

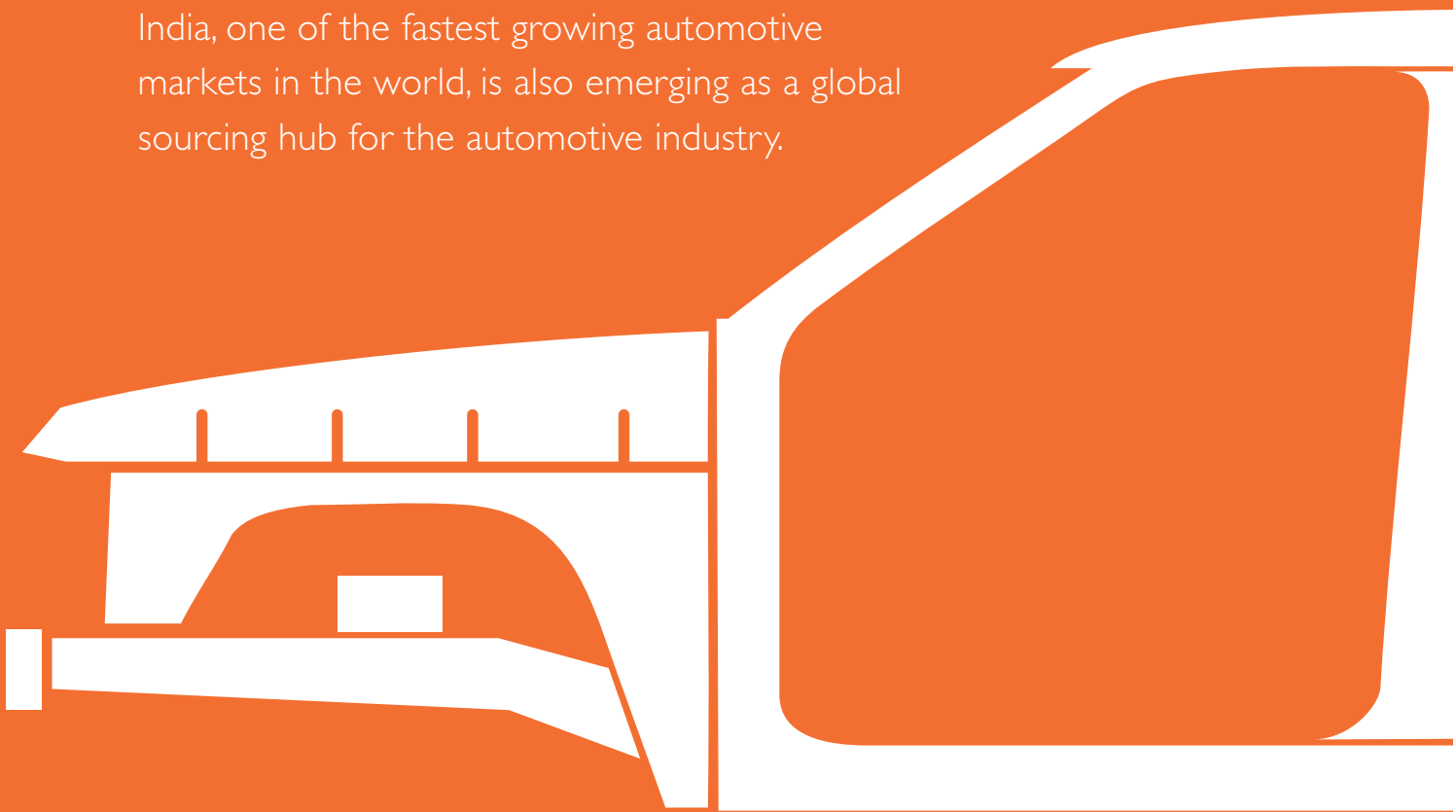


IN THE DRIVER'S SEAT.

The Indian automotive industry is sitting pretty,
and poised to gain tremendously from the
dramatic changes that are sweeping the globe.

A PHENOMENON IN THE MAKING

India, one of the fastest growing automotive markets in the world, is also emerging as a global sourcing hub for the automotive industry.





PEDAL TO THE METAL

The automotive industry is undoubtedly making headway, but where is it going, and how quickly will it get there? This explorative report holds the answers.

EXECUTIVE SUMMARY

The importance of the automotive industry to the Indian economy needs no reiteration. The industry is poised for strong growth in the decade ahead. However, certain critical challenges need to be addressed to enable the industry to exploit the emerging opportunities, both locally and globally.

The Future Thought of Business: Automotive is an attempt to capture the various facets of the Indian automotive industry and identify the important trends that would define the sector's changing dynamics in the coming decade. The demand potential, the major challenges likely to be faced by the sector and the actions needed to be taken are detailed in the report.

Future Drivers Healthy economic growth, changing consumer preferences and rising aspirations, increased spending on infrastructure development, thrust on rural economy and new product launches would be the chief factors driving the automotive industry's growth and expansion, going forward.

Future Strategies The strategies likely to be adopted by automotive companies would be aimed at meeting the major challenges faced today, particularly in the areas of rising fuel consumption; automobile recycling; increasing environmental and safety concerns, cost-effectiveness and rising market competition.

Enhanced Customer Experience With market competition set to become fierce, following the expected launch of more vehicle models on the Indian roads, creating a differentiated customer experience will be a key tool to retain existing customers as also to expand market share. The coming decade will see increased action in the areas of OEMs' captive financing business, pre-owned vehicle market, organised auto service stations and social media marketing.

In-vehicle Experience Automobile manufacturers would deploy telematics, embedded software and in-vehicle infotainment to enhance their competitive positions. The challenge, however, would be to integrate the various technologies

and offer the in-vehicle experience in the most simple, seamless, safe and user-friendly manner.

Technology Innovation The future technological development in the Indian automotive industry would be driven by changing demands in the core areas of fuel efficiency, emission reduction, safety and durability, cost optimisation and innovative features.

Focus on Green Technology Green vehicle manufacturing, i.e. product and process innovation and enhancement of efficiency and productivity would assume centre stage in the coming decade. In view of the rising fuel prices and increasing expectations of Indian consumers for cost-effective and fuel-efficient vehicles, the Original Equipment Manufacturers (OEMs) would place greater thrust on two core areas - reducing vehicle weight and developing smaller engines.

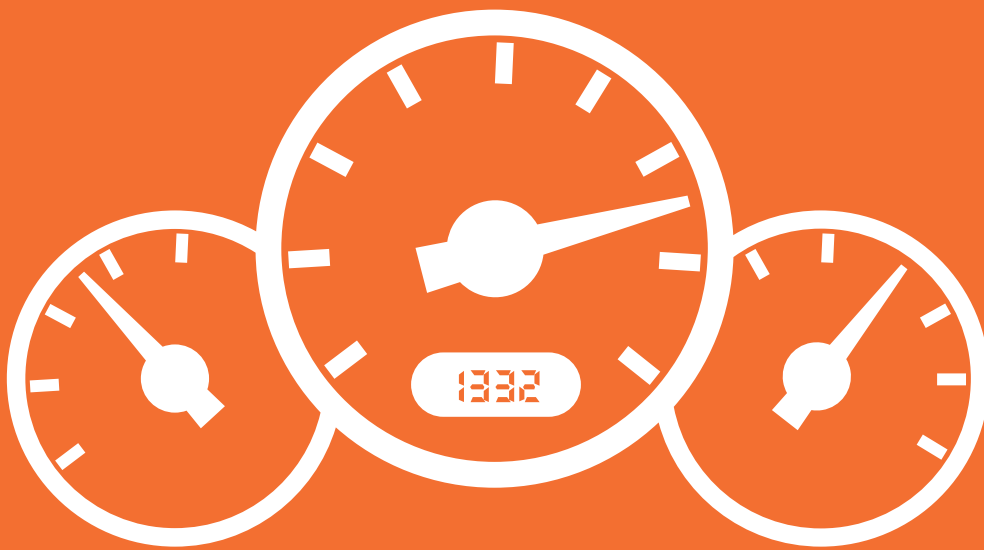
De-risking To ensure long-term sustainability and growth and to reduce susceptibility of their businesses to cyclical fluctuations, auto companies will look at deploying their core competencies in other industries such as defence, aerospace, oil & gas, railways and construction, among others.

Cost Optimisation Mounting pressures on margins would put cost optimisation high on the industry's agenda, which they would approach through local sourcing, local manufacturing and by having multi-plant operations. The globalisation objectives would lead to companies widening their presence, not just within the domestic boundaries, but also across the global markets. The success stories of Indian companies who embarked on the acquisition route early on would encourage more auto players to aggressively focus on expanding their global footprint.

Collaboration The changing role of component suppliers will necessitate more investments in R&D, product innovation and faster response time to OEMs' new product launch plans. As a result of the changing OEM-Tier I supplier relationships, the findings predict increased consolidation in future.

