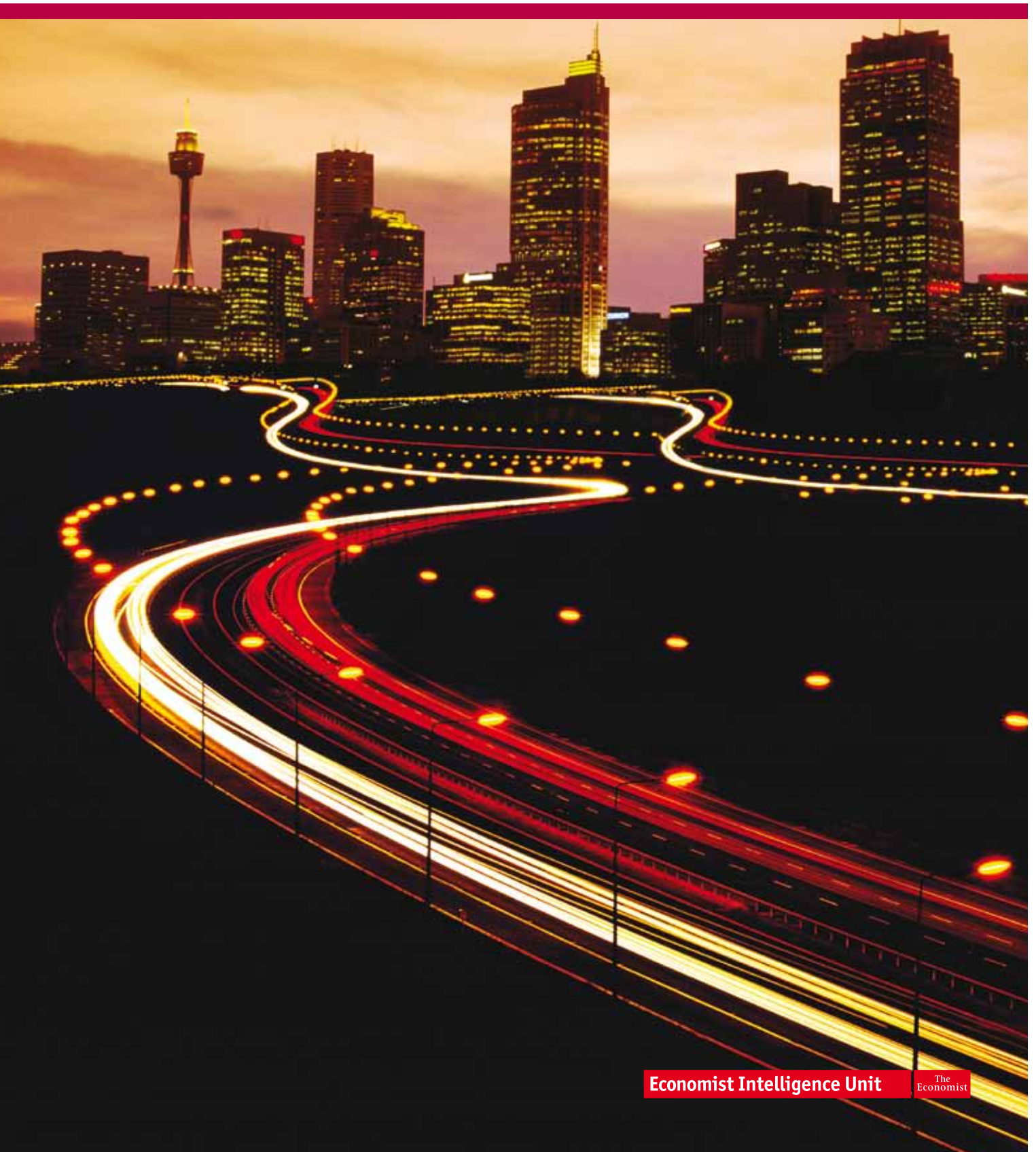




GOING PLACES: THE LOW CARBON CHALLENGE FOR THE EMERGING MARKETS' AUTOMOTIVE AND CONSUMER DURABLES INDUSTRIES



THE LOW CARBON CHALLENGE

The consumer durables and automotive sectors are two of the largest industries in emerging markets, most notably in Asia, where rapid urbanisation continues apace. But such growth has raised concerns about sustainability issues. This paper, produced by UK Trade & Investment in co-operation with the Economist Intelligence Unit, examines the measures being taken by consumer durables and automotive companies to meet the challenge of a low carbon economy.

