiency car launches had met with success: The Indian government had collaborated with Japanese auto giant Suzuki Motor Corporation to release the mini Maruti 800 in the 1980s; in 2008, at the time of the Nano's release,

the Maruti 800 retailed at USD5,000. Hyundai and Suzuki each manufactured up to one million subcompact cars in India in 2007, and they had plans to expand. Renault, Nissan, and Bajaj Auto were already exploring whether a USD3,000 automobile was possible.

But Maruti was in no rush to reach lower than its Maruti 800 at USD5,000. “Our thinking is that a consumer who is looking to buy a Maruti 800 or Maruti Alto will never settle for the Tata car because of the difference in value propositions that the respective cars offer,” said Maruti Suzuki India Ltd. Managing Director Shinzo Nakanishi. “In any case, the impact of the car will be felt more in the two-wheeler segment, and every Tata 1 lakh owner will be a potential buyer of our cars.”¹⁰

“India is a growing economy and so people will buy cars,” said Krish Krishnan, who managed a green investment firm called Green Ventures. “It is a good thing that they will perhaps be buying a smaller car which is complying with more stringent norms rather than a much larger car or a two-wheeler that follows less stringent norms.”¹¹

Tata Dealer Response

In spring 2008, Tata dealers expressed excitement about the Nano, saying many customers had already inquired about it. One dealer characterized the market as middle-class families and college students. “Almost 50% of college-going students go for a bike,” he said, “which costs around a minimum of 40,000 to 50,000 rupees, and they don’t worry to shell out 50,000 more if they are getting a more comfortable, safe, and spacious journey. Families would no doubt feel the same way.” Although two-wheelers offered twice as many miles to the gallon, “safety and comfort are the key words that Tata Nano assures, which is the driving force for the success of this car.”

Another dealer cited the car’s attractive design as a selling point: “The car has great looks and is cute, which is very much appealing to middle-class families and students.” Still, he conceded that price was the Nano’s chief appeal. “Pricing the car that low is the biggest plus point, and I don’t think any [other] car company in the world can perform such a feat of low cost and efficient use of labor and raw materials.”

In response to criticism that that Tata’s overall sales-satisfaction index ranked the company below the industry average,¹² Tata dealers mentioned that they were going to increase the number of service stations and outlets in few months and concentrate on this aspect keenly.

The Nano would also be a viable alternative to a used car, some dealers said. “As it is,” said a Karol Bagh dealer of used Marutis, “there are no buyers for the 95–96 model. They sell for just [INR]25,000 and [are] mostly picked up by scrap dealers.” “Nano could surely put a dent in the secondhand car market for even newer models,” said another dealer.

Where the Rubber Meets the Road

Would India’s growing middle class see the Nano as the optimal transportation solution? According to a research report by the Credit Rating and Information Services of India Ltd., the Nano could expand the number of households that could afford a car by 65%. “The on-road price

for a Nano is expected to be in the region of [INR]1.3 lakh. This brings down the cost of ownership of an entry-level car in India by 30%, making a new car affordable to families with income level of [INR]2 lakh," the report stated.¹³

As the Tata Nano began to hit the streets, so did newspaper articles and editorials decrying the "people's car" as an environmental "nightmare." "When you lower the price that drastically, how will you be able to meet safety and emissions standards?" asked Anumita Roy Choudhury of the Centre for Science and Environment in New Delhi. "It's just not sustainable, whether from an environmental point of view or in terms of congestion."¹⁴

In the *New York Times*, author Thomas Friedman pleaded with India to address public transportation issues rather than replicating U.S. traffic and pollution woes:

If [India] applied itself to green mass-transit solutions for countries with exploding middle classes, it would be a gift for itself and the world. To do that it must leapfrog ... It will also be an India that gives us cheap answers to big problems—rather than cheap copies of our worst habits.

Still, customers flocked to Tata dealerships, eager to see the latest model. "I would definitely consider buying the Nano as the cost of the car fits my pocket," said one consumer, an IT professional with a multinational corporation in Gurgaon who travels every day in a Bajaj Pulsar. "And above all it gives good mileage."

¹ As of September 8, 2008, USD 1 = 44.5 Indian rupees (INR); INR100,000 = 1 lakh; 100 lakh = 1 crore. Note: "lakh" means 100,000, and its use is not restricted to a quantity of money.

² "Indian Auto Companies to be Showcased at SAE Congress," *Business Line Financial Review*, April 1, 2006.

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¹ Stephan Mayer and Ruediger Plaines, "Mega Market for Ultra-Low-Cost Cars: Focusing on Customers in Developing Markets," A.T. Kearney, Inc., 2008.

² John Neff, "Tata Nano Tanking Used Car Market in India," February 8, 2008, <http://www.autoblog.com/2008/02/08/tata-nano-tanking-used-car-market-in-india/> (accessed April 6, 2009).

³ 1 kilometer = 0.62 miles; 1 liter = 0.26 gallons; kph = kilometers per hour.

⁴ "Is the Two-Wheeler Segment Dreading the Nano Effect?" <http://nanocar.wordpress.com/2008/01/15/is-the-two-wheeler-segment-dreading-the-nano-effect/> (accessed April 6, 2009).

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² Nelson Ireson, "Rising Costs Could Eat Tata Nano's Profits," *Motor Authority*, August 5, 2008.

⁸ Timmons.

² Rina Chandran, "Tata Motors's \$2,500 Car to Put India on Global Autos Map," *Hindustan Times*, January 11, 2008.¹⁰ "We Can't Make a 1 Lakh Car: Maruti," Express News Service, January 10, 2008, <http://www.expressindia.com/latest-news/We-cant-make-a-1lakh-car-Maruti/259919/> (accessed April 6, 2009).

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¹¹ Chandran.

¹² *J.D. Power Asia Pacific 2007 Sales Satisfaction Index (SSI) Study*, J.D. Power and Associates.

¹³ Arunawa Biswas, "Is the Two Wheeler Segment Dreading the (El)-Nano effect?" *Economic Times*, January 10, 2008.

¹⁴ Reuters, "What's Good and Not So Good About the Tata Nano," January 8, 2008, <http://www.financialexpress.com/news/Whats-good-and-not-so-good-about-Tatas-1-lakh-car/259077/> (accessed April 6, 2009).

