

Automobile Components: Structure and Prospects

Overview:

The Indian auto industry is expected to be the world's third largest by 2016 only behind China and the US and will account for more than 5% of the global vehicle sales as per IBEF. It is also expected to become the fourth largest automobiles producer globally by 2020 after China, US and Japan (India is currently world's second largest two-wheeler manufacturer).

The Indian auto components industry is ancillary to the automobile industry. Demand swings in any of the auto segments (Commercial vehicles, cars, two-wheelers) have an impact on the auto ancillary demand. Indian Auto Component Industry is transforming itself from a low-volume, highly fragmented one into a competitive industry backed by strengths like technology, efficiency and evolving value chain. The industry mainly caters to 2 segments – (1) Original Equipment manufacturers (OEM) and (2) Replacement market (Aftermarket). OEM dominates the auto component market contributing around 80 per cent while the replacement market share is around 20 per cent.

The auto component sector is largely unorganized with about 10,000 players operating in the unorganized market. There are about 700 players in the organized market as of 2015. The demand from replacement market is low, owing to the high cost of genuine component parts. Unorganized players mainly dominated the replacement market, which were mostly Tier 3/4 component manufacturers.

However, in terms of turnover, organized market holds about 85% share. The Indian auto component industry is a highly fragmented industry and was estimated to be valued at around Rs.2.6 trillion (USD 39 billion) in FY16. This industry has witnessed growth of 8.6% on y-o-y basis and contributes to 2.3% to India's Gross Domestic Product (GDP). The industry is in a stage of transformation and the entry of new players in last few years has led to surge in the auto component industry.

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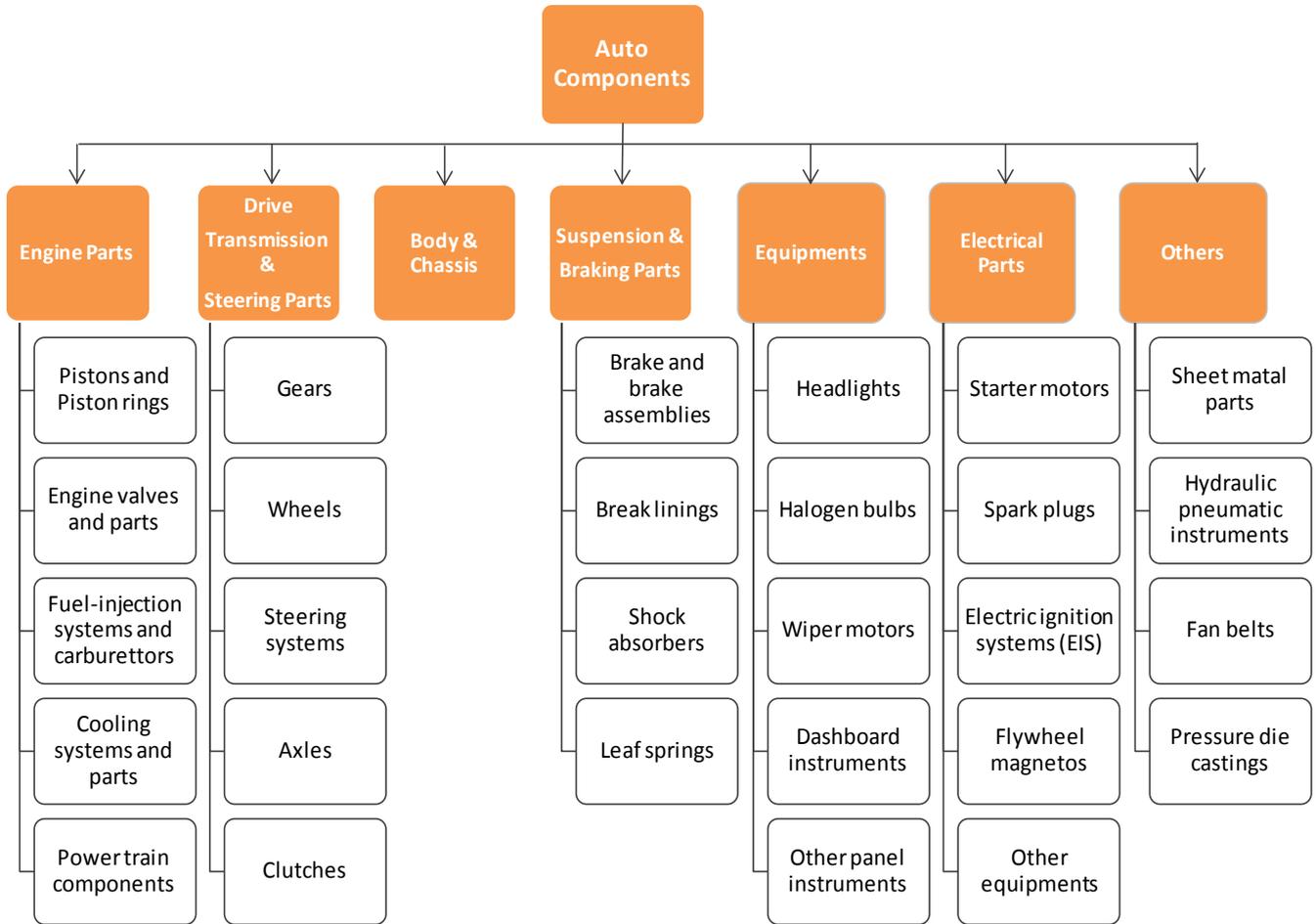
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Automotive Component in India is split under various segments as follows:

