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**A**t the Autoline Industries factory on the outskirts of Pune, engineers don't talk about mass production anymore. That's not the only change at this erstwhile grease room. Even more noticeable is a large group of engineers analysing, designing and testing auto components on high-end computer-aided design and engineering component 'morphing' tools. These cutting-edge processes, once the exclusive domain of larger ancillary companies such as Bharat Forge and Sundram Fasteners, are Autoline's tickets to moving up the value chain.

"Medium-sized ancillaries have the money to expand into automation and design," says Gopal Patwardhan, chair-

**Auto component sweatshops are transforming into innovative design studios**

man of Autoline, a Rs 200-crore vendor of several leading automobile companies. Having bought Detroit Engineered Products, an American design firm, for \$15 million (Rs 60 crore), Autoline is now preparing to be a global ancillary.

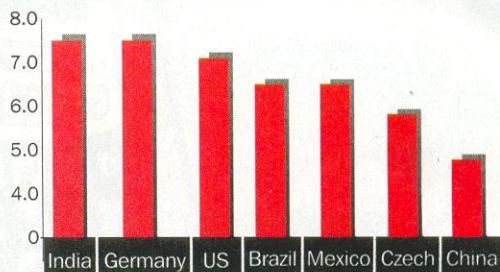
It's an infectious trend. "Four years ago, we realised we needed a strong design team to survive," says R.K. Behera, chairman of RSB Transmissions, a Rs 600-crore auto ancillary firm in Pune. "Now, it's no longer about survival. We advise original equipment manufacturers (OEMs) on why a component has to be designed in a particular way, something we never thought we could do in 2003." To give such advice, the design team has to be capable of going a step beyond the OEM's component specification. Behera's company, for instance, designed a propeller shaft 10 kg lighter than its original weight, which, coming as it did from an Indian ancillary, surprised the OEM.

RSB has invested Rs 12 crore in R&D, and has also acquired Michigan-based Miller Brothers, a precision machining company, for \$19 million (Rs 76 crore). This will give RSB a ready-made distribution system, and access to OEMs such as Volvo, Caterpillar and J.C. Bamford.

According to an Automotive Component Manufacturers Association (ACMA) report, the Indian auto component industry's production has grown at a compounded annual growth rate (CAGR) of 17.4 per cent during 1999-2006, crossing the \$10-billion (Rs