Section I:

Indian Automotive Landscape



INDICATORS OF GROWTH

In a rapidly changing industry, it is important to keep an eye on key metrics, to reliably foresee the future.

The Indian automotive industry has come a long way since the country's independence, having transformed from being a protected, locally-focused industry, to emerging as one of the fastest growing automotive markets in the world.

The automobile industry in India is the seventh largest in the world. Most of the leading players in the world have established a presence in this important market. In fact, liberalisation policies and concurrent induction of foreign competition has changed the market dynamics in the auto industry over the last few decades.

The Indian automotive industry is going through a phase of rapid transformation and growth, driven chiefly by growth in the economy and infrastructure development. The industry is an important driver of economic growth, owing to its deep forward and backward linkages, which has a strong multiplier effect. Automobile sales volumes have grown at a CAGR of 13.1% during FY06-FY12. At the same time, the size of the auto components industry has risen at a CAGR of 13% during FY08-FY12. The automotive industry's contribution to the national GDP has risen to 6% presently from 2.77% in 1992-93.

SNAPSHOT OF THE INDIAN AUTOMOTIVE INDUSTRY

Parameters	Value
IMPORTANCE TO ECONOMY	
Turnover	US\$ 73 billion
Share in National GDP	6%
Share in Manufacturing GDP	22%
Share in excise duty collection	21%
Employment	More than 13.1 million people
FDI inflows	US\$ 6.96 billion*
GLOBAL RANKING	
Three-wheelers	1 st
Two-wheelers	2 nd
Commercial vehicles	5 th
Passenger cars	7 th

*For April 2000-June 2012

Source: Report of the Working Group on Automotive Sector for the 12th Five Year Plan; Websites of SIAM & DIPP

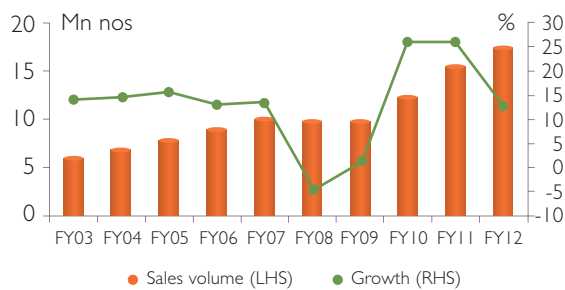
COMPARISON OF VEHICLE PENETRATION*

Countries/ Segments	Cars	Commercial vehicles	Two wheelers
China	27	18	59
Germany	565	38	69
India	10	4	43
Indonesia	18	14	90
Japan	451	131	100
Thailand	57	90	286
US	453	365	18

Source: SIAM

*Vehicles per 1,000 population

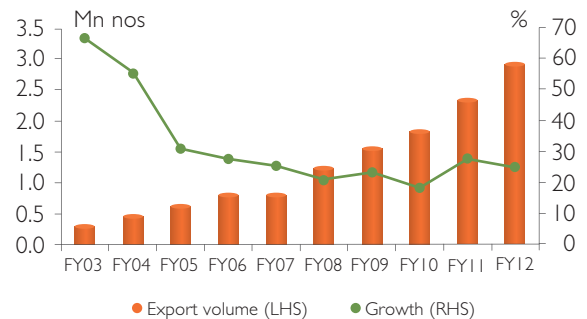
TREND IN AUTOMOBILE SALES*



*Domestic sales

Source: SIAM, D&B Research

TREND IN AUTOMOBILE EXPORTS



Source: SIAM, D&B Research

Demand for automobiles has risen at healthy rates across segments during the last decade, which is reflected in the segmental trend in sales. Domestic sales of commercial vehicles (trucks & buses) have grown at a CAGR of 17.4% during FY03-FY12. At the same time,

sales of passenger vehicles (cars, vans and multi-utility vehicles) grew at a rate of 15.7% during this period. Sales of two-wheelers (motorcycles, scooters & mopeds) recorded growth of 12.1%, while those of three-wheelers (goods carriers & passenger carriers) rose by 9.2% during this 10-year period.

CHANGING CUSTOMER NEEDS ALTER VEHICLE MARKET DYNAMICS

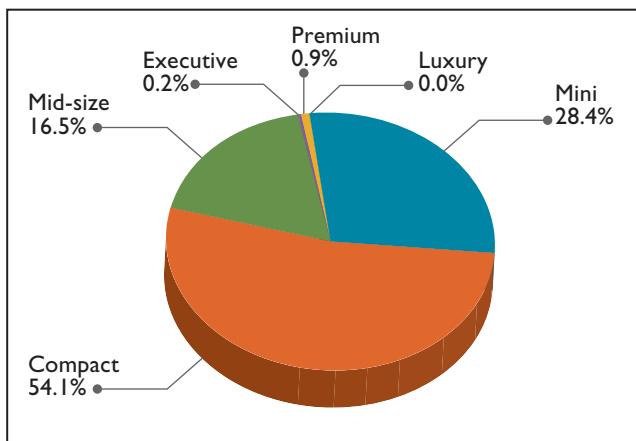
The automobile industry has seen distinct shift in demand patterns across vehicle categories in the last few years. Within the passenger vehicle segment, for instance, there has been a steady increase in demand for compact cars away from mini cars.

Though small in terms of market share, the high-end/luxury car market is growing fast, driven by changing customer preferences and aspirations and launch of more models by foreign OEMs. In five years, the average age of the luxury car buyer has come down from 45 to 40 years. In another five years, it would decrease to 35 years.

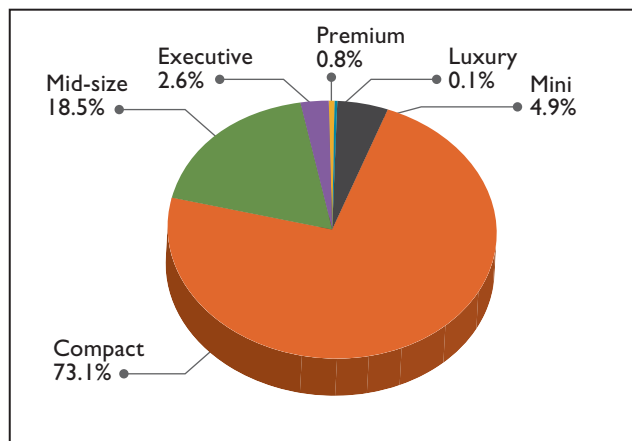
Although demand for high-end cars continues to be strong, the small car market will continue to dominate the Indian market. In fact, foreign OEMs who entered the market with large/high-end vehicles are now looking to play the volume game and are increasing focus on the small segment to cash in on the burgeoning demand from this segment, which accounts for bulk of the car sales in India. Moreover, amidst stiff market competition, in view of the price and value conscious Indian consumer's preference for smaller vehicles (unlike developed economies), OEMs are even introducing smaller cars with certain features that are usually found in large or high-end vehicles.

CHANGING CAR SALES COMPOSITION

FY02



FY11



Source: SIAM, D&B Research

SHIFTING INTO OVERDRIVE

The industry is on the upswing. And several players are making the most of changing customer preferences.





“By 2020, penetration of luxury vehicles will increase to 4-5% from 1% presently. Economic growth and increased penetration in Tier II and Tier III markets would drive this segment’s growth.”

Mr. Debashis Mitra,
Director - Sales & Marketing, Mercedes-Benz India Pvt. Ltd.

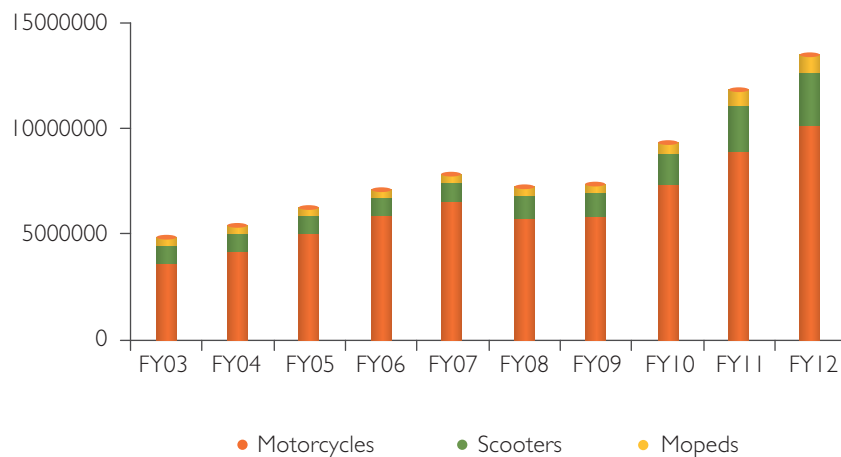
In the Commercial Vehicle (CV) segment, thrust on product development by domestic players and entry of foreign players have resulted in the introduction of advanced products into the market. While this is fuelling further market competition, it is also leading to a structural shift, with demand increasing for higher tonnage trucks, indicating towards a maturing product mix. Further, CV manufacturers see greater value in expanding their presence to niche segments (construction, mining, defence, etc.) and are hence diversifying into these specialised segments.