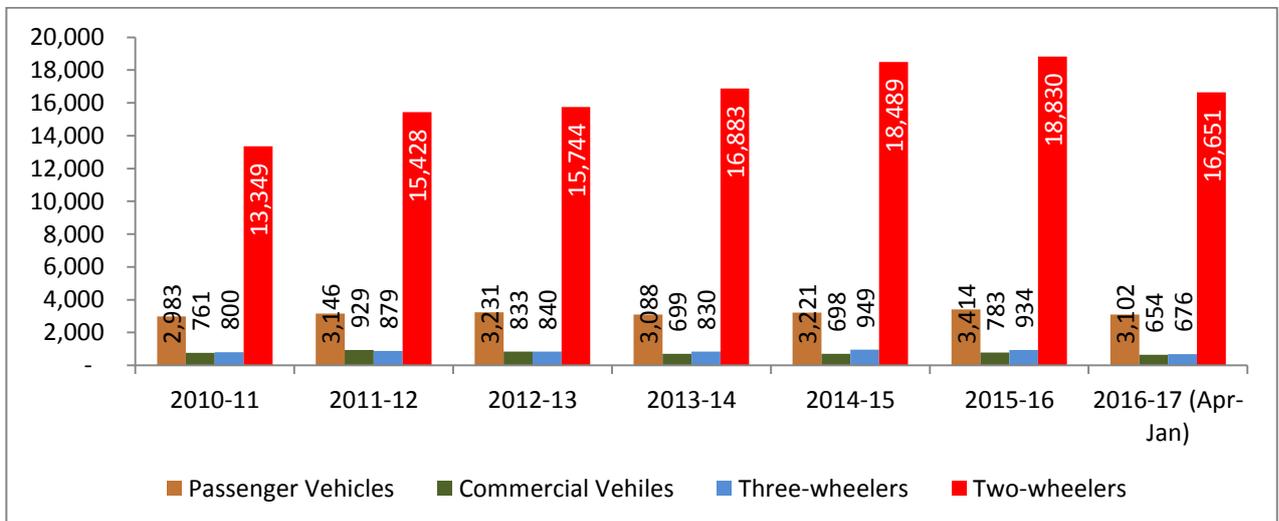
Chart 1: Auto Component Segment



Source: ACMA

Automobiles production

Chart 2: Category wise Production of Automobiles (000 units)



Source: SIAM

Segment wise domestic market share of automobile industry

Table 1: Segment wise domestic market share (2015-16)

	%
Two-wheelers	79
Passenger Vehicles	14
Three-wheelers	4
Commercial Vehicles	3

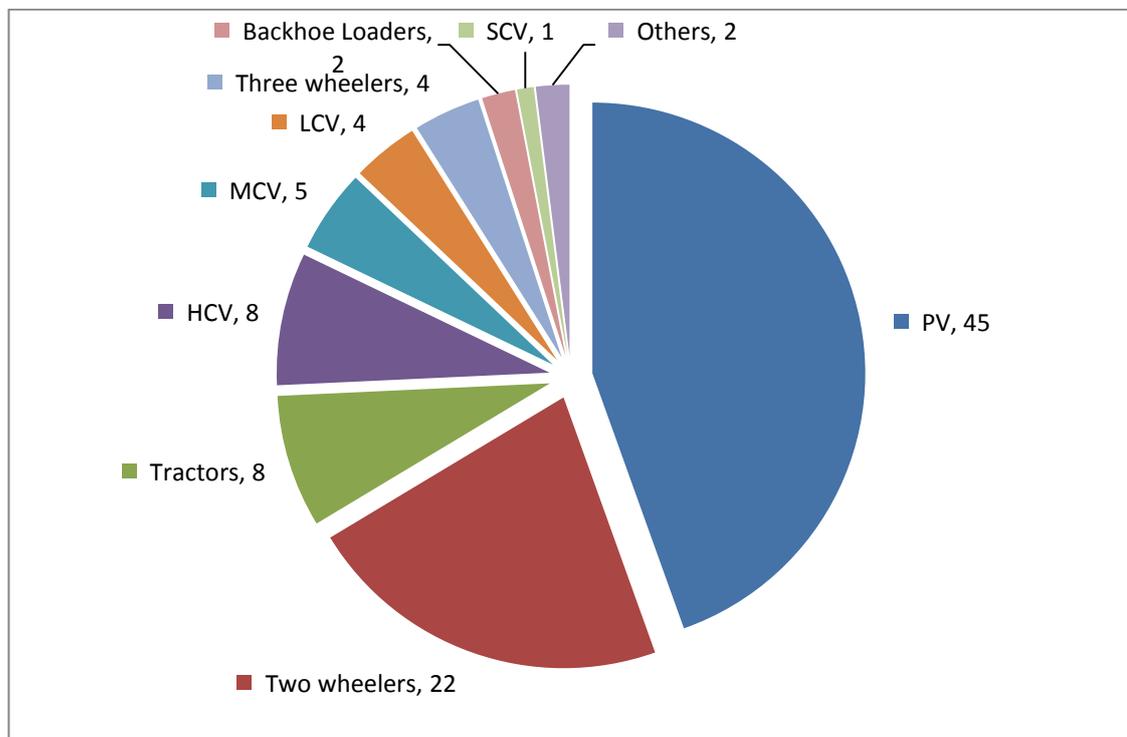
Source: SIAM

In 2015-16, India’s annual production stood at 23,960,940 vehicles (including passenger vehicles, commercial vehicles, three wheelers, two wheelers and quadricycle) as against 23,358,047 in 2014-15, registering a sluggish growth of 2.6% y-o-y. Two-wheelers have dominated the production volumes of the automobile industry over the years. Over the past 4 years, two-wheeler production share in the overall automobile production has remained stable at around 80%. This is followed by passenger vehicles having a share of 14%. Productions of commercial vehicles and three-wheelers have about 3% share each in the automobile industry.

Passenger vehicles comprising 14% in the overall automobile production in 2015-16, accounts for about 45% of the total auto component production volumes, followed by two-wheelers segment which accounts for about 22% share of the total auto component production volumes.

Auto component consumption by OEM

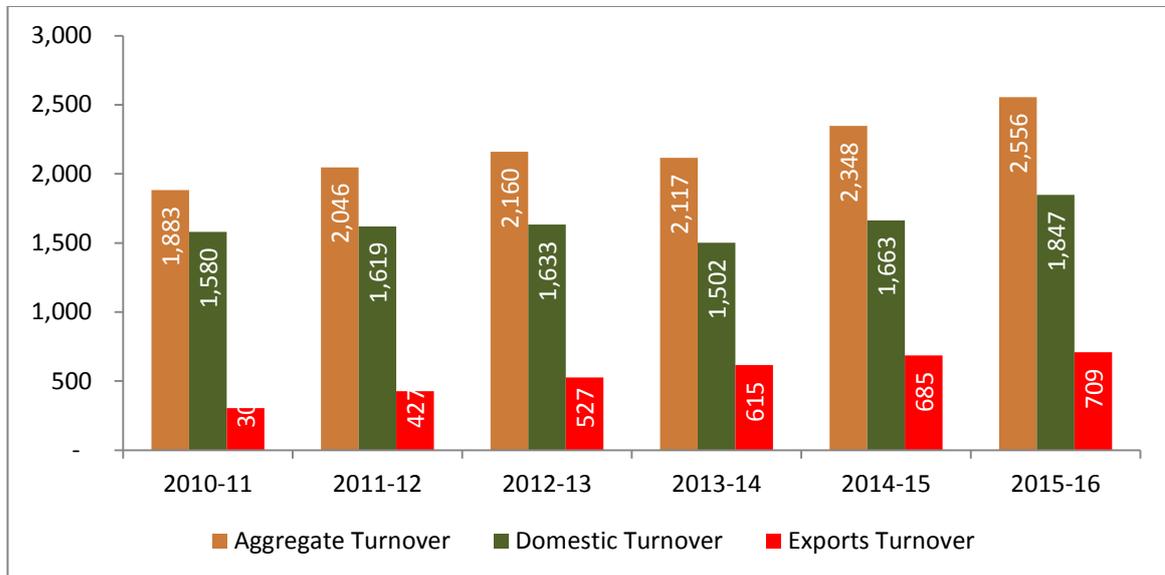
Chart 3: Consumption by OEM (%)