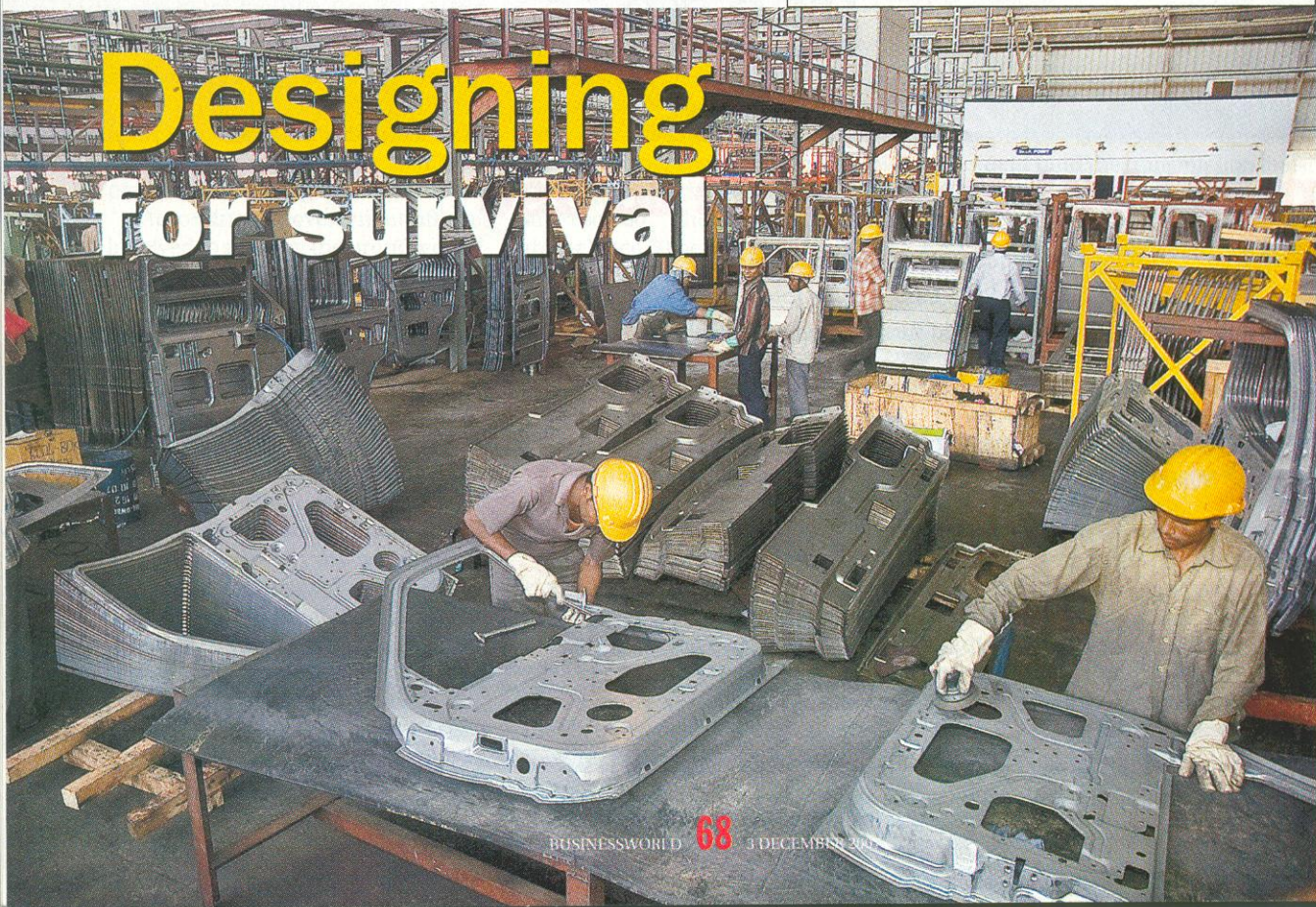
**Who's got the top design?**

**Designing and machining ability**



Figures are ratings from a scale of 1 to 10 with 1 being the lowest  
Source: Motilal Oswal Securities

**Designing for survival**



SUBHABRATA DAS

40,000-crore) mark in 2006. ACMA estimates that, despite a higher base, it will continue to grow at the same rate till 2015, quadrupling the industry's size.