Going forward, CV manufacturers will also increase focus on less cyclical businesses (E.g. small CV, defence, etc.) OEMs will put greater thrust on product innovation to create new market segments, and roll out new

models to cater to potential domestic customers. In fact, the introduction of the Tata Ace in May 2005, the sub-one truck created a new segment. Moreover, it changed the dynamics of the light commercial vehicles market and ate into the market share of three-wheeler goods carriers.

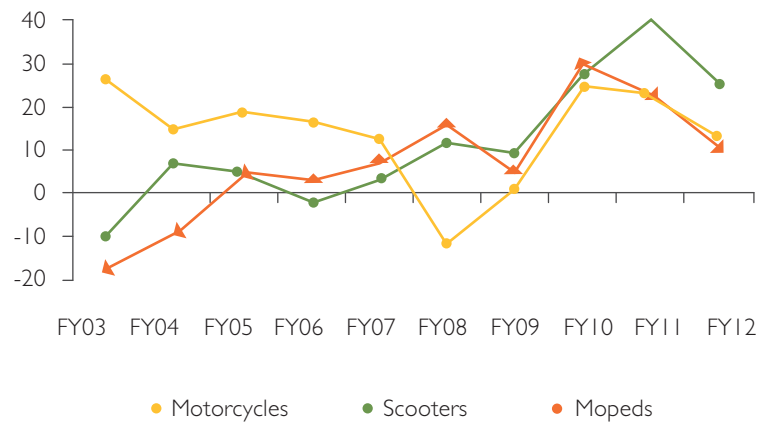
In the two-wheeler market, though motorcycles continue to dominate, sales of scooters are witnessing a revival on the back of product repositioning by players, who are launching trendy models, targeted at women and youth. With scooter sales rising at double-digits in the recent 3-4 years, it is prompting more companies to look at this segment closely.

TWO WHEELERS: SALES VOLUME (NOS.)



Source: SIAM, D&B Research

TWO WHEELERS: SALES GROWTH (%)



Source: SIAM, D&B Research

AUTO COMPONENTS: SCRIPTING A SUCCESS STORY

The auto components industry is an integral part of the Indian automotive industry, with this industry's growth being driven by increasing demand for vehicles, low cost manufacturing and availability of low cost skilled manpower. The component industry's scale of operations has increased substantially, thereby making it possible to invest in technologies which are designed for high volume production. The focus on improving quality levels and basic shop floor practices have also played a critical role in its transformation. The industry has substantially developed the capability to keep pace with the international quality standards, which are constantly moving upwards.

Today component suppliers offer their own design solutions, do value engineering, and instead of supplying only components, they are beginning to supply automotive systems. With more global companies designing products for India, it offers opportunities for the Indian component makers to build on their R&D capabilities by participating in the design and development process.

The OEMs are rationalising their vendor base to improve operational efficiencies. As a result, the supply chain management (SCM) responsibility will increasingly shift on the component suppliers. Also, the market will witness greater consolidation activities. Component suppliers will be required to invest more in R&D, product innovation and meeting faster response time to new product launches of the OEMs.

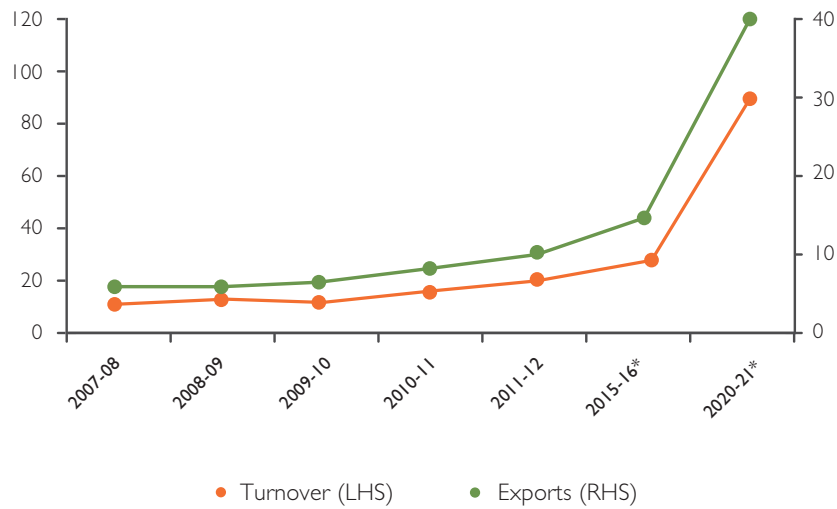


"The auto components industry lacks in new product design capability, although it has good guidance from OEM groups like Mahindras and Tatas. Given the requirements of the Indian market, the new global auto players in India will have to develop vehicles in India, and thus the automotive companies are developing people as also hiring from overseas for product development."

Dr Surinder Kapur,
Chairman, Sona Koyo Steering Systems Ltd.

The auto components industry's turnover has grown at a CAGR of 14.6% during 2007-11, and the Automotive Component Manufacturers Association of India (ACMA) estimates the industry to grow at a CAGR of 11% during 2011-2021. Exports have also been rising steadily, at a CAGR of 11% during 2007-11. The ACMA estimates growth in exports to accelerate to 18.8% (CAGR) during 2011-21.

PERFORMANCE OF THE INDIAN AUTO COMPONENTS INDUSTRY (US\$ BN)



*Estimates

Source: ACMA, D&B Research

The components industry is working towards achieving world class standards of inventory management, processing time and quality levels. Over the past few decades, it has made significant progress in the export markets. Compared with the 1990s, when 65% of India's component exports catered to the aftermarket (with only 35% being catered to the OEMs/Tier I suppliers), today this composition has changed favourably, with exports to OEMs/Tier I suppliers contributing to 80% of India's exports, indicating growing significance of the Indian industry in the global automotive value chain.



“By 2020, the auto component industry would be a US\$ 110-120 billion industry, with US\$ 80 billion coming from the domestic market.”

Mr Vinnie Mehta,

Executive Director, Automotive Component Manufacturers Association of India



“Friendly policies on investment and taxation to promote JVs with global component manufacturers; better infrastructure and land policies to enable investments in new plants and expansion; introduction of GST and abolition of octroi are some of the initiatives required to accelerate the industry's growth.”

Mr Surinder Kanwar,

Chairman & Managing Director, Bharat Gears Ltd.



“The OEM-supplier relation will become more of a partnering relationship, though in a competitive environment.”

Dr Surinder Kapur,

Chairman, Sona Koyo Steering Systems Ltd.

TECHNOLOGY: DRIVING THE CHANGE

Technological innovations in the Indian automotive industry over the past decade have enabled upgradation, right from the design and planning stage to the product development stage, and have also played a critical role in improving the overall performance of the product. Healthy economic growth and rising disposable incomes has resulted in India emerging as a fast growing automobiles market. Further, the low cost of operations and skills in design, R&D and manufacturing has led to India becoming one of the most favourable destinations globally for investment and manufacturing operations. The entry of global companies has favourably altered the Indian automotive manufacturing landscape, with the adaption of international technologies.

The role of information technology (IT) in speeding up the growth process and in managing growth of automotive companies is assuming greater prominence. Globally and increasingly in the Indian market as well, technology is driving critical changes and auto companies are aligning their IT strategies in line with their overall business strategies. Companies are realising the benefits of

implementing information technology solutions, especially as the scale of business increases. As a result, there are greater alliances and partnerships being established between auto companies and IT solution providers with a view to better manage operations and meet critical challenges.

Dealer Management System (DMS) is one such software solution which enables auto companies to not only offer improved and consistent service levels across the country, but also to consolidate customer/retail data to further improve their offerings and react to market changes faster. Maruti Suzuki India has 1,100 sales outlets, a dealer service network of 1,305 and authorised service network of 1,653 (as of 2011-12). The company has deployed a DMS solution and has been reaping major benefits including improved productivity across dealer networks, improved process efficiency and reduced costs, improved marketing planning and promotions, better inventory visibility, order management and replenishment, and sales force productivity monitoring.



“Automotive industries in the developed economies invest 5-8% of their revenues on R&D, while in India the investment is less than 1%.”

Mr Vinnie Mehta,

Executive Director, Automotive Component Manufacturers Association of India



“Market volatility and uncertainty, in terms of absence of a long term policy roadmap is deterring the industry players from making investments for future technologies. There is a need for a 10-15 year clear roadmap for taxation, emission and fuel economy.”

Mr Thimmaiah NP,

Managing Director & CEO India, Meritor Commercial Vehicles India Pvt. Ltd.