The Tata Nano, the world's cheapest car, manufactured by Indian car company Tata Motors, was unveiled to the world just under two years ago. It was certified as the most fuel-efficient petrol-driven car in India, with not only the highest rating of any other Indian petrol-powered car but also with the lowest carbon emissions at 101 gm/km. But despite these features, environmentalists were quick to express concerns about pollution owing to the sheer number of potential Nano buyers in India.

The automotive sector has been one of India's largest and fastest growing manufacturing sectors in recent years – for a long time cars have been a luxury item for most of the Indian population, but they are becoming increasingly affordable for a number of urban consumers. Indian car buyers focus chiefly on price and fuel economy, and small, cheap cars make up the bulk of sales. It is a similar growth story in other emerging markets such as China. Car ownership is set to rise and the long-term growth potential of the country's automotive industry is promising, with a number of factors set to drive demand in the next few years. Incomes are still rising quickly, particularly in the cities, with car ownership becoming affordable for an increasing proportion of the population.

Tata is set to benefit from increasing its hold on the Indian automotive market, but how is it meeting the inevitable environmental challenges that will arise when a family changes from a two-wheeler to a four-wheeler? To date, the company has explored using alternative technologies, and in June last year signed an agreement with French company MDI to manufacture eco-friendly cars which run on compressed air with zero emissions.



There is, however, some way to go to meet these challenges and it is not just growth in the automotive sector in China and India that is prompting environmental concerns. Both countries have experienced a rapid uptake in consumer durables. In India, for example, demand for most types of consumer durables enjoyed double-digit growth in the country's economic boom between 2003 and 2007. The economic slowdown in 2008-2009 cut the growth rate of most products, but demand has held up much better in India than in many other emerging markets. In China, at end-2008, there was an average of 133 colour television sets and 100 air conditioners per 100 households in the country's urban areas.

Defying downward trends

The consumer boom has been driven by rapid urbanisation in these areas, which has led to changing lifestyles, rising income levels, easier access to consumer finance and a greater awareness of affordably priced products.

Strong backing by government has also helped support the consumer durables boom in China. In November 2008, recognising that demand for its exports to Europe and the US could not continue indefinitely, the Chinese government announced a US\$585 billion stimulus package to spur domestic growth.

Other measures too have acted as a medium-term driver for continued growth in the automotive and consumer durables sectors, such as the reduction in stamp duties on vehicle purchases and subsidies for buyers in rural areas. This strategy has helped to boost car sales; in the first ten months of 2009, car sales in China rose by 37.8 per cent year-on-year, according to the China Association of Automobile Manufacturers. These stimulus measures have been extended for 2010 and aim to boost continued growth in the automotive sector. To put this rate of growth in context, it compares with a 37 per cent year-on-year drop in new-car sales in the US in the first five months of 2009, and an estimated 13 per cent fall in west European new-car demand during the same period.

Re-enforcing the upward trend of urbanisation

According to Pradeep Bakshi, vice-president of operations at the Indian engineering solutions firm Voltas, India's success in consumer durables lies in its rural markets, which during 2008 and 2009 grew at 25 per cent versus between 7 per cent and 10 per cent in the urban market. "The numbers speak for themselves," says Mr Bakshi. "Over 50 per cent of all television sets and fans in India were consumed by the rural population."

It is a trend that looks set to continue; between 2005 and 2025, 300 million people in India are expected to move from the category of rural poor to rural lower-middle class. Marco Giubin, senior portfolio manager at Mirae Asset Global Investments, a specialist emerging markets asset manager, believes that third world wages in China coupled with first world infrastructure makes for a powerful combination for the manufacture of consumer durables. "This leads to a number of efficiencies for the manufacture of low-cost consumer durables," he says.

Sustainability: turning a challenge into an opportunity

Such rapid growth in these sectors, however, has been accompanied by growing concerns over sustainability issues and levels of carbon emissions, an issue demonstrated none more clearly than with the launch of the Nano. Emerging markets have been quick to react to these concerns in recent months. India, for example, has signalled its intention to commit to a low carbon economy, with the government having recently formed an expert group to deal with low carbon issues. And a report issued by the National Development and Reform Commission in China says the country aims to reduce its carbon emissions to a maximum of 2.2 billion tonnes a year by 2035 and further to 1.4 billion tonnes in 2050.

Sentiment among Indian consumers too, particularly the young, is shifting. "They are becoming increasingly eco-conscious and are taking a stand against over-consumption," confirms Mr Bakshi. This is an area that Voltas is keen to tap into. "Sustainability initiatives offer manufacturers growth opportunities through new products and markets," he says. However, he is quick to point out that any initiatives are still in the early stages and quantifying the commercial value will remain central.