Source: ACMA

Auto Component Aggregate Turnover

Chart 5: Aggregate turnover (Rs Billion)

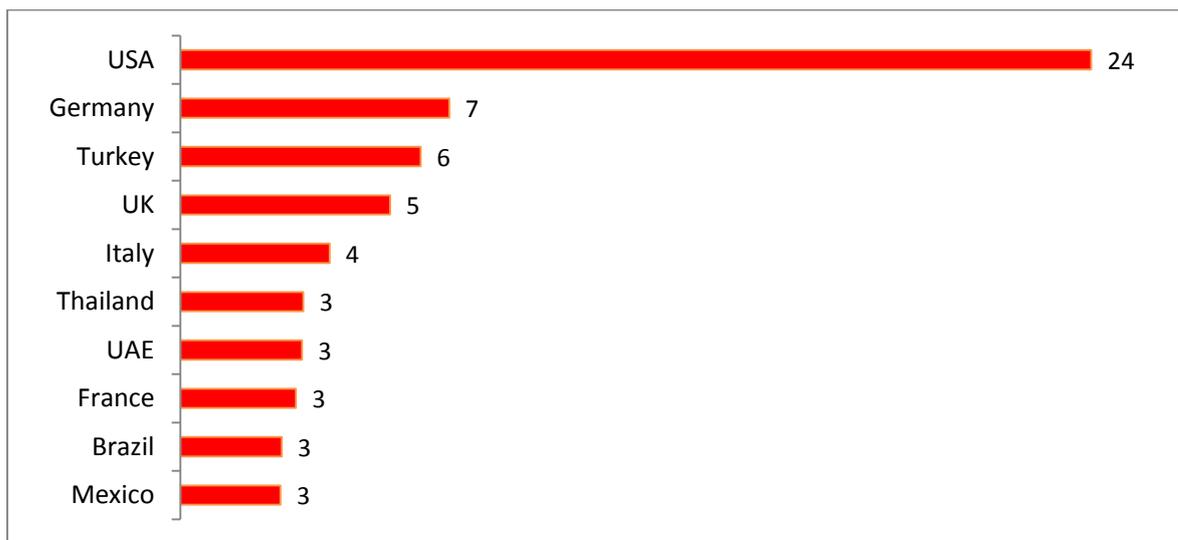


Note: The aggregate turnover includes the domestic supplies to OEMs, aftermarket sales and exports for the period
 Source: ACMA

It can be seen from the chart that after marginally declining in 2013-14 the auto components turnover increased by over 11% in 2014-15 on the back of a pick-up in demand from the automobile industry. The turnover increased, however, at a slower pace in 2015-16. Automobile production increased only marginally by 2.6% in 2015-16 leading to slower y-o-y auto comp turnover increase of 8.6% in 2015-16.

Export destinations – Top 10 countries (2015-16)

Chart 6: Country wise Exports – Top 10 countries (Per cent)



Source: ACMA

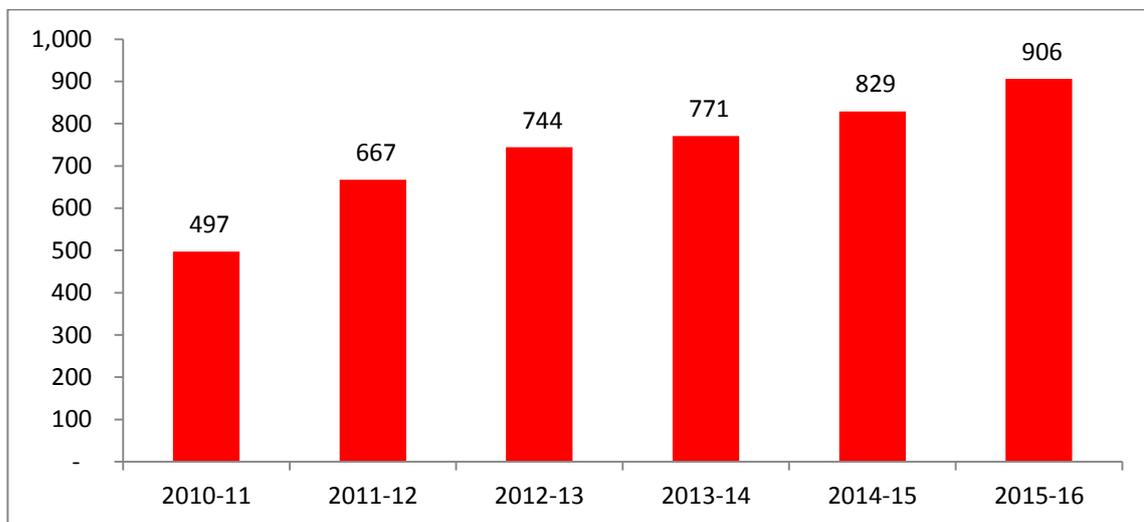
The size of Indian exports of auto components stood approximate at Rs 709 billion (USD 10.8 billion) in FY16 and has increased at a CAGR of about 18.5 per cent from Rs 303 billion (USD 6.7 billion) in FY11. Exports share in turnover increased from 16% in 2010-11 to 28% in 2015-16 in value terms registering a CAGR of 18.3% during the period.

Currently industry exports to more than 160 countries. Key auto components exported from India include gear boxes and parts, hydraulic power steering systems and steering gear systems and parts, parts of diesel engines, drive-axles and parts, suspension systems and parts, brakes and servo-brakes, spark ignition and parts, among others.

The top 10 export destination countries accounted for about 60% of total auto components exports from India in 2015-16. USA is the largest importer of auto components from India. Region wise, Europe is the largest importer of auto components with a share of about 36%. This is followed by North America and Asia which account for about 25% each of the overall exports of auto comp from India. Africa and South America account for about 6% and 4% of the overall exports respectively, while New Zealand and Australia have minute share of just about 1%.