In terms of automotive technology and performance requirement, India is 5-7 years behind US and Europe, but the trends are the same. Although automotive technology has evolved considerably over the past decades, the industry continues to face certain critical challenges. The major issues facing the industry today are: rising consumption of fuel and rapidly depleting reserves of conventional

fuel; increasing environment hazards; rising safety concerns; recyclability of materials used in the vehicles; and cost-effectiveness. Consequently, future technology development will be focused in the areas of safety, reliability, comfort, performance, fuel efficiency and environmental concerns.

INDUSTRY AT THE CROSSROADS

The Automotive Mission Plan 2006-2016 aims to make India a global automotive hub, which would involve doubling the automotive sector's contribution to India's GDP by taking its turnover to US\$ 145 billion. As per the Ministry of Heavy Industries and Public Enterprises, by 2020, the passenger vehicle segment is expected to grow to nine million units and the two-wheeler segment to 30 million units.

Given the expected increase in vehicle population in the decade ahead, the need for efficient and environment-friendly recycling

facilities would assume criticality, especially given the growing interest of global OEMs in India and increasing awareness of ecological issues.

Notwithstanding the various challenges, the industry's long-term prospects remain bright. Growth will be driven mainly by healthy economic growth, changing consumer preferences and rising aspirations, increased spending on infrastructure development, thrust on rural economy and new product launches, among others.



“Gradually, hybrids will become much more popular, with the development of a good highway network.”

Dr. Surinder Kapur,
Chairman, Sona Koyo Steering Systems Ltd.



“The Indian auto industry perhaps has the largest opportunity for innovation, as the transportation models and technology solutions for the developed world cannot be simply replicated in India. Solutions have to be tailored to address the challenges posed by a rapidly growing economy, geographical spread, diversity and the spread in affordability.”

Mr. Pravin Shah,
Chief Executive – Automotive Division and Member of the Group Executive Board, Mahindra & Mahindra Ltd.

Section II:

Emerging Trends in the Indian Automotive Industry



JUST OVER THE HORIZON,
SEVERAL FUNDAMENTAL
SHIFTS ARE APPROACHING

With continuously rising fuel prices and high sensitivity of the Indian consumer to vehicle price and fuel costs, the coming decade is expected to see greater emphasis by the OEMs on improving vehicle fuel efficiencies. Further, with over 50% of oil use around the world being for transport, climate change and energy security would be on the political agenda of nations across the globe in the coming decade. This, in turn, would put increased pressure on the OEMs to focus on improving vehicle fuel economy and reducing emissions.

From a long-term perspective, with growing congestion in the cities and a consequent expected shortage of parking space, apart from environmental concerns, the market would witness innovative vehicle designs to suit future urban mobility requirements. In the medium term, the two core areas of focus of OEMs would be to reduce vehicle weight and develop smaller engines.



“Five years from now, increased scale (sales volumes) will lead to increased cost competitiveness and overall development in capabilities, particularly in product development. Ten years from now, we could perhaps see ‘Frugal Innovation’.”

Mr. Pravin Shah,

*Chief Executive – Automotive Division and Member of the Group Executive Board,
Mahindra & Mahindra Ltd.*

AUTOMOTIVE LIGHT WEIGHTING TO ADDRESS RISING FUEL COSTS AND ENVIRONMENTAL CONCERNS

As the weight of a vehicle is directly correlated to fuel consumption and CO₂ emission, OEMs are giving greater focus on reducing vehicle weight by bringing down the weight of individual components. This is driven by the need to not only improve fuel efficiency and become cost-competitive, but also to address the newer stringent emission norms, and the next level of Bharat Stage V and VI norms to be implemented going ahead.

In the coming decade, automotive light weighting is a strategic opportunity which auto manufacturers will explore further, as

demand and prices of fuel continue to move upwards. At a strategic level, this implies towards greater partnerships between the OEMs and auto parts manufacturers in not just manufacturing but also designing of vehicles/vehicle parts. OEMs in collaboration with auto component makers would focus on using new materials and designs for reducing vehicle weight and improving fuel economy. This is likely to be achieved through the usage of alternate materials such as low-density metals, high strength light alloy steel structures, plastics and composites in component manufacturing.

Weight of a typical small car

Materials Composition	Current Scenario	Future*
Steel	55%	57 %
Iron	5%	3 %
Aluminium	12%	14 %
Plastic	13%	16 %
Others	15%	10 %

*5-10 year horizon

Source: Mahindra & Mahindra

Globally, a continuous growth in use of plastics in automotive parts is being observed. And this trend is expected to gather momentum among Indian OEMs as well in the coming 5-10 years. Further, the coming decade will witness increased usage of high tensile steel grades replacing conventional steel, as also increased use of plastics, aluminium, magnesium and other light weight alloys in place of ferrous materials. Among the various vehicle segments, small cars and commuter bikes being the most price-sensitive, these two segments are expected to witness greater action on the part of the OEMs along with their component supply chain in reducing overall vehicle weight.



“Technological innovations will mainly be focused in the areas of friction reduction for improving fuel efficiency of engines, emission reduction, light weighting and recyclability.”

Mr. Ashok Taneja,

Managing Director & CEO, Shriram Pistons & Rings Ltd.

The developed international markets such as the US are characterised by huge investments made by the companies in heavy, steel-based vehicles due to the popularity of pick-ups and gas guzzling SUVs. Therefore, even from an export perspective, with global fuel demand and fuel prices expected to remain on an upward

trend, demand from consumers for lighter vehicles is expected to gather momentum. This offers tremendous opportunities for the growing and evolving Indian automobile industry to tap the expected rise in global demand for lighter, more fuel-efficient vehicles.

DEVELOPMENT OF SMALLER ENGINES TO BE HIGH ON AGENDA

Reducing vehicle weight would necessitate a redesign of the automotive supply chain. Going forward, OEMs will increase thrust on developing smaller engines, without compromising on performance. The thrust on developing smaller engines would again be driven by rising fuel prices and the expected introduction of more stringent emission control norms. This will be a win-win situation for the consumers, as smaller engines would also help in reducing the price of the vehicle.

The larger engines are being replaced by smaller engines with a turbocharger, which gives the power of a bigger engine without compromising on the fuel efficiency. Advancement in technology has made possible introduction of more sophisticated turbo charging and engine management systems which in turn have enabled smaller engines to develop as much power and torque as the larger engines.

And this trend is not likely to be restricted to the economy segments, as even segments such as sports-utility vehicles would see smaller engines being developed. While diesel turbochargers have been around for several years, it is only of late that there has been an

evolution in turbochargers in petrol engines. In the coming years, with growing emphasis on fuel economy, small turbo-charged gasoline engines would start coming into the market slowly.

OEMs EVALUATING MARKET READINESS FOR HYBRID & ELECTRIC VEHICLES

OEMs who have launched their electric or hybrid vehicles in India have met with limited success due to affordability issues. As a result, presently, companies offering electric vehicles (EV) are providing greater thrust to exports, given the lack of infrastructure and a policy environment in the domestic market that is not conducive. For instance, the Mahindra Reva (earlier known as Reva), a pioneer in the EV space is present in 24 countries but has met with limited success in the domestic market due to affordability factors and infrastructure constraints. Hence, necessary infrastructure and policy support for both OEMs and end consumers through incentives, subsidies, fiscal benefits and rationalised tariff structure is needed to boost adoption of such vehicles. Nevertheless, the industry is taking baby steps towards promoting green vehicles. The National Electric Mobility Mission Plan 2020 aimed at promoting electric and hybrid vehicles is expected to be a step in the right direction to establish an enabling environment for the future of such vehicles in the country.

The Indian market's readiness for alternate fuels/hybrid vehicles must be seen from three perspectives – OEM readiness, infrastructure readiness (fuel and allied infrastructure), and customer readiness (affordability and acceptability). Honda Siel Cars India, which launched India's first hybrid car, the Civic Hybrid in June 2008 at a

price of ₹ 21 lakh, had to reduce the price to around ₹ 13 lakh within a few months of launch to make the car more affordable to the Indian consumers. The Civic Hybrid was later withdrawn from the showrooms in India.

While globally hybrid cars are not expensive when compared to petrol vehicles, in India high import duties make hybrid cars twice as expensive as the acquisition cost for a normal car. Even for buses, the acquisition cost of hybrid buses is about 60% higher. To encourage consumption of green/fuel-efficient vehicles, appropriate incentives will encourage introduction of more such products in the market. Though presently the focus of the buyer is on the cost of ownership, in the coming decade, with the market maturing and sensitivity towards environment friendly measures increasing, demand for hybrid cars will increase. The introduction of new materials in automobiles would be a key driver for the development and implementation of new manufacturing technologies. Going forward, there will be increased inclination of manufacturers to use a variety of materials in automotive design, with each of the materials used for specific purposes/functions. Use of multiple materials, in turn, points towards increased adoption of multiple manufacturing processes/technologies, as also increased integration of materials design into the design of the manufacturing processes.