Consumer durables manufacturers, such as India-based Whirlpool and Godrej and Boyce, which produce a range of air conditioning and refrigeration units, are working on a sustainable production programme in co-operation with the EU to promote the use of natural refrigerants with a low global warming potential in the refrigeration and air conditioning sector. The latter is the largest consumer of ozone depleting substances (CFCs), with about two-thirds of this consumption being used in the servicing of refrigeration and air conditioning equipment and appliances.

Mr Bakshi believes that with regard to sustainability issues, there are lessons to be learned from more developed economies such as the UK, as it was the first country in the world to introduce a Climate Change Act with legally binding targets. By recognising the opportunities to be gained in adopting a low carbon and resource-efficient economy, the UK has put environmental issues firmly on the agenda. It is easy to see why – the UK government values this rapidly growing global market for such goods and services at around £3 trillion.

One of the UK's objectives is to lead the way in low carbon transport. It has already committed £350 million to encourage the uptake of ultra-low emission vehicles and develop ultra-low carbon technologies, essential to the future global success of the automotive industry, and UK-based car companies are taking a lead in this area too. Norfolk-based Lotus Cars, for example, which builds high-performance sports cars, has been undertaking research to understand the combustion process involved in running an engine on mixtures of alcohol-based fuels and gasoline, which has the potential to reduce the overall CO₂ footprint of internal combustion engines towards zero. Taking such a stance is something that Mr Bakshi sees as extremely valuable. "We need to start early to address the need for sustainability and responsible manufacturing," he says.

In manufacturing terms, the consumer durables and automotive growth stories may have shifted to Asia, but with regard to best practice, particularly low carbon initiatives, emerging markets can learn much from more developed economies. While manufacturers of consumer durables and automotives in emerging markets are becoming increasingly aware of the various risks and threats to the environment, they are also sensitive to the commercial and financial opportunities to be gained. Reconciling the two is likely to be the next challenge they face.

Towards a low carbon economy

- Emerging markets have lessons to learn regarding low carbon initiatives from more developed economies such as the UK.
- Consumers in emerging markets are becoming increasingly eco-conscious and taking a stand against over-consumption.
- The UK has helped to lead the way in low carbon transport, by committing considerable funds to encourage the uptake of ultra-low emission vehicles. Agencies such as Cenex, the UK's first Centre of Excellence, have been established to help UK businesses develop a supply chain for low carbon and fuel cell technologies.
- Emerging markets need to act now to address the need for sustainability and responsible manufacturing.
- Automotive and consumer durables manufacturers in emerging markets are looking to meet the challenges of emitting reduced carbon levels alongside the delivery of increased product efficiency and cost benefits.

CASE STUDY

AFFORDABLE EFFICIENCY OR ENVIRONMENTAL TIME BOMB?

As the second biggest market for two-wheeler vehicles in the world, it is little surprise that car manufacturers have recognised the opportunity to convert India's 7 million motorcycle users to small low-cost cars.

Indian conglomerate Tata Motors was the first to recognise the opportunity with the launch of its Nano vehicle in 2008. Coined the "people's car", the Nano is to date the world's cheapest car, retailing at around US\$2,000. It has had a head start but other major players such as Toyota, Honda and Volkswagen all have plans to launch low-cost vehicles that are likely to be manufactured in India because of the economies of scale.

There is certainly a growing market to cater for. According to rating agency Credit Analysis & Research, among the Indian households that can afford a car, penetration is as low as 45 per cent. With many more households likely to be able to afford a car in the future, demand looks strong for the next few years.

This is good news for struggling car companies, but what does it mean for the country's already traffic-choked roads? Environmentalists are warning that take up of cars like the Nano could be a disaster for India's rising pollution levels. In Delhi, air pollution levels are already twice what are considered safe.



But a Tata company spokesperson dismisses these claims, arguing that with a fuel efficiency of nearly 24 km to the litre (the highest of any car in India) and CO₂ emissions of 101 gm/km (the lowest of any car in India), the Nano is "beneficial for the country's fuel consumption and environment". Moreover, he says the car conforms to all emission standards in India and Europe. Since European exhaust emission standards are currently more stringent than those for two-wheeler vehicles, some commentators argue that the Nano will pollute less. But on balance, when it comes to fuel efficiency, two-wheeler vehicles do more kilometres to the litre than the Nano and so emit less CO₂.

Still, with pressure growing on the automotive industry to reduce its dependence on fossil fuels, all eyes will be on Tata, which reportedly has plans to launch an electric version of the Nano. Indeed, India's Auto Expo in January this year opened with a show of electric, hybrid and hydrogen-fuelled cars. But questions remain as to whether electric cars are really the solution to environmental concerns in India. One of the main issues is the question of electricity shortage – India's electricity comes from coal-fired plants that are helping to warm the planet.

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