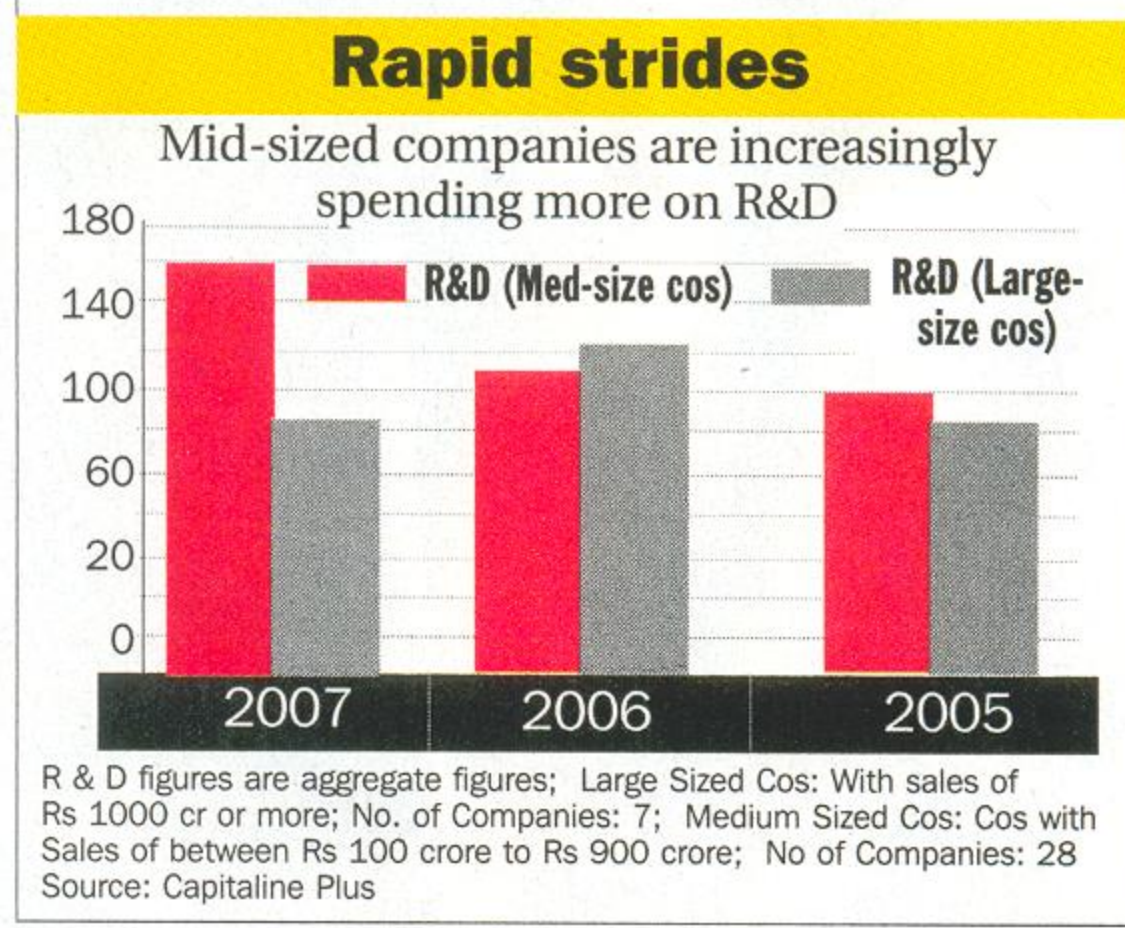
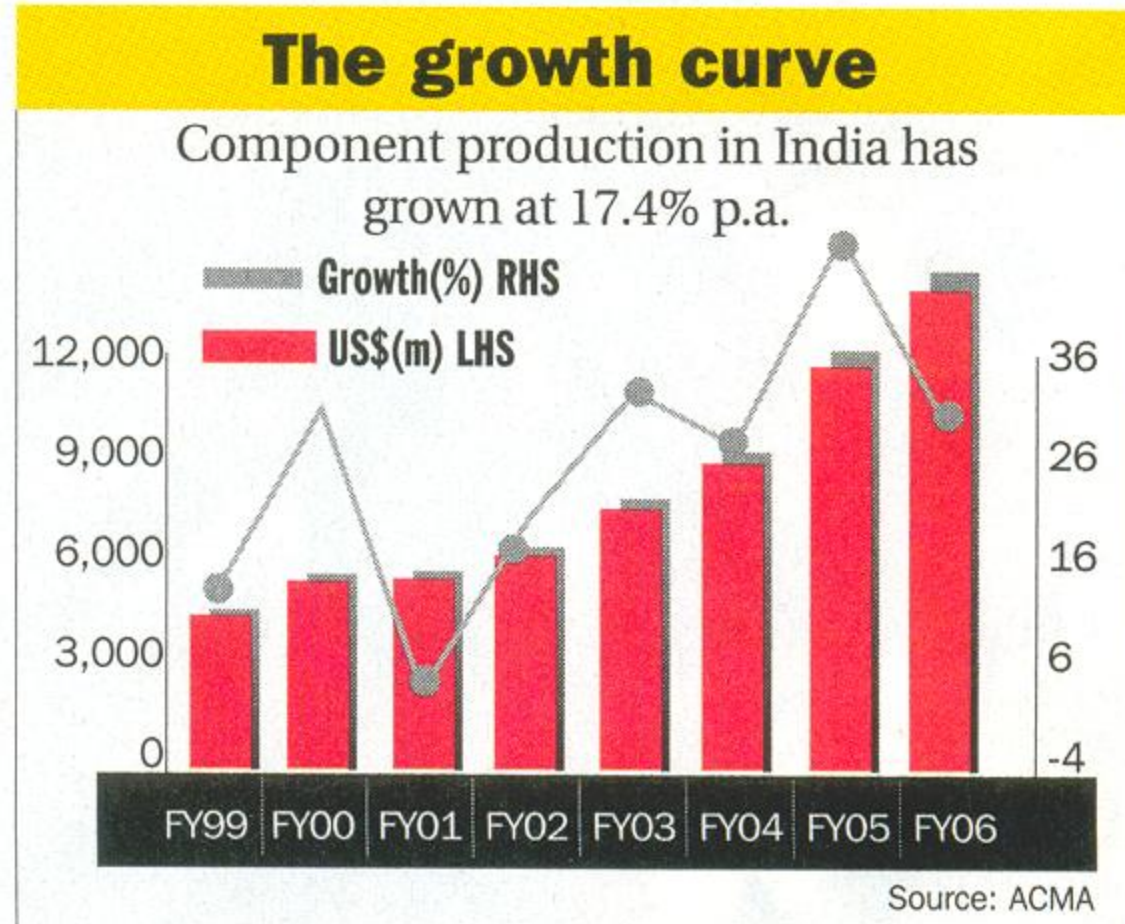
Medium-sized ancillaries have also been spending more on R&D over the past three years when compared to large component makers (see chart: 'Rapid Strides'). "The engineering capability in our country is the reason behind such growth figures," says Navin Mata, research analyst at Dolat Capital, a brokerage firm in the Indian derivatives market. "Importantly, foreign majors such as Toyota are noticing the rise in defect rate among their vendors. So they find Indian ancillaries a viable source."