OEMs TO FOCUS ON CREATING DIFFERENTIATED CUSTOMER EXPERIENCE

With competition reaching unprecedented levels, companies are gradually moving from merely selling vehicles to offering the whole basket of services to customers for an enhanced experience. Apart from competitive pricing, quality of products and services, easy availability of spares, proximity and familiarity with the service centre, and loyalty programmes and promotions will be the main elements helping companies in retaining their customers throughout the vehicle lifecycle, in an increasingly competitive business environment.

In view of the anticipated rise in customer preferences and heightened competitive pressures, going forward, quality and delivery of after sales services would assume critical importance for manufacturers. In the coming decade, more vehicle companies would venture into offering services in the areas of vehicle financing and used or pre-owned vehicles. Having a presence across the value chain ensures better customer retention by bundling various service offerings.



“From a CRM and business perspective, it makes sense to integrate as many value added services as possible. As the market becomes bigger, demand for such services will also rise.”

Mr. Debashis Mitra,

Director - Sales & Marketing, Mercedes-Benz India Pvt. Ltd.

Though currently a small market, companies expect the high-end market to expand significantly in the coming decade. Consequently, greater thrust will be put on offering more luxury vehicles, particularly cars and motorcycles. With rising preference of customers for quality products, both OEMs and auto component

companies would increase efforts in promoting genuine parts. Customer demand for enhanced in-vehicle experience will drive further penetration of in-vehicle infotainment. Another key trend expected to emerge is the emergence of organised auto service stations. These major trends are discussed in detail below.

PENETRATION OF TELEMATICS: IN-VEHICLE INFOTAINMENT AND EMBEDDED SOFTWARE TO RISE

The Indian automotive industry is transforming itself from mechanical systems to systems that are being enhanced by electronics to improve performance, emissions and fuel economy. The coming decade will witness increased adoption of in-vehicle infotainment systems, telematics and automotive-embedded software as OEMs will use these systems to enhance their competitive positions.

Moreover, with rising urbanisation and changing urban mobility needs, future mobility solutions would require vehicles that are small, maneuverable, energy efficient and connected. A connected car of

the future, for instance, would be connected to another car, OEM, and/or to infrastructure communication devices/service provider. In the long-term, to remain competitive, OEMs would offer connected vehicles with enhanced features to the drivers such as remote real-time vehicle diagnostics, location based services, Wi-Fi technology, streaming media, functional integration, etc. The challenge would be in integrating the various technologies and offering the in-vehicle experience in the most simple, seamless, safe and user-friendly manner.

IN-VEHICLE INFOTAINMENT SYSTEMS

The in-vehicle infotainment (IVI) industry in India is at a nascent stage. However, the market would receive a major boost in the coming years, on the back of a burgeoning automobile market, with several organised players entering this segment. Further, emerging technologies are creating newer opportunities for mobility, connectivity, productivity and entertainment while on the move. IVI systems in passenger cars would be an important area of focus for automotive OEMs, who are increasingly viewing it as a key differentiator in their vehicles.

Further, with changing market dynamics and rising consumer expectations, demand for IVI will not be restricted to the high-end or luxury car segment. Customer expectations would drive penetration

of IVI systems even in the mid-segment vehicles. This in turn, would necessitate development and introduction of more innovative and cost-effective IVI devices in the market. Presently, the Indian market for IVI is witnessing advancements through Bluetooth connectivity and double din HU system as also in-built navigation systems for better user-interface and enhanced experience. Going forward, in-car infotainment systems would be focused mainly in the areas of safety, security and comfort. Wireless connectivity would become the core of IVI systems. In terms of technological advances, innovative human machine interface, reliable voice-recognition systems and personalisation of the in-vehicle environment would be the key areas driving growth of this segment in the coming years.



“In-vehicle infotainment, currently restricted to high-end cars, would migrate from being a lifestyle/luxury feature to become a necessity, in the coming decade.”

Mr. Pravin Shah,

*Chief Executive – Automotive Division and Member of the Group Executive Board,
Mahindra & Mahindra Ltd.*

TELEMATICS

The telematics market in India is still in a nascent stage. Telematics services such as GPS-enabled navigation and vehicle tracking were introduced in India only in the mid-2000s. Nevertheless, there exists significant scope for implementing telematics in the Indian auto industry in the long-term. This is on account of the current low penetration levels and the fact that India is among the fastest growing automobile markets in the world. Further, this technology is currently limited to the high-end segment of the passenger car market, with scope to extend it into the mid-segment.

OEMs would put greater thrust on telematics in order to provide enhanced customer satisfaction and to gain a competitive edge. In

the commercial vehicle segment, with increased focus of fleet operators and logistics firms on controlling cost of ownership and to reap improved benefits from advanced electronics systems (compared to mechanical systems) such as overall cost benefits, higher reliability and performance, among others, demand for telematics services such as vehicle tracking, fleet management, passenger information system, etc. is expected to increase. However, to cater to this highly fragmented as also cost conscious segment of customers, there is a need to develop and offer innovative and affordable services in order to increase market penetration of these services.

EMBEDDED SOFTWARE

The penetration of automotive electronics/embedded systems in powertrain, chassis, body control and infotainment applications, particularly in passenger cars, is steadily increasing in India. Unlike the Western markets like US, Europe etc. where application of

electronics evolved with the advancements made in technology as also changing regulations, in the Indian context, this segment will be driven by market demand at competitive prices.



“Greater ease of assembly, reliability of components, ease of troubleshooting, fall in cost of electronic parts and additional features for the end users would drive greater penetration of automobile embedded systems.”

Mr Surinder Kanwar,

Chairman & Managing Director, Bharat Gears Ltd.

Rising market competition has led to increasing proliferation of automotive electronics from premium segments to the volume segment. For instance, features in areas of safety, comfort and infotainment systems such as anti-lock braking system, electronic brake-force distribution, auto AC and navigation systems are now being offered in the compact car segment as well. Electronic components are increasingly taking on a larger share of the total cost of a vehicle, and this trend is being driven by rising customer expectations for better comfort, convenience, connectivity and safety.

Automotive electronics will have a critical role to play in meeting some of the key challenges the industry faces in terms of rising fuel prices, customer preferences for advanced features and safety with low running costs, etc. Rising market competition and increasing consumer expectations, need for product differentiation, technological innovations and emission norms would drive increased use of embedded systems in automobiles. Increased electronic and software content in a vehicle points towards more complex embedded systems, and thereby a need to effectively manage embedded systems complexity.



“Automobile embedded systems are going to be the future, in areas of electronic troubleshooting, displays, voice-enabled controls, etc.”

Mr Thimmaiah NP,

Managing Director & CEO India, Meritor Commercial Vehicles India Pvt Ltd.

OEMs TO INCREASE FOCUS ON DEVELOPING CAPTIVE FINANCING BUSINESS

Automotive financial services form an important and integral business for the global automotive OEMs. In the developed markets such as US, Europe etc, vehicle manufacturers' captive financing units dominate the market. This phenomenon is expected to gain greater prominence among the Indian vehicle manufacturers going forward. This is because, apart from rising disposable incomes, auto financing is emerging as an important driver for demand in the auto industry. With the anticipated increase in market competition, having a captive financing arm would be a key strategic tool for the OEMs to create a financing environment that is conducive to their potential customers.

Captive units offer both, the product as also finance under one roof. A vehicle company's financing arm enjoys the advantage of the OEM's brand equity, as also comparatively lower establishment costs and a preferred financier status among the potential customers. Moreover, having an in-house financing arm also provides the OEMs with an alternate revenue stream and mode for business expansion.

USED CARS MARKET SET FOR RAPID EXPANSION

With growing competition in the new vehicle business, more OEMs are entering the growing used vehicle business and investing heavily in establishing/expanding this business. Maruti True Value, Mahindra First Choice, Tata Motors Assured, Hyundai Advantage etc. are some of the established players in this segment. The pre-owned market for cars, for instance, largely dominated by the unorganised players, is growing at 20-25% annually. The growth is not limited to the small or mid-segments, but is also supported by growing demand for luxury cars. The fall in the average ownership period from 7-8 years to 4-5

years explains the booming growth of this market. A presence in the pre-owned vehicle business is an important tool to retain customers within the OEM's product portfolio and enhance new vehicle sales through exchange. Currently, the used cars market is as big as the market for new cars, much smaller compared with developed markets (US, Europe), where the used cars market is thrice the size of the new cars market. However, with increasing proliferation and expansion by the organised players, the used cars market is set for rapid expansion in the coming years.

EMERGENCE OF ORGANISED AUTO SERVICE STATIONS

With technology becoming more advanced going forward, vehicles will become more complicated and hence increasingly difficult for the roadside mechanics and garages to repair, in turn prompting customers to go to the authorised service centres. The coming decade will see the growing prominence of organised/OEM-authorised network of service stations, which would eat into the market shares of the unorganised garages/players, which currently dominate this market.