Aggregate Turnover – Imports

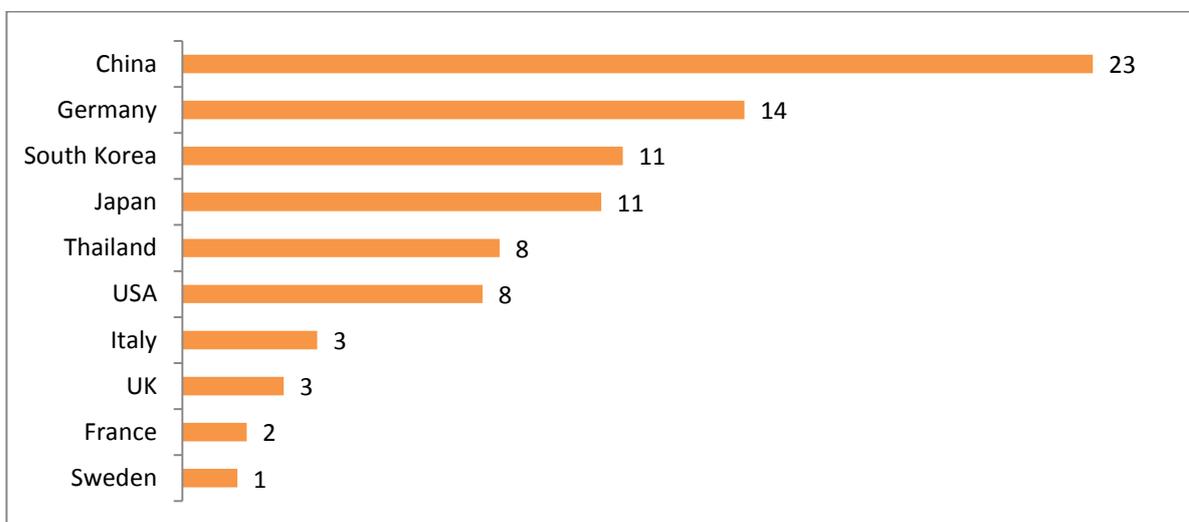
Chart 7: Aggregate turnover - Imports (Rs Billion)



Source: ACMA

Imports country wise – Top 10 countries (2015-16)

Chart 8: Country wise Imports – Top 10 countries (Per cent)



Source: ACMA

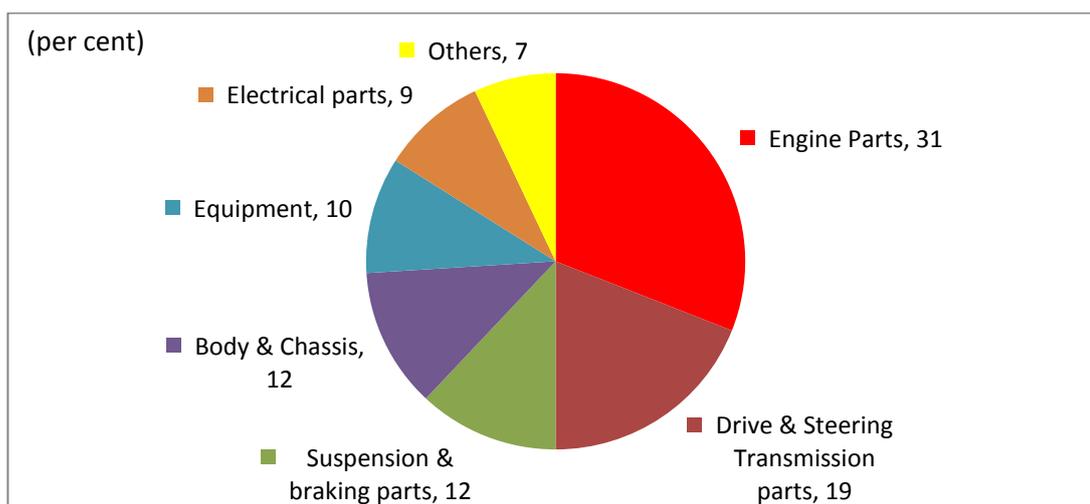
Nearly 30-35 per cent of the auto components used by OEMs are imported. The share of imported consumption has significantly increased over the last one decade with the entry of new global manufacturers. China has been a major exporting country for auto components to India.

India is estimated to have imported Rs 906 billion (USD 13.8 billion) worth auto components in FY16 as against the aggregate turnover of around Rs 2,556 billion (USD 39 billion). Thus, imports form almost 35 per cent of the aggregate turnover. During the last five years the auto component imports to India have increased at a CAGR of around 12.8% per cent from Rs 497 billion (USD 10.9 billion) in FY11 to around Rs 906 billion (USD 13.8 billion) in FY16. The major components imported into India include piston rings, brake assembly, bimetal bearings, transmission shafts, wheel rims, motor cycle parts etc.

In 2015-16, imports from top 10 countries comprised over 80% of India’s imports of auto components. Region wise, share of Asia was the highest at 58.6%. This was followed by Europe comprising about 31% of India’s imports. About 8% imports of auto components came from North America. Central and South America, Africa, New Zealand and Australia formed the remaining share of the Indian imports of auto components.

Component wise market segmentation

Chart 9: Component wise market segmentation



Source: IBEF

The Indian auto component industry can broadly be classified into the organized and unorganized sectors. The organized sector caters more to demand for high value precision instruments, while the unorganized sector caters to the aftermarket with low valued products.

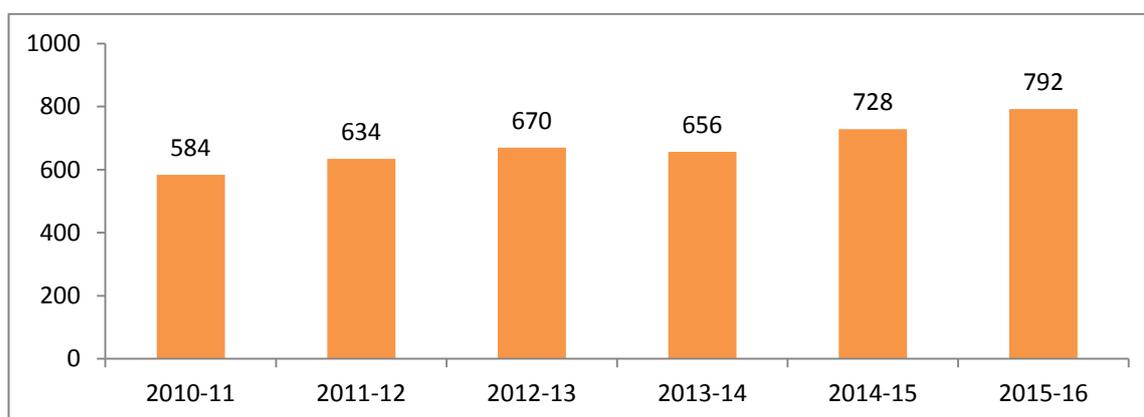
The industry over the years has integrated capability of manufacturing the entire range of auto components required to manufacture vehicles. Engine and drive transmission parts together contribute about 50% of the auto component industry production. Engine parts, which constitute 31% of the production, mainly comprise pistons, engine valves, carburetors, fuel injection systems, camshafts, crankshafts and cooling systems. Drive transmission parts, which constitute 19% of the total production, include axle assembly, steering parts and clutch assembly. Component wise market shares have remained stable over the past few years.