**Value For Design**

Clearly, design teams add a lot of value. For starters, they give the ancillary company freedom from the OEMs. RSB's 'i-Design' team, for instance, is a separate entity working with OEMs on component quality, weight, design and pricing. Secondly, the ancillary's value increases in the form of patents. Moreover, competent design teams give Indian component companies a level playing field alongside foreign ancillaries. Finally, and as a consequence, margins improve.

The pace is picking up on acquisitions. "Medium ancillaries will have to reap the rewards of the booming auto market in 2-3 years, before there is a slowdown," says Ajay Sethia, research analyst with Enam Securities, a stock broking firm. "Very few will make it to the top. OEMs across the world are comfortable with a smaller set of vendors."

And then there's exports. Component exports from India are likely to grow at a CAGR of 34 per cent to touch \$5.9 billion by 2010, and \$25 billion by 2015. According to a report from Motilal Oswal Securities, a research and advisory-based stock broking house, on a scale of 1-10, India scores 7.5 in designing and machining prowess. It's pitted against the likes of Germany, considered an engineering pioneer; other countries such as the US, Brazil, China and Mexico follow closely (see chart: 'Who's



Got The Top Design' on page 68).

**What About The Little Guys?**

But there are many smaller entrepreneurs in the auto components sector who have their backs against the wall. "The smaller guys are losing out on margins," says Dolat's Mata. "Their average margins are 12 per cent of their operating levels." Many of these companies may end up being acquired by larger competitors. Their main problem: finance, to be able to invest in acquiring relevant design capabilities.

With bank capital coming at an interest rate of 13 per cent, access to money for the long term is a problem. A few small entrepreneurs *BW* spoke to said they were looking at private equity (PE), especially with replacement rates of components coming down to four years from the previous five years.

"Smaller firms will find it difficult to invest in design if they have low profitability," says Anil Somalwar, chairman of Involute Technologies, a Rs 70-crore firm, also in Pune. "This is because of

overtrading on our part. We need PE firms that will stay longer in order to survive."

**Rooting For Research**

"The medium-sized auto components segment was heading for consolidation because many entrepreneurs did not want to be left behind in the race to be global vendors," says Autoline's Patwardhan. "But it is necessary to see how investment in R&D will be used. There will be very few of us who will really be the flag-bearers in research."

Design talent is also expensive and scarce. "The problem lies in directing the engineering capability into R&D," says Udayan Banerjee, executive director of Sharda Motors, a Rs 304-crore auto ancillary on the outskirts of Delhi. "Medium-sized ancillaries find it difficult to sway talent away from IT. This is where a firm with turnover of at least Rs 200 crore can match salaries to maintain design teams."

Banerjee says his company was spending on R&D for exhaust systems in cars. "Our margins were being squeezed when we were a plain vanilla auto ancillary," he says. "So, we had to reinvent ourselves. For us, access to capital is critical for survival against competition from foreign firms that are investing in India."

The competition is not just domestic. Since 100 per cent FDI is allowed in auto ancillaries, foreign firms may well drive competition. Eaton Corporation, a US-based \$12-billion (Rs 48,000-crore) firm, has already created a 'professional services centre', comprising 500 engineers dedicated entirely to R&D for the creation of green technologies. "The purpose of this team is to file patents out of India," says Sham Kambyenda, MD, Eaton Corp-India. "We will focus on clean technologies for the Indian and global automotive sector."

Design, said revolutionary guru Erik Adigard, "is in everything we make, but it's also between those things. It's a mix of craft, science, storytelling, propaganda and philosophy". For Indian mid-size auto ancillaries, it's also potential profit, and avoidable loss. ■