With rising customer expectations for quality services and increased market competition, there will be increased pressure on the aftermarket players to improve overall quality and service standards. Further, advancement in vehicular technologies is impacting the manner in which vehicles are serviced. Vehicles today come equipped with more embedded electronic components and controls, which in turn, necessitates greater technical skills in testing and servicing, which can be catered to in an improved manner by the organised players.

OEMs TO EXPLORE SOCIAL MEDIA PLATFORMS TO BUILD CLOSER BONDS WITH CUSTOMERS

Competition is prompting more players to tap new and innovative marketing strategies to reach out to customers. The increasing importance of social media marketing is accentuated by the fact that Internet penetration is improving and the average age of the users is decreasing. Auto companies are increasingly cashing in on the growing popularity of social media to attract young customers, not only as a means to share information about products, but also to receive feedback from customers. Maruti Suzuki India, for instance, introduced several changes in the interiors of the new version of the Swift model based on feedback from people through the social media.

Amid stiff competition and with the market flooded with a plethora of models, the digital/online medium offers greater flexibility to auto companies since they come with several interactive features for the users. Further, digital media, compared with the conventional media, makes it easier to track results effectively. Several companies have already launched online service websites which offer value added services to their customers including personalised features such as online service booking, service scheduler reminder, etc. Encouraged by the returns on the investments made, the coming years will see auto companies increasing their spending on the digital media, including social media, with a view to keep existing customers engaged and connected to the brand as also to attract new customers.



“Future customer centric initiatives must include customer education and awareness, more company certified user car showrooms, OEMs’ financing schemes, 24x7 on-road service support and car pools sponsored by car companies.”

Mr Surinder Kanwar,
Chairman & Managing Director, Bharat Gears Ltd.

COST OPTIMISATION: THE SURVIVAL TOOL

OEMs are under increasing pressure to reduce development cycle and cost and at the same time continuously improve quality and reliability. In such a scenario, going forward, there will be greater thrust on rolling out new vehicle models at a faster rate. OEMs will look at using global platforms to reduce overall expenses and optimise platform volumes, instead of the traditional practice of developing and marketing specific models for specific markets. The coming decade would see more auto companies increasing backward integration in order to cut costs.

High exchange rate fluctuation coupled with rising transportation costs are forcing OEMs and suppliers to increase focus on low-cost sourcing within a particular region. Going ahead, the components industry will look to localise every element of the supply chain, from raw materials to cutting tools, dyes, fixtures, machine tools, etc.



“In the coming decade, the main focus would be on enhancing efficiency and productivity, and on innovation, both process and product, driven by changing customer demands.”

Mr. Thimmaiah NP,

Managing Director & CEO India, Meritor Commercial Vehicles India Pvt. Ltd.

OEMs TO INCREASE FOCUS ON LOCAL SOURCING

The constant cost pressures on OEMs are compelling them to increase localisation. While the industry continues to remain dependent on imports for certain parts (airbags, parking sensors, etc.), going forward more OEMs will focus on sourcing components locally to reduce their soaring import bills. Market leader Maruti Suzuki India, for instance, reportedly aims to lower its import bill by three-fourths by March 2015. And to achieve this, the company's suppliers would have to invest at their plants to manufacture the components which they have been importing.

Vehicle OEMs have been, from time to time, passing the burden of increased costs to the end-consumers. However, price hikes and

currency hedging are only short term remedies. From a long-term and sustainability perspective, local sourcing will enable the industry to achieve long-term gains in costs and efficiencies. It will also aid the OEMs in diversifying the geographical spread of their suppliers.

The OEMs' increasing focus on local sourcing augurs well for the Indian auto components industry, as it points towards greater opportunities for them. This also catalyses the need for the component suppliers to expand capacities and build capabilities to meet the anticipated rise in demand for products.



“Component manufacturers need support from the OEMs and should proactively develop their own products and technologies, as margins are getting increasingly squeezed.”

Mr. Vinnie Mehta,

Executive Director, Automotive Component Manufacturers Association of India



“There will be increased thrust on deep localisation to improve cost-competitiveness, where every element of the supply chain will be localised. This includes raw materials, machine tools, toolings and consumables.”

Mr. Ashok Taneja,

Managing Director & CEO, Shriram Pistons & Rings Ltd.

Supply chain remains a big challenge, and the market volatility is compounding it. Sprucing the supply chain will assume greater significance, given the high logistics costs in India and with India emerging as an important global automotive manufacturing hub. Foreign OEMs would look to increase local sourcing of components by exploiting the capabilities of the local supply base to maintain competitiveness and avoid high import duties, at the same time reducing logistics costs. Further, global OEMs would use India as a manufacturing hub for their global operations, thereby all the more

increasing the need for a robust SCM system, which would enable seamless integration of the supply chain across multiple operating locations globally.

With continued pressure on margins, strict inventory control without proper visibility across the value chain would increase the burden of inventory on the component vendors. This in turn points towards increased need for greater deployment of IT systems and improved processes for better SCM.



“Supply chain optimisation is going to be one of the biggest challenges for us.”

Mr Thimmaiah NP,
Managing Director & CEO India, Meritor Commercial Vehicles India Pvt. Ltd.

FOREIGN OEMs TO OPT FOR LOCAL MANUFACTURE INSTEAD OF IMPORTING VEHICLES

With India being one of the fastest growing automobile markets, the coming decade will witness several foreign automakers, which until now have been importing from abroad and selling in India, setting up manufacturing/assembly operations here. Need for having local assembly operations would also be driven by the need to cater to the price-sensitive Indian customers. Manufacturer of high-end passenger vehicles Mercedes Benz for instance, plans to start assembly of its luxury sports-utility vehicles M and GL-Class in India

by 2013, in order to price its products more aggressively. Similarly, Harley Davidson plans to start assembling its bikes in India from 2013 to make its products more accessible to the Indian consumers. Further, with rising market competition, for an enhanced customer experience, having a wider product portfolio and lower lead times will assume greater significance going ahead, thereby prompting OEMs to have manufacturing presence in the domestic market.

AUTO MAKERS TO HAVE MULTI-PLANT OPERATIONS

Unlike traditionally, when majority of the demand for vehicles has come from the major cities, going forward, a significant portion of demand will come from the tier II and tier III markets. Given the wide geographical spread of the consumer base in India and the high transportation costs incurred by OEMs, there will be increased thrust on setting up production/assembly facilities in multiple locations. Several OEMs, who for instance have a dominant presence in a certain region, are now announcing their expansion plans for setting up new facilities in new locations, with a view to spread their manufacturing operations across the country.

At a strategic level, the need to save time and transportation costs (accounting for 40% of logistics costs) would also prompt OEMs to have multiple locations. Further, considering the fact that the industry continues to be adversely impacted on account of the intermittent labour unrest, having multiple locations enable them to spread the labour related risk factors and avoid production losses. At the same time, infrastructural constraints, as also attractive incentives offered by various states is encouraging OEMs to look beyond the traditional auto hubs. These changing market dynamics will create more auto manufacturing hubs in the country

GEOGRAPHICAL LOCATION OF EXISTING & NEW PLANTS OF COMPANIES

Company	Existing Plants	New Plants
Ford India Pvt. Ltd.	Tamil Nadu	Gujarat
Hero Motocorp Ltd.	Haridwar & Haryana	Rajasthan & Gujarat
Honda Motorcycle & Scooter India Pvt. Ltd.	Haryana & Rajasthan	Karnataka
Maruti Suzuki India Ltd.	Gurgaon & Manesar	Gujarat
India Yamaha Motor Pvt. Ltd.	Uttar Pradesh & Haryana	Tamil Nadu
Badve Engineering	Maharashtra, Madhya Pradesh, Uttarakhand, Tamil Nadu	Karnataka
Bosch Ltd.	Karnataka, Maharashtra, Rajasthan, Goa	Gujarat

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DE-RISKING TO GAIN PROMINENCE

Mounting pressure on industry players is prompting them to identify alternate revenue streams to reduce excessive dependence on a particular line of business, particularly those that are susceptible to cyclicity. Going forward, the focus will be to build independent business units – auto related and non-auto related, to ensure long-term sustainability and growth, and make them less susceptible to the cyclical fluctuations in the automotive industry. Not just de-risking from excess dependence on one business, diversification will also enable better utilisation of existing resources and capacities, as also increase scale on a long-term basis.

Several component manufacturers have already diversified their operations into non-auto verticals, and are reaping the benefits of enhanced revenues and global customer base. Bharat Forge, for instance, embarked on the diversification route early on. Today its non-automotive business has grown to ₹ 12.88 billion (FY 12) from ₹ 4.85 billion (FY 08), and contributes 38% (FY 12) to the company's standalone operations.