Engine component segment

Engine components fall into three broad categories — core engine components, fuel delivery system and others. This segment accounts for 31 per cent of the auto component market (by value). The turnover of this segment in 2015-16 is estimated at around Rs 792 billion as compared to Rs 584 billion in 2010-11.

This segment includes products such as pistons, piston rings, engine valves, carburetors, crank shafts, sump connecting rods etc. These are the most critical components and require high level of precision and quality adherence. Accordingly, there is high level of co-ordination between component manufacturers and Original Equipment Manufacturers (OEMs). The engine components are largely assembled by the OEMs themselves.

Chart 10: Trend in turnover of Engine components (Rs Billion)

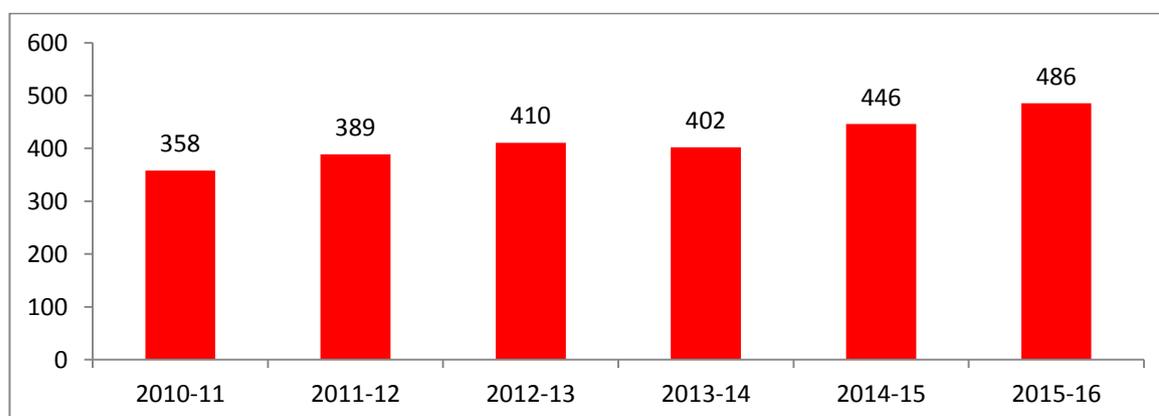


Source: ACMA

Drive transmission and steering component segment

The drive transmission and steering component segment accounts for around 19 per cent of the auto component market. This segment consists of products like gears, wheels, steering systems, axles and clutches. Clutch discs, cover assemblies and kits components are the key sub-categories in clutch sub-segment. The turnover of this segment increased to Rs 486 billion in 2015-16, from Rs 358 billion in 2010-11.

Chart 11: Trend in turnover of drive transmission and steering segment (Rs Billion)



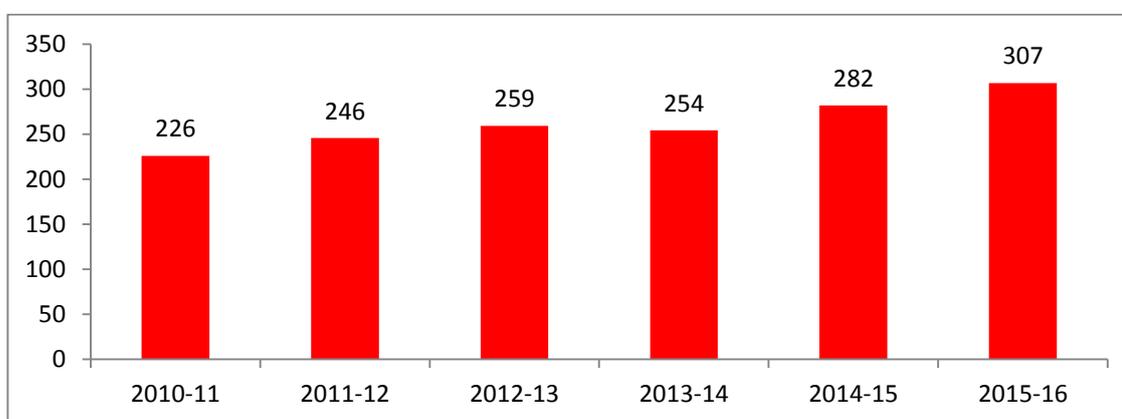
Source: ACMA

The steering system industry is technology and capital-intensive in nature that acts as an entry barrier, especially for smaller players and the unorganized segment. With power steering reducing the driving efforts, these are increasingly becoming popular and consequently, the players are shifting their product mix towards power steering over manual steering system. Manufacturing axles too is capital and technology-intensive business, with axle being one of the critical components. Designing and offering axles to meet exact engine specifications is one of the key success factors of axle manufacturers. On the other hand, braking system is not very technology-intensive.

Body and Chassis segment

The body and chassis segment accounts for 12 per cent of the auto component market, with the turnover of around Rs.307 billion in 2015-16 from Rs.226 billion in 2010-11. This segment is not very technology and capital intensive and is thus relatively more fragmented and dominated by the unorganized sector. Automobile Corporation of Goa is one of the major players in the organized segment having presence across different products in this segment.

Chart 12: Trend in turnover of body and chassis segment (Rs Billion)



Source: ACMA

Suspension and braking component segment

The suspension and braking component segment includes components like brakes, brake linings, leaf springs and shock absorbers, which accounts for around 12 per cent of the domestic auto component market. The turnover of this segment was Rs.307 billion in 2015-16, which grew from Rs.226 billion in 2010-11.

Chart 13: Trend in turnover of suspension and braking component segment (Rs Billion)

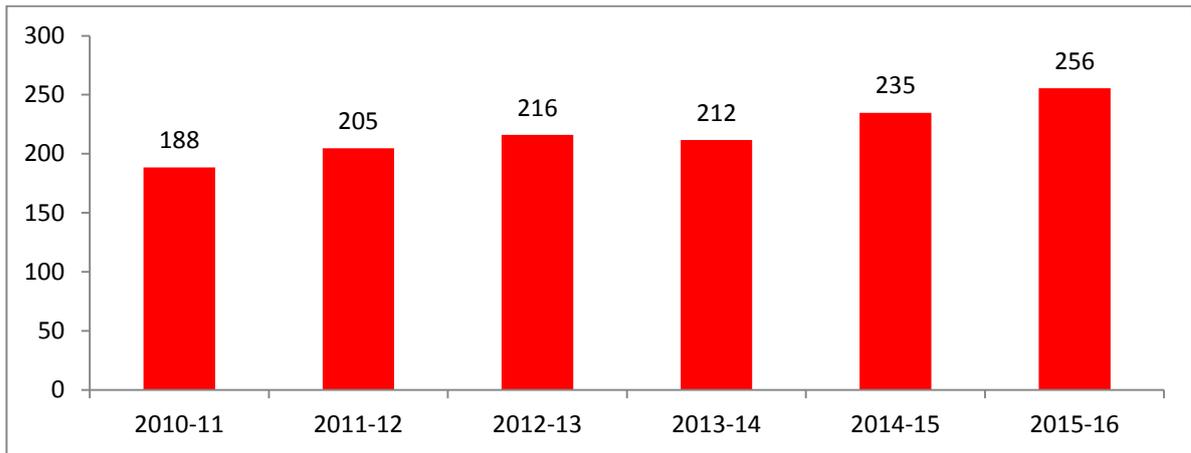


Source: ACMA

Equipment segment

The equipment segment, accounts for around 10 per cent share in the auto component market, which includes components like headlights, dashboard instruments, wiper motors, electric horns etc. The turnover of this segment has grown from Rs.107 billion in 2007-2008 to Rs.2108 billion in 2012-13. The manufacturers of headlights, which are not directly related to automotive technology, are increasingly innovating new designs for making the appearance of personal vehicles like cars and two-wheelers more and more stylish and vibrant.

Chart 14: Trend in turnover of Equipment segment (Rs Billion)

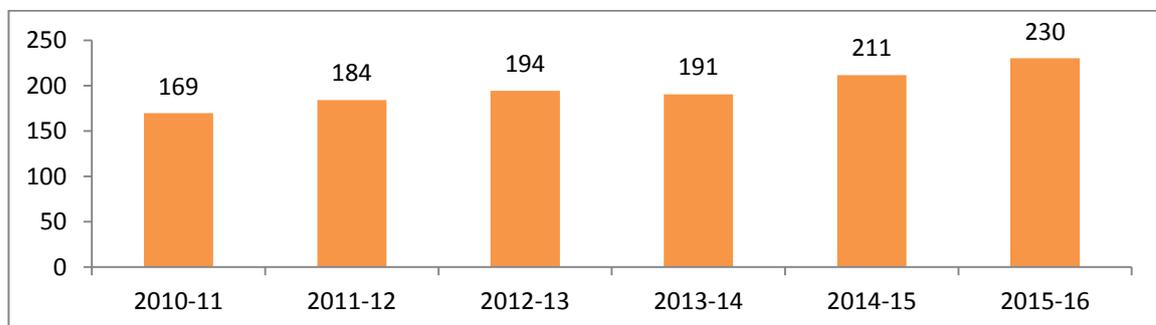


Source: ACMA

Electrical component segment

The electrical component segment comprises of products such as starter motors, generators, spark plugs, ignition coil, flywheel magnet, voltage regulator, electric ignition and distributors. This segment is one of the most dynamic because of constant evolution of technology. The new cars have increasingly higher proportion of electrical parts. Secondly, there have been changes in the ignition technology for two-wheelers that have moved from kick-start to electric start. The electric component segment currently forms around 9 per cent of the Indian component industry. The turnover of this segment has increased from Rs 169 billion in 2010-11 to Rs 230 billion in 2015-16.

Chart 15: Trend in turnover of Electrical component segment (Rs Billion)



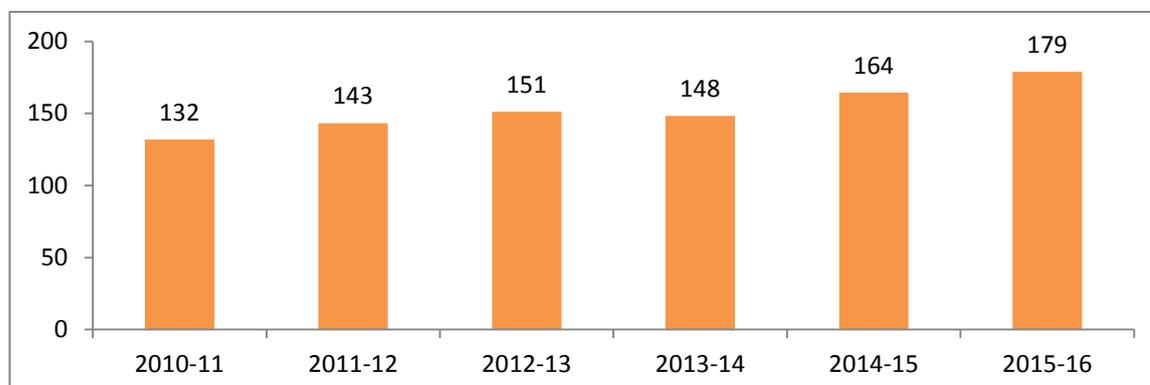
Source: ACMA

Residual Segment (Others)

Sheet Metal Components (SMC) and Plastic Moulded Components (PMC) are the two key products in the residual 'other components' segment. Around 7 per cent of the market is accounted for by this residual segment or such

other components not included in any of the specific component segments. The turnover of the residual segment has grown from Rs 132 billion in 2010-11 to Rs 179 billion in 2015-16.

Chart 16: Trend in turnover of Residual segment (Rs Billion)



Source: ACMA

SMC and PMC are not very technology-intensive and thus dominated by the unorganised segment. The key SMC producers include Automotive Stampings and Assemblies, Autoline Industries, Jay Bharat Maruti, JBM Auto, Omax Auto, etc. Similarly, Mahindra Components and Motherson Auto are the key players in the organized segment involved in manufacturing PMC.