The coming decade will see more players venturing into other verticals such as oil and gas, railways and locomotives, construction and mining, aerospace, power, marine, defence, among others. For component suppliers who are constantly under pressure from vehicle OEMs to cut costs, venturing into the non-auto verticals, which enjoy higher margins, is a lucrative business proposition. Moreover, diversifying into these verticals would also provide the players with opportunities to tap into the increasing investments being made in these sectors by the developing economies of the world, thereby also helping boost export revenues of these Indian suppliers. The coming decade will witness more acquisitions and partnerships by component manufacturers in a bid to enter into new business sectors as also to get access to a larger customer base. The diversification of the business into non-auto related businesses will enable companies to mitigate the risk arising out of uncertainty in demand, domestically and even globally.

GEOGRAPHICAL DIVERSIFICATION: THE GROWTH MANTRA

Automotive companies will drive more aggressive expansion to widen their presence, not just within the local markets, but also across the global markets. The need to expand across the domestic market,

particularly into the tier II and tier III markets will be driven by the increasing competition in the metro and big cities and to tap into the large unmet demand potential in these smaller markets.

DOMESTIC MARKET: EXPAND SALES AND DEALER NETWORK

The coming years will see vehicle manufacturers expanding their presence across the length and breadth of the country, mainly into the tier II and tier III markets, to reach out to the large untapped demand

potential in these markets. Maruti Suzuki India, which dominates the car market, has expanded its sales network from 375 in 2005-06 to 1,100 by 2011-12, and covers 1,408 cities by its service network.

The table below indicates the expansion plans announced by companies with respect to their dealer network, and a significant portion of these expansions are planned for the smaller markets.

DEALER NETWORK EXPANSION PLANS OF OEMs

Company	Current Network	Planned Network*	Completion Year
Honda Motorcycle & Scooter India Pvt. Ltd.	1500	2000	2012-13
Toyota Kirloskar Motor Pvt. Ltd.	173	225	2013
Premier Ltd.	50	100	2012
Fiat India Automobiles Ltd.	-	100	2013-14
Daimler India Commercial Vehicles Pvt. Ltd.	-	100	2014
BMW India Pvt. Ltd.	25	40	2012
Audi India	18	25	2012
Tata Group - Jaguar and Land Rover	15	20	-
Volvo Auto India Pvt. Ltd.	7	16	2013

*Includes current network and planned expansion

Source: Various



“Manpower poaching is a big challenge on the retail front. With more dealerships being set up across the country, particularly in tier II and tier III markets, finding good quality talent for sales, after-sales and technical support will become a bigger challenge.”

Mr. Debashis Mitra,

Director - Sales & Marketing, Mercedes-Benz India Pvt. Ltd.

EXPORT MARKET: EXPLORE NEW GEOGRAPHICAL MARKETS

While the domestic market would continue to be the mainstay of auto companies, there would also be increased focus on enhancing revenues through exports. More importantly, manufacturers would explore newer markets, since the traditional markets of the US, Europe etc. are experiencing slower growth. This excess dependence is fraught with risk and hence companies are diversifying their market spread by developing a wider customer base. Consequently, going forward, Brazil, South Africa and Russia will be some of the key export markets to be explored by the Indian auto components manufacturers. Several CV companies (e.g. Ashok Leyland) are

looking beyond Sri Lanka and Bangladesh, and targeting West Asia, Africa, CIS, ASEAN and Latin America, either to push exports or initiate local operations. Tata Motors recently (September, 2012) announced its entry into Indonesia, the largest automobile market in the ASEAN. The company is evaluating options for setting up a manufacturing base in Indonesia to serve the country and the ASEAN region. Such geographical diversification will enable companies to hedge against economic cycles in countries across the globe.



India-like markets such as Brazil, South Africa and Iran will open new opportunities for Indian auto component exports.”

Mr. Ashok Taneja,
Managing Director & CEO, Shriram Pistons & Rings Ltd.

OEMs LOOKING TO LEVERAGE INDIA AS A HUB

The increasing focus of OEMs towards localisation further boosts prospects of India emerging as a favoured global manufacturing hub. Foreign OEMs present in India would increase sourcing of locally manufactured parts, both for their Indian and overseas operations. With its low-cost advantage, India would emerge as a global hub for OEMs in this region, who will also use it as their manufacturing base for exports.

There also exist strong prospects for India to develop as a global automotive R&D hub. This would be driven by strong domestic demand (presence of OEMs and need to build products to suit the

local needs), a maturing auto components industry and improving software capabilities. Government support for setting up R&D facilities would provide the much needed boost. The National Automotive Testing and Research Infrastructure Project (NATRIP) is one of the most significant initiatives, representing collaboration among the central government, state governments and the Indian automotive industry to create a state-of-the-art testing, validation and R&D infrastructure in the country. The project is scheduled to be completed by December 2012, at an estimated cost of ` 22.9 billion.

ENHANCE GLOBAL PRESENCE THROUGH FOREIGN ACQUISITIONS AND PARTNERSHIPS

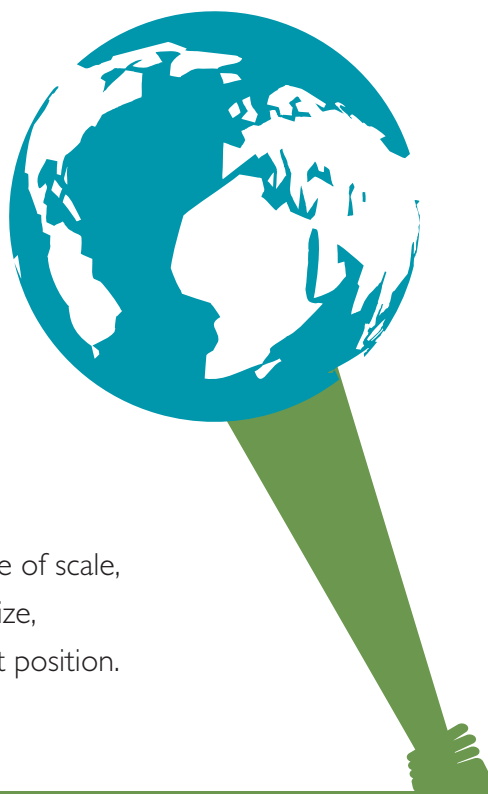
The move towards globalisation of Indian automotive companies is expected to strengthen further going forward, with more firms moving faster towards this direction, through overseas acquisitions and strategic collaborations. For instance, in 2008, Tata Motors acquired the loss-making British carmaker Jaguar Land Rover PLC to enhance its global footprint and to achieve long-term benefits from component sourcing, low-cost engineering and design services, and within a short span has managed to turn around the British luxury vehicle division. The success stories of Indian companies who embarked on the acquisition route early on is encouraging more auto players to focus on expanding global footprint, as they increasingly realise the importance of achieving global size and competitiveness in order to establish a broader market position.

To enhance quality standards to match international levels, Indian component manufacturers are looking at partnerships with the major global OEMs and component makers, and are also looking for investment opportunities through the M&A route in North America

and Europe to leverage the R&D base and quality, and to acquire international customer base.

The developing nations of Africa and South America have huge potential for growth. However, being virgin territories, the Indian component manufacturers will have to look at setting up regional production bases in these countries. Logistics costs from India to these countries remain high. Hence, to exploit the market potential better and to compete effectively, the industry should look at making investments or acquiring regional companies.

Going ahead, the need for having a global manufacturing footprint would be driven by the need of companies to gain access to new customers, markets, technologies as also skills. Moreover, having a manufacturing presence in multiple geographical markets would further auto companies' objectives of optimising the sourcing of critical raw materials, gaining proximity to customers and de-risking their business.



A PLANET SIZED OPPORTUNITY

As organizations realize the importance of scale, they are striking out, achieving global size, competitiveness and a stronger market position.

CONCLUSION

GROWTH & EXPANSION STRATEGIES

The industry's growth will be driven by healthy economic growth and stable economic policies, a growing and large domestic market as also focus on servicing export opportunities due to proximity to other Asian and emerging markets, among others. To ensure long-term, sustainable growth, auto companies should focus on adopting a three pronged strategy of - investing in R&D for product development, extending presence to non-auto verticals, and expanding geographical presence beyond the domestic boundaries. OEMs should expand service and distribution networks, manufacturing facilities and improve technological capabilities.

Component suppliers should also scale up and prepare themselves to meet the dynamic demands of OEMs, domestic and foreign. From a long-term growth perspective, it is imperative, for both component suppliers and the OEMs to focus on R&D and innovation to equip themselves with the necessary capabilities to develop vehicles which meet future market needs, so as to stay ahead of competition.

The auto industry is yet to fully address the latent demand for mobility in the rural and semi-urban markets. Going forward, OEMs will put greater thrust on these markets, driven by the need to expand sales and counter the rising competition in the big cities. Apart from rural consumers, women and youth would be the key target customer groups for auto companies in the decade ahead.

GOING GLOBAL

Given the huge investment requirements, with long gestation periods on the one hand, and dynamically changing consumer preferences on the other, going ahead there will be greater technological, distributional and even R&D alliances in the automotive industry, driven by the need of players to enhance scale and reach and get access to infrastructure as also technology to keep pace with changing market trends. Such alliances and partnerships are a step towards increasing the Indian players' access to foreign markets, advanced technology as also international quality and performance standards.