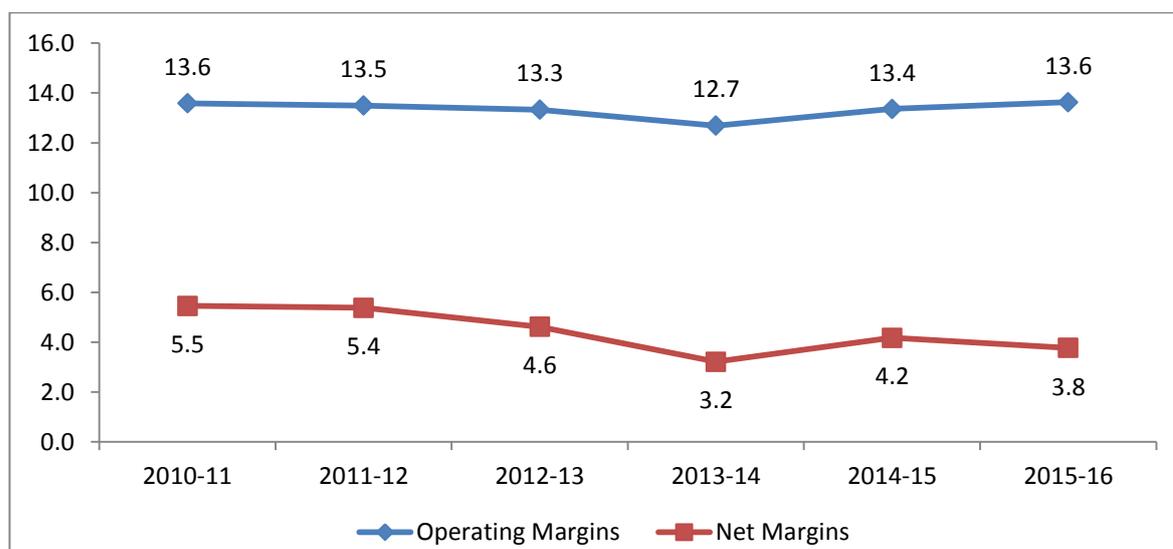
Component wise key players

Engine & engine parts	<ul style="list-style-type: none"> • Pistons – Goetze, Shriram Pistons & Rings, India Pistons, Anand I-Power Limited • Engine Valves – Rane Engine Valves, Shriram Pistons & Rings, SSV Valves • Carburetors – Ucal Fuel Systems and Spaco Carburetors & Escorts Auto Components • Diesel-based fuel-injection systems – Mico, Delphi-TVS Diesel System and Tata Cummins
Transmission & steering Parts	<ul style="list-style-type: none"> • Steering Systems – Sona Koyo Steering Systems, Rane NSK Steering Systems and Rane TRW systems • Gears – Bharat Gears, Gajra Bevel Gears, ZF Steering Gear (India) Limited, Eicher, Graziano Trasmissioni and SIAP Gears India • Clutch – Clutch Auto, Ceekay Daikin, Amalgamations Repco, Luk Clutches • Driveshafts – GKN Driveshafts, Spicer India Private Limited, Delphi and Sona Koyo Steering Systems
Electrical	<ul style="list-style-type: none"> • Lucas TVS, Denso, Delco Remy Electricals and Nippon Electricals are key players in this segment
Suspension & braking parts	<ul style="list-style-type: none"> • Brake Systems – Brakes India, Kalyani Brakes, Mando India Limited and Automotive Axles • Brake Lining – Rane Brake Lining, Sundaram Brake Lining, Hindustan Composites and Allied Nippon • Leaf Springs – Jamna Auto and Jai Parabolic • Shock Absorbers – Gabriel India, Delphi, Mando India Limited and Munjal Showa
Equipment	<ul style="list-style-type: none"> • Headlights – Lumax, Autolite and Phoenix Lamps • Dashboard – Premiere Instruments & Controls • Sheet metal parts – Jay Bharat Maruti, Omax Auto and JBM Tools

The other major players in the industry include Exide Industries, Standard, Tudor, Chloride International and Amara Raja (batteries), Harita Seating Systems and Toyota Boshoku (Seats), Motherson Sumi (wiring harnesses), Banco Products (radiators), Subros (auto air-conditioning systems), Munjal Auto (exhaust systems and mufflers), Minda Corporation (automobile locks, electronic security systems, window regulators, etc), Asahi India automobile glass and wind-shield), Indian IDE-casting Industries (aluminum die-casts and precision components), Sundaram Brake Linings, Rane Brakes and Hindustan Composites (automotive friction material), Amtek Auto (castings and forgings), Sundaram Fasteners, Universal Wire Forms and Spring India (fasteners), etc.

Financial performance of Auto ancillary players

Chart 17: Margins of Auto Ancillary players



Note: The industry margins are based on the financial results of 70 listed auto ancillary companies

Source: AceEquity

Auto component manufacturer’s profitability is sensitive to the changes in raw material cost as it forms the bulk (about 60%) of net sales. In 2015-16, India’s annual automobile production stood at 23.96 mn vehicles as against 23.36 mn in 2014-15, registering a sluggish growth of 2.6% y-o-y. In line, auto comp production slowed down and declined by over 3% y-o-y after increasing by about 6% in the previous year. This decline was on account of muted demand from the automobiles industry.

In 2016-17, with increase in steel, aluminum and plastics costs, overall raw material costs are expected to increase. Operating margins are expected to be range bound in 2016-17 after rising marginally in 2015-16, while higher raw material costs will restrict the margin expansion.

Regulations

India has various cost advantages and has evolved as a cost-effective manufacturing base that keeps costs lower by 10-25 per cent relative to operations in Europe and Latin America. Also, India is the third largest steel producer globally after China and Japan hence it has the cost advantage.

Also, various policies have been announced to support the auto industry.

- **Auto Policy 2002:**
 - The policy aims to promote integrated, phased, enduring and self-sustained growth of the Indian automotive industry
 - Manufacturing and imports in this sector are exempt from licensing and approvals.

- **National Automotive Testing and R&D Infrastructure Project (NATRIP)**
 - It is the largest and one of the most significant initiatives in Automotive sector so far, represents a unique joining of hands between the Government of India, a number of State Governments and Indian Automotive Industry to create a state of the art Testing, Validation and R&D infrastructure in the country.
 - The Project aims at creating core global competencies in Automotive sector in India and facilitate seamless integration of Indian Automotive industry with the world as also to position the country prominently on the global automotive map

- **FDI Policy:**
 - 100% Foreign Direct Investment (FDI) is allowed under the automatic route in the auto components sector, subject to all the applicable regulations and laws.

Investments

The cumulative Foreign Direct Investment (FDI) inflows into the Indian automobile industry during the period April 2000 – September 2016 were recorded at US\$ 15.80 billion, as per data by the Department of Industrial Policy and Promotion (DIPP).

Some of the major investments made into the Indian auto components sector are as follows:

- Gestamp, a Spanish automobile component manufacturing company, has invested Rs 260 crore (US\$ 38.63 million) in a new hot stamping plant in Pune, in order to cater to the increasing demand for lighter vehicles in India.
- Exide Industries, India's biggest automotive battery maker, plans to invest around Rs 300 crore (US\$ 45 million) in West Bengal to expand its capacity for advanced motorcycle batteries over a period of 18 months.
- Motherson Sumi Systems Ltd, an automobile components manufacturer, has acquired Finland-based truck wire maker PKC Group Pic for € 571 million (US\$ 609.57 million), which will help the company expand its presence in the global wiring harness business for commercial vehicles.
- Sundaram Clayton, part of the TVS group, plans to invest US\$ 50 million in US and Rs 400 crore (US\$ 59.76 million) in India over the next three years.
- Mercedes Benz India Private Limited has set up India's largest spare parts warehouse in Pune, with an area of 16,500 square meters which can stock up to 44,000 parts. It will also include a vehicle preparation centre that can stock up to 5,700 cars to customise them before delivery.
- JK Tyre and Industries Ltd, India's leading tyre manufacturer, has acquired Cavendish Industries Ltd (CIL) for Rs 2,200 crore (US\$ 329.2 million), which will enable JK's entry into the fast-growing two-wheeler and three-wheeler tyre market.
- Japanese auto major Honda is planning to step up supply and target exporting of auto components worth Rs 1,500 crore (US\$ 224.45 million) from India to its various international operations.

- Auto components maker Bharat Forge Ltd (BFL), the flagship company of the US\$ 3 billion Kalyani Group, has formalised agreement with Rolls-Royce Plc which will supply BFL with critical and high integrity forged and machined components
- Canada's Magna International Incorporated has started production at two facilities in Gujarat's Sanand, which will supply auto parts to Ford Motor Co in India
- Everstone Capital, a Singapore-based private equity (PE) firm, has purchased 51 per cent in Indian auto components maker SJS Enterprises for an estimated Rs 350 crore (US\$ 51.35 million).
- ArcelorMittal signed a joint venture agreement with Steel Authority of India Ltd (SAIL) to establish an automotive steel manufacturing facility in India.
- German auto components maker Bosch Ltd opened its new factory at Bidadi, near Bengaluru, which is its fifth manufacturing plant in Karnataka. The company has also signed a memorandum of understanding (MoU) with Indian Institute of Science (IISc), Bengaluru with a view to strengthen Bosch's research and development in areas including mobility and healthcare thereby driving innovation for India-centric requirements.
- French tyre manufacturer Michelin announced plans to produce 16,000 tonnes of truck and bus tyres from its Indian facility this year, a 45 per cent rise from last year.
- Amtek Auto Ltd acquired Germany-based Scholz Edelstahl GmbH through its 100 per cent Singapore-based subsidiary Amtek Precision Engineering Pte Ltd.
- MRF Ltd plans to invest Rs 4,500 crore (US\$ 660.231 million) in its two factories in Tamil Nadu as part of its expansion plan.
- Hero MotoCorp is investing Rs 5,000 crore (US\$ 733.59 million) in five manufacturing facilities across India, Colombia and Bangladesh, to increase its annual production capacity to 12 million units by 2020.

Source: IBEF

Outlook: -

Performance of the automobile industry in FY17 and FY18

Table 2: Growth in automobile sales

Category	Apr-Dec FY17 (Actual)	FY17 E*	FY18 E*
CVs	4.5%	5-7%	12-13%
PVs	10.3%	10-12%	12-13%
Two & Three wheelers	6.2%	8-10%	10-12%
Tractors	16.8%	16-18%	18-20%

E – Estimated

Auto component OEM segment is expected to witness growth in 2016-17 largely driven by the buoyancy witnessed in automobile sales. Post demonetisation, growth estimation of two-wheelers and small cars has been hit slightly. However, lower cost of ownership of auto vehicles triggered by series of interest rate cuts, push on manufacturing and infrastructure segment by the government combined with lower fuel prices have resulted in recovery of auto sector. Auto component industry stands to benefit from this turnaround in OEM demand and stable replacement demand. However, auto component manufacturers supplying to CV, PV and tractors segment are expected to benefit the most in the near term as the outlook for these auto segments in the Indian market is relatively more positive than TW.

The life of the two-wheelers and LCVs is considered to be about 5-7 years while that of the passenger cars and MHCVs is about 8-10 years (or about 1 – 1.5 lakh kilometers) -post which the replacement demand is expected to increase i.e., 2 years after any new vehicle is purchased and prior to the life of the vehicle. Currently, a vehicle, both commercial and private is registered for a period of 15 years in India. However, the road transport ministry wants to modify the motor vehicles rules and reduce the registration of commercial vehicles to 10 years.

Over the past decade, OEM market demand of auto components (80% of the overall demand) has been 1.5 times that of the automobile sales, whereas, replacement market (20%) has moved by about 1.2 times of the automobile market. Therefore, with expectations of the automobile industry to grow by about 10-20% across various categories, **CARE expects the demand for overall auto components to improve by about 15-18% between FY17 and FY18.** Capacity utilizations are also estimated to improve over the previous period which shall impact operating efficiencies favourably with most of the key input costs expected to remain largely stable or increase marginally.

Both, domestic and export demand for auto components is expected to remain robust during this period on the back of strong growth prospects for Auto OEMs. The margins of auto-component manufacturers will be challenged as long as raw materials (metals and plastics) prices increase. However, this rise in raw material prices will be marginally offset by the higher utilization rates and softening finance costs going ahead.

As per the Automotive Mission Plan 2016-26 (AMP), the Indian auto component industry may attain an impressive USD 200 billion in revenue by 2026, with exports of USD 80 billion. The Indian Automotive Industry will be among the top three of the world in the area of engineering, manufacturing export of vehicles and components. It is estimated that the demand of vehicles will reach 66.3 to 75.8 million units in the same year. Contribution of Auto component industry in India's GDP will account to as much as 5% to 7% by 2026. Exports of auto components grew at a CAGR of 14% to USD 10.8 billion in 2015-16 from USD 3 billion in 2005-06.

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