CUSTOMER IS KING

With market competition going to become fierce, OEMs would drive greater initiatives for creating a differentiated customer experience, by introducing newer features in their offerings, aimed at making their products more appealing to customers, differentiating brands and building brand loyalty. Innovation will drive the industry, as companies continue to put greater thrust on differentiating their products, characterised by growing interface between electronics and IT in the automotive functionalities, mainly safety, entertainment and navigation.

Infotainment will be an important factor in influencing the Indian consumer's buying decision. Consequently, it would be an important area of focus for vehicle companies, integrating information, connectivity and entertainment. And with rising consumer expectations, IVI systems would percolate from the high-end segments to volume segments.

In the coming decade, with rising urbanisation and improved infrastructure, consumer preferences for long drives and weekend getaways would rise, in turn, influencing their choice of vehicles. Further, with increasing congestion in cities, rising parking woes and rise in number of nuclear families, vehicles will become more compact. The market would witness the emergence of newer segments and price points, which would blur the boundaries between various body styles, in a bid to attract customers and deliver a better customer value proposition.

ALLIANCES/PARTNERSHIPS

There will be increased pressures to improve quality and reliability on the one hand, and reduce development cycle and cost, on the other hand. In such a highly dynamic business environment, where customer preferences keep changing, there will be a need for fostering deeper collaboration between the OEMs and their suppliers, and working closely as partners to exploit the emerging opportunities and meet future challenges.

From a long-term perspective, there is a need for fostering public-private partnerships to make investments in setting up appropriate infrastructure and facilities for enabling efficient and environment-friendly dismantling and recycling of automobiles. There is also a need for vehicle manufacturers to make significant investments in the development of recyclable materials and recycling technologies. Both OEMs and component suppliers should focus on continuous development of existing and new materials and processes in order to produce components which are cost effective and recyclable.

The current legislations are also not sufficient to effectively combat the activities run by the counterfeit auto parts market. Enforcement of more stringent laws is the need of the hour to curb this menace. Also spreading awareness among consumers and dealers, conducting regular raids and curbing imports of less expensive parts are some of the other measures to control the counterfeit market. There is an urgent need for all the stakeholders including manufacturers/suppliers of genuine parts, relevant industry bodies and the government authorities, to come together and fight this growing menace.

COST MANAGEMENT

The auto components industry continues to face the challenges of access to technology, absorption of technology, exchange rate fluctuation, availability of skilled manpower and manpower retention. Going forward, growing pressure from OEMs will put increased pressure on the component suppliers to spruce up their engineering expertise so as to remain competitive. The future competitive scenario points towards greater demands on the component suppliers to manage growth, reduce costs, improve efficiency and productivity, and become easier to do business with, both with local and overseas clients.

IT TO MANAGE COSTS & GROWTH

With changing market dynamics, component suppliers will have to become more flexible and cost efficient in developing new and more cost effective products and processes for their customers. There will also be greater emphasis by the OEMs on customisation and personalisation of their products to meet the varying customer demand. Component suppliers will have to

enhance their local product development capabilities and supply chain competencies, at the same time establish flexible manufacturing infrastructure to meet increasing/varied requirements placed by the OEMs. This in turn, hints towards extensive adoption of IT-enabled set up for creating flexible manufacturing systems. Component manufacturers are increasingly realising the importance of equipping themselves with advanced IT systems to overcome these growing pressures, manage the complexities and improve profit margins.

INDUSTRY ROADMAP

There is a need for the Government and automotive players to come together on a common platform, particularly in the area of green technology, considering the environmental and economic imperatives, with consensus on the future roadmap for the industry.

A clear long-term roadmap for the automotive industry is imperative for accelerating and sustaining growth. To achieve common objectives, there is an urgent need to have a clear, long-term roadmap focusing on emission and auto fuel, fiscal policies, safety regulations, as also skill development and R&D. This would pave the way in not just encouraging the auto companies to lay down their expansion and other investment plans for the Indian market, but would also enable them to prepare and offer the best value for the customers.

The expected expansion of vehicle population on Indian roads also points towards the dismantling and recycling needs of vehicles at the end of life, which could pose a major challenge. This is particularly so, because unlike the developed economies such as Europe, Japan, etc, India neither has the requisite infrastructure nor the appropriate regulations governing design and manufacturing vehicles for end-of-life ease of recycling.

There is a need for creating a more encouraging ecosystem, characterised by increased thrust on IT, R&D, creation of more value added products, incentives and policy support from the Government, testing and validation centres, and appropriate training infrastructure to spruce up the human resource base, with the objective of positioning the Indian industry prominently on the global automotive map.

References & Sources

ACMA Documents and Presentations

SIAM Presentations

Annual Reports and Investor Presentations of Auto Companies

Report of the Working Group on Automotive Sector for the 12th Five Year Plan (2012-2017), Ministry of Heavy Industries and Public Enterprises

Websites

www.dipp.nic.in

www.investindia.gov.in

www.natrip.in

www.unep.org

www.globalfueleconomy.org

www.autocarpro.in

www.siamindia.com

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We would like to thank the following experts for sharing their insights during the preparation of this report:



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Mr. Ashok Taneja joined the Shriram Group as a Management Trainee in 1972, joined the Board of Directors as Whole-time Director in 1999 and presently holds the office of MD & CEO at Shriram Pistons & Rings Ltd. Mr. Taneja did his B.Tech (Mechanical Engineering) from Indian Institute of Technology, Kanpur. He is the

Past President of ACMA. He is a member of the Tata Motors National Supplier Council and has also served as the President of Honda Car Suppliers Club. He is currently the Chairman – Economic Affairs, WTO & Knowledge Partner of ACMA and is also a member of CII International Policy and Trade Council.



Mr. Pravin Shah

Chief Executive – Automotive Division and Member of the Group Executive Board, Mahindra & Mahindra Ltd.

Mr. Pravin Shah is a Chartered Accountant by profession and has held various positions within the Mahindra Group. Over his three decade stint with Mahindra, Mr. Shah has been closely involved with several milestones in Mahindra's evolution as a modern Sports Utility Vehicle (SUV) and Multi-Purpose Vehicle (MPV) manufacturer. He is

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Mr. Surinder Kanwar is the Chairman & MD of Bharat Gears Ltd. and Raunaq International Ltd. Mr. Kanwar was elected as the Chairman of ACMA Western Region from 2006 to 2010, and has been a member of the Executive Committee for several years. He was

Chairman of Technical Panel of ACMA during 2001-2002 and Chairman of Raw Material committee during 2005-2006. Mr. Kanwar is the Vice President of ACMA and is the incumbent President of ACMA for the year 2012-13.



Dr. Surinder Kapur

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Dr. Surinder Kapur is the founder Chairman of Sona Group. A Doctorate in Mechanical Engineering from Michigan State University (MSU), USA and a recipient of the MSU Distinguished Alumni Award from the MSU Alumni Association, Dr. Kapur also holds an M.S. and B.S. in Engineering from USA. He currently serves as the Chairman of

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Mr. Vinnie Mehta

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Mr. Vinnie Mehta, Executive Director of ACMA has been actively involved in promotion, growth and development of the auto component industry in India. Prior to joining ACMA, he headed the Manufacturers' Association for Information Technology (MAIT), the

apex body of the IT hardware Industry in India. He is an Electrical Engineer from IIT-BHU, an MBA from FMS, University of Delhi and a Masters in International Trade from the Indian Institute of Foreign Trade (IIFT).



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Mr. Thimmaiah NP, an automobile engineer from Mysore University, is the MD & CEO of Meritor India. Meritor is a global leader in providing innovative drive train mobility and braking solutions for OEMs of trucks, trailers and specialty vehicles, as well as the related aftermarkets in the transportation and industrial sectors. He has the overall responsibilities of Meritor and its Joint Venture activities in

India which include, Meritor Heavy Vehicle Systems, Automotive Axle Ltd. - the joint venture, and India Technical Centre. In his 22 years of experience, Mr. Thimmaiah has worked in supply chain, operations, sourcing and Business Management profiles. He is also a certified Six Sigma Black belt.



Mr. Debashis Mitra

Director - Sales & Marketing, Mercedes-Benz India Pvt. Ltd.

Mr. Debashis Mitra is the Director of Marketing and Sales at Mercedes-Benz India since January 2009 and had joined the company as General Manager responsible for Network Development in April 2008.

Mr. Mitra possesses over two decades of rich and extensive experience in areas related to Strategic Planning, Marketing, Network Management, Business Development and Sales. Prior to his engagement with

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A Post Graduate in Business Management (Marketing) from the Indian Institute of Management, Kolkata; Mr. Mitra also holds a Bachelor's degree in Mechanical Engineering from the North Bengal University.

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- Remote Infrastructure management
- Business Process Outsourcing



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